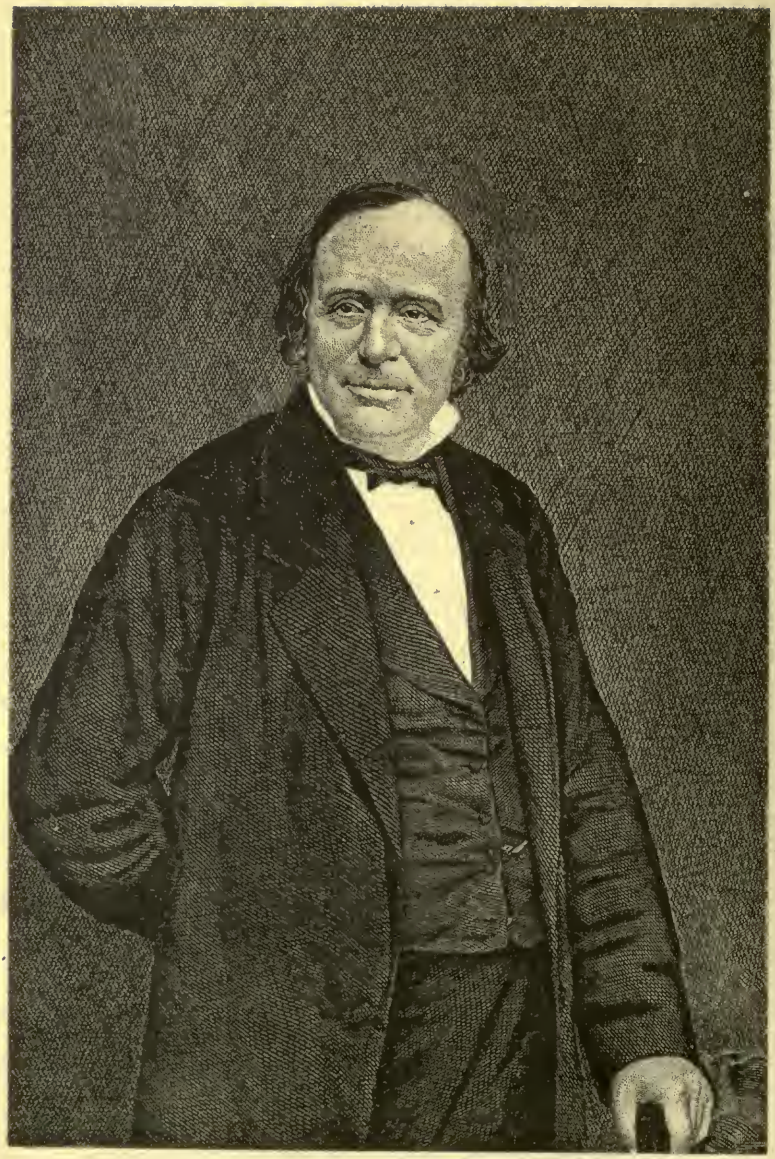

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Beacon Lights of Science

THE PLEASURES OF LIFE

By SIR JOHN LUBBOCK, BART

PREFACE.

THOSE who have the pleasure of attending the opening meetings of schools and colleges, and of giving away prizes and certificates, are generally expected at the same time to offer such words of counsel as the experience of the world might enable them to give to those who are entering life.

Being myself naturally rather prone to suffer from low spirits, I have at several of these gatherings taken the opportunity of dwelling on the privileges and blessings we enjoy, and I reprint here the substance of some of these addresses (omitting what was special to the circumstances of each case, and freely making any alterations and additions which have since occurred to me), hoping that the thoughts and quotations in which I have myself found most comfort may perhaps be of use to others also.

It is hardly necessary to say that I have not by any means referred to all the sources of happiness open to us, some indeed of the greatest pleasures and blessings being altogether omitted.

In reading over the proofs I feel that I may appear in some cases too dogmatic, but I hope that allowance will be made for the circumstances under which they were delivered.

HIGH ELMS,
DOWN, KENT, *January* 1887.

CHAPTER I.

THE DUTY OF HAPPINESS.*

"If a man is unhappy, this must be his own fault; for God made all men to be happy."—EPICTETUS.

LIFE is a great gift, and as we reach years of discretion, we most of us naturally ask ourselves what should be the main object of our existence. Even those who do not accept "the greatest good of the greatest number" as an absolute rule, will yet admit that we should all endeavor to contribute as far as we may to the happiness of our fellow creatures. There are many, however, who seem to doubt whether it is possible, or even right, that we should be happy ourselves. Our own happiness ought not, of course, to be our main object, nor indeed will it ever be secured if selfishly sought. We may have many pleasures in life, but must not let pleasures have rule over us or they will soon hand us over to sorrow; and "into what dangerous and miserable servitude does he fall who suffereth pleasures and sorrows (two unfaithful and cruel commanders) to possess him successively?" †

I cannot, however, but think that the world would be better and brighter if our teachers would dwell on the duty of happiness as well as on the happiness of duty; for we ought to be

* The substance of this was delivered at the Harris Institute, Preston.
† Seneca.

as cheerful as we can, if only because to be happy ourselves is a most effectual contribution to the happiness of others.

Every one must have felt that a cheerful friend is like a sunny day, which sheds its brightness on all around; and most of us can, as we choose, make of this world either a palace or a prison.

There is no doubt some selfish satisfaction in yielding to melancholy; in brooding over grievances, especially if more or less imaginary; in fancying that we are victims of fate. To be bright and cheerful often requires an effort; there is a certain art in keeping ourselves happy; in this respect, as in others, we require to watch over and manage ourselves almost as if we were somebody else.

As a nation we are prone to melancholy. It has been said of our countrymen that they take even their pleasures sadly. But this, if it be true at all, will, I hope, prove a transitory characteristic. "Merry England" was the old saying, and we hope it may become true again. We must look to the East for real melancholy. What can be sadder than the lines with which Omar Khayyam opens his quatrains. I quote from Whinfield's translation:

"We sojourn here for one short day or two,
And all the gain we get is grief and woe;
And then, leaving life's problems all unsolved
And harassed by regrets, we have to go.

or the Devas' song to prince Siddârtha, in Edwin Arnold's beautiful version:

"We are the voices of the wandering wind,
Which moan for rest, and rest can never find.
Lo! as the wind is, so is mortal life—
A moan, a sigh, a sob, a storm, a strife."

No wonder that under such circumstances, Nirvâna—the cessation of sorrow—should be welcomed even at the sacrifice of consciousness. But, on the contrary, ought we not to place before ourselves a very different ideal—a healthier, manlier, and nobler hope?

"Im ganzen, guten, schönen
Resolut zu leben." *

Life certainly may be, and ought to be, bright, interesting, and happy; and, according to the Italian proverb, "if all cannot live on the piazza, every one may feel the sun."

If we do our best; if we do not magnify trifling troubles; if we resolutely look, I do not say at the bright side of things, but at things as they really are; if we avail ourselves of the manifold blessings which surround us, we cannot but feel how thankful we ought to be for the "sacred trusts of health, strength, and time,"—for the glorious inheritance of life.

Few of us, indeed, realize the wonderful privilege of living; the blessings we inherit, the glories and beauties of the Universe, which is our own if we choose to have it so; the extent to which we can make ourselves what we wish to be; or the power we possess of securing peace, of triumphing over pain and sorrow.

Dante pointed to the neglect of opportunities as a serious fault:

"Man can do violence
To himself and his own blessings, and for this
He, in the second round, must aye deplore,
With unavailing penitence, his crime.
Whoe'er deprives himself of life and light
In reckless lavishment his talent wastes,
And sorrows then when he should dwell in joy."

Ruskin has expressed this with special allusion to the marvelous beauty of this glorious world, too often taken as a matter of course, and remembered, if at all, almost without gratitude. "Holy men," he complains, "in the recommending of the love of God to us, refer but seldom to those things in which it is most abundantly and immediately shown; though they insist much on His giving of bread, and raiment, and health (which He gives to all inferior creatures), they

* Goethe.

require us not to thank Him for that glory of His works which He has permitted us alone to perceive; they tell us often to meditate in the closet, but they send us not, like Isaac, into the fields at even; they dwell on the duty of self-denial, but they exhibit not the duty of delight:" and yet, as he justly says elsewhere, "each of us, as we travel the way of life, has the choice, according to our working, of turning all the voices of Nature into one song of rejoicing; or of withering and quenching her sympathy into a fearful withdrawn silence of condemnation, or into a crying out of her stones and a shaking of her dust against us."

May we not all admit, with Sir Henry Taylor, that "the retrospect of life swarms with lost opportunities."

St. Bernard, indeed, goes so far as to state that "nothing can work me damage except myself; the harm that I sustain I carry about with me, and never am a real sufferer but by my own fault."

Some Heathen moralists have taught very much the same lesson. "The gods," says Marcus Aurelius, "have put all the means in man's power to enable him not to fall into real evils. Now that which does not make a man worse, how can it make his life worse?"

Epictetus takes the same line: "If a man is unhappy, remember that his unhappiness is his own fault; for God has made all men to be happy." "I am," he elsewhere says, "always content with that which happens; for I think that what God chooses is better than what I choose." And again: "Seek not that things which happen should happen as you wish; but wish the things which happen to be as they are, and you will have a tranquil flow of life. . . . If you wish for anything which belongs to another, you lose that which is your own."

Few, however, if any, can I think go as far as St. Bernard. We cannot but suffer from pain, sickness, and anxiety; from the loss, the unkindness, the faults, even the coldness of those we love. How many a day has been damped and darkened by an angry word.

Hegel is said to have calmly finished his *Phænomenologie des Geistes* at Jena, on the 14th October, 1806, not knowing anything whatever of the battle that was raging round him.

But if we separate ourselves so much from the interests of those around us that we do not sympathize with them in their sufferings, we shut ourselves out from sharing their joys, and lose far more than we gain. If we exclude sympathy and wrap ourselves round in a cold chain armor of selfishness, we exclude ourselves from many of the greatest and purest joys of life. To render ourselves insensible to pain we must forfeit also the possibility of happiness.

It is, in fact, impossible to deny the existence of evil, and the reason for it has long exercised the human intellect. The savage solves it by the supposition of evil spirits. The Greeks attributed the misfortunes of men in great measure to the antipathies and jealousies of gods and goddesses. Others have imagined two divine principles, opposite and antagonistic—the one friendly, the other hostile to men.

Much, however, of what we call evil is really good in disguise, and we should not "quarrel rashly with adversities not yet understood, nor overlook the mercies often bound up in them."* Pain, for instance, is a warning of danger, a very necessity of existence. But for it, but for the warnings which our feelings give us, the very blessings by which we are surrounded would soon and inevitably prove fatal. Many of those who have not studied the question are under the impression that the more deeply-seated portions of the body must be most sensitive. The very reverse is the case. The skin is a continuous and ever watchful sentinel, ever on guard to give us notice of any approaching danger; while the flesh

* Sir T. Browne.

and inner organs, where pain would be without purpose, are, so long as they are healthy, comparatively without sensation.

Freedom of action seems to involve the possibility of evil. If any freedom of choice be left us, much must depend on the choice we make. In the very nature of things, two and two cannot make five. Epictetus imagines Jupiter addressing man as follows: "If it had been possible to make your body and your property free from liability to injury, I would have done so. As this could not be, I have given you a small portion of myself."

This divine gift it is for us to use wisely. It is, in fact, our most valuable treasure. "The soul is a much better thing than all the others which you possess. Can you then show me in what way you have taken care of it? For it is not likely that you, who are so wise a man, inconsiderately and carelessly allow the most valuable thing that you possess to be neglected and to perish." *

Moreover, even if evil cannot be altogether avoided, it is no doubt true that not only whether we lead good and useful, or evil and useless lives, but also whether we are happy or unhappy, is very much in our own power, and depends greatly on ourselves. "Time alone relieves the foolish from sorrow, but reason the wise," † and no one was ever yet made utterly miserable excepting by himself. We are, if not the masters, at any rate almost the creators of ourselves.

With most of us it is not so much great sorrows, disease or death, but rather the little "daily dyings" which cloud over the sunshine of life. How many of the troubles of life are insignificant in themselves, and might easily be avoided!

How happy home might generally be made but for foolish quarrels, or misunderstandings, as they are well named! It is our own fault if we are querulous or ill-humored; nor need we, though this is less easy, allow ourselves to be made unhappy by the querulousness or ill-humors of others.

Much of what we suffer we have brought on ourselves, if not by actual fault, at least by ignorance or thoughtlessness. Many of us fritter our life away. Indeed, La Bruyère says that "most men spend much of their lives in making the rest miserable;" or, as Goethe puts it:

> "Careworn man has, in all ages,
> Sown vanity to reap despair."

Not only do we suffer much in the anticipation of evil, as "Noah lived many years under the affliction of a flood, and Jerusalem was taken unto Jeremy before it was besieged," but we often distress ourselves greatly in the apprehension of misfortunes which after all never happen at all. We should do our best and wait calmly the result. We often hear of people breaking down from overwork, but in nine cases out of ten they are really suffering from worry or anxiety.

"Nos maux moraux," says Rousseau, "sont tous dans l'opinion, hors un seul, qui est le crime; et celui-la dépend de nous: nos maux physiques nous détruisent, ou se détruisent. Le temps ou la mort sont nos remèdes."

This, however, applies to the grown up. With children of course it is different. It is customary, but I think it is a mistake, to speak of happy childhood. Children, however, are often over-anxious and acutely sensitive. Man ought to be a man and master of his fate, but children are at the mercy of those around them. Mr. Rarey, the great horse-tamer, has told us that he has known an angry word raise the pulse of a horse ten beats in a minute. Think then how it must affect a child!

It is small blame to the young if they are over-anxious; but it is a danger to be striven against. "The

* Epictetus.
† Epictetus.

terrors of the storm are chiefly felt in the parlor or the cabin."*

To save ourselves from imaginary, or at any rate problematical, evils, we often incur real suffering. "The man," said Epicurus, "who is not content with little is content with nothing." How often do we "labor for that which satisfieth not." We most of us give ourselves an immense amount of useless trouble; encumber ourselves, as it were, on the journey of life with a dead weight of unnecessary baggage. And as "a man maketh his train longer, he makes his wings shorter." † In that delightful fairy tale, *Alice through the Looking-Glass*, the "White Knight" is described as having provided himself on starting for a journey with a variety of odds and ends, including a mousetrap, in case he was troubled by mice at night, and a bee-hive in case he came across a swarm of bees.

Hearne, in his *Journey to the Mouth of the Coppermine River*, tells us that a few days after starting he met a party of Indians, who annexed a great deal of his property, and all Hearne says is, "The weight of our baggage being so much lightened, our next day's journey was much pleasanter." I ought, however, to add that the Indians broke up the philosophical instruments, which, no doubt, were rather an encumbrance.

"We talk of the origin of evil; . . . but what is evil? We mostly speak of sufferings and trials as good, perhaps, in their result; but we hardly admit that they may be good in themselves. Yet they are knowledge—how else to be acquired, unless by making men as gods, enabling them to understand without experience. All that men go through may be absolutely the best for them—no such thing as evil, at least in our customary meaning of the word." ‡

Indeed, "the vale best discovereth the hill,"* and "pour sentir les grands biens, il faut qu'il connoisse les petits maux."†

If we cannot hope that life will be all happiness, we may at least secure a heavy balance on the right side, and even events which look like misfortune, if boldly faced, may often be turned to good. Helmholtz dates his start in science to an attack of typhoid fever. This illness led to his acquisition of a microscope, which he was enabled to purchase, owing to his having spent his autumn vacation of 1841 in the hospital, prostrated by typhoid fever; being a pupil, he was nursed without expense, and on his recovery he found himself in possession of the savings of his small resources.

"Under different circumstances," says Castelar, "Savonarola would undoubtedly have been a good husband, a tender father, a man unknown to history, utterly powerless to print upon the sands of time and upon the human soul the deep trace which he has left; but misfortune came to visit him, to crush his heart, and to impart that marked melancholy which characterizes a soul in grief, and the grief that circled his brows with a crown of thorns was also that which wreathed them with the splendor of immortality. His hopes were centered in the woman he loved, his life was set upon the possession of her, and when her family finally rejected him, partly on account of his profession, and partly on account of his person, he believed that it was death that had come upon him, when in truth it was immortality"

Moreover, when troubles come, Marcus Aurelius wisely tells us to "remember on every occasion which leads thee to vexation to apply this principle, that this is not a misfortune, but that to bear it nobly is good fortune;" and he elsewhere observes that we suffer much more from the anger and vexation which we allow

* Emerson.
† Bacon.
‡ Helps.

* Bacon.
† Rousseau.

acts to rouse in us, than we do from the acts themselves at which we are angry and vexed. How much most people, for instance, allow themselves to be distracted and disturbed by quarrels and family disputes. Yet in nine cases out of ten one ought not to suffer from being found fault with. If the condemnation is just, it should be welcome as a warning; if it is undeserved, why should we allow it to distress us?

If misfortunes happen we do but make them worse by grieving over them.

"I must die," again says Epictetus. "But must I then die sorrowing? I must be put in chains. Must I then also lament? I must go into exile. Can I be prevented from going with cheerfulness and contentment? But I will put you in prison. Man, what are you saying? You can put my body in prison, but my mind not even Zeus himself can overpower."

If, indeed, we cannot be happy, the fault is generally in ourselves. Epictetus was a poor slave, and yet how much we owe him!

"How is it possible," he says, "that a man who has nothing, who is naked, houseless, without a hearth, squalid, without a slave, without a city, can pass a life that flows easily? See, God has sent you a man to show yon that it is possible. Look at me who am without a city, without a house, without possessions, without a slave; I sleep on the ground; I have no wife, no children, no prætorium, but only the earth and heavens, and one poor cloak. And what do I want? Am I not without sorrow? Am I not without fear? Am I not free? When did any of you see me failing in the object of my desire? or ever falling into that which I would avoid? Did I ever blame God or man? Did I ever accuse any man? Did any of you ever see me with a sorrowful countenance? And how do I meet with those whom you are afraid of and admire? Do not I treat them like slaves? Who, when he sees me, does not think that he sees his king and master?"

Think how much we have to be thankful for. Few of us appreciate the number of our everyday blessings; we think they are trifles, and yet "trifles make perfection, and perfection is no trifle," as Michael Angelo said. We forget them because they are always with us; and yet for each of us, as Mr. Pater well observes of his hero Marius, "these simple gifts, and others equally trivial, bread and wine, fruit and milk, might regain that poetic and, as it were, moral significance which surely belongs to all the means of our daily life, could we but break through the veil of our familiarity with things by no means vulgar in themselves."

"Let not," says Isaak Walton, "the blessings we receive daily from God make us not to value or not praise Him because they be common; let us not forget to praise Him for the innocent mirth and pleasure we have met with since we met together. What would a blind man give to see the pleasant rivers and meadows and flowers and fountains; and this and many other like blessings we enjoy daily."

Contentment, we have heen told by Epicurus, consists not in great wealth, but in few wants. In this fortunate country, however, we may have many wants, and yet, if they are only reasonable, we may gratify them all.

Nature provides without stint the main requisites of human happiness. "To watch the corn grow, or the blossoms set; to draw hard breath over the ploughshare or spade; to read, to think, to love, to pray," these, says Ruskin, "are the things that make men happy."

"I have fallen into the hands of thieves," says Jeremy Taylor; "what then? They have left me the sun and moon, fire and water, a loving wife and many friends to pity me, and some to relieve me, and I can still discourse: and, unless I list, they

have not taken away my merry countenance and my cheerful spirit and a good conscience. . . . And he that hath so many causes of joy, and so great, is very much in love with sorrow and peevishness who loses all these pleasures, and chooses to sit down on his little handful of thorns."

"When a man has such things to think on, and sees the sun, the moon, and stars, and enjoys earth and sea, he is not solitary or even helpless." *

"Paradise indeed might," as Luther said, "apply to the whole world." What more is there we could ask for ourselves? "Every sort of beauty," says Mr Greg, "has been lavished on our allotted home; beauties to enrapture every sense, beauties to satisfy every taste; forms the noblest and the loveliest, colors the most gorgeous and the most delicate, odors the sweetest and subtlest, harmonies the most soothing and the most stirring; the sunny glories of the day: the pale Elysian grace of moonlight, the lake, the mountain, the primrose, the forest, and the boundless ocean; 'silent pinnacles of aged snow' in one hemisphere, the marvels of tropical luxuriance in another; the serenity of sunsets; the sublimity of storms; everything is bestowed in boundless profusion on the scene of our existence; we can conceive or desire nothing more exquisite or perfect than what is round us every hour, and our perceptions are so framed as to be consciously alive to all. The provision made for our sensuous enjoyment is in overflowing abundance: so is that for the other elements of our complex nature. Who that has revelled in the opening ecstasies of a young imagination, or the rich marvels of the world of thought, does not confess that the intelligence has been dowered at least with as profuse a beneficence as the senses? Who that has truly tasted and fathomed human love in its dawning and crowning joys has not thanked God for a felicity which indeed 'passeth understanding?' If we had set our fancy to picture a Creator occupied solely in devising delight for children whom he loved, we could not conceive one single element of bliss which is not here."

* Epictetus.

CHAPTER II.

THE HAPPINESS OF DUTY.*

"I am always content with that which happens; for I think that what God chooses is better than what I choose."—EPICTETUS.

"O God, All conquering! this lower earth
Would be for men the blest abode of mirth
If they were strong in Thee
As other things of this world well are seen,
Other, far other than they yet have been,
How happy would men be."

KING ALFRED'S ed. of Boethius's *Consolations of Philosophy.*

WE ought not to picture duty to ourselves, or to others, as a stern taskmistress. She is rather a kind and sympathetic mother, ever ready to shelter us from the cares and anxieties of this world, and to guide us in the paths of peace.

To shut one's self up from mankind is, in most cases, to lead a selfish as well as a dull life. Our duty is to make ourselves useful, and thus life may be most interesting, and yet comparatively free from anxiety.

But how can we fill our lives with *life*, energy, and interest, and yet keep care outside?

Many great men have made shipwreck in the attempt. "Anthony sought for happiness in love; Brutus in glory; Cæsar in dominion: the first found disgrace, the second disgust, the last ingratitude, and each destruction." † Riches, again, often bring danger, trouble, and temptation; they require care to keep, though they may give much happiness if wisely spent.

* The substance of this was delivered at the Harris Institute, Preston.

† Colton, *Lacon, or Many Things in Few Words.*

How then is this great object to be secured? What, says Marcus Aurelius, "What then is that which is able to conduct a man? One thing and only one—philosophy. But this consists in keeping the dæmon within a man free from violence and unharmed, superior to pains and pleasures, doing nothing without a purpose, not yet falsely and with hypocrisy, not feeling the need of another man's doing or not doing anything; and besides, accepting all that happens, and all that is allotted, as coming from thence, wherever it is, from whence he himself came; and, finally, waiting for death with a cheerful mind, as being nothing else than a dissolution of the elements of which every living being is compounded." I confess I do not feel the force of these last few words, which indeed scarcely seem requisite for his argument. The thought of death, however, certainly influences the conduct of life less than might have been expected.

Bacon truly points out that "there is no passion in the mind of man so weak, but it mates and masters the fear of death. . . . Revenge triumphs over death, love slights it, honor aspireth to it, grief flieth to it."

"Think not I dread to see my spirit fly,
Through the dark gates of fell mortality;
Death has no terrors when the life is true;
'Tis living ill that makes us fear to die."*

We need certainly have no such fear if we have done our best to make others happy; to promote "peace on earth and goodwill amongst men." Nothing, again, can do more to release us from the cares of this world, which consume so much of our time, and embitter so much of our life; yet when we have done our best, we should wait the result in peace; content, as Epictetus says, "with that which happens, for what God chooses is better than what I choose."

At any rate, if we have not effected all we wished, we shall have influenced ourselves. It may be true that one cannot do much. "You are not Hercules, and you are not able to purge away the wickedness of others, nor yet are you Theseus, able to purge away the evil things of Attica. Clear away your own. From yourself, from your thoughts; cast away, instead of Procrustes and Sciron, sadness, fear, desire, envy, malevolence. avarice, effeminacy, intemperance. But it is not possible to eject these things otherwise than by looking to God only, by fixing your affections on Him only, by being consecrated by His commands."* To rule one's self is in reality the greatest triumph.

"He who is his own monarch," says Sir T. Browne, "contentedly sways the scepter of himself, not envying the glory to crowned heads and Elohim of the earth;" for those are really highest who are nearest to heaven, and those are lowest who are farthest from it. True greatness has little, if anything, to do with rank or power.

"Eurystheus being what he was," says Epictetus, "was not really king of Argos nor of Mycenæ, for he could not even rule himself; while Hercules purged lawlessness and introduced justice, though he was both naked and alone."

We are told that Cineas, the philosopher, once asked Pyrrhus what he would do when he had conquered Italy. "I will conquer Sicily." "And after Sicily?" "Then Africa." "And after you have conquered the world?" "I will take my ease and be merry." "Then," asked Cineas, "why can you not take your ease and be merry now?" Moreover, as Sir Arthur Helps has wisely pointed out, "the enlarged view we have of the Universe must in some measure damp personal ambition. What is it to be king, sheikh, tetrarch, or emperor over a 'bit of a bit' of this little earth?"

"All rising to great place," says Bacon, "is by a winding stair;" and

* Omar Khayyam.

* Epictetus.

"princes are like heavenly bodies, which have much veneration, but no rest." Moreover, there is a great deal of drudgery in the lives of courts. Ceremonials may be important, but they are terribly tedious, and take up a great deal of time.

A man is his own best kingdom. But self-control, this truest and greatest monarchy, rarely comes by inheritance. Every one of us must conquer himself, and we may do so, if we take conscience for our guide and general.

Being myself engaged in business, I was rather startled to find it laid down by no less an authority than Aristotle (almost as if it were a self-evident proposition) that commerce "is incompatible with that dignified life which it is our wish that our citizens should lead, and totally adverse to that generous elevation of mind with which it is our ambition to inspire them." I know not how far that may really have been the spirit and tendency of commerce among the ancient Greeks; but if so, I do not wonder that it was not more successful.

But is it true that the ordinary duties of life in a country like ours—commerce, manufactures, agriculture—the pursuits to which the vast majority are and must be devoted—are incompatible with the dignity or nobility of life? Surely this is not so. Whether a life is noble or ignoble depends not on the calling which is adopted, but on the spirit in which it is followed. The humblest life may be noble, while that of the most powerful monarch or the greatest genius may be contemptible. What Ruskin says of art is, with due modification, true of life generally. It does not matter whether a man "paint the petal of a rose or the chasms of a precipice, so that love and admiration attend on him as he labors, and wait forever on his work. It does not matter whether he toil for months on a few inches of his canvas, or cover a palace front with color in a day, so only that it be with a solemn purpose, that he have filled his heart with patience or urged his hand to haste."

It is true that in a subsequent volume he refers to this passage, and adds, "But though all is good for study, and all is beautiful, some is better than the rest for the help and pleasure of others; and this it is our duty always to choose if we have opportunity," adding, however, "being quite happy with what is within our reach if we have not."

Commerce, indeed, is not only compatible, but I would almost go further and say that it will be most successful, if carried on in happy union with noble aims and generous aspirations. We read of and admire the heroes of old, but every one of us has to fight his own Marathon and Thermopylæ; every one meets the Sphinx sitting by the road he has to pass; to each of us, as to Hercules, is offered the choice of vice and virtue; we may, like Paris, give the apple of life to Venus, or Juno, or Minerva.

I may, indeed, quote Aristotle against himself, for he has elsewhere told us that "business should be chosen for the sake of leisure; and things necessary and useful for the sake of the beautiful in conduct."

There are many who seem to think that we have fallen on an age in the world when life is especially difficult and anxious, when there is less leisure than ever, and the struggle for existence is keener than it was of yore.

On the other hand, we must remember how much we have gained in security? It may be an age of hard work, but when this is not carried to an extreme, it is by no means an evil. Cheerfulness is the daughter of employment, and on the whole I believe there never was a time when modest merit and patient industry were more sure of reward. We must not, indeed, be discouraged if success be slow in coming, nor puffed up if it comes quickly. We should, however, greatly misunderstand the teaching of Marcus Aurelius if we supposed that in advocating philosophy he intended

in any way to exclude sympathy with the joys and sorrows of others.

Matthew Arnold has suggested that we might take a lesson from the heavenly bodies:

"Unaffrighted by the silence round them,
Undistracted by the sights they see,
These demand not that the things without them
Yield them love, amusement, sympathy.

Bounded by themselves, and unobservant
In what state God's other works may be,
In their own tasks all their powers pouring,
These attain the mighty life you see."

To many, however, this isolation would be itself most painful. The heart is "no island cut off from other lands, but a continent that joins to them,"* though it is true that

"A man is his own star;
Our acts our angels are
For good or ill."

and that "rather than follow a multitude to do evil," one should "stand like Pompey's pillar, conspicuous by one's self, and single in integrity."†

Newman, in perhaps the most beautiful of his hymns, "Lead, kindly light," says:

"Keep thou my feet, I do not ask to see
The distant scene; one step enough for me."

But we must be sure that we are really following some worthy guide, and not out of mere laziness allowing ourselves to drift. We have a guide within us which will generally lead us straight enough.

Religion, no doubt, is full of difficulties, but if we are often puzzled what to think, we need seldom be in doubt what to do.

"To say well is good, but to do well is better;
Do well is the spirit, and say well the letter;
If do well and say well were fitted in one frame,
All were won, all were done, and got were all the gain."

* Bacon.
† Sir T. Browne.

Cleanthes, who appears to have well merited the statute erected to him at Assos, says:

"Lead me, O Zeus, and thou, O Destiny,
The way that I am bid by you to go:
To follow I am ready. If I choose not,
I make myself a wretch; and still must follow."

If we are ever in doubt what to do, it is a good rule to ask ourselves what we shall wish on the morrow that we had done.

Moreover, the result in the long run will depend not so much on some single resolution, or on our action in a special case, but rather on the preparation of daily life. Great battles are really won before they are actually fought. To control our passions we must govern our habits, and keep watch over ourselves in the small details of everyday life.

The importance of small things has been pointed out by philosophers over and over again from Æsop downwards. "Great without small makes a bad wall," says a quaint Greek proverb, which seems to go back to cyclopean times. In an old Hindoo story Ammi says to his son, "Bring me a fruit of that tree and break it open. What is there?" The son said, "Some small seeds." "Break one of them and what do you see?" "Nothing, my lord." "My child," said Ammi, "where you see nothing there dwells a mighty tree." It may almost be questioned whether anything can be truly called small.

"There is no great and no small
To the soul that maketh all;
And where it cometh all things are,
And it cometh everywhere."*

"If, then, you wish not to be of an angry temper, do not feed the habit: throw nothing on it which will increase it: at first keep quiet, and count the days on which you have not been angry. I used to be in passion every day; now every second day; then every third; then every fourth. But

* Emerson.

if you have intermitted thirty days, make a sacrifice to God. For the habit at first begins to be weakened, and then is completely destroyed. When you can say, 'I have not been vexed to-day, nor the day before, nor yet on any succeeding day during two or three months; but I took care when some exciting things happened,' be assured that you are in a good way." *

"The great man," says Emerson, "is he who in the midst of the crowd keeps with perfect sweetness the serenity of solitude."

And he closes his *Conduct of Life* with a striking allegory. The young mortal enters the Hall of the Firmament. The gods are sitting there, and he is alone with them. They pour on him gifts and blessings, and beckon him to their thrones. But between him and them suddenly appear snow-storms of illusions. He imagines himself in a vast crowd, whose behests he fancies he must obey. The mad crowd drives hither and thither, and sways this way and that. What is he that he should resist? He lets himself be carried about. How can he think or act for himself? But when the clouds lift, there are the gods still sitting on their thrones; they alone with him alone.

We may all, if we will, secure peace of mind for ourselves.

"Men seek retreats," says Marcus Aurelius, "houses in the country, sea-shores, and mountains; and thou too art wont to desire such things very much. But this is altogether a mark of the most common sort of men, for it is in thy power whenever thou shalt choose to retire into thyself. For nowhere either with more quiet or more freedom from trouble does a man retire than into his own soul, particularly when he has within him such thoughts that by looking into them he is immediately in perfect tranquillity."

Happy indeed is the man who has such a sanctuary in his own soul.

* Epictetus.

"He who is virtuous is wise; and he who is wise is good; and he who is good is happy." *

But we cannot expect to be happy if we do not lead pure and useful lives. To be good company for ourselves we must store our minds well; fill them with happy and pure thoughts, with pleasant memories of the past, and reasonable hopes for the future. We must, as far as may be, protect ourselves from self-reproach, from care, and from anxiety. We shall make our lives pure and happy, by resisting evil, by placing restraint upon our appetites, and perhaps even more by strengthening and developing our tendencies to good. We must be careful, then, how we choose our thoughts. The soul is dyed by its thoughts; we cannot keep our minds pure if we allow them to dwell on detailed accounts of crime and sin. Peace of mind, as Ruskin beautifully observes, "must come in its own time, as the waters settle themselves into clearness as well as quietness; you can no more filter your mind into purity than you can compress it into calmness; you must keep it pure if you would have it pure, and throw no stones into it if you would have it quiet."

Few men have led a wiser or more virtuous life than Socrates, of whom Xenophon gives us the following description:—"To me, being such as I have described him, so pious that he did nothing without the sanction of the gods; so just, that he wronged no man even in the most trifling affair, but was of service in the most important matters to those who enjoyed his society; so temperate that he never preferred pleasure to virtue; so wise, that he never erred in distinguishing better from worse; needing no counsel from others, but being sufficient in himself to discriminate between them; so able to explain and settle such questions by argument; and so capable of discerning the character of others, of confut-

* King Alfred's *Boethius*.

ing those who were in error, and of exhorting them to virtue and honor, he seemed to be such as the best and happiest of men would be. But if any one disapproves of my opinion let him compare the conduct of others with that of Socrates, and determine accordingly."

Marcus Aurelius again has drawn for us a most instructive lesson in his character of Antoninus:—"Do everything as a disciple of Antoninus. Remember his constancy in every act which was conformable to reason, and his evenness in all things, and his piety, and the serenity of his countenance, and his sweetness, and his disregard of empty fame, and his efforts to understand things; and how he would never let anything pass without having first most carefully examined it and clearly understood it; and how he bore with those who blamed him unjustly without blaming them in return; how he did nothing in a hurry; and how he listened not to calumnies, and how exact an examiner of manners and actions he was; not given to reproach people, nor timid, nor suspicious, nor a sophist; with how little he was satisfied, such as lodging, bed, dress, food, servants; how laborious and patient; how sparing he was in his diet; his firmness and uniformity in his friendships; how he tolerated freedom of speech in those who opposed his opinions; the pleasure that he had when any man showed him anything better; and how pious he was without superstition. Imitate all this that thou mayest have as good a conscience, when thy last hour comes, as he had."

Such peace of mind is indeed an inestimable boon, a rich reward of duty fulfilled. Well does Epictetus ask, "Is there no reward? Do you seek a reward greater than doing what is good and just? At Olympia you wish for nothing more, but it seems to you enough to be crowned at the games. Does it then seem to you so small and worthless a thing to be good and happy?"

In St. Bernard's beautiful lines—

"Pax erit illa fidelibus, illa beata
Irrevocabilis, Invariabilis, Intemerata.
Pax sine crimine, pax sine turbine, pax sine rixâ,
Meta laboribus, inque tumultibus anchora fixa;
Pax erit omnibus unica. Sed quibus? immaculatis,
Pectore mitibus; ordine stantibus, ore sacratis."

What greater happiness can we have than this?

CHAPTER III.

A SONG OF BOOKS.*

"Oh for a booke and a shadie nooke,
Eyther in-a-doore or out;
With the grene leaves whispering overhede,
Or the streete cryes all about.
Where I maie reade all at my ease,
Both of the newe and olde;
For a jollie goode booke whereon to looke,
Is better to me than golde."

OLD ENGLISH SONG.

OF all the privileges we enjoy in this nineteenth century there is none, perhaps, for which we ought to be more thankful than for the easier access to books.

The debt we owe to books was well expressed by Richard de Bury, Bishop of Durham, author of *Philobiblon*, published as long ago as 1473, and the earliest English treatise on the delights of literature:—"These are the masters who instruct us without rods and ferules, without hard words and anger, without clothes or money. If you approach them, they are not asleep; if investigating you interrogate them, they conceal nothing; if you mistake them, they never grumble; if you are ignorant, they cannot laugh at you."

This feeling that books are real friends is constantly present to all who love reading.

"I have friends," said Petrarch,

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* Delivered at the Working Men's College.

"whose society is extremely agreeable to me; they are of all ages and of every country. They have distinguished themselves both in the cabinet and in the field, and obtained high honors for their knowledge of the sciences. It is easy to gain access to them, for they are always at my service, and I admit them to my company, and dismiss them from it, whenever I please. They are never troublesome, but immediately answer every question I ask them. Some relate to me the events of past ages, while others reveal to me the secrets of Nature. Some teach me how to live, and others how to die. Some by their vivacity, drive away my cares and exhilarate my spirits; while others give fortitude to my mind, and teach me the important lesson how to restrain my desires, and to depend wholly on myself. They open to me, in short, the various avenues of all the arts and sciences, and upon their information I may safely rely in all emergencies. In return for all their services, they only ask me to accommodate them with a convenient chamber in some corner of my humble habitation, where they may repose in peace; for these friends are more delighted by the tranquillity of retirement than with the tumults of society."

"He that loveth a book," says Isaac Barrow, "will never want a faithful friend, a wholesome counsellor, a cheerful companion, an effectual comforter. By study, by reading, by thinking, one may innocently divert and pleasantly entertain himself, as in all weathers, so in all fortunes."

Southey took a rather more melancholy view:

"My days among the dead are pass'd,
Around me I behold,
Where'er these casual eyes are cast,
The mighty minds of old;
My never-failing friends are they,
With whom I converse day by day."

Imagine, in the words of Aikin, "that we had it in our power to call up the shades of the greatest and wisest men that ever existed, and oblige them to converse with us on the most interesting topics—what an inestimable privilege should we think it!—how superior to all common enjoyments! But in a well-furnished library we, in fact, possess this power. We can question Xenophon and Cæsar on their campaigns, make Demosthenes and Cicero plead before us, join in the audiences of Socrates and Plato, and receive demonstrations from Euclid and Newton. In books we have the choicest thoughts of the ablest men in their best dress."

"Books," says Jeremy Collier, "are a guide in youth and an entertainment for age. They support us under solitude, and keep us from being a burthen to ourselves. They help us to forget the crossness of men and things; compose our cares and our passions; and lay our disappointments asleep. When we are weary of the living, we may repair to the dead, who have nothing of peevishness, pride, or design in their conversation."

Cicero described a room without books as a body without a soul. But it is by no means necessary to be a philosopher to love reading.

Sir John Herschel tells an amusing anecdote illustrating the pleasure derived from a book, not assuredly of the first order. In a certain village the blacksmith had got hold of Richardson's novel, *Pamela, or Virtue Rewarded*, and used to sit on his anvil in the long summer evenings and read it aloud to a large and attentive audience. It is by no means a short book, but they fairly listened to it all. "At length, when the happy turn of fortune arrived, which brings the hero and heroine together, and sets them living long and happily according to the most approved rules, the congregation were so delighted as to raise a great shout, and procuring the church keys, actually set the parish bells ringing."

"The lover of reading," says Leigh Hunt, "will derive agreeable terror

from *Sir Bertram* and the *Haunted Chamber;* will assent with delighted reason to every sentence in *Mrs. Barbauld's Essay;* will feel himself wandering into solitudes with *Gray;* shake honest hands with *Sir Roger de Coverley;* be ready to embrace *Parson Adams*, and to chuck *Pounce* out of the window instead of the hat; will travel with *Marco Polo* and *Mungo Park;* stay at home with *Thomson;* retire with *Cowley;* be industrious with *Hutton;* sympathizing with *Gay and Mrs. Inchbald;* laughing with (and at) *Buncle;* melancholy, and forlorn, and self-restored with the shipwrecked mariner of *De Foe.*"

Carlyle has wisely said that a collection of books is a real university.

The importance of books has been appreciated in many quarters where we might least expect it. Among the hardy Norsemen runes were supposed to be endowed with miraculous power. There is an Arabic proverb, that "a wise man's day is worth a fool's life," and though it rather perhaps reflects the spirit of the Califs than of the Sultans, that "the ink of science is more precious than the blood of the martyrs."

Confucius is said to have described himself as a man who "in his eager pursuit of knowledge forgot his food, who in the joy of its attainment forgot his sorrows, and did not even perceive that old age was coming on."

Yet, if this could be said by the Chinese and the Arabs, what language can be strong enough to express the gratitude we ought to feel for the advantages we enjoy! We do not appreciate, I think, our good fortune in belonging to the nineteenth century. Sometimes, indeed, one may be inclined to wish that one had not lived quite so soon, and to long for a glimpse of the books, even the school-books, of one hundred years hence. A hundred years ago not only were books extremely expensive and cumbrous, many of the most delightful books were still uncreated—such as the works of Scott, Thackeray, Dickens, Bulwer Lytton, and Trollope, not to mention living authors. How much more interesting science has become, especially if I were to mention only one name, through the genius of Darwin! Renan has characterized this as a most amusing century; I should rather have described it as most interesting; presenting us with an endless vista of absorbing problems, with infinite opportunities; with more than the excitements, and less of the dangers, which surrounded our less fortunate ancestors.

Reading, indeed, is by no means necessarily study. Far from it. "I put," says Mr. Frederic Harrison, in his excellent article on the "Choice of Books," "I put the poetic and emotional side of literature as the most needed for daily use."

In the prologue to the *Legende of Goode Women*, Chaucer says:

"And as for me, though that I konne but lyte,
On bokes for to rede I me delyte,
And to him give I feyth and ful credence,
And in myn herte have him in reverence,
So hertely, that ther is game noon,
That fro my bokes maketh me to goon,
But yt be seldome on the holy day,
Save, certynly, when that the monthe of May
Is comen, and that I here the foules synge,
And that the floures gynnen for to sprynge,
Farwel my boke, and my devocion."

But I doubt whether, if he had enjoyed our advantages, he could have been so certain of tearing himself away even in the month of May.

Macaulay, who had all that wealth and fame, rank and talents could give, yet, we are told, derived his greatest happiness from books. Sir G. Trevelyan, in his charming biography, says that—"of the feelings which Macaulay entertained towards the great minds of bygone ages it is not for any one except himself to speak. He has told us how his debt to them was incalculable; how they guided him to truth; how they filled his mind with noble and graceful

images; how they stood by him in all vicissitudes—comforters in sorrow, nurses in sickness, companions in solitude, the old friends who are never seen with new faces; who are the same in wealth and in poverty, in glory and in obscurity. Great as were the honors and possessions which Macaulay acquired by his pen, all who knew him were well aware that the titles and rewards which he gained by his own works were as nothing in the balance as compared with the pleasure he derived from the works of others."

There was no society in London so agreeable that Macaulay would have preferred it at breakfast or at dinner "to the company of Sterne or Fielding, Horace Walpole or Boswell."

The love of reading which Gibbon declared he would not exchange for all the treasures of India was, in fact, with Macaulay "a main element of happiness in one of the happiest lives that it has ever fallen to the lot of the biographer to record."

"History," says Fuller, "maketh a young man to be old without either wrinkles or gray hair, privileging him with the experience of age without either the infirmities or the inconveniences thereof."

So delightful indeed are our books that we must be careful not to neglect other duties for them; in cultivating the mind we must not neglect the body.

To the lover of literature or science exercise often presents itself as an irksome duty, and many a one has felt like "the fair pupil of Ascham, who, while the horns were sounding and dogs in full cry, sat in the lonely oriel with eyes riveted to that immortal page which tells how meekly and bravely the first martyr of intellectual liberty took the cup from his weeping jailer."*

Still, as the late Lord Derby justly observed, † those who do not find time for exercise will have to find time for illness.

Books are now so cheap as to be within the reach of almost every one. This was not always so. It is quite a recent blessing. Mr. Ireland, to whose charming little *Book Lover's Enchiridion*, in common with every lover of reading, I am greatly indebted, tells us that when a boy he was so delighted with White's *Natural History of Selborne*, that in order to possess a copy of his own he actually copied out the whole work.

Mary Lamb gives a pathetic description of a studious boy lingering at a bookstall:

"I saw a boy with eager eye
Open a book upon a stall,
And read as he'd devour it all;
Which, when the stall man did espy,
Soon to the boy I heard him call,
'You, sir, you never buy a book,
Therefore in one you shall not look.'
The boy passed slowly on, and with a sigh
He wished he never had been taught to read,
Then of the old churl's books he should have had no need."

Such snatches of literature have, indeed, a special and peculiar charm. This is, I believe, partly due to the very fact of their being brief. Many readers I think, miss much of the pleasure of reading by forcing themselves to dwell too long continuously on one subject. In a long railway journey, for instance, many persons take only a single book. The consequence is that, unless it is a story, after half an hour or an hour they are quite tired of it. Whereas, if they had two, or still better three, on different subjects, and one of them being of an amusing character, they would probably find that, by changing as soon as they felt at all weary, they would come back again and again to each with renewed zest, and hour after hour would pass pleasantly away. Every one, of course, must judge for himself, but such at least is my experience.

I quite agree, therefore, with Lord Iddesleigh as to the charm of desul-

* Macaulay.
† Address, Liverpool College, 1873.

tory reading, but the wider the field the more important that we should benefit by the very best books in each class. Not that we need confine ourselves to them, but that we should commence with them, and they will certainly lead us on to others. There are of course some books which we must read, mark, learn, and inwardly digest. But these are exceptions. As regards by far the larger number, it is probably better to read them quickly, dwelling only on the best and most important passages. In this way, no doubt, we shall lose much, but we gain more by ranging over a wider field. We may, in fact, I think, apply to reading Lord Brougham's wise dictum as regards education, and say that it is well to read everything of something and something of everything. In this way only we can ascertain the bent of our own tastes, for it is a general, though not of course an invariable, rule, that we profit little by books which we do not enjoy.

Every one, however, may suit himself. The variety is endless.

"We may sit in our library and yet be in all quarters of the earth. We may travel round the world with Captain Cook or Darwin, with Kingsley or Ruskin, who will show us much more perhaps than ever we should see for ourselves. The world itself has no limits for us; Humboldt and Herschel will carry us far away to the mysterious nebulæ, far beyond the sun and even the stars; time has no more bounds than space; history stretches out behind us, and geology will carry us back for millions of years before the creation of man, even to the origin of the material Universe itself. We are not limited even to one plane of thought. Aristotle and Plato will transport us into a sphere none the less delightful because it acquires some training to appreciate it. We may make a library, if we do but rightly use it, a true paradise on earth, a garden of Eden without its one drawback, for all is open to us, including and especially the fruit of the tree of knowledge for which we are told that our first mother sacrificed all the rest. Here we may read the most important histories, the most exciting volumes of travels and adventures, the most interesting stories, the most beautiful poems; we may meet the most eminent statesmen and poets and philosophers, benefit by the ideas of the greatest thinkers, and enjoy all the greatest creations of human genius."

CHAPTER IV.

THE CHOICE OF BOOKS.*

"All round the room my silent servants wait—
My friends in every season, bright and dim,
Angels and Seraphim
Come down and murmur to me, sweet and low,
And spirits of the skies all come and go
Early and Late."

PROCTOR.

AND yet too often they wait in vain. One reason for this is, I think, that people are overwhelmed by the crowd of books offered to them. There are books and books, and there are books which, as Lamb said, are not books at all.

In old days books were rare and dear. Our ancestors had a difficulty in procuring them. Our difficulty now is what to select. We must be careful what we read, and not like the sailors of Ulysses, take bags of wind for sacks of treasure—not only lest we should even now fall into the error of the Greeks, and suppose that language and definitions can be instruments of investigation as well as of thought, but lest, as too often happens, we should waste time over trash. There are many books to which one may apply, in the sarcastic sense the ambiguous remark said to have been made to an unfortunate

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* Delivered at the London Working Men's College.

author, "I will lose no time in reading your book."

It is wonderful indeed how much innocent happiness we thoughtlessly throw away. An eastern proverb says that calamities sent by heaven may be avoided, but from those we bring on ourselves there is no escape.

Many, I believe, are deterred from attempting what are called stiff books for fear they should not understand them; but, as Hobbes said, there are few who need complain of the narrowness of their minds, if only they would do their best with them.

In reading, however, it is most important to select subjects in which one is interested. I remember years ago consulting Mr. Darwin as to the selection of a course of study. He asked me what interested me most, and advised me to choose that subject. This, indeed, applies to the work of life generally.

I am sometimes disposed to think that the great readers of the next generation will be, not our lawyers and doctors, shopkeepers and manufacturers, but the laborers and mechanics. Does not this seem natural? The former work mainly with their head; when their daily duties are over the brain is often exhausted, and of their leisure time much must be devoted to air and exercise. The laborer and mechanic, on the contrary, besides working often for much shorter hours, have in their work-time taken sufficient bodily exercise, and could therefore give any leisure they might have to reading and study. They have not done so as yet, it is true; but this has been for obvious reasons. Now, however, in the first place, they receive an excellent education in elementary schools, and in the second have more easy access to the best books.

Ruskin has observed he does not wonder at what men suffer, but he often wonders at what they lose. We suffer much, no doubt, from the faults of others, but we lose much more by our own ignorance.

It is one thing to own a library; it is, however, another to use it wisely. "If," says Sir John Herschel, "I were to pray for a taste which should stand me instead under every variety of circumstances, and be a source of happiness and cheerfulness to me through life, and a shield against its ills, however things might go amiss and the world frown upon me, it would be a taste for reading. I speak of it of course only as a worldly advantage, and not in the slightest degree as superseding or derogating from the higher office and surer and stronger panoply of religious principles—but as a taste, an instrument, and a mode of pleasurable gratification. Give a man this taste, and the means of gratifying it, and you can hardly fail of making a happy man, unless, indeed, you put into his hands a most perverse selection of books."

I have often been astonished how little care people devote to the selection of what they read. Books, we know, are almost innumerable; our hours for reading are, alas! very few. And yet many people read almost by hazard. They will take any book they chance to find in a room at a friend's house; they will buy a novel at a railway-stall if it has an attractive title; indeed, I believe in some cases even the binding affects their choice. The selection is, no doubt, far from easy. I have often wished some one would recommend a list of a hundred good books. If we had such lists drawn up by a few good guides they would be most useful. I have indeed sometimes heard it said that in reading every one must choose for himself, but this reminds me of the recommendation not to go into the water till you can swim.

In the absence of such lists I have picked out the books most frequently mentioned with approval by those who have referred directly or indirectly to the pleasure of reading, and have ventured to include some which, though less frequently mentioned,

are especial favorites of my own. Every one who looks at the list will wish to suggest other books, as indeed I should myself, but in that case the number would soon run up.*

I have abstained, for obvious reasons, from mentioning works by living authors, though from many of them—Tennyson, Ruskin, and others—I have myself derived the keenest enjoyment; and have omitted works on science, with one or two exceptions, because the subject is so progressive.

I feel that the attempt is over bold, and I must beg for indulgence; but indeed one object which I have had in view is to stimulate others more competent far than I am to give us the advantage of their opinions.

Moreover, I must repeat that I suggest these works rather as those which, as far as I have seen, have been most frequently recommended, than as suggestions of my own, though I have slipped in a few of my own special favorites.

In the absence of such lists we may fall back on the general verdict of mankind. There is a "struggle for existence" and a "survival of the fittest" among books, as well as among animals and plants. As Alonzo of Aragon said, "Age is a recommendation in four things—old wood to burn, old wine to drink, old friends to trust, and old books to read." Still, this cannot be accepted without important qualifications. The most recent books of history and science contain, or ought to contain, the most accurate information and the most trustworthy conclusions. Moreover, while the books of other races and times have an interest from their very distance, it must be admitted that many will still more enjoy, and feel more at home with, those of our own century and people.

Yet the oldest books of the world are remarkable and interesting on account of their very age; and the works which have influenced the opinions, or charmed the leisure hours, of millions of men in distant times and far-away regions are well worth reading on that very account, even if they seem scarcely to deserve their reputation. It is true that to many of us such works are accessible only in translations; but translations, though they can never perhaps do justice to the original, may yet be admirable in themselves. The Bible itself, which must stand first in the list, is a conclusive case.

At the head of all non-Christian moralists, I must place the *Enchiridion* of Epictetus, certainly one of the noblest books in the whole of literature; so short, moreover, so accessible, and so well translated that it is always a source of wonder to me that it is so little read. With Epictetus I think must come Marcus Aurelius. The *Analects* of Confucius will, I believe, prove disappointing to most English readers, but the effect it has produced on the most numerous race of men constitutes in itself a peculiar interest. The *Ethics* of Aristotle, perhaps, appear to some disadvantage from the very fact that they have so profoundly influenced our views of morality. The *Koran*, like the *Analects* of Confucius, will to most of us derive its principal interest from the effect it has exercised, and still exercises, on so many millions of our fellow-men. I doubt whether in any other respect it will seem to repay perusal, and to most persons probably certain extracts, not too numerous, would appear sufficient.

The writings of the Apostolic Fathers have been collected in one volume by Wake. It is but a small one, and though I must humbly confess that I was disappointed, they are perhaps all the more curious from the contrast they afford to those of the Apostles themselves. Of the later Fathers I have included only the *Confessions* of St. Augustine, which

* Several longer lists have been given; for instance, by Comte, *Catechism of Positive Philosophy*; Pycroft, *Course of English Reading*; Baldwin, *The Book Lover*; and Perkins, *The Best Reading*; and by Mr. Ireland, *Books for General Readers*.

Dr. Pusey selected for the commencement of the *Library of the Fathers*, and which, as he observes, has "been translated again and again into almost every European language, and in all loved;" though Luther was of opinion that he "wrote nothing to the purpose concerning faith;" but then Luther was no great admirer of the Fathers. St. Jerome, he says, "writes, alas! very coldly;" Chrysostom "digresses from the chief points;" St. Jerome is "very poor;" and in fact, he says, "the more I read the books of the Fathers the more I find myself offended;" while Renan, in his interesting autobiography, compared theology to a Gothic Cathedral, "elle a la grandeur, les vides immenses, et le peu de solidité."

Among other devotional works most frequently recommended are Thomas à Kempis's *Imitation of Christ*, Pascal's *Pensées*, Spinoza's *Tractatus Theologico-Politicus*, Butler's *Analogy of Religion*, Jeremy Taylor's *Holy Living and Dying*, Keble's beautiful *Christian Year*, and last, not least, Bunyan's *Pilgrim's Progress*.

Aristotle and Plato again stand at the head of another class. The *Politics* of Aristotle, and Plato's *Dialogues*, if not the whole, at any rate the *Phædo*, the *Apology*, and the *Republic*, will be of course read by all who wish to know anything of the history of human thought, though I am heretical enough to doubt whether the latter repays the minute and laborious study often devoted to it.

Aristotle being the father, if not the creator, of the modern scientific method, it has followed naturally—indeed, almost inevitably—that his principles have become part of our very intellectual being, so that they seem now almost self-evident, while his actual observations, though very remarkable—as, for instance, when he observes that bees on one journey confine themselves to one kind of flower—still have been in many cases superseded by others, carried on under more favorable conditions. We must not be ungrateful to the great master, because his own lessons have taught us how to advance.

Plato, on the other hand, I say so with all respect, seems to me in some cases to play on words; his arguments are very able, very philosophical, often very noble; but not always conclusive; in a language differently constructed they might sometimes tell in exactly the opposite sense. If this method has proved less fruitful, if in metaphysics we have made but little advance, that very fact in one point of view leaves the *Dialogues* of Socrates as instructive now as ever they were; while the problems with which they deal will always rouse our interest, as the calm and lofty spirit which inspires them must command our admiration.

I would also mention Demosthenes's *De Coronâ*, which Lord Brougham pronounced the greatest oration of the greatest of orators; Lucretius, Plutarch's Lives, Horace, and at least the *De Officiis*, *De Amicitiâ*, and *De Senectute* of Cicero.

The great epics of the world have always constituted one of the most popular branches of literature. Yet how few, comparatively, ever read the *Iliad* or *Odyssey*, Hesiod or Virgil, after leaving school.

The *Nibelungenlied*, our great Anglo-Saxon epic, is perhaps too much neglected, no doubt on account of its painful character. Brunhild and Kriemhild, indeed, are far from perfect, but we meet with few such "live" women in Greek or Roman literature. Nor must I omit to mention Sir T. Malory's *Morte d'Arthur*, though I confess I do so mainly in deference to the judgment of others.

Among the Greek tragedians, Æschylus, if not all his works, at any rate *Prometheus*, perhaps the sublimest poem in Greek literature, and the *Trilogy* (Mr. Symonds in his *Greek Poets* speaks of the "unrivaled majesty" of the *Agamemnon*, and Mark Pattison considered it "the grandest work of creative genius in the whole range of literature"); or,

as Mr. Grant Duff recommends, the *Persæ;* Sophocles (*Œdipus Tyrannus*), Euripides (*Medea*), and Aristophanes (*The Knights and Clouds*); Schlegel says that probably even the greatest scholar does not understand half his jokes; though I think most modern readers will prefer our modern poets.

I should like, moreover, to say a word for Eastern poetry, such as portions of the *Maha Bharata* and *Ramayana* (too long probably to be read through, but of which Talboys Wheeler has given a most interesting epitome in the two first volumes of his *History of India*); the *Shah-nameh*, the work of the great Persian poet, Firdusi; and the Sheking, the classical collection of ancient Chinese odes. Many, I know, will think I ought to have included Omar Khayyam.

In history we are beginning to feel that the vices and vicissitudes of kings and queens, the dates of battles and wars, are far less important than the development of human thought, the progress of art, of science, and of law, and the subject is on that very account even more interesting than ever. I will, however, only mention, and that rather from a literary than a historical point of view, Herodotus, Xenophon (the *Anabasis*), Thucydides, and Tacitus (*Germania*); and of modern historians, Gibbon's *Decline and Fall*, Hume's *History of England*, Carlyle's *French Revolution*, Grote's *History of Greece*, and Green's *Short History of the English People.*

Science is so rapidly progressive that, though to many minds it is the most fruitful and interesting subject of all, I cannot here rest on that agreement which, rather than my own opinion, I take as the basis of my list. I will therefore only mention Bacon's *Novum Organum*, Mill's *Logic*, and Darwin's *Origin of Species;* in Political Economy, which some of our rulers now scarcely seem sufficiently to value, Mill, and parts of Smith's *Wealth of Nations*, for probably those who do not intend to make a special study of political economy would scarcely read the whole.

Among voyages and travels, perhaps those most frequently suggested are Cook's *Voyages*, Humboldt's *Travels*, and Darwin's *Naturalist's Journal;* though I confess I should like to have added many more.

Mr. Bright not long ago specially recommended the less known American poets, but he probably assumed that every one would have read Shakespeare, Milton (*Paradise Lost*, *Lycidas*, and minor poems), Chaucer, Dante, Spenser, Dryden, Scott, Wordsworth, Pope, Southey, Byron, and others, before embarking on more doubtful adventures.

Among other books most frequently recommended are Goldsmith's *Vicar of Wakefield*, Swift's *Gulliver's Travels*, Defoe's *Robinson Crusoe*, *The Arabian Nights*, *Don Quixote*, Boswell's *Life of Johnson*, White's *Natural History of Selborne*, Burke's Select Works (Payne), the Essays of Bacon, Addison, Hume, Montaigne, Macaulay, and Emerson; the plays of Molière and Sheridan; Carlyle's *Past and Present*, Smiles's *Self-Help*, and Goethe's *Faust* and *Autobiography*.

Nor can one go wrong in recommending Berkeley's *Human Knowledge*, Descartes's *Discours sur la Méthode*, Locke's *Conduct of the Understanding*, Lewes's *History of Philosophy;* while in order to keep within the number one hundred, I can only mention Molière and Sheridan among dramatists. Macaulay considered Marivaux's *La Vie de Marianne* the best novel in any language, but my number is so nearly complete that I must content myself with English: and will suggest Miss Austen (either *Emma* or *Pride and Prejudice*), Thackeray (*Vanity Fair* and *Pendennis*), Dickens (*Pickwick* and *David Copperfield*), G. Eliot (*Adam Bede* or *The Mill on the Floss*), Kingsley (*Westward Ho!*), Lytton (*Last Days of Pompeii*), and last, not least, those of Scott, which indeed constitute a library in themselves, but which I must ask, in return for my trouble, to be

allowed, as a special favor, to count as one.

To any lover of books the very mention of these names brings back a crowd of delicious memories, grateful recollections of peaceful home hours, after the labors and anxieties of the day. How thankful we ought to be for these inestimable blessings, for this numberless host of friends who never weary, betray, or forsake us!

LIST OF 100 BOOKS.

Works by Living Authors are omitted.

The Bible.
The Meditations of Marcus Aurelius.
Epictetus.
Aristotle's Ethics.
Analects of Confucius.
St. Hilaire's "Le Bouddha et sa religion."
Wake's Apostolic Fathers.
Thos. à Kempis's Imitation of Christ.
Confessions of St. Augustine (Dr. Pusey).
The Koran (portions of).
Spinoza's Tractatus Theologico-Politicus.
Comte's Catechism of Positive Philosophy.
Pascal's Pensées.
Butler's Analogy of Religion.
Taylor's Holy Living and Dying.
Bunyan's Pilgrim's Progress.
Keble's Christian Year.

Plato's Dialogues; at any rate, the Apology, Phædo, and Republic.
Xenophon's Memorabilia.
Aristotle's Politics.
Demosthenes's De Coronâ.
Cicero's De Officiis, De Amicitiâ, and De Senectute.
Plutarch's Lives.
Berkeley's Human Knowledge.
Descartes's Discours sur la Méthode.
Locke's On the Conduct of the Understanding.

Homer.
Hesiod.
Virgil.
Maha Bharata, Ramayana. { Epitomized in Talboys Wheeler's History of India, vols. i. and ii.
The Shahnameh.
The Nibelungenlied.
Malory's Morte d'Arthur.
The Sheking.
Æschylus's Prometheus.
Trilogy of Orestes.
Sophocles's Œdipus.
Euripides's Medea.
Aristophanes's The Knights and Clouds.

Horace.
Lucretius.
Chaucer's Canterbury Tales (perhaps in Morris's edition; or, if expurgated, in C. Clarke's, or Mrs. Haweis's).
Shakespeare.
Milton's Paradise Lost, Lycidas, and the shorter poems.
Dante's Divina Commedia.
Spenser's Fairie Queen.
Dryden's Poems.
Scott's Poems.
Wordsworth (Mr. Arnold's selection).
Southey's Thalaba the Destroyer.
The Curse of Kehama.
Pope's Essay on Criticism.
Essay on Man.
Rape of the Lock.
Burns.
Byron's Childe Harold.
Gray.

Herodotus.
Xenophon's Anabasis.
Thucydides.
Tacitus's Germania.
Livy.
Gibbon's Decline and Fall.
Hume's History of England.
Grote's History of Greece.
Carlyle's French Revolution.
Green's Short History of England.
Lewes's History of Philosophy.

Arabian Nights.
Swift's Gulliver's Travels.
Defoe's Robinson Crusoe.
Goldsmith's Vicar of Wakefield.
Cervantes's Don Quixote.
Boswell's Life of Johnson.
Molière.
Sheridan's The Critic, School for Scandal, and the Rivals.
Carlyle's Past and Present.

Smiles's Self-Help.
Bacon's Novum Organum.
Smith's Wealth of Nations (part of).
Mill's Political Economy.
Cook's Voyages.
Humboldt's Travels.
White's Natural History of Selborne.
Darwin's Origin of Species.
Naturalist's Voyage.
Mill's Logic.

Bacon's Essays.
Montaigne's Essays.
Hume's Essays.
Macaulay's Essays.

Addison's Essays.
Emerson's Essays.
Burke's Select works.

Voltaire's Zadig.
Goethe's Faust, and Autobiography.
Miss Austen's Emma, or Pride and Prejudice.
Thackeray's Vanity Fair.
Pendennis.
Dickens's Pickwick.
David Copperfield.
Lytton's Last Days of Pompeii.
George Eliot's Adam Bede.
Kingsley's Westward Ho.
Scott's Novels.

CHAPTER V.

THE BLESSING OF FRIENDS.*

"They seem to take away the sun from the world who withdraw friendship from life; for we have received nothing better from the immortal gods, nothing more delightful."—CICERO.

MOST of those who have written in praise of books have thought they could say nothing better of them than to compare them to friends.

Socrates said that "all people have their different objects of ambition—horses, dogs, money, honor, as the case may be; but for his own part he would rather have a good friend than all these put together." And again, men know "the number of their other possessions, although they might be very numerous, but of their friends, though but few, they were not only ignorant of the number, but even when they attempted to reckon it to such as asked them, they set aside again some that they had previously counted among their friends; so little did they allow their friends to occupy their thoughts. Yet in comparison with what possession, of all others, would not a good friend appear far more valuable?"

"As to the value of other things," says Cicero, "most men differ; concerning friendship all have the same opinion." What can be more foolish than, when men are possessed of great influence by their wealth, power, and resources, to procure other things which are bought by money—horses, slaves, rich apparel, costly vases—and not to procure friends, the most valuable and fairest furniture of life?" And yet, he continues, "every man can tell how many goats or sheep he possesses, but not how many friends." In the choice, moreover, of a dog or of a horse, we exercise the greatest care; we inquire into its pedigree, its training and character, and yet we too often leave the selection of our friends, which is of infinitely greater importance—by whom our whole life will be more or less influenced either for good or evil—almost to chance.

No doubt, much as worthy friends add to the happiness and value of life, we must in the main depend on ourselves, and every one is his own best friend or worst enemy.

Sad, indeed, is Bacon's assertion that "there is little friendship in the world, and least of all between equals, which was wont to be magnified. That that is, is between superior and inferior, whose fortunes may comprehend the one to the other." But this can hardly be taken as his deliberate opinion, for he elsewhere says, "but we may go farther, and affirm most truly, that it is a mere and miserable solitude to want true friends, without which the world is but a wilderness." Not only, he adds, does friendship introduce "daylight in the understanding out of darkness and confusion of thoughts;" it "maketh a fair day in the affections from storm and tempests:" in consultation with a friend a man "tosseth his thoughts more easily; he marshalleth them more orderly; he seeth how they look when they are turned into words; finally, he waxeth wiser than himself, and that more by an hour's discourse than by a day's meditation." . . . "But little do men perceive what solitude is, and how far it extendeth, for a crowd is not company, and faces are

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* The substance of this was delivered at the London Working Men's College.

but a gallery of pictures, and talk but a tinkling cymbal where there is no love."

With this I cannot altogether concur. Surely even strangers may be most interesting! and many will agree with Dr. Johnson when, describing a pleasant evening, he summed it up—"Sir, we had a good talk."

It is no doubt true, as the *Autocrat of the Breakfast Table* says, that all men are bores except when we want them. And Sir Thomas Browne quaintly observes that "unthinking heads who have not learnt to be alone are a prison to themselves if they be not with others; whereas, on the contrary, those whose thoughts are in a fair and hurry within, are sometimes fain to retire into company to be out of the crowd of themselves." Still I do not quite understand Emerson's idea that "men descend to meet." In another place, indeed, he qualifies the statement, and says, "Almost all people descend to meet." Even so I should venture to question it, especially considering the context. "All association," he adds, "must be a compromise, and, what is worse, the very flower and aroma of the flower of each of the beautiful natures disappears as they approach each other." What a sad thought! Is it really so? Need it be so? And if it were so, would friends be any real advantage? I should have thought that the influence of friends was exactly the reverse: that the flower of a beautiful nature would expand, and the colors grow brighter, when stimulated by the warmth and sunshine of friendship.

Much certainly of the happiness and purity of our lives depends on our making a wise choice of our companions and friends. Many people seem to trust in this matter to the chapter of accident. It is well and right, indeed, to be courteous and considerate to every one with whom one is thrown into contact, but to choose them as real friends is another matter. Some seem to make a man a friend, or try to do so, because he lives near, because he is in the same business, travels on the same line of railway, or for some other trivial reason. There cannot be a greater mistake. These are only, in the words of Plutarch "the idols and images of friendship." If our friends are badly chosen they will inevitably drag us down; if well they will raise us up. To be friendly with every one is another matter; we must remember that there is no little enemy, and those who have ever really loved any one will have some tenderness for all.

There is indeed some good in most men. "I have heard much," says Mr. Nasmyth in his charming autobiography, "about the ingratitude and selfishness of the world. It may have been my good fortune, but I have never experienced either of these unfeeling conditions." Such also has been my own experience.

> "Men talk of unkind hearts, kind deeds
> With deeds unkind returning.
> Alas! the gratitude of men
> Has oftener left me mourning."

I cannot, then, agree with Emerson that "we walk alone in the world. Friends such as we desire are dreams and fables. But a sublime hope cheers ever the faithful heart, that elsewhere in other regions of the universal power souls are now acting, enduring, and daring, which can love us, and which we can love."

Epictetus gives very good advice when he dissuades from conversation on the very subjects most commonly chosen, and advises that it should be on "none of the common subjects—not about gladiators, nor horse-races, nor about athletes, nor about eating or drinking, which are the usual subjects; and especially not about men, as blaming them;"* but when he adds, "or praising them" the injunction seems to me of doubtful value. Surely Marcus Aurelius more wisely advises that "when thou wishest to delight thyself, think of the virtues of those who live with thee;

* *Enchiridion.*

for instance, the activity of one, and the modesty of another, and the liberality of a third, and some other good quality of a fourth. For nothing delights so much as the examples of the virtues, when they are exhibited in the morals of those who live with us and present themselves in abundance, as far as is possible. Wherefore we must keep them before us." Yet how often we know merely the sight of those we call our friends, or the sound of their voices, but nothing whatever of their mind or soul.

We must, moreover, be as careful to keep friends as to make them. The affections should not be mere "tents of a night." Friendship gives no privilege to make ourselves disagreeable. Some people never seem to appreciate their friends till they have lost them. Anaxagoras described the Mausoleum as the ghost of wealth turned into stone.

"But he who has once stood beside the grave to look back on the companionship which has been forever closed, feeling how impotent *then* are the wild love and the keen sorrow, to give one instant's pleasure to the pulseless heart, or atone in the lowest measure to the departed spirit for the hour of unkindness, will scarcely for the future incur that debt to the heart which can only be discharged to the dust." *

Death, indeed, cannot sever friendship. "Friends, though absent, are still present, though in poverty they are rich; though weak, yet in the enjoyment of health; and what is still more difficult to assert, though dead they are alive." This seems a paradox, yet is there not much truth in his explanation? "To me, indeed, Scipio still lives, and will always live; for I love the virtue of that man, and that worth is not yet extinguished. . . . Assuredly of all things that either fortune or time has bestowed on me, I have none which I can compare with the friendship of Scipio."

If, then, we choose our friends for what they are, not for what they have, and if we deserve so great a blessing, then they will be always with us, preserved in absence, and even after death in the "amber of memory."

* Ruskin.

CHAPTER VI.

THE VALUE OF TIME.†

Each day is a little life.

ALL other good gifts depend on time for their value. What are friends, books, or health, the interest of travel or the delights of home, if we have not time for their enjoyment? Time is often said to be money, but it is more—it is life; and yet many who would cling desperately to life, think nothing of wasting time.

Ask of the wise, says Schiller in Lord Sherbrooke's translation,

> "The moments we forego
> Eternity itself cannot retrieve."

And in the words of Dante,

> "For who knows most, him loss of time most grieves."

Not that a life of drudgery should be our ideal. Far from it. Time spent in innocent and rational enjoyments, in social and family intercourse, in healthy games, is well and wisely spent. Games not only keep the body in health, but give a command over the muscles and limbs which cannot be over-valued. Moreover, there are temptations which strong exercise best enables us to resist.

It is generally the idle who complain they cannot find time to do that which they fancy they wish. In truth, people can generally find time for what they choose to do; it is not really the time but the will that is wanting: and the advantage of leisure is mainly that we may have the power of choosing our own work; not

† The substance of this was delivered at the Polytechnic Institution.

certainly that it confers any privilege of idleness.

For it is not so much the hours that tell as the way we use them.

> "Circles are praised, not that excel
> In largeness, but th' exactly framed;
> So life we praise, that does excel
> Not in much time, but acting well." *

"Idleness," says Jeremy Taylor, "is the greatest prodigality in the world; it throws away that which is invaluable in respect of its present use, and irreparable when it is past, being to be recovered by no power of art or nature."

"A counted number of pulses only," says Pater, "is given to us of a variegated aromatic life. How may we see in them all that is to be seen in them by the finest senses? How can we pass most swiftly from point to point, and be present always at the focus where the greatest number of vital forces unite in their purest energy?

"To burn always with this hard gem-like flame, to maintain this ecstasy, is success in life. Failure is to form habits; for habit is relation to a stereotyped world . . . while all melts under our feet, we may well catch at any exquisite passion, or any contribution to knowledge that seems, by a lifted horizon, to set the spirit free for a moment."

I would not quote Lord Chesterfield as generally a safe guide, but there is certainly much shrewd wisdom in his advice to his son with reference to time. "Every moment you now lose, is so much character and advantage lost; as, on the other hand, every moment you now employ usefully, is so much time wisely laid out, at prodigious interest."

And again, "It is astonishing that any one can squander away in absolute idleness one single moment of that small portion of time which is allotted to us in the world. . . . Know the true value of time; snatch, seize, and enjoy every moment of it."

> "Are you in earnest? seize this very minute
> What you can do, or think you can begin it." †

I remember, says Hillard, "a satirical poem, in which the devil is represented as fishing for men, and adapting his bait to the tastes and temperaments of his prey; but the idlers were the easiest victims, for they swallowed even the naked hook." The mind of the idler indeed preys upon itself.

"The human heart is like a millstone in a mill; when you put wheat under it, it turns and grinds and bruises the wheat to flour; if you put no wheat, it still grinds on—and grinds itself away." ‡

It is not work, but care, that kills, and it is in this sense, I suppose, that we are told to "take no thought for the morrow." To "consider the lilies of the field, how they grow; they toil not, neither do they spin: and yet even Solomon, in all his glory, was not arrayed like one of these. Wherefore, if God so clothe the grass of the field, which to-day is, and tomorrow is cast into the oven, shall he not much more clothe you, O ye of little faith?" It would indeed be a mistake to suppose that the lilies are idle or imprudent. On the contrary, like all plants, they are most industrious, and store up in their complex bulbs a great part of the nourishment of one year to quicken the growth of the next. Care, on the other hand, they certainly know not.§

Wasted time is worse than no time at all; "I wasted time," says Richard II., "and now doth time waste me."

"Hours have wings, fly up to the author of time, and carry news of our usage. All our prayers cannot entreat one of them either to return or slacken his pace." "The misspents of every minute are a new record

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* Waller.

† Faust.

‡ Luther.

§ The word used *μεριμνήσητε* is translated in Liddell and Scott "to be anxious about, to be distressed in mind, to be cumbered with many cares."

against us in heaven. Sure if we thought thus, we should dismiss them with better reports, and not suffer them to fly away empty, or laden with dangerous intelligence. How happy is it when they carry up not only the message, but the fruits of good, and stay with the Ancient of Days to speak for us before His glorious throne!" *

"He that is choice of his time," says Jeremy Taylor, "will also be choice of his company, and choice of his actions; lest the first engage him in vanity and loss, and the latter, by being criminal, be a throwing his time and himself away, and a going back in the accounts of eternity." †

If we deduct the time required for sleep, for meals. for dressing and undressing, for exercise, etc., how little of our life is really at our own disposal!

"I have lived," said Lamb, "nominally fifty years, but deduct from them the hours I have lived for other people, and not for myself, and you will find me still a young fellow."

It is not, however, the hours we live for other people which should be deducted, but those which benefit neither one's self nor anyone else; and these, alas! are often very numerous.

It is wonderful, indeed, how much innocent happiness we thoughtlessly throw away. An Eastern proverb says that calamities sent by heaven may be avoided, but from those we bring on ourselves there is no escape.

Some years ago I paid a visit to the principal lake villages of Switzerland in company with a distinguished archæologist, M. Morlot. To my surprise I found that his whole income was £100 a year, part of which, moreover, he spent in making a small museum. I asked him whether he contemplated accepting any post or office, but he said certainly not. He valued his leisure and opportunities as priceless possessions far more than silver or gold, and would not waste any of his time in making money.

Just think of our advantages here in London! We have access to the whole literature of the world; we may see in our National Gallery the most beautiful productions of former generations, and in the Royal Academy and other galleries works of the greatest living artists. Perhaps there is no one who has ever found time to see the British Museum thoroughly. Yet consider what it contains; or rather, what does it not contain? The most gigantic of living and extinct animals, the marvelous monsters of geological ages, the most beautiful birds and shells and minerals, the most interesting antiquities, curious and fantastic specimens illustrating different races of men; exquisite gems, coins, glass, and china; the Elgin marbles, the remains of the Mausoleum; of the temple of Diana of Ephesus; ancient monuments of Egypt and Assyria; the rude implements of our predecessors in England, who were coeval with the hippopotamus and rhinoceros, the musk-ox, and the mammoth; and beautiful specimens of Greek and Roman art. In London we may unavoidably suffer, but no one has any excuse for being dull.

And yet some people *are* dull. They talk of a better world to come, while whatever dulness there may be here is all their own. Sir Arthur Helps has well said: "What! dull, when you do not know what gives its loveliness of form to the lily, its depth of color to the violet, its fragrance to the rose; when you do not know in what consists the venom of the adder, any more than you can imitate the glad movements of the dove. What! dull, when earth, air, and water are all alike mysteries to you, and when as you stretch out your hand you do not touch anything the properties of which you have mastered; while all the time Nature is inviting you to talk earnestly with her, to understand her, to subdue her, and to be blessed by her! Go away, man; learn something, do something, understand some-

* Milton.
† Jeremy Taylor.

thing, and let me hear no more of your dulness."

Time, indeed, is a sacred gift, and each day is a little life.

CHAPTER VII.

THE PLEASURES OF TRAVEL.*

"I am a part of all that I have seen."
TENNYSON.

I AM sometimes disposed to think that there are few things in which we of this generation enjoy greater advantages over our ancestors than in the increased facilities of travel; but I hesitate to say this, not because our advantages are not great, but because I have already made the same remark with reference to several other aspects of life.

The very word "travel" is suggestive. It is a form of "travail"—excessive labor; and, as Skeat observes, it forcibly recalls the toil of travel in olden days. How different things are now!

It is sometimes said that every one should travel on foot "like Thales, Plato, and Pythagoras"; we are told that in these days of railroads people rush through countries and see nothing. It may be so, but that is not the fault of the railways. They confer upon us the inestimable advantage of being able, so rapidly and with so little fatigue, to visit countries which were much less accessible to our ancestors. What a blessing it is that not our own islands only—our smiling fields and rich woods, the mountains that are full of peace and the rivers of joy, the lakes and heather and hills, castles and cathedrals, and many a spot immortalized in the history of our country—but the sun and scenery of the South, the Alps, the palaces of Nature, the blue Mediterranean, the cities of Europe, with all their memories and treasures, are now brought within a few hours of us. Surely no one who has the opportunity should omit to travel. The world belongs to him who has seen it.

Bacon tells us that "the things to be seen and observed are the courts of princes, especially when they give audience to ambassadors; the courts of justice while they sit and hear causes; and so of consistories ecclesiastic; the churches and monasteries, with the monuments which are therein extant; the walls and fortifications of cities and towns; and so the havens and harbors, antiquities and ruins, libraries, colleges, disputations and lectures when any are; shipping and navies; houses and gardens of state and pleasure near great cities; armories, arsenals, magazines, exchanges, burses, warehouses, exercises of horsemanship, fencing, training of soldiers, and the like; comedies, such whereunto the better sort of persons do resort; treasuries of jewels and robes; cabinets and rarities; and, to conclude, whatsoever is memorable in the places where they go."

But this depends on the time at our disposal, and the object with which we travel. If we can stay long in any one place, Bacon's advice is no doubt excellent; but for the moment I am thinking rather of an annual holiday, taken for the sake of rest and health; for fresh air and exercise rather than for study. Yet even so, if we have eyes to see, we cannot fail to lay in a stock of new ideas as well as a store of health.

We may have read the most vivid and accurate description, we may have pored over maps and plans and pictures, and yet the reality will burst on us like a revelation. This is true not only of mountains and glaciers, of palaces and cathedrals, but even of the simplest examples.

For instance, like every one else, I had read descriptions and seen photographs and pictures of the Pyramids. Their form is simplicity itself. I do not know that I could put into words any characteristic of the original for

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* The substance of this was delivered at Oldham.

which I was not prepared. It was not that they were larger; it was not that they differed in form, in color, or situation. And yet, the moment I saw them, I felt that my previous impression had been but a faint shadow of the reality. The actual sight seemed to give life to the idea.

Every one, I think, who has been in the East will agree that a week of oriental travel seems to bring out, with more than stereoscopic effect, the pictures of patriarchal life as given us in the Old Testament. And what is true of the Old Testament is true of history generally. To those who have been in Athens or Rome, the history of Greece or Italy becomes far more interesting; while, on the other hand, some knowledge of the history and literature enormously enhances the interest of the scenes themselves.

Good descriptions and pictures, however, help us to see much more than we should perhaps perceive for ourselves. It may even be doubted whether some persons do not derive a more correct impression from a good drawing or description, which brings out the salient points, than they would from actual, but unaided, inspection. The idea may gain in accuracy, in character, and even in detail, more than it misses in vividness. But, however this may be, for those who cannot travel, descriptions and pictures have an immense interest; while to those who *have* travelled, they will afford an inexhaustible delight in reviving the memories of beautiful scenes and interesting expeditions.

It is really astonishing how little most of us see of the beautiful world in which we live. Mr. Norman Lockyer tells us that while traveling on a scientific mission in the Rocky Mountains, he was astonished to meet an aged French Abbé, and could not help showing his surprise. The Abbé observed this, and in the course of conversation explained his presence in that distant region.

"You were," he said, "I easily saw, surprised to find me here. The fact is, that some months ago I was very ill. My physicians gave me up, and one morning I seemed to faint and thought that I was already in the arms of the Bon Dieu, and I fancied the angels came and asked me, 'Well, M. l'Abbé, and how did you like the beautiful world you have just left?' And then it occurred to me that I who had been all my life preaching about heaven had seen almost nothing of the world in which I was living. I determined therefore, if it pleased Providence to spare me, to see something of this world; and so here I am."

Few of us are free, however much we might wish it, to follow the example of the worthy Abbé. But although it may not be possible for us to visit the Rocky Mountains, there are other countries nearer home which most of us might find time to visit.

Though it is true that no descriptions can come near the reality, they may at least persuade us to give ourselves this great advantage. Let me then try to illustrate this by pictures in words, as realized by some of our most illustrious countrymen; I will select references to foreign countries only, not that we have not equal beauties here, but because everywhere in England one feels one's self at home.

The following passage from Tyndall's *Hours of Exercise in the Alps*, is almost as good as an hour in the Alps itself:

"I looked over this wondrous scene towards Mont Blanc, the Grand Combin, the Dent Blanche, the Weisshorn, the Dom, and the thousand lesser peaks which seemed to join in the celebration of the risen day, I asked myself, as on previous occasions, How was this colossal work performed? Who chiselled these mighty and picturesque masses out of a mere protuberance of the earth? And the answer was at hand. Ever young, ever mighty—with the vigor of a thousand worlds still within him—the real sculptor was even then

climbing up the eastern sky. It was he who raised aloft the waters which cut out these ravines; it was he who planted the glaciers on the mountain-slopes, thus giving gravity a plough to open out the valleys; and it is he who, acting through the ages, will finally lay low those mighty monuments, rolling them gradually seaward, sowing the seeds of continents to be; so that the people of an older earth may see mould spread, and corn wave over the hidden rocks which at this moment bear the weight of the Jungfrau." And the Alps lie within twenty-four hours of London.

His writings also contain many vivid descriptions of the glaciers, those "silent and solemn causeways . . . broad enough for the march of an army in line of battle and quiet as a street of tombs in a buried city."* I do not, however, borrow from him or from any one else any description of glaciers, for they are so unlike anything else that no one who has not seen them can possibly visualize them.

The history of European rivers yet remains to be written, and is most interesting. They did not always run in their present courses. The Rhone, for instance, appears to have been itself a great traveler. At least there seems reason to believe that the upper waters of the Valais fell at first into the Danube, and so into the Black Sea; and subsequently joined the Rhine, and so ran far north to the Arctic Ocean, over the plains which once connected the mountains of Scotland, and of Norway, before they adopted their present course into the Mediterranean. But, however this may be, the Rhine of Germany and the Rhine of Switzerland are very unlike. The catastrophe of Schaffhausen seems to alter the whole character of the river, and no wonder.

"Stand for half an hour beside the Fall of Schaffhausen, on the north side where the rapids are long, and watch how the vault of water first bends, unbroken, in pure polished velocity, over the arching rocks at the brow of the cataract, covering them with a dome of crystal twenty feet thick, so swift that its motion is unseen, except when a foam globe from above darts over it like a falling star; . . . and how ever and anon, startling you with its white flash, a jet of spray leaps hissing out of the fall, like a rocket, bursting in the wind and driven away in dust, filling the air with light; and how, through the curdling wreaths of the restless crushing abyss below, the blue of the water, paled by the foam in its body, shows purer than the sky through white rain cloud; . . . their dripping masses lifted at intervals, like sheaves of loaded corn, by some stronger gush from the cataract, and bowed again upon the mossy rocks as its roar dies away." †

But however much we may admire the majestic grandeur of a mighty river, either in its eager rush or its calmer moments, there is something which fascinates even more in the free life, the young energy, the sparkling transparency, and merry music of smaller streams.

"The upper Swiss valleys," as the same great "seer" says, "are sweet with perpetual streamlets, that seem always to have chosen the steepest places to come down, for the sake of the leaps, scattering their handfuls of crystal this way and that, as the wind takes them, with all the grace, but with none of the formalism, of fountains . . . until at last . . . they find their way down to the turf, and lose themselves in that, silently; with quiet depth of clear water furrowing among the grass blades, and looking only like their shadow, but presently emerging again in little startled gushes and laughing hurries, as if they had remembered suddenly that the day was too short for them to get down the hill."

How vividly does Symonds bring

* Ruskin.

† Ruskin.

before us the sunny shores of the Mediterranean, which he loves so well, and the contrast between the scenery of the South and the North.

"In northern landscapes the eye travels through vistas of leafy boughs to still, secluded crofts and pastures, where slow-moving oxen graze. The mystery of dreams and the repose of meditation haunt our massive bowers. But in the South, the lattice-work of olive boughs and foliage scarcely veils the laughing sea and bright blue sky, while the hues of the landscape find their climax in the dazzling radiance of the sun upon the waves, and the pure light of the horizon. There is no concealment aud no melancholy here. Nature seems to hold a never-ending festival and dance, in which the waves and sunbeams and shadows join. Again, in northern scenery the rounded forms of full-foliaged trees suit the undulating country, with its gentle hills and brooding clouds; but in the South the spiky leaves and sharp branches of the olive carry out the defined outlines which are everywhere observable through the broader beauties of mountain and valley and sea-shore. Serenity and intelligence characterize this southern landscape, in which a race of splendid men and women lived beneath the pure light of Phœbus, their ancestral god. Pallas protected them, aud golden Aphrodité favored them with beauty. Olives are not, however, by any means the only trees which play a part in idyllic scenery. The tall stone pine is even more important. . . . Near Massa, by Sorrento, there are two gigantic pines so placed that, lying on the grass beneath them, one looks on Capri, rising from the sea, Baiae, and all the bay of Naples sweeping round to the base of Vesuvius. Tangled growths of olives, oranges, and rose-trees fill the garden-ground along the shore, while far away in the distance pale Inarime sleeps, with her exquisite Greek name, a virgin island on the deep.

"On the wilder hills you find patches of ilex and arbutus glowing with crimson berries and white waxen bells, sweet myrtle rods and shafts of bay, frail tamarisk and tall tree-heaths that wave their frosted boughs above your head. Nearer the shore the lentisk grows, a savory shrub, with cytisus and aromatic rosemary. Clematis and polished garlands of tough sarsaparilla wed the shrubs with clinging, climbing arms; and here and there in sheltered nooks the vine shoots forth luxuriant tendrils bowed with grapes, stretching from branch to branch of mulberry or elm, flinging festoons on which young loves might sit and swing, or weaving a lattice-work of leaves across the open shed. Nor must the sounds of this landscape be forgotten,—sounds of bleating flocks, and murmuring bees, and nightingales, and doves that moan, and running streams, and shrill cicadas, and hoarse frogs, and whispering pines. There is not a single detail which a patient student may not verify from Theocritus.

"Then too it is a landscape in which sea and country are never sundered. The higher we climb upon the mountain side the more marvelous is the beauty of the sea, which seems to rise as we ascend, and stretch into the sky. Sometimes a little flake of blue is framed by olive boughs, sometimes a turning in the road reveals the whole broad azure calm below. Or, after toiling up a steep ascent we fall upon the undergrowth of juniper, and lo! a double sea, this way and that, divided by the sharp spine of the jutting hill, jewelled with villages along its shore, and smiling with fair islands and silver sails."

To many of us the mere warmth of the South is a blessing and a delight. The very thought of it is delicious. I have read over again and again Wallace's graphic description of a tropical morning—"The sun of the early morning that turneth all into gold." *

"Up to about a quarter past five o'clock," says Wallace, "the darkness

* Morris.

is complete; but about that a few cries of birds begin to break the silence of night, perhaps indicating that signs of dawn are perceptible in the eastern horizon. A little later the melancholy voices of the goat-suckers are heard, varied croakings of frogs, the plaintive whistle of mountain thrushes, and strange cries of birds or mammals peculiar to each locality. About half-past five the first glimmer of light becomes perceptible; it slowly becomes lighter, and then increases so rapidly that at about a quarter to six it seems full daylight, For the next quarter of an hour this changes very little in character; when, suddenly, the sun's rim appears above the horizon, decking the dew-laden foliage with glittering gems, sending gleams of golden light far into the woods, and waking up all nature to life and activity. Birds chirp and flutter about, parrots scream, monkeys chatter, bees hum among the flowers, and gorgeous butterflies flutter lazily along or sit with full expanded wings exposed to the warm and invigorating rays. The first hour of morning in the equatorial regions possesses a charm and a beauty that can never be forgotten. All nature seems refreshed and strengthened by the coolness and moisture of the past night, new leaves and buds unfold almost before the eye, and fresh shoots may often be observed to have grown many inches since the preceding day. The temperature is the most delicious conceivable. The slight chill of early dawn, which was itself agreeable, is succeeded by an invigorating warmth; and the intense sunshine lights up the glorious vegetation of the tropics, and realizes all that the magic art of the painter or the glowing words of the poet have pictured as their ideals of terrestrial beauty."

Or take Dean Stanley's description of the colossal statues of Amenophis III., the Memnon of the Greeks, at Thebes—"The sun was setting, the African range glowed red behind them; the green plain was dyed with a deeper green beneath them, and the shades of evening veiled the vast rents and fissures in their aged frames. As I looked back at them in the sunset, and they rose up in front of the background of the mountain, they seemed, indeed, as if they were part of it—as if they belonged to some natural creation."

But I must not indulge myself in more quotations, though it is difficult to stop. Such extracts recall the memory of many glorious days; for the advantages of travels last through life: and often, as we sit at home, "some bright and perfect view of Venice, of Genoa, or of Monte Rosa comes back on you, as full of repose as a day wisely spent in travel." *

Not only does a thorough love and enjoyment of traveling by no means interfere with the love of home, but perhaps no one can thoroughly enjoy his home who does not sometimes travel. They are like exertion and rest, each the complement of the other; so that, though it may seem paradoxical, one of the greatest pleasures of travel is the return, and no one who has not traveled can realize the devotion which the wanderer feels for Domiduca, the sweet and gentle goddess who watches over our coming home.

CHAPTER VIII.

THE PLEASURES OF HOME.

"Outside fall the snowflakes lightly,
Through the night loud raves the storm;
In my room the fire glows brightly,
And 'tis cosy, silent, warm."

HEINE.

IT may well be doubted which is most delightful,—to start for a holiday which has been well earned, or to return home from one which has been thoroughly enjoyed; to find one's self, with renewed vigor, with a new store of memories and ideas, back once more by one's own fireside,

* Helps.

with one's family, friends, and books.

"To sit at home," says Leigh Hunt, "with an old folio (?) book of romantic yet credible voyages and travels to read, an old bearded traveler for its hero, a fireside in an old country house to read it by, curtains drawn, and just wind enough stirring out of doors to make an accompaniment to the billows or forests we are reading of—this surely is one of the perfect moments of existence."

It is no doubt a great privilege to visit foreign countries; to travel say in Mexico or Peru, or to cruise among the Pacific Islands; but in some respects the narratives of early travelers, the histories of Prescott or the voyages of Captain Cook, are even more interesting; describing to us, as they do, a state of society which was then so unlike ours, but which now has been much changed and Europeanized.

Thus we may make our daily travels interesting, even though, like the Vicar of Wakefield's family, all our adventures are by own fireside, and all our migrations from one room to another.

Moreover, even if the beauties of home are humble, they are still infinite, and a man "may lie in his bed, like Pompey and his sons, in all quarters of the earth."*

It is no doubt very wise to "cultivate a talent very fortunate for a man of my disposition, that of traveling in my easy chair; of transporting myself, without stirring from my parlor, to distant places and to absent friends; of drawing scenes in my mind's eye; and of peopling them with the groups of fancy, or the society of remembrance." †

We may indeed secure for ourselves endless variety without leaving our own firesides.

In the first place, the succession of seasons multiplies every home. How different is the view from our windows as we look on the tender green of spring, the rich foliage of summer, the glorious tints of autumn, or the delicate tracery of winter.

In our happy climate, even in the worst months of the year, "calm mornings of sunshine visit us at times, appearing like glimpses of departed spring amid the wilderness of wet and windy days that lead to winter. It is pleasant, when these interludes of silvery light occur, to ride into the woods and see how wonderful are all the colors of decay. Overhead, the elms and chestnuts hang their wealth of golden leaves, while the beeches darken into russet tones, and the wild cherry glows like blood-red wine. In the hedges crimson haws and scarlet hips are wreathed with hoary clematis or necklaces of coral briony berries; the brambles burn with many-colored flames; the dog-wood is bronzed to purple; and here and there the spindle-wood puts forth its fruit, like knots of rosy buds, on delicate frail twigs. Underneath lie fallen leaves, and the brown brake rises to our knees as we thread the forest paths." ‡ Nay, every day gives us a succession of glorious pictures in never-ending variety.

It is remarkable how few people seem to derive any pleasure from the beauty of the sky. Gray, after describing a sunrise—how it began with a slight "whitening, then slightly tinged with gold and blue, all at once a little line of insufferable brightness that, before I can write these five words, was grown to half an orb, and now to a whole one too glorious to be distinctly seen"—adds, "I wonder whether any one ever saw it before. I hardly believe it." §

From the dawn of poetry, the splendors of the morning and evening skies have excited the admiration of mankind. But we are especially indebted to Ruskin for making us see more vividly these glorious sky pictures. As he says, in language al-

* Sir T. Browne.
† Mackenzie, *The Lounger*.
‡ J. A. Symonds.
§ Gray's Letters.

most as brilliant as the sky itself, the whole heaven, "from the zenith to the horizon, becomes one molten, mantling sea of color and fire; every black bar turns into massy gold, every ripple and wave into unsullied, shadowless crimson, and purple, and scarlet, and colors for which there are no words in language, and no ideas in the mind—things which can only be conceived while they are visible; the intense hollow blue of the upper sky melting through it all, showing here deep and pure, and lightness; there, modulated by the filmy, formless body of the transparent vapor, till it is lost imperceptibly in its crimson and gold."

It is in some cases indeed "not color but conflagration," and though the tints are richer and more varied towards morning and at sunset, the glorious kaleidoscope goes on all day long. Yet "it is a strange thing how little in general people know about the sky. It is the part of creation in which nature has done more for the sake of pleasing man, more for the sole and evident purpose of talking to him and teaching him, than in any other of her works, and it is just the part in which we least attend to her. There are not many of her other works in which some more material or essential purpose than the mere pleasing of man is not answered by every part of their organization; but every essential purpose of the sky might, so far as we know, be answered, if once in three days, or thereabouts, a great, ugly, black rain-cloud were brought up over the blue, and everything well watered, and so all left blue again till next time, with perhaps a film of morning and evening mist for dew. And instead of this, there is not a moment of any day of our lives when nature is not producing scene after scene, picture after picture, glory after glory, and working still upon such exquisite and constant principles of the most perfect beauty, that it is quite certain it is all done for us, and intended for our perpetual pleasure." *

Nor does the beauty end with the day. For my part I always regret the custom of shutting up our rooms in the evening, as though there was nothing worth looking at outside. What, however, can be more beautiful than to "look how the floor of heaven is thick inlaid with patines of bright gold," or to see the moon journeying in calm and silver glory through the night; and even if we do not feel that "the man who has seen the rising moon break out of the clouds at midnight, has been present like an archangel at the creation of light and of the world," † still "the stars say something significant to all of us: and each man has a whole hemisphere of them, if he will but look up, to counsel and befriend him" ‡ for it is not so much, as he elsewhere observes, "in guiding us over the seas or our little planet, but out of the dark waters of our own perturbed minds, that we may make to ourselves the most of our significance." § Indeed,

"How beautiful is night!
A dewy freshness fills the silent air;
No mist obscures, nor cloud, nor speck, nor stain
Breaks the serene of heaven:
In fuel-orbed glory yonder moon divine
Rolls through the dark blue depths;
Beneath her steady ray
The desert circle spreads,
Like the round ocean, girdled with the sky,
How beautiful is night!" **

I have never wondered at those who worshiped the sun and moon.

On the other hand, when all outside is dark and cold; when perhaps

"Outside fall the snowflakes lightly;
Through the night loud raves the storm;
In my room the fire glows brightly,
And 'tis cosy, silent, warm.

* Ruskin.
† Emerson.
‡ Helps.
§ *Ibid.*
** Southey.

"Musing sit I on the settle
By the firelight's cheerful blaze,
Listening to the busy kettle
Humming long-forgotten lays." *

For after all the true pleasures of home are not without, but within, and "the domestic man who loves no music so well as his own kitchen clock and the airs which the logs sing to him as they burn on the hearth, has solaces which others never dream of." †

We love the ticking of the clock, and the flicker of the fire, like the sound of the cawing of rooks, not for their own sakes, but for their associations.

It is a great truth that when we retire into ourselves we can call up what memories we please.

"How dear to this heart are the scenes of my childhood,
When fond recollection recalls them to view—
The orchard, the meadow, the deep-tangled wildwood,
And every lov'd spot which my infancy knew." ‡

It is not so much the

"Fireside enjoyments,
And *all the comforts* of the lowly roof," §

but rather, according to the higher and better ideal of Keble,

"Sweet is the smile of home; the mutual look,
When hearts are of each other sure;
Sweet all the joys that crowd the household nook,
The haunt of all affections pure."

In ancient times, not only among savage races, but even among the Greeks themselves, there seems to have been but little family life.

What a contrast is the home life of the Greeks, as it seems to have been, to that described by Cowley—a home happy "in books and gardens," and above all, in a

"Virtuous wife, where thou again dost meet
Both pleasures more refined and sweet;
The fairest garden in her looks,
And in her mind the wisest books."

No one who has ever loved mother or wife, sister or daughter, can read without astonishment and pity St. Chrysostom's description of woman as "a necessary evil, a natural temptation, a desirable calamity, a domestic peril, a deadly fascination, and a painted ill."

In few respects has mankind made a greater advance than in the relations of men and women. It is terrible to think how women suffer in savage life; and even among the intellectual Greeks, with rare exceptions, they seem to have been treated rather as housekeepers or playthings than as the angels of home.

The Hindoo proverb that you should "never strike a wife, even with a flower," though a considerable advance, tells a melancholy tale of what must previously have been.

In *The Origin of Civilization* I have given many cases showing how small a part family affection plays in savage life. Here I will only mention one case in illustration. The Algonquin (North America) language contained no word for "to love," so that when the missionaries translated the Bible into it they were obliged to invent one. What a life! and what a language without love!

Yet in marriage even the rough passion of a savage may contrast favorably with any cold calculation, which is almost sure, like the enchanted hoard of the Nibelungs, to bring misfortune. In the Finnish epic, the Kalevala, Ilmarinnen, the divine smith, forges a bride of gold and silver for Wainamoinen, who was pleased at first to have so rich a wife, but soon found her intolerably cold, for, in spite of fires and furs, whenever he touched her she froze him.

Moreover, apart from mere coldness, how much we suffer from foolish quarrels about trifles; from hasty words thoughtlessly repeated (some-

* Heine, trans. by E. A Browning.
† Emerson.
‡ Woodworth.
§ Cowper.

times without the context or tone which would have deprived them of any sting); from mere misunderstandings! How much would that charity which "beareth all things, believeth all things, hopeth all things, endureth all things," effect to smooth away the sorrows of life and add to the happiness of home. Home indeed may be a haven of repose from the storms and perils of the world. But to secure this we must not be content to pave it with good intentions, but must make it bright and cheerful.

If our life be one of toil and of suffering, if the world outside be cold and dreary, what a pleasure to return to the sunshine of happy faces and the warmth of hearts we love.

CHAPTER IX.

SCIENCE.*

"Happy is the man that findeth wisdom,
And the man that getteth understanding:
For the merchandise of it is better than silver,
And the gain thereof than fine gold.
She is more precious than rubies:
And all the things thou canst desire are not to be compared unto her.
Length of days is in her right hand,
And in her left hand riches and honor.
Her ways are ways of pleasantness,
And all her paths are peace."
PROVERBS OF SOLOMON.

THOSE who have not tried for themselves can hardly imagine how much science adds to the interest and variety of life. It is altogether a mistake to regard it as dry, difficult, or prosaic—much of it is as easy as it is interesting. A wise instinct of old united the prophet and the "seer." Technical work, descriptions of species, etc., bear the same relation to science as dictionaries do to literature. In endless aspects science is as wonderful and interesting as a fairy tale.

"There are things whose strong reality
Outshines our fairyland; in shape and hues
More beautiful than our fantastic sky,
And the strange constellations which the Muse
O'er her wild universe is skillful to diffuse." †

Occasionally, indeed, it may destory some poetical myth of antiquity, such as the ancient Hindoo explanation of rivers, that "Indra dug out their beds with his thunderbolts, and sent them forth by long continuous paths." But the real causes of natural phenomena are far more striking, and contain more real poetry, than those which have occurred to the untrained imagination of mankind.

Mackay more justly exclaims:—

"Blessings on Science! When the earth seemed old,
When faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

Botany, for instance, is by many regarded as a dry science. Yet without it one may admire flowers and trees as one may admire a great man or a beautiful woman whom one meets in a crowd; but it is as a stranger. The botanist, on the contrary—nay, I will not say, the botanist, but one with even a slight knowledge of that delightful science—when he goes out into the woods or into one of those fairy forests which we call fields, finds himself welcomed by a glad company of friends, every one with something interesting to tell. Dr. Johnson said that, in his opinion, when you had seen one green field you had seen them all, and a greater even than Johnson, Socrates, the very type of intellect without science, said he was always anxious to learn, and from fields and trees he could learn nothing. It has, I know, been said that botanists

"Love not the flower they pluck and know it not,
And all their botany is but Latin names.

* The substance of this was delivered at Mason College, Birmingham.

† Byron.

Contrast this, however, with the language of one who would hardly claim to be a master in botany, though he is certainly a loving student. "Consider," says Ruskin, "what we owe to the meadow grass, to the covering of the dark ground by that glorious enamel, by the companies of those soft, countless, and peaceful spears of the field! Follow but for a little time the thought of all that we ought to recognize in those words. All spring and summer is in them—the walks by silent scented paths, the rest in noon-day heat, the joy of the herds and flocks, the power of all shepherd life and meditation; the life of the sunlight upon the world, falling in emerald streaks and soft blue shadows, when else it would have struck on the dark mould or scorching dust; pastures beside the pacing brooks, soft banks and knolls of lowly hills, thymy slopes of down overlooked by the blue line of lifted sea; crisp lawns all dim with early dew, or smooth in evening warmth of barred sunshine, dinted by happy feet, softening in their fall the sound of loving voices."

Even if it be true that science was dry when it was buried in huge folios, that is certainly no longer the case now; and Lord Chesterfield's wise wish, that Minerva might have three graces as well as Venus, has been amply fulfilled.

The study of natural history indeed seems destined to replace the loss of what is, not very happily I think, termed "sport;" engraven in us as it is by the operation of thousands of years, during which man lived greatly on the produce of the chase. Game is gradually becoming "small by degrees and beautifully less." Our prehistoric ancestors hunted the mammoth, the woolly-haired rhinoceros, and the Irish elk; the ancient Britons had the wild ox, the deer, and the wolf. We have still the hare, the partridge, and the fox; but even these are becoming scarcer, and must be preserved first, in order that they may be killed afterwards. Some of us even now—and more, no doubt, will hereafter—satisfy instincts, essentially of the same origin, by the study of birds, or insects, or even infusoria—of creatures which more than make up by their variety what they want in size.

Emerson says that when a naturalist has "got all snakes and lizards in his phials, science has done for him also, and has put the man into a bottle." I do not deny that there are such cases, but they are quite exceptional. The true naturalist is no mere dry collector.

I cannot resist, although it is rather long, quoting the following description from Hudson and Gosse's beautiful work on the Rotifera:—

"On the Somersetshire side of the Avon, and not far from Clifton, is a little combe, at the bottom of which lies an old fish-pond. Its slopes are covered with plantations of beech and fir, so as to shelter the pond on three sides, and yet leave it open to the soft south-western breezes, and to the afternoon sun. At the head of the combe wells up a clear spring, which sends a thread of water, trickling through a bed of osiers, into the upper end of the pond. A stout stone wall has been drawn across the combe from side to side, so as to dam up the stream; and there is a gap in one corner through which the overflow finds its way in a miniature cascade, down into the lower plantation.

"If we approach the pond by the game-keeper's path from the cottage above, we shall pass through the plantation, and come unseen right on the corner of the wall; so that one quiet step will enable us to see at a glance its whole surface, without disturbing any living thing that may be there.

"Far off at the upper end a water-hen is leading her little brood among the willows; on the fallen trunk of an old beech, lying half way across the pond, a vole is sitting erect, rubbing his right ear, and the splash of

a beech husk just at our feet tells of a squirrel who is dining somewhere in the leafy crown above us.

"But see, the water-rat has spied us out, and is making straight for his hole in the bank, while the ripple above him is the only thing that tells of his silent flight. The water-hen has long ago got under cover, and the squirrel drops no more husks. It is a true Silent Pond, and without a sign of life.

"But if, retaining sense and sight, we could shrink into living atoms and plunge under the water, of what a world of wonders should we then form part! We should find this fairy kingdom peopled with the strangest creatures—creatures that swim with their hair, that have ruby eyes blazing deep in their necks, with telescopic limbs that now are withdrawn wholly within their bodies and now stretched out to many times their own length. Here are some riding at anchor, moored by delicate threads spun out from their toes; and there are others flashing by in glass armor, bristling with sharp spikes or ornamented with bosses and flowing curves; while fastened to a great stem is an animal convolvulus that, by some invisible power, draws a never ceasing stream of victims into its gaping cup, and tears them to death with hooked jaws deep down within its body.

"Close by it, on the same stem, is something that looks like a filmy heart's-ease. A curious wheelwork runs round its four outspread petals; and a chain of minute things, living and dead, is winding in and out of their curves into a gulf at the back of the flower. What happens to them there we cannot see; for round the stem is raised a tube of golden-brown balls, all regularly piled on each other. Some creature dashes by, and like a flash the flower vanishes within its tube.

"We sink still lower, and now see on the bottom slow gliding lumps of jelly that thrust a shapeless arm out where they will, and grasping their prey with these chance limbs, wrap themselves round their food to get a meal; for they creep without feet, seize without hands, eat without mouths, and digest without stomachs."

Too many, however, still feel only in nature that which we share "with the weed and the worm;" they love birds as boys do—that is, they love throwing stones at them; or wonder if they are good to eat, as the Esquimaux asked of the watch; or treat them as certain devout Afreedee villagers are said to have treated a descendant of the Prophet—killed him in order to worship at his tomb: but gradually we may hope that the love of nature will become to more and more, as already it is to many, a "faithful and sacred element of human feeling."

Science summons us

"To that cathedral, boundless as our wonder,
Whose quenchless lamps the sun and moon supply;
Its choir the winds and waves, its organ thunder,
Its dome the sky." *

Where the untrained eye will see nothing but mire and dirt, science will often reveal exquisite possibilities. The mud we tread under our feet in the street is a grimy mixture of clay and sand, soot and water. Separate the sand, however, as Ruskin observes—let the atoms arrange themselves in peace according to their nature—and you have the opal. Separate the clay, and it becomes a white earth, fit for the finest porcelain: or if it still further purifies itself, you have a sapphire. Take the soot, and if properly treated it will give you a diamond. While, lastly, the water, purified and distilled, will become a dew-drop or crystallize into a lovely star. Or, again, you may see in a shallow pool either the mud lying at the bottom, or the image of the sky above.

Nay, even if we imagine beauties and charms which do not really exist;

* H. Smith.

still if we err at all, it is better to do so on the side of charity; like Nasmyth, who tells us in his delightful autobiography that he used to think one of his friends had a charming and kindly twinkle, till one day he discovered that he had a glass eye.

But I should err indeed were I to dwell exclusively on science as lending interest and charm to our leisure hours. Far from this, it would be impossible to overrate the importance of scientific training on the wise conduct of life.

"Science," said the Royal Commission of 1861, "quickens and cultivates directly the faculty of observation, which in very many persons lies almost dormant through life, the power of accurate and rapid generalization, and the mental habit of method and arrangement; it accustoms young persons to trace the sequence of cause and effect; it familiarizes them with a kind of reasoning which interests them, and which they can promptly comprehend; and it is perhaps the best corrective for that indolence which is the vice of half-awakened minds, and which shrinks from any exertion that is not like an effort of memory, merely mechanical."

Again, when we contemplate the grandeur of science, if we transport ourselves in imagination back into primeval times, or away into the immensity of space, our little troubles and sorrows seem to shrink into insignificance. "Ah, beautiful creations!" says Helps, speaking of the stars, "it is not in guiding us over the seas of our little planet, but out of the dark waters of our own perturbed minds, that we may make to ourselves the most of your significance." They teach, he tells us elsewhere, "something significant to all of us; and each man has a whole hemisphere of them, if he will but look up to counsel and befriend him."

There is a passage in an address given many years ago by Professor Huxley to the South London Working Men's College which struck me very much at the time, and which puts this in language more forcible than any which I could use.

"Suppose," he said, "it were perfectly certain that the life and fortune of every one of us would, one day or other, depend upon his winning or losing a game of chess. Don't you think that we should all consider it to be a primary duty to learn at least the names and the moves of the pieces? Do you not think that we should look with a disapprobation amounting to scorn upon the father who allowed his son, or the State which allowed its members, to grow up without knowing a pawn from a knight? Yet it is a very plain and elementary truth that the life, the fortune, and the happiness of every one of us, and more or less of those who are connected with us, do depend upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. It is a game which has been played for untold ages, every man and women of us being one of the two players in a game of his or her own. The chessboard is the world, the pieces are the phenomena of the Universe, the rules of the game are what we call the laws of nature. The player on the other side is hidden from us. We know that his play is always fair, just, and patient. But also we know to our cost that he never overlooks a mistake or makes the smallest allowance for ignorance. To the man who plays well the highest stakes are paid, with that sort of overflowing generosity which with the strong shows delight in strength. And one who plays ill is checkmated —without haste, but without remorse."

I have elsewhere endeavored to show the purifying and ennobling influence of science upon religion; how it has assisted, if indeed it may not claim the main share, in sweeping away the dark superstitions, the degrading belief in sorcery and witchcraft, and the cruel, however well in-

tentioned, intolerance which embittered the Christian world almost from the very days of the Apostles themselves. In this she has surely performed no mean service to religion itself. As Canon Fremantle has well and justly said, men of science, and not the clergy only, are ministers of religion.

Again, the national necessity for scientific education is imperative. We are apt to forget how much we owe to science, because so many of its wonderful gifts have become familiar parts of our everyday life, that their very value makes us forget their origin. At the recent celebration of the Sexcentenary of Peterhouse College, near the close of a long dinner, Sir Frederick Bramwell was called on, some time after midnight, to return thanks for applied science. He excused himself from making a long speech on the ground that, though the subject was almost inexhaustible, the only illustration which struck him as appropriate under the circumstances was "the application of the domestic lucifer to the bedroom candle." One cannot but feel how unfortunate was the saying of the poet that

> "The light-outspeeding telegraph
> Bears nothing on its beam."

The report of the Royal Commission on Technical Instruction, which has recently been issued, teems with illustrations of the advantages afforded by technical instruction. At the same time, technical training ought not to begin too soon, for, as Bain truly observes, "in a right view of scientific education the first principles and leading examples, with select details, of all the great sciences, are the proper basis of the complete and exhaustive study of any single science." Indeed, in the words of Sir John Herschel, "it can hardly be pressed forcibly enough on the attention of the student of nature, that there is scarcely any natural phenomenon which can be fully and completely explained in all its circumstances, without a union of several, perhaps of all the sciences." The most important secrets of nature are often hidden away in unexpected places. Many valuable substances have been discovered in the refuse of manufactories: it was a happy thought of Glauber to examine what everybody else threw away. There is perhaps no nation the future happiness aud prosperity of which depend more on science than our own. Our population is over 35,000,000, and is rapidly increasing. Even at present it is far larger than our acreage can support. Few people whose business does not lie in the study of statistics realize that we have to pay foreign countries no less than £140,000,000 a year for food. This, of course, we purchase mainly by manufactured articles. We hear now a great deal about depression of trade, and foreign, especially American, competition, which, let me observe, will be much keener a few years hence, when she has paid off her debt, and consequently reduced her taxation. But let us look forward one hundred years—no long time in the history of a nation. Our coal supplies will then be greatly diminished. The population of Great Britain doubles at the present rate of increase in about fifty years, so that we should then, if the present rate continues, require to import over £400,000,000 a year in food. How, then, is this to be paid for? We have before us, as usual, three courses. The natural rate of increase may be stopped, which means suffering and outrage; or the population may increase, only to vegetate in misery and destitution; or, lastly, by the development of scientific training and appliances, they may probably be maintained in happiness and comfort. We have, in fact, to make our choice between science and suffering. It is only by wisely utilizing the gifts of science that we have any hope of maintaining our population in plenty and comfort. Science, however, will do this for us if we will only let her.

She may be no fairy godmother indeed, but she will richly endow those who love her.

That discoveries, innumerable, marvelous, and fruitful, await the successful explorers of nature no one can doubt. What would one not give for a science primer of the next century? for, to paraphrase a well-known saying, even the boy at the plough will then know more of science than the wisest of our philosophers do now. Boyle entitled one of his essays "Of Man's great Ignorance of the Uses of Natural Things; or that there is no one thing in nature whereof the uses to human life are yet thoroughly understood"—a saying which is still as true now as when it was written. And, lest I should be supposed to be taking too sanguine a view, let me give the authority of Sir John Herschel, who says: "Since it cannot but be that innumerable and most important uses remain to be discovered among the materials and objects already known to us, as well as among those which the progress of science must hereafter disclose, we may hence conceive a well-grounded expectation not only of constant increase in the physical resources of mankind, and the consequent improvement of their condition, but of conditional accession to our power of penetrating into the arcana of nature and becoming acquainted with her highest laws."

Nor is it merely in a material point of view that science would thus benefit the nation. She will raise and strengthen the national, as surely as the individual, character. The great gift which Minerva offered to Paris is now freely tendered to all, for we may apply to the nation, as well as to the individual, Tennyson's noble lines:—

"Self-reverence, self-knowledge, self-control:
These three alone lead life to sovereign power,
Yet not for power (power of herself
Would come uncalled for), but to live by law;
Acting the law we live by without fear."

"In the vain and foolish exultation of the heart," said John Quincy Adams, at the close of his final lecture on resigning his chair at Boston, "which the brighter prospects of life will sometimes excite, the pensive portress of science shall call you to the sober pleasures of her holy cell. In the mortification of disappointment, her soothing voice shall whisper serenity and peace. In social converse with the mighty dead of ancient days, you will never smart under the galling sense of dependence upon the mighty living of the present age. And in your struggles with the world, should a crisis ever occur, when even friendship may deem it prudent to desert you, when priest and Levite shall come and look on you and pass by on the other side, seek refuge, my unfailing friends, and be assured you shall find it, in the friendship of Lælius and Scipio, in the patriotism of Cicero, Demosthenes, and Burke, as well as in the precepts and example of Him whose law is love, and who taught us to remember injuries only to forgive them."

Let me in conclusion quote the glowing description of our debt to science given by Archdeacon Farrar in his address at Liverpool College—testimony, moreover, all the more valuable, considering the source from which it comes.

"In this great commercial city," he said, "where you are surrounded by the triumphs of science and of mechanism—you, whose river is ploughed by the great steamships, whose white wake has been called the fittest avenue to the palace front of a mercantile people—you know well that in the achievements of science there is not only beauty and wonder, but also beneficence and power. It is not only that she has revealed to us infinite space crowded with unnumbered worlds; infinite time peopled by unnumbered existences; infinite organisms hitherto invisible but full of delicate and iridescent loveliness; but also that she has been, as a great archangel of

mercy, devoting herself to the service of man. She has labored, her votaries have labored, not to increase the power of despots or add to the magnificence of courts, but to extend human happiness, to economize human effort, to extinguish human pain. Where of old, men toiled, half blinded and half naked, in the mouth of the glowing furnace to mix the white-hot iron, she now substitutes the mechanical action of the viewless air. She has enlisted the sunbeam in her service to limn for us, with absolute fidelity, the faces of the friends we love. She has shown the poor miner how he may work in safety, even amid the explosive fire-damp of the mine. She has by her anæsthetics, enabled the sufferer to be hushed and unconscious while the delicate hand of some skilled operator cuts a fragment from the nervous circle of the unquivering eye. She points not to pyramids built during weary centuries by the sweat of miserable nations, but to the lighthouse, and the steamship, to the railroad and the telegraph. She has restored eyes to the blind and hearing to the deaf. She has lengthened life, she has minimized danger, she has controlled madness, she has trampled on disease. And on all these grounds, I think that none of our sons should grow up wholly ignorant of studies which at once train the reason and fire the imagination, which fashion as well as forge, which can feed as well as fill, the mind."

CHAPTER X.

EDUCATION.

"No pleasure is comparable to the standing upon the vantage ground of truth."—
BACON.

"Divine Philosophy!
Not harsh and crabbed as dull fools suppose,
But musical as is Apollo's lute,
And a perpetual feast of nectar'd sweets
Where no crude surfeit reigns."
SHAKESPEARE.

It may seem rather surprising to include education amony the pleasures of life; for in too many cases it is made odious to the young, and is supposed to cease with school; while, on the contrary, if it is to be really successful it must be made suitable, and therefore interesting, to children, and must last through life.

"It is not the eye that sees the beauties of heaven, nor the ear that hears the sweetness of music, or the glad tidings of a prosperous accident; but the soul that perceives all the relishes of a sensual and intellectual perceptions: and the more noble and excellent the soul is, the greater and more savory are its perceptions. And if a child behold the rich ermine, or the diamonds of a starry night, or the order of the world, or hears the discourses of an apostle; because he makes no reflex act on himself and sees not what he sees, he can have but the pleasure of a fool or the deliciousness of a mule." *

Herein lies the importance of education. I say education rather than instruction, because it is far more important to cultivate the mind than to store the memory. Studies are a means and not an end. "To spend too much time in studies is sloth; to use them too much for ornament is affectation; to make judgment wholly by their rules is the humor of a scholar: they perfect nature, and are perfected by experience. . . . Crafty men contemn studies, simple men admire them, and wise men use them." †

Moreover, though, as Mill says, "in the comparatively early state of human development in which we now live, a person cannot indeed feel that entireness of sympathy with all others which would make any real discordance in the general direction of their conduct in life impossible," yet education might surely do more to root in us the feeling of unity with our fellow-creatures; at any rate, if we do not study in this spirit, all our learning will but leave us as weak and sad as Faust.

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* Jeremy Taylor.
† Bacon.

"I've now, alas! Philosophy,
Medicine and Jurisprudence too,
And to my cost Theology;
With ardent labor studied through,
And here I stand, with all my lore,
Poor fool, no wiser than before."*

Our studies should be neither "a couch on which to rest; nor a cloister in which to promenade alone; nor as a tower from which to look down on others; nor as a fortress whence we may resist them; nor as a workshop for gain and merchandise; but as a rich armory and treasury for the glory of the creator and the ennoblement of life." †

For in the noble words of Epictetus, "you will do the greatest service to the state if you shall raise, not the roofs of the houses, but the souls of the citizens: for it is better that great souls should dwell in small houses rather than for mean slaves to lurk in great houses."

It is then of great importance to consider whether our present system of education is the one best calculated to fulfill these great objects. Does it really give that love of learning which is better than learning itself? Does all the study of the classics to which our sons devote so many years give any just appreciation of them; or do they not on leaving college too often feel with Byron—

"Then, farewell, Horace, whom I hated so!"

Too much concentration on any one subject is a great mistake, especially in early life. Nature herself indicates the true system, if we would but listen to her. Our instincts are good guides, though not infallible, and children will profit little by lessons which do not interest them. In cheerfulness, says Pliny, is the success of our studies—"studia hilaritate proveniunt"—and we may with advantage take a lesson from Theognis, who, in his Ode on the Marriage of Cadmus and Harmonia, makes the Muses sing:—

"What is good and fair,
Shall ever be our care;
Thus the burden of it rang,
That shall never be our care,
Which is neither good nor fair.
Such were the words your lips immortal sang."

There are some who seem to think that our educational system is as good as possible, and that the only remaining points of importance are the number of schools and scholars, the question of fees, the relation of voluntary and board schools, etc. "No doubt," says Mr. Symonds in his *Sketches in Italy and Greece*, "there are many who think that when we not only advocate education but discuss the best system we are simply beating the air; that our population is as happy and cultivated as can be, and that no substantial advance is really possible. Mr. Galton, however, has expressed the opinion, and most of those who have written on the social condition of Athens seem to agree with him, that the population of Athens, taken as a whole, was as superior to us as we are to Australian savages."

That there is, indeed, some truth in this, probably no student of Greek history will deny. Why, then, should this be so? I cannot but think that our system of education is partly responsible.

Manual and science teaching need not in any way interfere with instruction in other subjects. Though so much has been said about the importance of science and the value of technical instruction, or of hand-training, as I should prefer to call it, it is unfortunately true that in our system of education from the highest schools downwards, both of them are sadly neglected, and the study of language reigns supreme.

This is no new complaint. Ascham, in *The Schoolmaster*, long ago lamented it; Milton, in his letter to Mr. Samuel Hartlib, complained "that our children are forced to stick unreason-

* Goethe.
† Bacon.

ably in these grammatick flats and shallows;" and observes that, "though a linguist should pride himself to have all the tongues Babel cleft the world into, yet, if he have not studied the solid things in them as well as the words and lexicons, he were nothing so much to be esteemed a learned man as any yeoman or tradesman competently wise in his mother dialect only;" and Locke said that "schools fit us for the university rather than for the world." Commission after commission, committee after committee, have reiterated the same complaint. How then do we stand now?

I see it indeed constantly stated that, even if the improvement is not so rapid as could be desired, still we are making considerable progress. But is this so? I fear that our present system does not really train the mind, or cultivate the power of observation, or even give the amount of information which we may reasonably expect from the time devoted to it.

Mr. (now Sir M. G.) Grant-Duff has expressed the opinion that a boy or girl of fourteen might reasonably be expected to "read aloud clearly and agreeably, to write a large distinct round hand, and to know the ordinary rules of arithmetic, especially compound addition—a by no means universal accomplishment; to speak and write French with ease and correctness, and have some slight acquaintance with French literature; to translate *ad aperturam libri* from an ordinary French or German book; to have a thoroughly good elementary knowledge of geography, under which are comprehended some notions of astronomy—enough to excite his curiosity; a knowledge of the very broadest facts of geology and history—enough to make him understand, in a clear but perfectly general way, how the larger features of the world he lives in, physical and political, came to be like what they are; to have been trained from earliest infancy to use his powers of observation on plants, or animals, or rocks, or other natural objects; and to have gathered a general acquaintance with what is most supremely good in that portion of the more important English classics which is suitable to his time of life; to have some rudimentary acquaintance with drawing and music."

To effect this, no doubt, "industry must be our oracle, and reason our Apollo," as Sir T. Browne says; but surely it is no unreasonable estimate; yet how far do we fall short of it? General culture is often deprecated because it is said that smatterings are useless. But there is all the difference in the world between having a smattering of, or being well grounded in, a subject. It is the latter which we advocate—to try to know, as Lord Brougham well said, "everything of something, and something of everything."

"It can hardly," says Sir John Herschel, "be pressed forcibly enough on the attention of the student of nature, that there is scarcely any natural phenomenon which can be fully and completely explained, in all its circumstances, without a union of several, perhaps of all, the sciences."

The present system is most of our public schools and colleges sacrifices everything else to classics and arithmetic. They are most important subjects, but ought not to exclude science and modern languages. Moreover, after all, our sons leave college unable to speak either Latin or Greek, and too often absolutely without any interest in classical history or literature. But the boy who has been educated without any training in science has grave reason to complain of "knowledge at one entrance quite shut out."

By concentrating the attention, indeed, so much on one or two subjects, we defeat our own object, and produce a feeling of distaste where we wish to create an interest.

Our great mistake in education is, as it seems to me, the worship of book-learning—the confusion of instruction and education. We strain

the memory instead of cultivating the mind. The children in our elementary schools are wearied by the mechanical act of writing, and the interminable intricacies of spelling, they are oppressed by columns of dates, by lists of kings and places, which convey no definite idea to their minds, and have no near relation to their daily wants and occupations; while in our public schools the same unfortunate results are produced by the weary monotony of Latin and Greek grammar. We ought to follow exactly the opposite course with children—to give them a wholesome variety of mental food, and endeavor to cultivate their tastes, rather than to fill their minds with dry facts. The important thing is not so much that every child should be taught, as that every child should be given the wish to learn. What does it matter if the pupil knows a little more or a little less? A boy who leaves school knowing much, but hating his lessons, will soon have forgotten almost all he ever learnt; while another who had acquired a thirst for knowledge, even if he had learnt little, would soon teach himself more than the first ever knew. Children are by nature eager for information. They are always putting questions. This ought to be encouraged. In fact, we may to a great extent trust to their instincts, and in that case they will do much to educate themselves. Too often, however, the acquirement of knowledge is placed before them in a form so irksome and fatiguing that all desire for information is choked, or even crushed out; so that our schools, in fact, become places for the discouragement of learning, and thus produce the very opposite effect from that at which we aim. In short, children should be trained to observe and to think, for in that way there would be opened out to them a source of the purest enjoyment for leisure hours, and the wisest judgment in the work of life.

Another point in which I venture to think that our system of education might be amended, is that it tends at present to give the impression that everything is known. Dr. Bushby is said to have kept his hat on in the presence of King Charles, that the boys might see what a great man he was. I doubt, however, whether the boys were deceived by the hat; and am very skeptical about Dr. Bushby's theory of education.

Master John of Basingstoke, who was Archdeacon of Leicester in 1252, and who, having learnt Greek during a visit to Athens from Constantina, daughter of the Archbishop of Athens, used to say afterwards that though he had studied well and diligently at the University of Paris, yet he learnt more from an Athenian maiden of twenty. We cannot all study so pleasantly as this, but the main fault I find with Dr. Bushby's system is that it keeps out of sight the great truth of human ignorance.

Boys are given the impression that the masters know everything. If, on the contrary, the great lesson impressed on them was that what we know is as nothing to what we do not know, that the "great ocean of truth lies all undiscovered before us," surely this would prove a great stimulus, and many would be nobly anxious to extend the intellectual kingdom of man, and enlarge the boundaries of human knowledge.

Education ought not to cease when we leave school; but if well begun there, will continue through life.

Moreover, whatever our occupation or profession in life may be, it is most desirable to create for ourselves some other special interest. In the choice of a subject every one should consult his own instincts and interests. I will not attempt to suggest whether it is better to pursue art; whether we only study the motes in the sunbeam, or the heavenly bodies themselves. Whatever may be the subject of our choice, we shall find enough, and more than enough, to repay the devotion of a lifetime. Life no doubt is paved with enjoyments, but we must

all expect times of anxiety, of suffering, and of sorrow; when these come it is an inestimable comfort to have some deep interest which will, at any rate to some extent, enable us to escape from ourselves.

"A cultivated mind," says Mill,—"I do not mean that of a philosopher, but any mind to which the fountains of knowledge have been opened, and which has been taught in any tolerable degree to exercise its faculties—will find sources of inexhaustible interest in all that surrounds it; in the objects of nature, the achievements of art, the imaginations of poetry, the incidents of history, the ways of mankind past and present, and their prospects in the future. It is possible, indeed, to become indifferent to all this, and that too without having exhausted a thousandth part of it; but only when one has had from the beginning no moral or human interest in these things, and has sought in them only the gratification of curiosity."

I have been subjected to some good-natured banter for having said that I looked forward to a time when our artisans and mechanics would be great readers. But it is surely not unreasonable to regard our social condition as susceptible of great improvement. The spread of schools, the cheapness of books, the establishment of free libraries will, it may be hoped, exercise a civilizing and ennobling influence. They will even, I believe, do much to diminish poverty and suffering, so much of which is due to ignorance and to the want of interest and brightness in uneducated life. So far as our elementary schools are concerned, there is no doubt much difficulty in opportioning the National Grant without unduly stimulating mere mechanical instruction. But this is not the place to discuss the subject of religious or moral training, or the system of apportioning the grant.

If we succeed in giving the love of learning, the learning itself is sure to follow.

We should then endeavor to educate our children so that every country walk may be pleasure; that the discoveries of science may be a living interest; that our national history and poetry may be sources of legitimate pride and rational enjoyment; in short, our schools, if they are to be worthy of the name—if they are in any measure to fulfill their high function—must be something more than mere places of dry study; must train the children educated in them so that they may be able to appreciate and enjoy those intellectual gifts which might be, and ought to be, a source of interest and of happiness, alike to the high and to the low, to the rich and to the poor.

Education might at least teach us how little man yet knows, how much he has to learn; it might enable us to realize that those who complain of the tiresome monotony of life have only themselves to blame that knowledge is pleasure as well as power; it should lead us all to try with Milton "to behold the bright countenance of truth in the quiet and still air of study," and to realize with Bacon in part, if not entirely, that "no pleasure is comparable to the standing upon the vantage ground of truth."

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CONTENTS TO PART II.

Beacon Lights of Science

THE PLEASURES OF LIFE

PART II

By SIR JOHN LUBBOCK, Bart.

PREFACE.

"And what is writ, is writ—
Would it were worthier."

BYRON.

HEREWITH I launch the conclusion of my subject. Perhaps I am unwise in publishing a second part. The first was so kindly received that I am running a risk in attempting to add to it.

In the preface, however, to the first part I have expressed the hope that the thoughts and quotations in which I have found most comfort and delight, might be of use to others also.

In this my most sanguine hopes have been more than realized. Not only has the book passed through thirteen editions in less than two years, but the many letters which I have received have been most gratifying.

Two criticisms have been repeated by several of those who have done me the honor of noticing my previous volume. It has been said in the first place that my life has been exceptionally bright and full, and that I connot therefore judge for others. Nor do I attempt to do so. I do not forget, I hope I am not ungrateful for, all that has been bestowed on me. But if I have been greatly favored, ought I not to be on that very account especially qualified to write on such a theme? Moreover, I have had,—who has not,—my own sorrows.

Again, some have complained that there is too much quotation—too little of my own. This I take to be in reality a great compliment. I have not striven to be original.

If, as I have been assured by many, my book have proved a comfort, and have been able to cheer in the hour of darkness, that is indeed an ample reward, and is the utmost I have ever hoped.

HIGH ELMS,
DOWN, KENT, *April* 1889.

CHAPTER I.

AMBITION.

"Fame is the spur that the clear spirit doth raise
(That last infirmity of noble minds)
To scorn delights and live laborious days."

MILTON.

IF fame be the last infirmity of noble minds, ambition is often the first; though, when properly directed, it may be no feeble aid to virtue.

Had not my youthful mind, says Cicero, "from many precepts, from many writings, drunk in this truth, that glory and virtue ought to be the darling, nay, the only wish in life; that, to attain these, the torments of the flesh, with the perils of death and exile, are to be despised; never had I exposed my person in so many encounters, and to these daily con-

flicts with the worst of men, for your deliverance. But on this head, books are full; the voice of the wise is full; the examples of antiquity are full: and all these the night of barbarism had still enveloped, had it not been enlightened by the sun of science."

The poet tells us that

"The many fail: the one succeeds."*

But this is scarcely true. All succeed who deserve, though not perhaps as they hoped, An honorable defeat is better than a mean victory, and no one is really the worse for being beaten, unless he loses heart. Though we may not be able to attain, that is no reason why we should not aspire.

I know, says Morris,

"How far high failure overleaps the bound
Of low successes."

And Bacon assures us that "if a man look sharp and attentively he shall see fortune; for though she is blind, she is not invisible."

To give ourselves a reasonable prospect of success we must realize what we hope to achieve; and then make the most of our opportunities. Of these the use of time is one of the most important. What have we to do with time, asks Oliver Wendell Holmes, but to fill it up with labor.

"At the battle of Montebello," said Napoleon, "I ordered Kellermann to attack with 800 horse, and with these he separated the 6000 Hungarian grenadiers before the very eyes of the Austrian cavalry. This cavalry was half a league off, and required a quarter of an hour to arrive on the field of action; and I have observed that it is always these quarters of an hour that decide the fate of a battle," including, we may add, the battle of life.

Nor must we spare ourselves in other ways, for

"He who thinks in strife
To earn a deathless fame, must do, nor ever care for life."†

In the excitement of the struggle, moreover, he will suffer comparatively little from wounds and blows which would otherwise cause intense suffering.

It is well to weigh scrupulously the object in view, to run as little risk as may be, to count the cost with care.

But when the mind is once made up, there must be no looking back, you must spare yourself no labor, nor shrink from danger.

"He either fears his fate too much
Or his deserts are small,
That dares not put it to the touch
To gain or lose it all."*

Glory, says Renan, "is after all the thing which has the best chance of not being altogether vanity." But what is glory?

Marcus Aurelius observes that "a spider is proud when it has caught a fly, a man when he has caught a hare, another when he has taken a little fish in a net, another when he has taken wild boars, another when he has taken bears, and another when he has taken Sarmatians;"† but this, if from one point of view it shows the vanity of fame, also encourages us with the evidence that every one may succeed if his objects are but reasonable.

Alexander may be taken as almost a type of Ambition in its usual form, though carried to an extreme.

His desire was to conquer, not to inherit or to rule. When news was brought that his father Philip had taken some town, or won some battle, instead of appearing delighted with it, he used to say to his companions, "My father will go on conquering, till there be nothing extraordinary left for you and me to do."‡ He is said even to have been mortified at the number of the stars, considering that he had not been able to conquer one world. Such ambition is justly foredoomed to disappointment.

The remarks of Philosophers on

*Tennyson.
† Beowulf.

* Montrose.
† He is referring here to one of his expeditions.
‡ Plutarch.

the vanity of ambition refer generally to that unworthy form of which Alexander may be taken as the type —the idea of self-exaltation, not only without any reference to the happiness, but even regardless of the sufferings, of others.

"A continual and restless search after fortune," says Bacon, "takes up too much of their time who have nobler things to observe." Indeed he elsewhere extends this, and adds, "No man's private fortune can be an end any way worthy of his existence."

Goethe well observes that man "exists for culture; not for what he can accomplish, but for what can be accomplished in him."*

As regards fame we must not confuse name and essence. To be remembered is not necessarily to be famous. There is infamy as well as fame; and unhappily almost as many are remembered for the one as for the other, and not a few for a mixture of both.

Who would not rather be forgotten, than recollected as Ahab or Jezebel, Nero or Commodus, Messalina or Heliogabalus, King John or Richard III.?

"To be nameless in worthy deeds exceeds an infamous history. The Canaanitish woman lives more happily without a name than Herodias with one; and who would not rather have been the good thief than Pilate?"†

Kings and Generals are often remembered as much for their deaths as for their lives, for their misfortunes as for their successes. The hero of Thermopylæ was Leonidas, not Xerxes. Alexander's Empire fell to pieces at his death. Napoleon was a great genius, though no Hero. But what came of all his victories. They passed away like the smoke of his guns, and he left France weaker, poorer, and smaller than he found her. The most lasting result of his genius is no military glory, but the Code Napoleon.

A surer and more glorious title to fame is that of those who are remembered for some act of justice or self-devotion: the self-sacrifice of Leonidas, the good faith of Regulus, are the glories of history.

In some cases where men have been called after places, the men are remembered, while the places are forgotten. When we speak of Palestrina or Perugino, of Nelson or Wellington, of Newton or Darwin, who remembers the towns? We think only of the men.

Goethe has been called the soul of his century.

It is true that we have but meagre biographies of Shakespeare or of Plato; yet how much we know about them.

Statesmen and Generals enjoy great celebrity during their lives. The newspapers chronicle every word and movement. But the fame of the Philosopher and Poet is more enduring.

Wordsworth deprecates monuments to poets, with some exceptions, on this very account. The case of statesmen, he says, is different. It is right to commemorate them because they might otherwise be forgotten; but Poets live in their books for ever.

The real conquerors of the world indeed are not the Generals but the Thinkers; not Genghis Khan and Akbar, Rameses, or Alexander, but Confucius and Buddha, Aristotle, Plato, and Christ. The rulers and kings who reigned over our ancestors have for the most part long since sunk into oblivion—they are forgotten for want of some sacred bard to give them life—or are remembered, like Suddhodana and Pilate, from their association with higher spirits.

Such men's lives cannot be compressed into any biography. They lived not merely in their own generation, but for all time. When we speak of the Elizabethan period we

* Emerson.

* Sir J. Browne.

think of Shakepeare and Bacon, Raleigh and Spenser. The minister and secretaries of state, with one or two exceptions, we scarcely remember, and Bacon himself is recollected less as the Judge than as the Philosopher.

Moreover, to what do Generals and Statesmen owe their fame? They were celebrated for their deeds, but to the Poet and the Historian they owe their fame, and to the Poet and Historian we owe their glorious memories and the example of their virtues.

> "Vixere fortes ante Agamemnona
> Multi; sed omnes illacrimabiles
> Urgentur ignotique longâ
> Nocte, carent quia vate sacro."

There were many brave men before Agamemnon, but their memory has perished because they were celebrated by no divine bard.

Montrose happily combined the two, when in "My dear and only love" he promises,

> "I'll make thee glorious by my pen,
> And famous by my sword.'

It is remarkable, and encouraging, how many of the greatest men have risen from the lowest rank, and triumphed over obstacles which might well have seemed insurmountable; nay, even obscurity itself may be a source of honor. The very doubts as to Homer's birthplace have contributed to this glory, seven cities as we all know laying claim to the great poet—

> "Smyrna, Chios, Colophon, Salamis, Rhodos, Argos, Athenæ."

To take men of Science only. Ray was the son of a blacksmith, Watt of a shipwright, Franklin of a tallow-chandler, Dalton of a handloom weaver, Fraünhofer of a glazier, Laplace of a farmer, Linnæus of a poor curate, Faraday of a blacksmith, Lamarck of a banker's clerk; Davy was an apothecary's assistant, Galileo, Kepler, Sprengel, Cuvier, and Sir W. Herschel were all children of very poor parents.

It is, on the other hand, sad to think how many of our greatest benefactors are unknown even by name. Who discovered the art of procuring fire? Prometheus is merely the personification of forethought. Who invented letters? Cadmus is a mere name.

These inventions, indeed, are lost in the mists of antiquity, but even as regards recent progress the steps are often so gradual and so numerous, that few inventions can be attributed entirely, or even mainly, to any one person.

Columbus is said, and truly said, to have discovered America, though the Northmen were there before him.

We Englishmen have every reason to be proud of our fellow-countrymen. To take Philosophers and men of Science only, Bacon and Hobbes, Locke and Berkeley, Hume and Hamilton, will always be associated with the progress of human thought; Newton with gravitation, Adam Smith with Political Economy, Young with the undulatory theory of light, Herschel with the discovery of Uranus and the study of the star depths, Lord Worcester, Trevethick, and Watt with the steam-engine, Wheatstone with the electric telegraph, Jenner with the banishment of small-pox, Simpson with the practical application of anæsthetics, and Darwin with the creation of modern Natural History.

These men, and such as these, have made our history and moulded our opinions; and though during life they may have occupied, comparatively, an insignificant space in the eyes of their countrymen, they became at length an irresistible power, and have now justly grown to a glorious memory.

CHAPTER II.

WEALTH.

> "The rich and the poor meet together: the Lord is the maker of them all." PROVERBS OF SOLOMON.

AMBITION often takes the form of

a love of money. There are many who have never attempted Art or Music, Poetry or Science; but most people do something for a livelihood, and consequently an increase of income is not only acceptable in itself, but gives a pleasant feeling of success.

Doubt is often expressed whether wealth is any advantage. I do not myself believe that those who are born, as the saying is, with a silver spoon in their mouth, are necessarily any the happier for it. No doubt wealth entails almost more labor than poverty, and certainly more anxiety. Still it must, I think, be confessed that the possession of an income, whatever it may be, which increases somewhat as the years roll on, does add to the comfort of life.

Unquestionably the possession of wealth is by no means unattended by drawbacks. Money and the love of money often go together. The poor man, as Emerson says, is the man who wishes to be rich; and the more a man has, the more he often longs to be richer. Just as drinking often does but increase thirst; so in many cases the craving for riches does grow with wealth.

This is, of course, especially the case when money is sought for its own sake. Moreover, it is often easier to make money than to keep or to enjoy it. Keeping it is dull and anxious drudgery. The dread of loss may hang like a dark cloud over life. Apicius, when he had squandered most of his patrimony, but had still 250,000 crowns left, committed suicide, as Seneca tells us, for fear he should die of hunger.

Wealth is certainly no sinecure. Morever, the value of money depends partly on knowing what to do with it, partly on the manner in which it is acquired.

"Acquire money, thy friends say, that we also may have some. If I can acquire money and also keep myself modest, and faithful, and magnanimous, point out the way, and I will acquire it. But if you ask me to love the things which are good and my own, in order that you may gain things that are not good, see how unfair and unwise you are. For which would you rather have? Money, or a faithful and modest friend. . . . .

"What hinders a man, who has clearly comprehended these things, from living with a light heart, and bearing easily the reins, quietly expecting which can happen, and enduring that which has already happened? Would you have me to bear poverty? Come, and you will know what poverty is when it has found one who can act well the part of a poor man."*

We must bear in mind Solon's answer to Crœsus, "Sir, if any other come that hath better iron than you, he will be master of all this gold."

Midas is another case in point. He prayed that everything he touched might be turned into gold, and this prayer was granted. His wine turned to gold, his bread turned to gold, his clothes, his very bed.

"Attonitus novitate mali, divesque miserque,
Effugere optat opes, et quæ modo voverat, odit."

He is by no means the only man who has suffered from too much gold.

The real truth I take to be that wealth is not necessarily an advantage, but that whether it is so or not depends on the use we make of it. The same, however, might be said of most other opportunities and privileges; Knowledge and Strength, Beauty and Skill, may all be abused; if we neglect or misuse them we are worse off than if we had never had them. Wealth is only a disadvantage in the hands of those who do not know how to use it. It gives the command of so many other things—leisure, the power of helping friends, books, works of art, opportunities and means of travel.

It would, however, be easy to ex-

* Epictetus.

aggerate the advantages of money. It is well worth having, and worth working for, but it does not requite too great a sacrifice; not indeed so great as it often offered up to it. A wise proverb tells us that gold may be bought too dear. If wealth is to be valued because it gives leisure, clearly it would be a mistake to sacrifice leisure in the struggle for wealth. Money has no doubt also a tendency to make men poor in spirit. But, on the other hand, what gift is there which is without danger?

Euripides said that money finds friends for men, and has great (he said the greatest) power among Mankind, cynically adding, "A mighty person indeed is a rich man, especially if his heir be unknown."

Bossuet tells us that "he had no attachment to riches, still if he had only what was barely necessary, he felt himself narrowed, and would lose more than half his talents."

Shelley was certainly not an avaricious man, and yet "I desire money," he said, "because I think I know the use of it. It commands labor, it gives leisure; and to give leisure to those who will employ it in the forwarding of truth is the noblest present an individual can make to the whole."

Many will have felt with Pepys when he quaintly and piously says, "Abroad with my wife, the first time that ever I rode in my own coach; which do make my heart rejoice and praise God, and pray him to bless it to me, and continue it."

This, indeed, was a somewhat selfish satisfaction. Yet the merchant need not quit nor be ashamed of his profession, bearing in mind only the inscription on the Church of St. Giacomo de Rialto at Venice: "Around this temple let the merchant's law be just, his weights true, and his covenants faithful."*

If life has been sacrificed to the rolling up of money for its own sake, the very means by which it was acquired will prevent its being enjoyed; the chill of poverty will have entered into the very bones. The term Miser was happily chosen for such persons; they are essentially miserable.

"A collector peeps into all the picture shops of Europe for a landscape of Poussin, a crayon sketch of Salvator; but the Transfiguration, the Last Judgment, the Communion of St. Jerome, and what are as transcendent as these, are on the walls of the Vatican, the Uffizi, or the Louvre, where every footman may see them; to say nothing of Nature's pictures in every street, of sunsets and sunrises every day, and the sculpture of the human body never absent. A collector recently bought at public auction in London, for one hundred and fifty-seven guineas, an autograph of Shakespeare: but for nothing a schoolboy can read Hamlet, and can detect secrets of highest concernment yet unpublished therein."* And yet "What hath the owner but the sight of it with his eyes."†

We are really richer than we think. We often hear of Earth hunger. People envy a great Landlord, and fancy how delightful it must be to possess a large estate. But, as Emerson says, "if you own land, the land owns you." Moreover, have we not all, in a better sense—have we not all thousands of acres of our own? The commons, and roads, and footpaths, and the seashore, our grand and varied coast—these are all ours. The sea-coast has, moreover, two great advantages. In the first place, it is for the most part but little interfered with by man, and in the second it exhibits most instructively the forces of Nature. We are all great landed proprietors, if we only knew it. What we lack is not land, but the power to enjoy it. Moreover, this great inheritence has the additional advantage that it entails no labor, requires no management. The landlord has the trouble, but the landscape belongs to every one who has eyes to

* Ruskin.

* Emerson.

† Solomon.

see it. Thus Kingsley called the heaths round Eversley his "winter garden;" not because they were his in the eye of the law, but in that higher sense in which ten thousand persons may own the same thing.

CHAPTER III.

HEALTH.

"Health is best for mortal man, next beauty; thirdly, well gotten wealth; fourthly, the pleasure of youth among friends."

SIMONIDES.

BUT if there has been some difference of opinion as to the advantage of wealth, with reference to health all are agreed.

"Health," said Simonides long ago, "is best for mortal man; next beauty; thirdly, well gotten wealth; fourthly, the pleasure of youth among friends." "Life," says Longfellow, "without health is a burden, with health is a joy and gladness." Empedocles delivered the people of Selinus from a pestilence by draining a marsh, and was hailed as a Demigod. We are told that a coin was struck in his honor, representing the Philosopher in the act of staying the hand of Phœbus.

We scarcely realize, I think how much we owe to Doctors. Our system of Medicine seems so natural and obvious that it hardly occurs to us as somewhat new and exceptional. When we are ill we send for a Physician; he prescribes some medicine; we take it, and pay his fee. But among the lower races of men pain and illness are often attributed to the presence of evil spirits. The Medicine Man is a Priest, or rather a Sorcerer, more than a true Doctor, and his effort is to exorcise the evil spirit.

In other countries where some advance has been made, a charm is written on a board, washed off, and drunk. In some cases the medicine is taken, not by the patient, but by the Doctor. Such a system, however, is generally transient; it is naturally discouraged by the Profession, and is indeed incompatible with a large practice. Even as regards the payment we find very different systems. The Chinese pay their medical man as long as they are well, and stop his salary as soon as they are ill. In ancient Egypt we are told that the patient feed the Doctor for the first few days, after which the Doctor paid the patient until he made him well. This is a fascinating system, but might afford too much temptation to heroic remedies.

On the whole our plan seems the best, though it does not offer adequate encouragement to discovery and research. We do not appreciate how much we owe to the discoveries of such men as Hunter and Jenner, Simpson and Lister. And yet in the matter of health we can generally do more for ourselves than the greatest Doctors can for us.

But if all are agreed as to the blessing of health, there are many who will not take the little trouble, or submit to the slight sacrifices, necessary to maintain it. Many, indeed, deliberately ruin their own health, and incur the certainty of an early grave, or an old age of suffering.

No doubt some inherit a constitution which renders health almost unattainable. Pope spoke of that long disease, his life. Many indeed may say, "I suffer, therefore I am." But happily these cases are exceptional. Most of us might be well if we would. It is very much our own fault that we are ill. We do those things which we ought not to do, and we leave undone those things which we ought to have done, and then we wonder there is no health in us.

We all know that we can make ourselves ill, but few perhaps realize how much we can do to keep our-

selves well. Much of our suffering is self-inflicted. It has been observed that among the ancient Egyptians the chief aim of life seemed to be to be well buried. Many, however, live even now as if this were the principal object of their existence.

Like Naaman, we expect our health to be the subject of some miraculous interference, and neglect the homely precautions by which it might be secured.

I am inclined to doubt whether the study of health is sufficiently impressed on the minds of those entering life. Not that it is desirable to potter over minor ailments, to con over books on illnesses, or experiment on ourselves with medicine. Far from it. The less we fancy ourselves ill, or bother about little bodily discomforts, the more likely perhaps we are to preserve our health.

It is, however, a different matter to study the general conditions of health. A well known proverb tells us that every one is a fool or a physician at forty. Unfortunately, however, many persons are invalids at forty as well as physicians.

Ill-health, however, is no excuse for moroseness. If we have one disease we may at least congratulate ourselves that we are escaping all the rest. Sydney Smith, ever ready to look on the bright side of things, once, when borne down by suffering, wrote to a friend that he had gout, asthma, and seven other maladies, but was "otherwise very well;" and many of the greatest invalids have borne their sufferings with cheerfulness and good spirits.

It is said that the celebrated physiognomist, Campanella, could so abstract his attention from any suffer ings of his body, that he was even able to endure the rack without much pain; and who ever has the power of concentrating his attention and controlling his will, can emancipate himself from most of the minor miseries of life. He may have much cause for anxiety, his body may be the seat of severe suffering, and yet his mind will remain serene and unaffected; he may triumph over care and pain.

But many have undergone much unnecessary suffering, and valuable lives have often been lost, through ignorance or carelessness. We cannot but fancy that the lives of many great men might have been much prolonged by the exercise of a little ordinary care.

If we take musicians only, what a grievous loss to the world it is that Pergolesi should have died at twenty six, Schubert at thirty-one, Mozart at thirty-five, Purcell at thirty-seven, and Mendelssohn at thirty-eight.

In the old Greek myth the life of Meleager was indissolubly connected by fate with the existence of a particular log of wood. As long as this was kept safe by Althæa, his mother, Meleager bore a charmed life. It seems wonderful that we do not watch with equal care over our body, on the state of which happiness so much depends.

The requisites of health are plain enough; regular habits, daily exercise, cleanliness, and moderation in all things—in eating as well as in drinking—would keep most people well.

I need not here dwell on the evils of drinking, but we perhaps scarcely realize how much of the suffering and ill-humor of life is due to overeating. Dyspepsia, for instance, from which so many suffer, is in nine cases out of ten their own fault, and arises from the combination of too much food with too little exercise. To lengthen your life, says an old proverb, shorten your meals. Plain living and high thinking will secure health for most of us, though it matters, perhaps, comparatively little what a healthy man eats, so long as he does not eat too much.

Mr. Gladstone has told us that the splendid health he enjoys is greatly due to his having early learnt one simple physiological maxim, and laid it down as a rule for himself

always to make twenty-five bites at every bit of meat.

> "Go to your banquet then, but use delight
> So as to rise still with an appetite."*

No doubt, however, though the rule not to eat or drink too much is simple enough in theory, it is not quite so easy in application. There have been many Esaus who have sold their birthright of health for a mess of pottage.

Moreover, it may seem paradoxical, but it is certainly true, that in the long run the moderate man will derive more enjoyment even from eating and drinking, than the glutton or the drunkard will ever obtain. They know not what it is to enjoy "the exquisite taste of common dry bread."†

And yet even if we were to consider merely the pleasure to be derived from eating and drinking, the same rule would hold good. A lunch of bread and cheese after a good walk is more enjoyable than a Lord Mayor's feast. Without wishing, like Apicius, for the neck of a stork, so that he might enjoy his dinner longer, we must not be ungrateful for the enjoyment we derive from eating and drinking, even though they be amongst the least æsthetic of our pleasures. They are homely, no doubt, but they come morning, noon, and night, and are not the less real because they have reference to the body rather than the soul.

We speak truly of a healthy appetite, for it is a good test of our bodily condition; and indeed in some cases of our mental state also. That

> "There cometh no good thing
> Apart from toil to mortals,"

is especially true with reference to appetite; to sit down to a dinner, however simple, after a walk with a friend among the mountains or along the shore, is no insignificant pleasure.

Cheerfulness and good humor, moreover, during meals are not only pleasant in themselves, but conduce greatly to health.

It has been said that hunger is the best sauce, but most would prefer some good stories at a feast even to a good appetite; and who would not like to have it said of him, as of Biron by Rosaline—

> "A merrier man
> Within the limit of becoming mirth
> I never spent an hour's talk withal."

In the three great "Banquets" of Plato, Xenophon, and Plutarch, the food is not even mentioned.

In the words of the old Lambeth adage—

> "What is a merry man?
> Let him do what he can
> To entertain his guests
> With wine and pleasant jests,
> Yet if his wife do frown
> All merryment goes down.

What salt is to food, wit and humor are to conversation and literature. "You do not," an amusing writer in the *Cornhill* has said, "expect humor in Thomas à Kempis or the Hebrew Prophets;" but we have Solomon's authority that there is a time to laugh, as well as to weep.

"To read a good comedy is to keep the best company in the world, when the best things are said, and the most amusing things happen."*

It is not without reason that every one resents the imputation of being unable to see a joke.

Laughter appears to be the special prerogative of man. The higher animals present us with proof of evident, if not highly-developed reasoning power, but it is more than doubtful whether they are capable of appreciating a joke.

Wit, moreover, has solved many difficulties and decided many controversies.

> "Ridicule shall frequently prevail,
> And cut the knot when graver reasons fail."*

A careless song, says Walpole, with a little nonsense in it now and then, does not misbecome a monarch, but it is difficult now to realize that James I. should have regarded skill

* Herrick.
† Hamerton.

* Hazlitt.
† Francis.

in punning in his selection of bishops and privy councillors.

The most wasted of all days, says Chamfort, is that on which one has not laughed.

It is moreover, no small merit of laughter that it is quite spontaneous. "You cannot force people to laugh; you cannot give a reason why they should laugh; they must laugh of themselves or not at all. . . . If we think we must not laugh, this makes our temptation to laugh the greater."* Humor is, moreover, contagious. A witty man may say, as Falstaff does of himself, "I am not only witty in myself, but the cause that wit is in other men."

But one may paraphrase the well-known remark about port wine and say that some jokes may be better than others, but anything which makes one laugh is good. "After all," says Dryden, "it is a good thing to laugh at any rate; and if a straw can tickle a man, it is an instrument of happiness," and I may add, of health.

I have been told that in omitting any mention of smoking I was overlooking one of the real pleasures of life. Not being a smoker myself I cannot perhaps judge; much must depend on the individual temperament; to some nervous natures it certainly appears to be a great comfort; but I have my doubts whether smoking, as a general rule, does add to the pleasures of life. It must, moreover, detract somewhat from the sensitiveness of taste and of smell.

Those who live in cities may almost lay it down as a rule that no time spent out of doors is ever wasted. Fresh air is a cordial of incredible virtue; old families, are in all senses county families, not town families; and those who prefer Homer and Plato and Shakespeare to hares and patridges and foxes must beware that they are not tempted to neglect this great requisite of our nature.

Most Englishmen, however, love open air, and it is probably true that most of us enjoy a game at cricket or golf more than looking at any of the old masters. The love of sport is engraven in the English character. As was said of William Rufus, "he loves the tall deer as if he had been their father."

An Oriental traveller is said to have watched a game of cricket and been much astonished at hearing that many of those playing were rich men. He asked why they did not pay some poor people to do it for them.

Wordsworth made it a rule to go out every day, and he used to say that as he never consulted the weather, he never had to consult the physicians.

It always seems to be raining harder than it really is when you look at the weather through the window. Even in winter, though the landscape often seems cheerless and bare enough when you look at it from the fireside, still it is far better to go out, even if you have to brave the storm: when you are once out of doors the touch of earth and the breath of the fresh air gives you fresh life and energy. Men, like trees, live in great part on air.

After a gallop over the downs, a row on the river, a sea voyage, a walk by the seashore or in the woods,

> "The blue above, the music in the air
> The flowers upon the ground."*

one feels as if one could say with Henry IV, "Je me porte comme le Pont Neuf."

The Roman proverb that a child should be taught nothing which he cannot learn standing up, went no doubt into an extreme, but surely we fall into another when we act as if games were the only thing which boys could learn upon their feet.

The love of games among boys is

* Hazlitt.

*Trench.

certainly a healthy instinct, and though carried too far in some of our great schools, there can be no question that cricket and football, boating and hockey, bathing and birdnesting, are not only the greatest pleasures, but the best medicines for boys

We cannot always secure sleep. When important decisions have to be taken, the natural anxiety to come to a right decision will often keep us awake. Nothing, however, is more conducive to healthy sleep than plenty of open air. Then indeed we can enjoy the fresh life of the early morning: "the breezy call of incense-bearing morn."*

"At morn the Blackcock trims his jetty wing,
'Tis morning tempts the linnet's blithest lay,
All nature's children feel the matin spring
Of life reviving with reviving day."

Epictetus described himself as "a spirit bearing about a corpse." That seems to me an ungrateful description. Surely we ought to cherish the body, even if it be but a frail and humble companion. Do we not owe to the eye our enjoyment of the beauties of this world and the glories of the Heavens; to the ear the voices of friends and all the delights of music; are not the hands most faithfull and invaluable instruments, ever ready in case of need, ever willing to do our bidding; and even the feet bear us without a murmur along the roughest and stoniest paths of life.

With reasonable care then, most of us may hope to enjoy good health. And yet what a marvellous and complex organization we have!

We are indeed fearfully and wonderfully made. It is

"Strange that a harp of a thousand strings
Should keep in tune so long."

When we consider the marvellous complexity of our bodily organization, it seems a miracle that we should live at all; much more that the innumerable organs and processes should continue day after day and year after year with so much regularity and so little friction that we are sometimes scarcely conscious of having a body at all.

And yet in that body we have more than 200 bones, of complex and varied forms, any irregularity in, or injury to, which would of course grievously interfere with our movements.

We have over 500 muscles; each nourished by almost innumerable bloodvessels, and regulated by nerves. One of our muscles, the heart, beats over 30,000,000 times in a year, and if it once stops, all is over.

In the skin are wonderfully varied and complex organs—for instance, over 2,000,000 perspiration glands, which regulate the temperature and communicate with the surface by ducts, which have a total length of some ten miles.

Think of the miles of arteries and veins, of capillaries and nerves; of the blood, with the millions of millions of blood corpuscles, each a microcosm in itself.

Think of the organs of sense,—the eye with its cornea and lens, vitreous humor, aqueous humor, and choroid, culminating in the retina, no thicker than a sheet of paper, and yet consisting of nine distinct layers, the innermost composed of rods, and cones, supposed to be the immediate recipients of the undulation of light, and so numerous that in each eye the cones are estimated at over 3,000,000, the rods at over 30,000,000.

Above all, and most wonderful of all, the brain itself. Meinert has calculated that the gray matter of the convolutions alone contains no less than 600,000,000 cells; each cell consists of several thousand visible atoms, and each atom again of many millions of molecules.

And yet with reasonable care we can most of us keep this wonderful organization in health so that it will work without causing us pain, or even discomfort, for many years; and we may hope that even when old age comes

* Gray.

"Time may lay his hand
Upon your heart gently, not smiting it,
But as a harper lays his open palm
Upon his harp, to deaden its vibrations."

CHAPTER IV.

LOVE.

"Love rules the court, the camp, the grove,
And men below and saints above;
For love is heaven and heaven is love."
SCOTT.

LOVE is the life and sunshine of life. We are so constituted that we cannot fully enjoy ourselves, or anything else, unless some one we love enjoys it with us. Even if we are alone, we store up our enjoyment in hope of sharing it hereafter with those we love.

Love lasts through life, and adapts itself to every age and circumstance; in childhood for father and mother, in manhood for wife, in age for children, and throughout for brothers and sisters, relations and friends. The strength of friendship is indeed proverbial, and in some cases, as in that of David and Jonathan, is described as surpassing the love of women. But I need not now refer to it, having spoken already of what we owe to friends.

The goodness of Providence to man has been often compared to that of fathers and mothers for their children.

"Just as a mother, with sweet pious face,
Yearns towards her little children from her seat,
Gives one a kiss, another an embrace,
Takes this upon her knees, that on her feet;
And while from actions, looks, complaints, pretences,
She learns their feelings and their various will,
To this a look, to that a word, dispenses,
And, whether stern or smiling, loves them still;—
So Providence for us, high infinite,
Makes our necessities its watchful task,
Hearkens to all our prayers, helps all our wants,
And e'en if it denies what seems our right,
Either denies because 'twould have us ask,
Or seems but to deny, or in denying grants."*

Sir Walter Scott well says—

"And if there be on Earth a tear
From passion's dross* refined and clear,
'Tis that which pious fathers shed
Upon a duteous daughter's head."

Epaminondas is said to have given as his main reason for rejoicing at the victory of Leuctra, that it would give so much pleasure to his father and mother.

Nor must the love of animals be altogether omitted. It is impossible not to sympathize with the Savage when he believes in their immortality, and thinks that after death

"Admitted to that equal sky
His faithful dog shall bear him company."†

In the *Mahabharata*, the great Indian Epic, when the family of Pandavas, the heroes, at length reached the gates of heaven, they are welcomed themselves, but are told that their dog cannot come in. Having pleaded in vain, they turn to depart, as they say they can never leave their faithful companion. Then at the last moment the Angel at the door relents, and their dog is allowed to enter with them.

We may hope the time will come when we shall learn

"Never to blend our pleasure or our pride
With sorrow of the meanest thing that feels,"‡

But at the present moment I am speaking rather of the love which leads to marriage. Such love is the music of life, nay, "there is music in the beauty, and the silent note of love, far sweeter than the sound of any instrument."§

The Symposium of Plato contains an interesting and amusing disquisition on Love.

"Love," Phædrus is made to say, "will make men dare to die for their beloved—love alone; and women as well as men. Of this, Alcestis, the daughter of Pelias, is a monument to all Hellas; for she was willing to lay down her life on behalf of her husband, when no one else would, although he had a father and mother; but the tenderness of her love

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* *Filicaja.* Translated by Leigh Hunt.

*Not from passion itself.

†Pope.

‡Wordsworth.

§Browne.

so far exceeded theirs, that she made them seem to be strangers in blood to their own son, and in name only related to him; and so noble did this action of hers appear to the gods, as well as to men, that among the many who have done virtuously she is one of the very few to whom they have granted the privilege of returning to earth, in admiration of her virtue; such exceeding honor is paid by them to the devotion and virtue of love."

Agathon is even more eloquent—

Love "fills men with affection, and takes away their disaffection, making them meet together at such banquets as these. In sacrifices, feasts, dances, he is our lord—supplying kindness and banishing unkindness, giving friendship and forgiving enmity, the joy of the good, the wonder of the wise, the amazement of the gods, desired by those who have no part in him, and precious to those who have the better part in him; parent of delicacy, luxury, desire, fondness, softness, grace, regardful of the good, regardless of the evil. In every word, work, wish, fear—pilot, comrade, helper, saviour; glory of gods and men, leader best and brightest: in whose footsteps let every man follow, sweetly singing in his honor that sweet strain with which love charms the souls of gods and men."

No doubt, even so there are two Loves, "one, the daughter of Uranus, who has no mother, and is the elder and wiser goddess; and the other, the daughter of Zeus and Dione, who is popular and common,"—but let us not examine too closely. Charity tells us even of Guinevere, "that while she lived, she was a good lover and therefore she had a good end."*

The origin of love has exercised philosophers almost as much as the origin of evil. The Symposium continues with a speech which Plato attributes in joke to Aristophanes, and of which Jowett observes that nothing in Aristophanes is more truly Aristophanic.

The original human nature, he says, was not like the present. The Primeval Man was round,* his back and sides forming a circle; and he had four hands and four feet, one head with two faces, looking opposite ways, set on a round neck and precisely alike. He could walk upright as men now do, backwards or forwards as he pleased, and he could also roll over and over at a great rate, whirling round on his four hands and four feet, eight in all, like tumblers going over and over with their legs in the air; this was when he wanted to run fast. Terrible was their might and strength, and the thoughts of their hearts were great, and they made an attack upon the gods; of them is told the tale of Otys and Ephialtes, who, as Homer says, dared to scale heaven, and would have laid hands upon the gods. Doubt reigned in the celestial councils. Should they kill them and annihilate the race with thunderbolts, as they had done the giants, then there would be an end of the sacrifices and worship which men offered to them; but, on the other hand, the gods could not suffer their insolence to be unrestrained. At last after a good deal of reflection, Zeus discovered a way. He said: "Methinks I have a plan which will humble their pride and mend their manners; they shall continue to exist, but I will cut them in two, which will have a double advantage, for it will halve their strength and we shall have twice as many sacrifices. They shall walk upright on two legs, and if they continue insolent and will not be quiet I will split them again and they shall hop on a single leg." He spoke and cut men in two, "as you might split an egg with a hair." . . . After the division the two parts of man each desiring his other half, came together. . . . So ancient is the desire of one an-

*Malory, *Morte d' Arthur.*

*I avail myself of Dr. Jowett's translation.

other which is implanted in us, reuniting our original nature, making one of two, and healing the state of man. Each of us when separated is but the indenture of a man, having one side only, like a flat-fish, and he is always looking for his other half.

And when one of them finds his other half, the pair are lost in amazement of love and friendship and intimacy, and one will not be out of the other's sight, as I may say, even for a minute: they will pass their whole lives together; yet they could not explain what they desire of one another. For the intense yearning which each of them has towards the other does not appear to be the desire of lovers' intercourse, but of something else, which the soul of either evidently desires and cannot tell, and of which she has only a dark and doubtful presentiment.

However this may be, there is such instinctive insight in the human heart that we often form our opinion almost instantaneously, and such impressions seldom change, I might even say, they are seldom wrong. Love at first sight sounds like an imprudence, and yet is almost a revelation. It seems as if we were but renewing the relations of a previous existence.

> "But to see her were to love her,
> Love but her, and love for ever."*

Yet though experience seldom falsifies such a feeling, happily the reverse does not hold good. The deepest affection is often of slow growth. Many a warm love has been won by faithful devotion.

Montaigne indeed declares that "Few have married for love without repenting it." Dr. Johnson also maintained that marriages would generally be happier if they were arranged by the Lord Chancellor; but I do not think either Montaigne or Johnson were good judges. As Lancelot said to the unfortunate Maid of Astolat, "I love not to be constrained to love, for love must arise of the heart and not by constraint."*

Love defies distance and the elements; Sestos and Abydos are divided by the sea, "but Love joined them by an arrow from his bow."†

Love can be happy anywhere. Byron wished

> "O that the desert were my dwelling-place,
> With one fair Spirit for my minister,
> That I might all forget the human race
> And, hating no one, love but only her."

And many will doubtless have felt

> "O Love! what hours were thine and mine
> In lands of Palm and southern Pine,
> In lands of Palm, of Orange blossom,
> Of Olive, Aloe, and Maize and Vine."

What is true of space holds good equally of time.

> "In peace, Love tunes the shepherd's reed;
> In war, he mounts the warrior's steed;
> In halls, in gay attire is seen;
> In hamlets, dances on the green.
> Love rules the court, the camp, the grove,
> And men below, and saints above;
> For love is heaven, and heaven is love."‡

Even when, as among some Eastern races, Religion and Philosophy have combined to depress Love, truth reasserts itself in popular sayings, as for instance in the Turkish proverb, "All women are perfection, especially she who loves you."

A French lady having once quoted to Abed-el-Kader the Polish proverb, "A woman draws more with a hair of her head than a pair of oxen well harnessed;" he answered with a smile, "The hair is unnecessary, woman is powerful as fate."

But we like to think of Love rather as the Angel of Happiness than as a ruling force: of the joy of home when "hearts are of each other sure"

> "It is the secret sympathy,
> The silver link, the silken tie,
> Which heart to heart, and mind to mind
> In body and in soul can bind."§

What Bacon says of a friend is even truer of a wife; there is "no man that imparteth his joys to his friend, but he joyeth the more; and no man that imparteth his griefs to his friend, but he grieveth the less."

*Burns.

*Malory, *Morte d' Arthur.*

†Symonds.

‡Scott.

§Scott.

Let some one we love come near us and

"At once it seems that something new or strange
Has passed upon the flowers, the trees, the ground;
Some slight but unintelligible change
On everything around."*

We might, I think, apply to love what Homer says of Fate:

"Her feet are tender, for she sets her steps
Not on the ground, but on the heads of men."

Love and Reason divide the life of man. We must give to each its due. If it is impossible to attain to virtue by the aid of Reason without Love, neither can we do so by means of Love alone without Reason.

Love, said Melanippides, "sowing in the heart of man the sweet harvest of desire, mixes the sweetest and most beautiful things together."

No one indeed could complain now, with Phædrus in Plato's Symposium, that Love has had no worshippers among the Poets. On the contrary, Love has brought them many of their sweetest inspirations; none perhaps nobler or more beautiful than Milton's description of Paradise:

"With thee conversing, I forget all time,
All seasons, and their change, all please alike.
Sweet is the breath of morn, her rising sweet
With charm of earliest birds; pleasant the sun
When first on this delightful land he spreads
His orient beams on herb, tree, fruit and flower
Glistering with dew, fragrant the fertile earth
After soft showers; and sweet the coming on
Of grateful evening mild; then silent night
With this her solemn bird and this fair moon,
And these the gems of heaven, her starry train:
But neither breath of morn when she ascends
With charm of earliest birds, nor rising sun
On this delightful land, no herb, fruit, flower
Glistering with dew, nor fragrance after showers,
Nor grateful evening mild, nor silent night
With this her solemn bird, nor walk by moon
Or glittering starlight, without thee is sweet."

Moreover, no one need despair of an ideal marriage. We fortunately differ so much in our tastes; love does so much to create love, that even the humblest may hope for the happiest marriage if only he deserves it; and Shakespeare speaks, as he does so often, for thousands when he says

"She is mine own,
And I as rich in having such a jewel
As twenty seas, if all their sands were pearls,
The water nectar, and the rocks pure gold."

*Trench'

True love indeed will not be unreasonable or exacting.

"Tell me not, sweet, I am unkind
That from the nunnery
Of thy chaste breast and quiet mind
To war and arms I fly,
True! a new mistress now I chase,
The first foe in the field,
And with a stronger faith embrace
A sword, a horse, a shield.
Yet this inconstancy is such
As you too shall adore
I could not love thee, dear, so much,
Loved I not honor more."*

And yet

"Alas! how light a cause may move
Dissension between hearts that love!
Hearts that the world in vain had tried,
And sorrow but more closely tied,
That stood the storm, when waves were rough,
Yet in a sunny hour fall off,
Like ships that have gone down at sea
When heaven was all tranquility."†

For love is brittle. Do not risk even any little jar; it may be

"The little rift within the lute,
That by and by will make the music mute,
And ever widening slowly silence all."‡

Love is delicate; "Love is hurt with jar and fret," and you might as well expect a violin to remain in tune if roughly used, as Love to survive if chilled or driven into itself. But what a pleasure to keep it alive by

"Little, nameless, unremembered acts
Of kindness and of love."§

"She whom you loved and chose," says Bondi,

"Is now your bride,
The gift of heaven, and to your trust consigned;
Honor her still, though not with passion blind;
And in her virtue, though you watch, confide,
Be to her youth a comfort, guardian, guide,
In whose experience she may safety find;
And whether sweet or bitter be assigned,
The joy with her, as well as pain, divide.
Yield not too much if reason disapprove;
Nor too much force; the partner of your life
Should neither victim be, nor tyrant prove.
Thus shall that rein, which often mars the bliss
Of wedlock, scarce be felt; and thus your wife
Ne'er in the husband shall the lover miss."‖

Every one is ennobled by true love—

"Tis better to have loved and lost
Than never to have loved at all."¶

Perhaps no one ever praised a woman more gracefully in a sentence than Steele when he said of Lady Elizabeth Hastings that "to know her was a liberal education;" but every woman may feel as she im-

*Lovelace.
† Moore.
‡ Tennyson.
§ Wordsworth.
‖ Bondi. Tr. by Glassfors.
¶ Tennyson.

proves herself that she is not only laying in a store of happiness for herself, but also raising and blessing him whom she would most wish to see happy and good.

Love, true love, grows and deepens with time. Husband and wife, who are married indeed, live

"By each other, till to love and live
Be one."*

Nor does it end with life. A mother's love knows no bounds.

"They err who tell us Love can die,
With life all other passions fly,
All others are but vanity.
In Heaven Ambition cannot dwell,
Nor Avarice in the vaults of Hell;
Earthly these passions of the Earth;
They perish where they have their birth,
But Love is indestructible;
Its holy flame forever burneth,
From heaven it came, to Heaven returneth;
Too oft on Earth a troubled guest,
At times deceived, at times opprest,
It here is tried and purified,
Then hath in Heaven its perfect rest:
It soweth here with toil and care,
But the harvest time of Love is there.

"The Mother when she meets on high
The Babe she lost in infancy,
Hath she not then, for pains and fears,
The day of woe, the watchful night,
For all her sorrow, all her tears,
An over-payment of delight?"†

As life wears on the love of husband or wife, of friends and of children, becomes the great solace and delight of age. The one recalls the past, the other gives interest to the future; and in our children, it has been truly said, we live our lives again.

CHAPTER V.

ART.

"High art consists neither in altering, nor in improving nature; but in seeking throughout nature for 'whatsoever things are lovely, whatsoever thing are pure;' in loving these, in displaying to the utmost of the painter's power such loveliness as is in them, and directing the thoughts of others to them by winning art, or gentle emphasis. Art (caeteris paribus) is great in exact proportion to the love of beauty shown by the painter, provided that love of beauty forfeit no atom of truth."
—RUSKIN.

THE most ancient works of Art which we possess are representations of animals, rude indeed, but often strikingly characteristic, engraved on, or carved in, stag's horn or bone; and found in English, French, and German caves, with stone and other rude implements, and the remains of mammalia, belonging apparently to the close of the glacial epoch: not only of the deer, bear, and other animals now inhabiting temperate Europe, but of some, such as the reindeer, the musk sheep, and the mammoth, which have either retreated north or become altogether extinct. We may, I think, venture to hope that other designs may hereafter be found, which will give us additonal information as to the manners and customs of our ancestors in those remote ages.

Next to these in point of antiquity came the sculptures and paintings on Assyrian and Egyptian tombs, temples, and palaces.

These ancient scenes, considered as works of art, have no doubt many faults, and yet how graphically they tell their story! As a matter of fact a king is not, as a rule, bigger than his soldiers, but in these battle-scenes he is always so represented. We must, however, remember that in ancient warfare the greater part of the fighting was, as a matter of fact, done by the chiefs. In this respect the Homeric poems resemble the Assyrian and Egyptian representations. At any rate, we see at a glance which is the king, which are officers, which side is victorious, the struggles and sufferings of the wounded, the flight of the enemy, the city of refuge—so that he who runs may read; while in modern battle-pictures the story is much less clear, and, indeed, the untrained eye sees for some time little but scarlet and smoke.

These works assuredly possess a grandeur and dignity of their own, even though they have not the beauty of later art.

In Greece Art reached a perfection which has never been excelled, and it was more appreciated than perhaps it has ever been since.

* Swinburne.

† Southey.

At the time when Demetrius attacked the city of Rhodes, Protogenes was painting a picture of Ialysus. "This," says Pliny, "hindered King Demetrius from taking Rhodes, out of fear lest he should burn the picture; and not being able to fire the town on any other side, he was pleased rather to spare the painting than to take the victory, which was already in his hands. Protogenes, at that time, had his painting-room in a garden out of the town, and very near the camp of the enemies, where he was daily finishing those pieces which he had already begun, the noise of soldiers not being capable of interrupting his studies. But Demetrius causing him to be brought into his presence, and asking him what made him so bold as to work in the midst of enemies, he answered the king, 'That he understood the war which he made was against the Rhodians, and not against the Arts.'"

With the decay of Greece, Art sank too, until it was revived in the thirteenth century by Cimabue, since whose time its progress has been triumphal.

Art is unquestionably one of the purest and highest elements in human happiness. It trains the mind through the eye, and the eye through the mind. As the sun colors flowers, so does art color life.

"In true Art," says Ruskin, "the hand, the head, and the heart of man go together. But Art is no recreation: it cannot be learned at spare moments, nor pursued when we have nothing better to do."

It is not only in the East that great works, really due to study and labor, have been attributed to magic.

Study and labor cannot make every man an artist, but no one can succeed in art without them. In Art two and two do not make four, and no number of little things will make a great one.

It has been said, and on high authority, that the end of all art is to please. But this is a very imperfect definition. It might as well be said that a library is only intended for pleasure and ornament.

Art has the advantage of nature, in so far as it introduces a human element, which is in some respects superior even to nature. "If," says Plato, "you take a man as he is made by nature and compare him with another who is the effect of art, the work of nature will always appear the less beautiful, because art is more accurate than nature."

Bacon also, in *The Advancement of Learning*, speaks of "the world being inferior to the soul, by reason whereof there is agreeable to the spirit of man a more ample greatness, a more exact goodness, and a more absolute variety than can be found in the nature of things."

The poets tell us that Prometheus, having made a beautiful statue of Minerva, the goddess was so delighted that she offered to bring down anything from Heaven which could add to its perfection. Prometheus on this prudently asked her to take him there, so that he might choose for himself. This Minerva did, and Prometheus, finding that in heaven all things were animated by fire, brought back a spark, with which he gave life to his work.

In fact, Imitation is the means and not the end of Art. The story of Zeuxis and Parrhasius is a pretty tale; but to deceive birds, or even man himself, is but a trifling matter compared with the higher functions of Art. To imitate the *Iliad*, says Dr. Young, is not imitating Homer, but as Sir J. Reynolds adds, the more the artist studies nature "the nearer he approaches to the true and perfect idea of art."

"Following these rules and using these precautions, when you have clearly and distinctly learned in what good coloring consists, you cannot do better than have recourse to Nature herself, who is always at hand, and in comparison of whose true

splendor the best colored pictures are but faint and feeble."*

Art, indeed, must create as well as copy. As Victor Cousin well says, "The ideal without the real lacks life; but the real without the ideal lacks pure beauty. Both need to unite; to join hands and enter into alliance. In this way the best work may be achieved. Thus beauty is an absolute idea, and not a mere copy of imperfect Nature."

The grouping of the picture is of course of the utmost importance. Sir Joshua Reynolds gives two remarkable cases to show how much any given figure in a picture is affected by its surroundings. Tintoret in one of his pictures has taken the Samson of Michael Angelo, put an eagle under him, placed thunder and lightning in his right hand instead of the jawbone of an ass, and thus turned him into a Jupiter. The second instance is even more striking. Titian has copied the figure in the vault of the Sistine Chapel which represents the Deity dividing light from darkness, and has introduced it into his picture of the battle of Cadore, to represent a general falling from his horse.

We must remember that so far as the eye is concerned, the object of the artist is to train, not to deceive, and that his higher function has reference rather to the mind than to the eye.

No doubt

"To gild refined gold, to paint the lily,
To throw a perfume on the violet,
To smooth the ice, or add another hue
Unto the rainbow, or with taper-light
To seek the beauteous eye of heaven to garnish,
Is wasteful and ridiculous excess.†

But all is not gold that glitters, flowers are not all arrayed like the lily, and there is room for selection as well as representation.

"The true, the good, and the beautiful," says Cousin, "are but forms of the infinite: what then do we really love in truth, beauty, and virtue? We love the infinite himself. The love of the infinite substance is hidden under the love of its forms. It is so truly the infinite which charms in the true, the good, and the beautiful, that its manifestations alone do not suffice. The artist is dissatisfied at the sight even of his greatest works; he aspires still higher."

It is indeed sometimes objected that Landscape painting is not true to nature; but we must ask, What is truth? Is the object to produce the same impression on the mind as that created by the scene itself? If so, let any one try to draw from memory a group of mountains, and he will probably find that in the impression produced on his mind the mountains are loftier and steeper, the valleys deeper and narrower, than in the actual reality. A drawing, then, which was literally exact would not be true, in the sense of conveying the same impression as Nature herself.

In fact, Art, says Goethe, is called Art simply because it is not Nature.

It is not sufficient for the artist to choose beautiful scenery and delineate it with accuracy. He must not be a mere copyist. Something higher and more subtle is required. He must create, or at any rate interpret, as well as copy.

Turner was never satisfied merely to reach to even the most glorious scenery. He moved, and even suppressed, mountains.

A certain nobleman, we are told, was very anxious to see the model from whom Guido painted his lovely female faces. Guido placed his color-grinder, a big coarse man, in an attitude, and then drew a beautiful Magdalen. "My dear Count," he said, "the beautiful and pure idea must be in the mind, and then it is no matter what the model is."

Guido Reni, who painted Saint Michael for the Church of the Capuchins at Rome, wished that he "had the wings of an angel, to have ascended unto Paradise, and there to

*Reynolds.

† Shakespeare.

have beheld the forms of those beautiful spirits, from which I might have copied my Archangel. But not being able to mount so high, it was in vain for me to seek for his resemblance here below; so that I was forced to look into mine own mind, and into that idea of beauty which I have formed in my own imagination"*

Science attempts, as far as the limited powers of Man permit, to reproduce the actual facts in a manner which, however bald, is true in itself, irrespective of time and scene. To do this she must submit to many limitations; not altogether unvexatious, and not without serious drawbacks. Art, on the contrary, endeavors to convey the impression of the original under some especial aspect.

In some respects, Art gives a clearer and more vivid idea of an unknown country than any description can convey. In literature rock may be rock, but in painting it must be granite or slate, and not merely rock in general.

It is remarkable that while artists have long recognized the necessity of studying anatomy, and there has been from the commencement a professor of anatomy in the Royal Academy, it is only of late years that any knowledge of botany or geology has been considered desirable, and even now their importance is by no means generally recognized.

Much has been written as to the relative merits of painting, sculpture, and architecture. This, if it be not a somewhat unprofitable inquiry, would at any rate be out of place here.

Architecture not only gives intense pleasure, but even the impression of something ethereal and superhuman.

Madame de Staël described it as "frozen music;" and a cathedral is a glorious specimen of "thought in stone," whose very windows are transparent walls of gorgeous hues.

* Dryden.

Caracci said that poets paint in their words and artists speak in their works. The latter have indeed one great advantage, for a glance at a statue or a painting will convey a more vivid idea than a long and minute description.

Another advantage possessed by Art is that it is understood by all civilized nations, whilst each has a separate language.

Even from a material point of view Art is most important. In a recent address Sir F. Leighton has observed that the study of Art "is every day becoming more important in relation to certain sides of the waning material prosperity of the country. For the industrial competition between this and other countries—a competition, keen and eager, which means to certain industries almost a race for life—runs, in many cases, no longer exclusively or mainly on the lines of excellence of material and solidity of workmanship, but greatly nowadays on the lines of artistic charm and beauty of design."

The highest service, however, that Art can accomplish for man is to become "at once the voice of his nobler aspirations, and the steady disciplinarian of his emotions; and it is with this mission, rather than with any æsthetic perfection, that we are at present concerned."*

Science and Art are sisters, or rather perhaps they are like brother and sister. The mission of Art is in some respects like that of woman. It is not Hers so much to do the hard toil and moil of the world, as to surround it with a halo of beauty, to convert work into pleasure.

In science we naturally expect progress, but in Art the case is not so clear; and yet Sir Joshua Reynolds did not hesitate to express his conviction that in the future "so much will painting improve, that the best we can now achieve will appear like the work of children," and we may hope that our power of enjoying it

*Haweis.

may increase in an equal ratio. Wordworth says that poets have to create the taste for their own works, and the same is, in some degree at any rate true of artists.

In one respect especially modern painters appear to have made a marked advance, and one great blessing which in fact we owe to them is a more vivid enjoyment of scenery.

I have of course no pretensions to speak with authority, but even in the case of the greatest masters before Turner, the landscapes seem to me singularly inferior to the figures. Sir Joshua Reynolds tells us that Gainsborough framed a kind of model of a landscape on his table, composed of broken stones, dried herbs, and pieces of looking-glass, which he magnified and improved into rocks, trees, and water; and Sir Joshua solemnly discusses the wisdom of such a proceeding. "How far it may be useful in giving hints," he says, "the professors of landscape can best determine," but he does not recommend it, and is disposed to think, on the whole, the practice may be more likely to do harm than good!

In the picture of Ceyx and Alcyone, by Wilson, of whom Cunningham said that, with Gainsborough, he laid the foundation of our School of Landscape, the castle is said to have been painted from a pot of porter, and the rock from a Stilton cheese. There is indeed another version of the story, that the picture was sold for a pot of porter and a cheese, which, however, does not give a higher idea of the appreciation of the art of landscape at that date.

Until very recently the general feeling with reference to mountain scenery has been that expressed by Tacitus. "Who would leave Asia or Africa or Italy to go to Germany, a shapeless and unformed country, a harsh sky, and melancholy aspect, unless indeed it was his native land?"

It is amusing to read the opinion of Dr. Beattie, in a special treatise on *Truth, Poetry, and Music*, written at the close of last century, that "The Highlands of Scotland are in general a melancholy country. Long tracts of mountainous country, covered with dark heath, and often obscured by misty weather; narrow valleys thinly inhabited, and bounded by precipices resounding with the fall of torrents; a soil so rugged, and a climate so dreary, as in many parts to admit neither the amenities of pasturage, nor the labors of agriculture; the mournful dashing of waves along the firths and lakes; the portentous noises which every change of the wind is apt to raise in a lonely region, full of echoes, and rocks, and caverns; the grotesque and ghastly appearance of such a landscape by the light of the moon: objects like these diffuse a gloom over the fancy," etc.*

Even Goldsmith regarded the scenery of the Highlands as dismal and hideous. Johnson, we know, laid it down as an axiom that "the noblest prospect which a Scotchman ever sees is the high road that leads him to England"—a saying which throws much doubt on his distinction that the Giant's Causeway was "worth seeing but not worth going to see."†

Madame de Staël declared, that though she would go 500 leagues to meet a clever man, she would not care to open her window to see the Bay of Naples.

Nor was the ancient absence of appreciation confined to scenery. Even Burke, speaking of Stonehenge, says, "Stonehenge, neither for disposition nor ornament, has anything admirable."

Ugly scenery, however, may in some cases have an injurious effect on the human system. It has been ingeniously suggested that what really drove Don Quixote out of his mind was not the study of his books of chivalry, so much as the monotonous scenery of La Mancha.

The love of landscape is not in-

* Beattie. 1776.

† Boswell.

deed due to Art alone. It has been the happy combination of art and science which has trained us to perceive the beauty which surrounds us.

Art helps us to see, and "hundreds of people can talk for one who can think; but thousands can think for one who can see. To see clearly is poetry, prophecy, and religion all in one. . . . Remembering always that there are two characters in which all greatness of Art consists—first, the earnest and intense seizing of natural facts; then the ordering those facts by strength of human intellect, so as to make them, for all who look upon them, to the utmost serviceable, memorable, and beautiful. And thus great Art is nothing else than the type of strong and noble life; for as the ignoble person, in his dealings with all that occurs in the world about him, first sees nothing clearly, looks nothing fairly in the face, and then allows himself to be swept away by the trampling torrent and unescapable force of the things that he would not foresee and could not understand: so the noble person, looking the facts of the world full in the face, and fathoming them with deep faculty, then deals with them in unalarmed intelligence and unhurried strength, and becomes, with his human intellect and will, no unconscious nor insignificant agent in consummating their good and restraining their evil."*

May we not also hope that in this respect also still further progress may be made, that beauties may be revealed, and pleasures may be in store for those who come after us, which we cannot appreciate, or at least can but faintly feel.

Even now there is scarcely a cottage without something more or less successfully claiming to rank as Art, —a picture, a photograph, or a statuette; and we may fairly hope that much as Art even now contributes to the happiness of life, it will do so even more effectively in the future.

* Ruskin.

CHAPTER VI.

POETRY.

"And here the singer for his Art
Not all in vain may plead;
The song that nerves a nation's heart
Is in itself a deed."

TENNYSON.

AFTER the disastrous defeat of the Athenians before Syracuse, Plutarch tells us that the Sicilians spared those who could repeat any of the poetry of Euripides.

"Some there were," he says, "who owed their preservation to Euripides. Of all the Grecians, his was the muse with whom the Sicilians were most in love. From the strangers who landed in their island they gleaned every small specimen or portions of his works, and communicated it with pleasure to each other. It is said that upon this ocasion a number of Athenians on their return home went to Euripides, and thanked him in the most grateful manner for their obligations to his pen; some having been enfranchised for teaching their masters what they remembered of his poems, and others having procured refreshments, when they were wandering about after the battle, by singing a few of his verses."

Nowadays we are none of us likely to owe our lives to Poetry in this sense, yet in another we many of us owe to it a similar debt. How often, when worn with overwork, sorrow or anxiety, have we taken down Homer or Horace, Shakespeare or Milton, and felt the clouds gradually roll away, the jar of nerves subside, the consciousness of power replace physical exhaustion, and the darkness of despondency brighten once more into the light of life.

"And yet Plato," says Jowett, "expels the poets from his Republic because they are allied to sense; because they stimulate the emotions; because they are thrice removed from the ideal truth."

In that respect, as in some others,

few would accept Plato's Republic as being an ideal Commonwealth, and most would agree with Sir Philip Sidney that "if you cannot bear the planet-like music of poetry . . . I must send you in the behalf of all poets, that while you live, you live in love, and never get favor for lacking skill of a sonnet; and when you die, your memory die from the earth, for want of an epitaph."

Poetry has often been compared with painting and sculpture. Simonides long ago said that Poetry is a speaking picture, and painting is mute Poetry.

"Poetry" says Cousin, "is the first of the Arts because it best represents the infinite."

And again, "Though the arts are in some respects isolated, yet there is one which seems to profit by the resources of all, and that is Poetry. With words, Poetry can paint and sculpture; she can build edifices like an architect; she unites, to some extent, melody and music. She is, so to say, the centre in which all arts unite."

A true poem is a gallery of pictures.

It must, I think, be admitted that painting and sculpture can give us a clearer and more vivid idea of an object we have never seen than any description can convey. But when we have once seen it, then on the contrary there are many points which the poet brings before us, and which perhaps neither in the representation, nor even in nature, should we perceive for ourselves. Objects can be most vividly brought before us by the artist, actions by the poet; space is the domain of Art, time of Poetry.*

Take, for instance, as a typical instance, female beauty. How labored and how cold any description appears. The greatest poets recognize this; as, for instance, when Scott wishes us to realize the Lady of the Lake he does not attempt any description, but just mentions her attitude and then adds—

"And ne'er did Grecian chisel trace
A Nymph, a Naiad, or a grace,
Of finer form or lovelier face!"

A great poet indeed must be inspired; he must posses an exquisite sense of beauty, and feelings deeper than those of most men, and yet well under his control. "The Milton of poetry is the man, in his own magnificent phrase, of devout prayer to that eternal spirit that can enrich with all utterance and knowledge, and sends out his seraphim with the hallowed fire of his altar, to touch and purify the lips of whom he pleases."* And if from one point of view Poetry brings home to us the immeasurable inequalities of different minds on the other hand it teaches us that genius is no affair of rank or wealth.

"I think of Chatterton, the marvellous boy,
The sleepless soul, that perish'd in his pride;
Of Burns, that walk'd in glory and in joy
Behind his plough upon the mountain-side."†

A man may be a poet and yet write no verse, but not if he writes bad or poor ones.

"Mediocribus esse poetis
Non homines, non Di, non concessere columnæ."‡

Second-rate poets, like second-rate writers generally, fade gradually into dreamland; but the great poets remain always.

Poetry will not live unless it be alive, "that which comes from the head goes to the heart;"§ and Milton truly said that "he who would not be frustrate of his hope to write well hereafter in laudable things, ought himself to be a true poem."

For "he who, having no touch of the Muses' madness in his soul, comes to the door and thinks he will get into the temple by the help of Art—he, I say, and his Poetry are not admitted."‖

But the work of the true poet is immortal.

"For have not the verses of Homer continued 2500 years or

* See Lessing's *Laocoön.*

* Arnold.
† Coleridge.
‡ Horace.
§ Wordsworth.
‖ Plato.

more without the loss of a syllable or a letter, during which time infinite palaces, temples, castles, cities, have been decayed and demolished? It is not possible to have the true pictures or statues of Cyrus, Alexander, Cæsar, no, nor of the kings or great personages of much later years; for the originals cannot last, and the copies cannot but lose of the life and truth. But the images of men's wits and knowledge remain in books, exempted from the wrong of time and capable of perpetual renovation. Neither are they fitly to be called images, because they generate still and cast their seeds in the minds of others, provoking and causing infinite actions and opinions in succeeding ages; so that if the invention of the ship was thought so noble, which carrieth riches and commodities from place to place, and consociateth the most remote regions in participation of their fruits, how much more are letters to be magnified, which, as ships, pass through the vast seas of time and make ages so distant to participate of the wisdom, illuminations, and inventions, the one of the other?"*

Tho poet requires many qualifications. "Who has traced," says Cousin, "the plan of this poem? Reason. Who has given it life and charm? Love. And who has guided reason and love? The Will."

"All men have some imagination, but
The Lover and the Poet
Are of imagination all compact.
. . . . . .
The Poet's eye, in a fine frenzy rolling,
Doth glance from heaven to earth, from earth to heaven,
And as imagination bodies forth
The forms of things unknown, the poet's pen
Turns them to shapes, and gives to airy nothing
A local habitation and a name."†

Poetry is the fruit of genius; but it cannot be produced without labor. Moore, one of the airiest of poets, tells us that he was a slow and painstaking workman.

The works of our greatest Poets are all episodes in that one great poem which the genius of man has created since the commencement of human history.

A distinguished mathematician is said once to have inquired what was proved by Milton in his *Paradise Lost;* and there are no doubt still some who ask themselves, even if they shrink from putting the question to others, whether Poetry is of any use, just as if to give pleasure were not useful in itself. No true Utilitarian, however, would feel this doubt, since the greatest happiness of the greatest number is the rule of his philosophy.

"We must not estimate the works of genius merely with reference to the pleasure they afford, even when pleasure was their principal object. We must also regard the intelligence which they presuppose and exercise."*

Thoroughly to enjoy Poetry we must not so limit ourselves, but must rise to a higher ideal.

"Yes; constantly in reading poetry, a sense for the best, the really excellent, and of the strength and joy to be drawn from it, should be present in our minds, and should govern our estimate of what we read."†

Cicero, in his oration for Archias, well asked, "Has not this man then a right to my love, to my admiration, to all the means which I can employ in his defense? For we are instructed by all the greatest and most learned of mankind, that education, precepts, and practice, can in every other branch of learning produce excellence. But a poet is formed by the hand of nature; he is aroused by mental vigor, and inspired by what we may call the spirit of divinity itself. Therefore our Ennius has a right to give to poets the epithet of Holy,‡ because they are, as it were, lent to mankind by the indulgent bounty of the gods."

*Bacon.

†Shakespeare.

*St. Hilaire.

†Arnold.

‡Plato styles poets the sons and interpreters of the gods.

"Poetry," says Shelley, "awakens and enlarges the mind itself by rendering it the receptacle of a thousand unapprehended combinations of thought. Poetry lifts the veil from the hidden beauty of the world, and makes familiar objects be as if they were not familiar; it reproduces all that it represents, and the impersonations clothed in its Elysian light stand thenceforward in the minds of those who have once contemplated them, as memorials of that gentle and exalted content which extends itself over all thoughts and actions with which it co-exists."

And again, "All high Poetry is infinite; it is as the first acorn, which contained all oaks potentially. Veil after veil may be undrawn, and the inmost naked beauty of the meaning never exposed. A great poem is a fountain for ever overflowing with the waters of wisdom and delight."

Or, as he has expressed himself in his Ode to a Skylark:

"Higher still and higher
From the earth thou springest
Like a cloud of fire;
The blue deep thou wingest,
And singing still dost soar, and soaring ever singest.

"Like a poet hidden
In the light of thought,
Singing hymns unbidden,
Till the world is wrought
To sympathy with hopes and fears it heeded not.

"Like a glow-worm golden
In a dell of dew,
Scattering unbeholden
Its aërial hue
Among the flowers and grass, which screen it from the view."

We speak now of the poet as the Maker or Creator—ποιητης; the origin of the word "bard" seems doubtful.

The Hebrews well called their poets "Seers," for they not only perceive more than others, but also help other men to see much which would otherwise be lost to us. The old Greek word was ἀοιδός—the Bard or Singer.

Poetry lifts the veil from the beauty of the world which would otherwise be hidden, and throws over the most familiar objects the glow and halo of imagination. The man who has a love for Poetry can scarcely fail to derive intense pleasure from Nature, which to those who love it is all "beauty to the eye and music to the ear."

"Yet Nature never set forth the earth in so rich tapestry as divers poets have done; neither with so pleasant rivers, fruitful trees, sweet-smelling flowers, nor whatsoever else may make the too-much-loved earth more lovely." *

In the smokiest city the poet will transport us, as if by enchantment, to the fresh air and bright sun, to the murmur of woods and leaves and water, to the ripple of waves upon sand, and enable us, as in some delightful dream, to cast off the cares and troubles of life.

The poet, indeed, must have more true knowledge, not only of human Nature, but of all Nature, than other men are gifted with.

Crabbe Robinson tells us that when a stranger once asked permission to see Wordsworth's study, the maid said, "This is master's Library, but he studies in the fields." No wonder then that Nature has been said to return the poet's love.

"Call it not vain; they do not err
Who say that, when the poet dies,
Mute Nature mourns her worshipper,
And celebrates his obsequies." †

Swinburne says of Blake, and I feel entirely with him, though in my case the application would have been different, that "The sweetness of sky and leaf, of grass and water—the bright light life of bird, child, and beast—is, so to speak, kept fresh by some graver sense of faithful and mysterious love, explained and vivified by a conscience and purpose in the artist's hand and mind. Such a fiery outbreak of spring, such an insurrection of fierce floral life and radiant riot of childish power and pleasure, no poet or painter ever gave before; such lustre of green leaves and flushed limbs, kindled

* Sydney, *Defence of Poetry.*
† Scott.

cloud and fervent fleece, was never wrought into speech or shape."

To appreciate Poetry we must not merely glance at it, or rush through it, or read it in order to talk or write about it. One must compose oneself into the right frame of mind. Of course for one's own sake one will read Poetry in times of agitation, sorrow, or anxiety, but that is another matter.

The inestimable treasures of Poetry again are open to all of us. The best books are indeed the cheapest. For the price of a little beer, a little tobacco, we can buy Shakespeare or Milton—or indeed almost as many books as a man can read with profit in a year.

Nor, in considering the advantage of Poetry to man, must we limit ourselves to its past or present influence. The future of Poetry, says Mr. Matthew Arnold, and no one was more qualified to speak, "The future of Poetry is immense, because in Poetry, where it is worthy of its high destinies, our race, as time goes on, will find an ever surer and surer stay. But for Poetry the idea is everything; the rest is a world of illusion, of divine illusion. Poetry attaches its emotion to the idea; the idea *is* the fact. The strongest part of our religion to day is its unconscious Poetry. We should conceive of Poetry worthily, and more highly than it has been the custom to conceive of it. We should conceive of it as capable of higher uses, and called to higher destinies than those which in general men have assigned to it hitherto."

Poetry has been well called the record "of the best and happiest moments of the happiest and best minds;" it is the light of life, the very "image of life expressed in its eternal truth;" it immortalizes all that is best and most beautiful in the world; "it purges from our inward sight the film of familiarity which obscures from us the wonder of our being;" "it is the centre and circumference of knowledge;" and poets are "mirrors of the gigantic shadows which futurity casts upon the present."

Poetry, in effect, lengthens life: it creates for us time, if time be realized as the succession of ideas and not of minutes; it is the "breath and finer spirit of all knowledge;" it is bound neither by time nor space, but lives in the spirit of man. What greater praise can be given than the saying that life should be Poetry put into action.

CHAPTER VII

MUSIC.

"Music is a moral law. It gives a soul to the universe, wings to the mind, flight to the imagination, a charm to sadness, gaiety and life to everything. It is the essence of order, and leads to all that is good, just, and beautiful, of which it is the invisible, bnt nevertheless dazzling, passionate, and eternal form."—PLATO.

MUSIC is in one sense far more ancient than man, and the voice was from the very commencement of human existence a source of melody: but so far as musical instruments are concerned, it is probable that percussion came first, then wind instruments, and lastly, those with strings: first the Drum, then the Flute, and thirdly, the Lyre. The early history of Music is, however, unfortunately wrapped in much obscurity. The use of letters long preceded the invention of notes, and tradition in such a matter can tell us but little.

The contest between Marsyas and Apollo is supposed by some to typify the struggle between the Flute and the Lyre; Marsyas representing the archaic Flute, Apollo the champion of the Lyre. The latter of course was victorious: it sets the voice free, and the sound

"Of music that is born of human breath
Comes straighter to the soul than any strain
The hand alone can make."*

*Morris.

Various myths have grown up to explain the origin of Music. One Greek tradition was to the effect Grasshoppers were human beings themselves in a world before the Muses; that when the Muses came, being ravished with delight, they sang and sang and forgot to eat, until "they died of hunger for the love of song. And they carry to heaven the report of those who honor them on earth."*

The old writers and commentators tell us that Pythagoras, "as he was one day meditating on the want of some rule to guide the ear, analogous to what had been used to help the other senses, chanced to pass by a blacksmith's shop, and observing that the hammers, which were four in number, sounded very harmoniously, he had them weighed, and found them to be in the proportion of six, eight, nine, and twelve. Upon this he suspended four strings of equal length and thickness, etc., fastened weights in the above mentioned proportions to each of them respectively, and found that they gave the same sounds that the hammers had done; viz. the fourth, fifth, and octave to the gravest tone."† However this may be, it would appear that the lyre had at first four strings only; Terpander is said to have given it three more, and an eighth was subsequently added.

We have unfortunately no specimens of Greek or Roman, or even of Early Christian music. The Chinese indicated the notes by words or their initials. The lowest was termed "Koung," or the Emperor, as being the Foundation on which all were supported; the second was Tschang, the Prime Minister; the third, the Subject; the fourth, Public Business; the fifth, the Mirror of Heaven.‡ The Greeks also had a name for each note. The so-called Gregorian notes were not invented until six hundred years after Gregory's death. The Monastery of St. Gall possesses a copy of Gregory's Antiphonary, made about the year 780 by a chorister who was sent from Rome to Charlemagne to reform the Northern music, and in this the notes are indicated by "pneumss," from which our notes were gradually developed, and first arranged along one line, to which others were gradually added. But I must not enlarge on this interesting subject.

In the matter of music Englishmen have certainly deserved well of the world. Even as long ago as 1185 Giraldus Cambrensis, Bishop of St. David's, says, "The Britons do not sing their tunes in unison like the inhabitants of other countries, but in different parts. So that when a company of singers meet to sing, as is usual in this country, as many different parts are heard as there are singers."*

The most ancient known piece of music for several voices is an English four men's song, "Summer is a-coming in," which is considered to be at least as early as 1240, and is now in the British Museum.

The Venetian Ambassador in the time of Henry VIII. said of our English Church music: "The mass was sung by His Majesty's choristers, whose voices are more heavenly than human; they did not chaunt like men, but like angels."

Speaking of Purcell's anthem, "Be merciful to me, O God," Burney says it is "throughout admirable. Indeed, to my conception there is no better music existing of the kind than the opening of this anthem, in which the verse 'I will praise God' and the last movement in C natural are, in melody, harmony, and modulation, truly divine music."

Dr. Burney says that Purcell was "as much the pride of an Englishman in music as Shakespeare in productions of the stage, Milton in epic

*Plato.

†Crowest.

‡Rowbotham, *History of Music.*

*Wakefield.

poetry, Locke in metaphysics, or Sir Isaac Newton in philosophy and mathematics;" and yet Purcell's music is unfortunately but little known to us now, as Macfarren says, "to our great loss."

The authors of some of the loviest music, and even in some cases that of comparatively recent times, are unknown to us. This is the case for instance with the exquisite song "Drink to me only with thine eyes," the words of which were taken by Jonson from Philostratus, and which has been considered as the most beautiful of all "people's songs."

The music of "God save the Queen" has been adopted in more than half a dozen other countries, and yet the authorship is a matter of doubt, being attributed by some to Dr. John Bull, by others to Carey. It was apparently first sung in a tavern in Cornhill.

Both the music and words of "O Death; rock me to sleep" are said to be by Anne Boleyn: "Stay, Corydon" and "Sweet Honey-sucking Bees" by Wildye, "the first of madrigal writers." "Rule Britannia" was composed by Arne, and originally formed part of his Masque of *Alfred*, first performed in 1740 at Cliefden, near Maidenhead. To Arne we are also indebted for the music of "Where the Bee sucks, there lurk I." "The Vicar of Bray" is set to a tune originally known as "A Country Garden." "Come unto these yellow sands" we owe to Purcell; "Sigh no more, Ladies" to Stevens; "Home, Sweet Home" to Bishop.

There is a curious melancholy in national music, which is generally in the minor key; indeed this holds good with the music of savage races generally. They appear, moreover, to have no love songs.

Herodotus tells us that during the whole time he was in Egypt he only heard one song, and that was a sad one. My own experience there was the same. Some tendency to melancholy seems indeed inherent in music. and Jessica is not alone in the feeling

"I am never merry when I hear sweet music."

The epitaphs on Musicians have been in some cases very well expressed. Such, for instance, is the following:

"Philips, whose touch harmonious could remove
The pangs of guilty power and hapless love,
Rest here, distressed by poverty no more;
Here find that calm thou gav'st so oft before;
Sleep, undisturbed, within this peaceful shrine,
Till angels wake thee with a note like thine!"

Still more so that on Purcell, whose premature death was so irreparable a loss to English music—

"Here lies Henry Purcell, who left this life, and is gone to that blessed place, where only his harmony can be exceeded."

The histories of Music contain many curious anecdotes as to the circumstances under which different works have been composed.

Rossini tells us that he wrote the overture to the "Gazza Ladra" on the very day of the first performance, in the upper loft of the La Scala where he had been confined by the manager under the guard of four scene-shifters, who threw the text out of window to copyists bit by bit as it was composed. Tartini is said to have composed "Il trillo del Diavolo," considered to be his best work, in a dream. Rossini, speaking of the chorus in G minor in his "Dal tuo stellato soglio," tells us: "While I was writing the chorus in G minor I suddenly dipped my pen into a medicine bottle instead of the ink. I made a blot, and when I dried this with the sand it took the form of a natural, which instantly gave me the idea of the effect the change from G minor to G major would make, and to this blot is all the effect, if any, due." But these of course are exceptional cases.

There are other forms of Music, which, though not strictly entitled to the name, are yet capable of giving intense pleasure. To the sportsman what Music can excel that of the hounds themselves. The cawing of

rooks has been often quoted as a sound which has no actual beauty of its own, and yet which is delightful from its associations.

There is, however, a true Music of Nature,—the song of birds, the whisper of leaves, the ripple of waters upon a sandy shore, the wail of wind or sea.

There was also an ancient impression that the Heavenly bodies give out music as well as light: the Music of the Spheres is proverbial.

"There's not the smallest orb which thou beholdest
But in his motion like an angel sings,
Still quiring to the young-eyed cherubims;
Such harmony is in immortal souls
But while this muddy vesture of decay
Doth grossly close it in, we cannot hear it."*

Music indeed often seems as if it scarcely belonged to this material universe, but was

"A tone
Of some world far from ours,
Where music, and moonlight, and feeling are one."†

There is Music in speech as well as in song. Not merely in the voice of those we love, and the charm of association, but in actual melody; as Milton says,

"The Angel ended, and in Adam's ear
So charming left his voice, that he awhile
Thought him still speaking, still stood fixed to hear."

It is remarkable that more pains are not taken with the voice in conversation as well as in singing, for

"What plea so tainted and corrupt
But, being seasoned with a gracious voice,
Obscures the show of evil."

It may be true as a general rule that

"The man that hath no Music in himself
Nor is not moved with concord of sweet sounds
Is fit for treasons, stratagems, and spoils;"‡

but there are some notable exceptions. Dr. Johnson had no love of music. On one occasion, hearing that a certain piece of music was very difficult, he expressed his regret that it was not impossible.

Poets, as might have been expected, have sung most sweetly in praise of song. They have, moreover, done so from the most opposite points of view.

Milton invokes it as a luxury—

"And ever against eating cares
Lap me in soft Lydian airs;

Married to immortal verse
Such as the meeting soul may pierce,
In notes with many a winding bout
Of linked sweetness long drawn out;
With wanton heed, and giddy cunning,
The melting voice through mazes running;
Untwisting all the chains that tie
The hidden soul of harmony."

Sometimes as a temptation: so Spenser says of Phædria,

"And she, more sweet than any bird on bough
Would oftentimes amongst them bear a part,
And strive to passe (as she could well enough)
Their native musicke by her skilful art."

Or as an element of pure happiness:

"There is in souls a sympathy with sounds;
And as the mind is pitched, the ear is pleased
With melting airs or martial, brisk or grave;
Some chord in unison with what we hear
Is touched within us, and the heart replies.
How soft the music of those village bells,
Falling at intervals upon the ear
In cadence sweet, now dying all away,
Now pealing loud again and louder still
Clear and sonorous, as the gale comes on."*

As touching the human heart—

"The soul of music slumbers in the shell,
Till waked and kindled by the master's spell,
And feeling hearts--touch them but rightly—pour
A thousand melodies unheard before."†

As an education—

"I have sent books and music there, and all
Those instruments with which high spirits call
The future from its cradle, and the past
Out of its grave, and make the present last
In thoughts and joys which sleep, but cannot die,
Folded within their own eternity."‡

As an aid to religion—

"As from the power of sacred lays
The spheres began to move,
And sung the great Creator's praise
To all the blessed above,
So when the last and dreadful hour
This crumbling pageant shall devour,
The trumpet shall be heard on high,
The dead shall live, the living die,
And music shall untune the sky."§

Or again—

"Hark how it falls! and now it steals along,
Like distant bells upon the lake at eve,
When all is still; and now it grows more strong
As when the choral train their dirges weave
Mellow and many voiced; where every close
O'er the old minster roof, in echoing waves reflows,
Oh! I am rapt aloft. My spirit soars
Beyond the skies, and leaves the stars behind;
Lo! angels lead me to the happy shores,
And floating pæans fill the buoyant wind.
Farewell! base earth, farewell! my soul is freed."

The power of Music to sway the

*Shakespeare.
†Swinburne.
‡Shakespeare.

*Cowper.
†Rogers.
‡Shelley.
§Dryden.

feelings of Man has never been more cleverly protrayed them by Dryden in "The Feast of Alexander," though the circumstances of the case precluded any reference to the influence of Music in its noblest aspects.

Poets have always attributed to Music,—and who would wish to deny it, a power even over the inanimate forces of Nature. Shakespeare accounts for shooting stars by the attraction of Music:

> "The rude sea grew civil at her song,
> And certain stars shot madly from their spheres
> To hear the Sea-maid's Music."

Prose writers have also been inspired by Music to their highest eloquence. "Music," says Plato, "is a moral law. It gives a soul to the universe, wings to the mind, flight to the imagination, a charm to sadness, gaiety and life to everything. It is the essence of order, and leads to all that is good, just, and beautiful, of which it is the invisible, but nevertheless dazzling, passionate, and eternal form." "Music," said Luther, "is a fair and glorious gift from God. I would not for the world renounce my humble share in music." "Music," said Haley, "is an art that God has given us, in which the voices of all nations may unite their prayers in one harmonious rhythm." Or Carlyle, "Music is a kind of inarticulate, unfathomable speech, which leads us to the edge of the infinite, and lets us for moments gaze into it."

Let me also quote Helmholtz, one of the profoundest exponents of modern science. "Just as in the rolling ocean, this movement, rhythmically repeated, and yet ever-varying, rivets our attention and hurries us along But whereas in the sea blind physical forces alone are at work, and hence the final impression on the spectator's mind is nothing but solitude—in a musical work of art the movement follows the outflow of the artist's own emotions. Now gently gliding, now gracefully leaping, now violently stirred, penetrated, or laboriously contending with the natural expression of passion, the stream of sound, in primitive vivacity bears over into the hearer's soul unimagined moods which the artist has overheard from his own, and finally raises him up to that repose of everlasting beauty of which God has allowed but few of his elect favorites to be the heralds."

"There are but seven notes in the scale; make them fourteen," says Newman, "yet what a slender outfit for so vast an enterprise! What science brings so much out of so little? Out of what poor elements does some great master in it create his new world! Shall we say that all this exuberant inventiveness is a mere ingenuity or trick of art, like some game of fashion of the day, without reality, without meaning? . . . Is it possible that that inexhaustible evolution and disposition of notes, so rich yet so simple, so intricate yet so regulated, so various yet so majestic, should be a mere sound, which is gone and perishes? Can it be that those mysterious stirrings of the heart, and keen emotions, and strange yearnings after we know not what, and awful impressions from we know not whence, should be wrought in us by what is unsubstantial, and comes and goes, and begins and ends in itself? it is not so; it cannot be. No; they have escaped from some higher sphere; they are the outpourings of eternal harmony in the medium of created sound; they are echoes from our Home; they are the voice of Angels, or the Magnificat of Saints, or the living laws of Divine Governance, or the Divine Attributes; something are they besides themselves, which we cannot compass, which we cannot utter, though mortal man, and he perhaps not otherwise distinguished above his fellows, has the gift of eliciting them."

Poetry and Music unite in song. From the earliest ages song has been

the sweet companion of labor. The rude chant of the boatman floats upon the water, the shepherd sings upon the hill, the milkmaid in the dairy, the ploughman at the plough. Every trade, every occupation, every act and scene of life, has long had its own especial music. The bride went to her marriage, the laborer to his work, the old man to his last long rest, each with appropriate and immemorial music.

Music has been truly described as the mother of sympathy, the handmaid of Religion, and will never exercise its full effect, as the Emperor Charles VI. said to Farinelli, unless it aims not merely to charm the ear, but to touch the heart.

There are many who consider that our life at present is peculiarly prosaic and mercenary. I greatly doubt whether that be the case, but if so our need for Music is all the more imperative.

Much as Music has already done for man, we may hope even more from it in the future.

It is, moreover, a joy for all. To appreciate Science or Art requires some training, and no doubt the cultivated ear will more and more appreciate the beauties of Music; but though there are exceptional individuals, and even races, almost devoid of any love of Music, still they are happily but rare.

Good Music, moreover, does not necessarily involve any considerable outlay; it is even now no mere luxury of the rich, and we may hope that as time goes on, it will become more and more the comfort and solace of the poor.

CHAPTER VIII.

THE BEAUTIES OF NATURE.

"Speak to the earth and it shall teach thee."
JOB.

"And this our life, exempt from public haunt,
Finds tongues in trees, books in the running brooks,
Sermons in stones, and good in everything."
SHAKESPEARE.

We are told in the first chapter of Genesis that at the close of the sixth day "God saw every thing that he had made, and, behold, it was very good." Not merely good, but very good. Yet how few of us appreciate the beautiful world in which we live!

In preceding chapters I have incidentally, though only incidentally, referred to the Beauties of Nature; but any attempt, however imperfect, to sketch the blessings of life must contain some special reference to this lovely world itself, which the Greeks happily called κόσμος—beauty.

Hamerton, in his charming work on *Landscape*, says, "There are, I believe, four new experiences for which no description ever adequately prepares us, the first sight of the sea, the first journey in the desert, the sight of flowing molten lava, and a walk on a great glacier. We feel in each case that the strange thing in pure nature as much nature as a familiar English moor, yet so extraordinary that we might be in another planet." But it would, I think, be easier to enumerate the Wonders of Nature for which description can prepare us, than those which are altogether beyond the power of language.

Many of us, however, walk through the world like ghosts, as if we were in it, but not of it. We have "eyes and see not, ears and hear not." To look is much less easy than to overlook, and to be able to see what we do see, is a great gift. Ruskin maintains that "The greatest thing a human soul ever does in this world is to see something, and tell what it saw in a plain way." I do not suppose that his eyes are better than ours, but how much more he sees with them!

We must look before we can expect to see. "To the attentive eye," says Emerson, "each moment of the year has its own beauty; and in the same field it beholds every hour a

picture that was never seen before, and shall never be seen again. The heavens change every moment and reflect their glory or gloom on the plains beneath."

The love of Nature is a great gift, and if it is frozen or crushed out, the character can hardly fail to suffer from the loss. I will not, indeed, say that a person who does not love Nature is necessarily bad; or that one who does, is necessarily good; but it is to most minds a great help. Many, as Miss Cobbe says, enter the Temple through the gate called Beautiful.

There are doubtless some to whom none of the beautiful wonders of Nature; neither the glories of the rising or setting sun; the magnificent spectacle of the boundless ocean, sometimes so grand in its peaceful tranquillity, at others so majestic in its mighty power; the forests agitated by the storm, or alive with the song of birds; nor the glaciers and mountains—there are doubtless some whom none of these magnificent spectacles can move, whom "all the glories of heaven and earth may pass in daily succession without touching their hearts or elevating their minds."*

Such men are indeed pitiable. But, happily, they are exceptions. If we can none of us as yet fully appreciate the beauties of Nature, we are beginning to do so more and more.

For most of us the early summer has a special charm. The very life is luxury. The air is full of scent, and sound, and sunshine, of the song of birds and the murmur of insects; the meadows gleam with golden buttercups, it almost seems as if one could see the grass grow and the buds open; the bees hum for very joy, and the air is full of a thousand scents, above all perhaps that of new-mown hay.

The exquisite beauty and delight of a fine summer day in the country has never perhaps been more truly, and therefore more beautifully, described than by Jefferies in his "Pageant of Summer." "I linger," he says, "in the midst of the long grass, the luxury of the leaves, and the song in the very air. I seem as if I could feel all the glowing life the sunshine gives and the south wind calls to being. The endless grass, the endless leaves, the immense strength of the oak expanding, the unalloyed joy of finch and blackbird; from all of them I receive a little. . . . In the blackbird's melody one note is mine; in the dance of the leaf shadows the formed maze is for me, though the motion is theirs; the flowers with a thousand faces have collected the kisses of the morning. Feeling with them, I receive some, at least, of their fulness of life. Never could I have enough; never stay long enough. . . . The hours when the mind is absorbed by beauty are the only hours when we really live, so that the longer we can stay among these things so much the more is snatched from inevitable Time. . . . These are the only hours that are not wasted—these hours that absorb the soul and fill it with beauty. This is real life, and all else is illusion, or mere endurance. To be beautiful and to be calm, without mental fear, is the ideal of Nature. If I cannot achieve it, at least I can think it."

This chapter is already so long that I cannot touch on the contrast and variety of the seasons, each with its own special charm and interest as

> "The daughters of the year
> Dance into light and die into the shade."*

Our countrymen derive great pleasure from the animal kingdom, in hunting, shooting, and fishing, thus obtaining fresh air and exercise, and being led into much varied and beautiful scenery. Still it will probably ere long be recognized that even from a purely selfish point of view,

* Beattie.

*Tennyson.

killing animals is not the way to get the greatest enjoyment from them. How much more interesting would every walk in the country be, if Man would but treat other animals with kindness, so that they might approach us without fear, and we might have the constant pleasure of watching their winning ways. Their origin and history, structure and habits, senses and inteliigence, offer an endless field of interest and wonder.

The richness of life is wonderful. Any one who will sit down quietly on the grass and watch a little will be indeed surprised at the number and variety of living beings, every one with a special history of its own, every one offering endless problems of great interest.

"If indeed thy heart were right, then would every creature be to thee a mirror of life, and a book of holy doctrine."*

The study of Natural History has the special advantage of carrying us into the country and the open air.

Not but what towns are beautiful too. They teem with human interest and historical associations.

Wordsworth was an intense lover of nature; yet does he not tell us, in lines which every Londoner will appreciate, that he knew nothing in nature more fair, no calm more deep, than the city of London at early dawn?

"Earth has not anything to show more fair
Dull would he be of soul who could pass by
A sight of touching in its majesty:
This City now doth, like a garment, wear
The beauty of the morning; silent, bare,
Ships, towers, domes, theatres, and temples lie
Open unto the fields, and to the sky:
All bright and glittering in the smokeless air.
Never did sun more beautifully steep
In his first splendor, valley, rock, or hill;
Ne'er saw I, never felt, a calm so deep!
The river glideth at its own sweet will:
Dear God! the very houses seem asleep;
And all that mighty heart is lying still!"

Milton also described London as

"Too blest abode, no loveliness we see
In all the earth, but it abounds in thee."

But after being some time in a great city, one feels a longing for the country.

"The meanest floweret of the vale,
The simplest note that swells the gale,
The common sun, the air, the skies,
To him are opening paradise."*

Here Gray justly places flowers in the first place, for when in any great town we think of the country, flowers seem first to suggest themselves.

"Flowers," says Ruskin, "seem intended for the solace of ordinary humanity. Children love them; quiet, tender, contented, ordinary people love them as they grow: luxurious and disorderly people rejoice in them gathered. They are the cottager's treasure; and in the crowded town, mark, as with a little broken fragment of rainbow, the windows of the workers in whose heart rests the covenant of peace." But in the crowded street, or even in the formal garden, flowers always seem, to me at least, as if they were pining for the freedom of the woods and fields, where they can live and grow as they please.

There are flowers for almost all seasons and all places. Flowers for spring, summer, and autumn, while even in the very depth of winter here and there one makes its appearance. There are flowers of the fields and woods and hedgerows, of the seashore and the lake's margin, of the mountain side up to the very edge, of the eternal snow.

And what an infinite variety they present.

"Daffodils,
That come before the swallow dares, and take
The winds of March with beauty; violets, dim,
But sweeter than the lids of Juno's eyes,
Or Cytherea's breath; pale primroses,
That die unmarried, ere they can behold
Bright Phœbus in his strength, a malady
Most incident to maids; bold oxlips and
The crown imperial; lilies of all kinds,
The flower-de-luce being one."†

Nor are they mere delights to the eye; they are full of mystery and suggestions. They almost seem like enchanted princesses waiting for some princely deliverer. Wordsworth tells us that

"To me the meanest flower that blows can give
Thoughts that do often lie too deep for tears."

Every color again, every variety of

* Thomas à Kempis

* Gray.

† Shakespeare

form, has some purpose and explanation.

And yet, lovely as Flowers are, Leaves add even more to the Beauty of Nature. Trees in our northern latitudes seldom own large flowers; and though of course there are notable exceptions, such as the Horse-chestnut, still even in these cases the flowers live only a few days, while the leaves last for months. Every tree indeed is a picture in itself: The gnarled and rugged Oak, the symbol and source of our navy, sacred to the memory of the Druids, the type of strength, the sovereign of British trees; the Chestnut, with its beautiful, tapering, and rich green, glossy leaves, its delicious fruit, and to the durability of which we owe the grand and historic roof of Westminster Abbey.

The Birch is the queen of trees, with her feathery foliage, scarcely visible in spring but turning to leaves of gold in autumn; the pendulous twigs tinged with purple, and silver stems so brilliantly marked with black and white.

The Elm forms grand masses of foliage which turn a beautiful golden yellow in autumn; and the Black Poplar with its perpendicular leaves, rustling and trembling with every breath of wind, towers over most other forest trees.

The Beech enlivens the country by its tender green in spring, rich green in summer, and glorious gold and orange in autumn, set off by the graceful gray stems; and has, moreover, such a wealth of leaves that in autumn there are enough not only to clothe the tree itself but to cover the grass underneath.

If the Beech owes much to its delicate gray stem, even more beautiful is the reddish crimson of the Scotch Pines, in such charming contrast with the rich green of the foliage, by which it is shown off rather than hidden; and, with the green spires of the Firs, they keep the woods warm in winter.

Nor must I overlook the smaller trees: the Yew with its thick green foliage; the wild Guelder rose, which lights up the woods in autumn with translucent glossy berries and many-tinted leaves; or the Bryonies, the Briar, the Traveller's Joy, and many another plant, even humbler perhaps, and yet each with some exquisite beauty and grace of its own, so that we must all have sometimes felt our hearts overflowing with gladness and gratitude, as if the woods were full of music—as if

> "The woods were filled so full with song
> There seemed no room for sense of wrong."*

On the whole, no doubt, woodlands are less beautiful in the winter; yet even then the delicate tracery of the branches, which cannot be so well seen when they are clothed with leaves, has a special beauty of its own; while every now and then hoar frost or snow settles like silver on every branch and twig, lighting up the forest as if by enchantment in preparation for some fairy festival.

I feel with Jefferies that "by day or by night, summer or winter, beneath trees the heart feels nearer to that depth of life which the far sky means. The rest of spirit found only in beauty, ideal and pure, comes there because the distance seems within touch of thought."

The general effect of forests in tropical regions must be very different from that of those in our latitudes. Kingsley describes it as one of helplessness, confusion, awe, all but terror. The trunks are very lofty and straight, and rising to a great height without a branch, so that the wood seems at first comparatively open. In Brazilian forests, for instance, the trees struggle upwards, and the foliage forms an unbroken canopy, perhaps a hundred feet overhead. Here, indeed, high up in the air is the real life of the forest. Everything seems to climb to the light. The quadrupeds climb, birds climb, reptiles climb, and the

* Tennyson.

variety of climbing plants is far greater than anything to which we are accustomed.

Many savage nations worship trees, and I really think my first feeling would be one of delight and interest rather than of surprise, if some day when I am alone in a wood one of the trees were to speak to me. Even by day there is something mysterious in a forest, and this is much more the case at night.

With wood, water seems to be naturally associated. Without water no landscape is complete, while overhead the clouds add beauty to the heavens themselves. The spring and the rivulet, the brook, the river, and the lake, seem to give life to Nature, and were indeed regarded by our ancestors as living entities themselves. Water is beautiful in the morning mist, in the broad lake, in the glancing stream or the river pool, in the wide ocean, beautiful in all its varied moods. Water nourishes vegetation; it clothes the lowlands with green and the mountains with snow. It sculptures the rocks and excavates the valleys, in most cases acting mainly through the soft rain, though our harder rocks are still grooved by the ice-chisel of bygone ages.

The refreshing power of water upon the earth is scarcely greater than that which it exercises on the mind of man. After a long spell of work how delightful it is to sit by a lake or river, or on the seashore, and enjoy

> "A little murmur in mine ear
> A little ripple at my feet."*

Every Englishman loves the sight of the Sea. We feel that it is to us a second home. It seems to vivify the very atmosphere, so that Sea air is proverbial as a tonic, and makes the blood dance in our veins. The Ocean gives an impression of freedom and grandeur more intense perhaps even than the aspect of the heavens themselves. A poor woman from Manchester, on being taken to the seaside, is said to have expressed her delight on seeing for the first time something of which there was enough for everybody. The sea coast is always interesting. When we think of the cliff sections with their histories of bygone ages; the shore itself teeming with sea weeds and animals, waiting for the return of the tide, or thrown up from deeper water by the waves; the weird cries of seabird; the delightful feeling that with every breath we are laying in a store of fresh life, and health, and energy, it is impossible to over-estimate all we owe to the sea.

It is, moreover, always changing. We went for our holiday this year to Lyme Regis. Let me attempt to describe the changes in the view from our windows during a single day. Our sitting-room opened on to a little lawn, beyond which the ground drops suddenly to the sea, while over about two miles of water were the hills of the Dorsetshire coast — Golden Cap, with its bright crest of yellow sand, and the dark blue Lias Cliff of Black Ven. When I came early down in the morning the sun was rising opposite, shining into the room over a calm sea, along an avenue of light; by degrees, as it rose, the whole sea was gilt with light, and the hills bathed in a violet mist. By breakfast-time all color had faded from the sea — it was like silver passing on each side into gray; the sky was blue, flecked with fleecy clouds; while, on the gentler slopes of the coast opposite, fields and woods, and quarries and lines of stratification begin to show themselves, though the cliffs are still in shadow, and the more distant headlands still a mere succession of ghosts, each one fainter than the one before it. As the morning advances the sea becomes blue, the dark woods, green meadows, and golden cornfields of the opposite coast more distinct, and the details

*Trench.

of the cliffs come gradually into view, and fishing-boats with dark sails begin to appear.

Gradually the sun rises higher, a yellow line of shore appears under the opposite cliffs, and the sea changes its color, mapping itself out as it were, the shallower parts turquoise blue, almost green; the deeper ones deep violet.

This does not last long — a thunderstorm comes up. The wind mutters overhead, the rain patters on the leaves, the cost opposite seems to shrink into itself, as if it would fly from the storm. The sea grows dark and rough, and white horses appear here and there.

But the storm is soon over. The clouds break, the rain stops, the sun shines once more, the hills opposite come out again. They are divided now not only into fields and woods, but into sunshine and shadow. The sky clears, and as the sun begins to descend westwards the sea becomes one beautiful clear uniform azure, changing again soon to pale blue in front and dark violet beyond; and once more as clouds begin to gather again, into an archipelago of bright blue sea and deep islands of ultramarine. As the sun travels westward, the opposite hills change again. They scarcely seem like the same country. What was in sun is now in shade, and what was in shade now lies bright in the sunshine. The sea once more becomes a uniform solid blue, only flecked in places by scuds of wind, and becoming paler towards evening, as the sun sinks, the cliffs which catch his setting rays, losing their deep color and in some places looking almost as white as chalk, while at sunset they light up again for a moment with a golden glow, the sea at the same time sinking to a cold gray. But soon the hills grow cold too, Golden Cap holding out bravely to the last, and the shades of evening settle over cliff and wood, cornfield and meadow.

These are but a part, and a very small part, of the changes of a single day. And scarcely any two days are alike. At times a sea-fog covers everything. Again the sea which sleeps to-day so peacefully sometimes rages, and the very existence of the bay itself bears witness to its force.

The night, again, varies like the day. Sometimes shrouded by a canopy of darkness, sometimes lit up by millions of brilliant worlds, sometimes bathed in the light of a moon, which never retains the same form for two nights together.

If Lakes are less grand than the sea, they are in some respect even more lovely. The seashore is comparatively bare. The banks of Lakes are often richly clothed with vegetation which comes close down to the water's edge, sometimes hanging even into the water itself. They are often studded with well-wooded islands. They are sometimes fringed with green meadows, somtimes bounded by rocky promontories rising directly from comparatively deep water, while the calm bright surface is often fretted by a delicate pattern of interlacing ripples, or reflects a second, softened, and inverted landscape.

To water again we owe the marvellous spectacle of the rainbow — "God's bow in the clouds." It is indeed truly a heavenly messenger, and so unlike anything else that it scarcely seems to belong to this world.

Many things are colored, but the rainbow seems to be color itself.

> "First the flaming red
> Sprang vivid forth; the tawny orange next,
> And next delicious yellow; by whose side
> Fell the kind beams of all-refreshing green.
> Then the pure blue that swells autumnal skies,
> Ethereal play'd; and then, of sadder hue,
> Emerged the deeper indigo (as when
> The heavy-skirted evening droops with frost),
> While the last gleamings of refracted light
> Died in the fainting violet away."*

We do not, I think, sufficiently realize how wonderful is the blessing of color. It would have been possible, it would even seem more probable, that though light might have enabled us to perceive objects, this

*Thomson.

could only have been by shade and form. How we perceive color it is very difficult to comprehend, and yet when we speak of beauty, among the ideas which come to us most naturally are those of birds and butterflies, flowers and shells, precious stones, skies, and rainbows.

Our minds might have been constituted exactly as they are, we might have been capable of comprehending the highest and sublimest truths, and yet, but for a small organ in the head, the world of sound would have been shut out from us; we should have lost the sounds of nature, the charms of music, the conversation of friends, and have been condemned to perpetual silence: and yet a slight alteration in the retina, which is not thicker than a sheet of paper, not larger than a finger nail,—and the glorious spectacle of this beautiful world, the exquisite variety of form, the glory and play of color, the variety of scenery, of woods and fields, and lakes and hills, seas and mountains, the glory of the sky alike by day and night, would all have been lost to us.

Mountains, again, "seem to have been built for the human race, as at once their schools and cathedrals; full of treasures of illuminated manuscript for the scholar, kindly in simple lessons for the worker, quiet in pale cloisters for the thinker, glorious in holiness for the worshipper. And of these great cathedrals of the earth, with their gates of rock, pavements of cloud, choirs of stream and stone, altars of snow, and vaults of purple traversed by the continual stars."*

All these beauties are comprised in Tennyson's exquisite description of Œnone's vale—the city, flowers, trees, river, and mountains.

"There is a vale in Ida, lovlier
Than all the valleys of Ionian hills
The swimming vapor slopes athwart the glen,
Puts forth an arm, and creeps from pine to pine,
And loiters, slowly drawn. On either hand
The lawns and meadow-ledges midway down
Hang rich in flowers, and far below them roars
The long brook falling thro' the clov'n ravine
In cataract after cataract to the sea.
Behind the valley topmost Gargarus
Stands up and takes the morning; but in front
The gorges, opening wide apart, reveal
Troas and Ilion's column'd citadel,
The crown of Troas."

And when we raise our eyes from earth, who has not sometimes felt "the witchery of the soft blue sky;" who has not watched a cloud floating upwards as if on its way to heaven, or when

"Sunbeam proof, I hang like a roof
The mountain its columns be." *

And yet "if, in our moments of utter idleness and insipidity, we turn to the sky as a last resource, which of its phenomena do we speak of? One says, it has been wet; and another, it has been windy; and another it has been warm. Who, among the whole chattering crowd, can tell me of the forms and precipices of the chain of tall white mountains that girded the horizon at noon yesterday? Who saw the narrow sunbeam that came out of the south, and smote upon their summits until they melted and mouldered away in a dust of blue rain? Who saw the dance of the dead clouds when the sunlight left them last night, and the west wind blew them before it like withered leaves? All has passed, unregretted as unseen; or if the apathy be ever shaken off, even for an instant, it is only by what is gross, or what is extraordinary; and yet it is not in the broad and fierce manifestations of the elemental energies, not in the clash of the hail, nor the drift of the whirlwind, that the highest characters of the sublime are developed."†

But exquisitely lovely as is the blue arch of the midday sky, with its inexhaustible variety of clouds, "there is yet a light which the eye invariably seeks with a deeper feeling of the beautiful, the light of the declining or breaking day, and the flakes of scarlet cloud burning like

*Ruskin.

*Shelley.
†Ruskin.

watch-fires in the green sky of the horizon."*

The evening colors indeed soon fade away, but as night comes on,

"How glorious the firmament
With living sapphires! Hesperus that led
The starry host, rode brightest; till the moon
Rising in clouded majesty, at length,
Apparent queen, unveiled her peerless light,
And o'er the dark her silver mantle threw."†

We generally speak of a beautiful night when it is calm and clear, and the stars shine brightly overhead; but how grand also are the wild ways of Nature, how magnificent when the lightning flashes, "between gloom and glory;" when

"From peak to peak the rattling crags among
Leaps the live thunder."‡

In the words of Ossian—

"Ghosts ride in the tempest to-night;
Sweet is their voice between the gusts of wind,
Their songs are of other worlds."

Nor are the wonders and beauties of the heavens limited by the clouds and the blue sky, lovely as they are. In the heavenly bodies we have before us "the perpetual presence of the sublime." They are so immense and so far away, and yet on soft summer nights "they seem leaning down to whisper in the ear of our souls."§

"A man can hardly lift up his eyes towards the heavens," says Seneca, "without wonder and veneration, to see so many millions of radiant lights, and to observe their courses and revolutions, even without any respect to the common good of the Universe."

Who does not sympathize with the feelings of Dante as he rose from his visit to the lower regions, until, he says,

"On our view the beautiful lights of heaven
Dawned through a circular opening in the cave,
Thence issuing, we again beheld the stars."

As we watch the stars at night they seem so still and motionless that we can hardly realize that all the time they are rushing on with a velocity far far exceeding any that man has ever accomplished.

Like the sands of the sea, the stars of heaven have ever been used as an appropriate symbol of number, and we know that there are some 75,000,000, many, no doubt, with planets of their own. But this is by no means all. The floor of heaven is not only "thick inlaid with patines of bright gold," but is studded also with extinct stars, once probably as brilliant as our own sun, but now dead and cold, as Helmholtz tells us our sun itself will be some seventeen millions of years hence. Then, again, there are the comets, which, though but few are visible to us at once, are even more numerous than the stars; there are the nebulæ, and the countless minor bodies circulating in space, and occasionally visible as meteors.

Nor is it only the number of the heavenly bodies which is so overwhelming; their magnitude and distances are almost more impressive. The ocean is so deep and broad as to be almost infinite, and indeed in so far as our imagination is the limit, so it may be. Yet what is the ocean compared to the sky? Our globe is little compared to the giant orbs of Jupiter and Saturn, which again sink into insignificance by the side of the sun. The sun itself is almost as nothing compared with the dimensions of the solar system. Sirius, is calculated to be a thousand times as great as the sun, and a million times as far away. The solar system itself travels in one region of space, sailing between worlds and worlds, and is surrounded by many other systems as great and complex as itself; and we know that even then we have not reached the limits of the Universe itself.

There are stars so distant that their light, though traveling 180,000 miles in a second, yet takes years to reach us; and beyond all these are other systems of stars which are so far away that they cannot be perceived singly, but even in our most powerful telescopes appear

*Ibid.
†Wordsworth.
‡Swinburne.
§Symonds.

only as minute clouds or nebulæ. It is, indeed, but a feeble expression of the truth to say that the infinities revealed to us by Science,—the infinitely great in the one direction, and the infinitely small in the other,—go far beyond anything which had occurred to the unaided imagination of Man, and are not only a never-failing source of pleasure and interest, but seem to lift us out of the petty troubles and sorrows of life.

CHAPTER IX.

THE TROUBLES OF LIFE.

We have in life many troubles, and troubles are of many kinds. Some sorrows, alas, are real enough, especially those we bring on ourselves, but others, and by no means the least numerous, are mere ghosts of troubles: if we face them boldly, we find that they have no substance or reality, but are mere creations of our own morbid imagination, and that it is as true now as in the time of David that "Man disquieteth himself in a vain shadow."

Some, indeed of our troubles are evils, but not real; while others are real, but not evils.

"And yet, into how unfathomable a gulf the mind rushes when the troubles of this world agitate it. If it then forget its own light, which is eternal joy, and rush into the outer darkness, which are the cares of this world, as the mind now does, it knows nothing else but lamentations."*

"Athens," said Epicetetus, "is a good place,—but happiness is much better; to be free from passions, free from disturbance."

We should endeavor to maintain ourselves in

> "that blessed mood
> In which the burden of the mystery,
> In which the heavy and the weary weight,
> Of all this unintelligible world
> Is lightened."†

So shall we fear "neither the exile of Aristides, nor the prison of Anaxagoras, nor the poverty of Socrates, nor the condemnation of Phocion, but think virtue worthy our love even under such trials."* We should then be, to a great extent, independent of external circumstances, for

> 'Stone walls do not a prison make,
> Nor iron bars a cage,
> Minds innocent and quiet take
> That for an hermitage.
> "If I have freedom in my love,
> And in my soul am free;
> Angels alone that soar above
> Enjoy such liberty."†

Happiness indeed depends much more on what is within than without us. When Hamlet says the world is "a goodly prison; in which there are many confines, wards, and dungeons; Denmark being one of the worst," and Rosencrantz differs from him, he rejoins wisely, "Why then, 'tis none to you: for there is nothing either good or bad, but thinking makes it so: to me it is a prison." "All is opinion," said Marcus Aurelius. "That which does not make a man worse, how can it make his life worse? But death certainly, and life, honor and dishonor, pain and pleasure, all these things happen equally to good men and bad, being things which make us neither better nor worse."

"The greatest evils," says Jeremy Taylor, "are from within us; and from ourselves also we must look for our greatest good."

"The mind," says Milton,

> "Is its own place, and in itself
> Can make a Heaven of Hell, a Hell of Heaven."

Milton indeed in his blindness saw more beautiful visions, and Beethoven in his deafness heard more heavenly music, than most of us can ever hope to enjoy.

We are all apt, when we know not what may happen, to fear the worst. When we know the full extent of any danger, it is half over. Hence, we dread ghosts more than robbers, not only without reason, but against

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* King Alfred's translation of the Consolations of Boethius.

† Wordsworth.

* Plutarch.

† Lovelace.

reason; for even if ghosts existed, how could they hurt us? and in ghost stories, few, even those who say that they have seen a ghost, ever profess or pretend to have felt one.

Milton, in his description of death, dwells on this characteristic of obscurity:

"The other shape
If shape it might be call'd that shape had none
Distinguishable, in member, joint, or limb;
Or substance might be call'd that shadow seem'd,
For each s emed either; black he stood as night;
Fierce as ten furies; terrible as hell:
And shook a deadly dart. What seem'd his head
The likeness of a kingly crown had on."

The effect of darkness and night in enhancing terrors is dwelt on in one of the sublimest passages in Job —

"In thoughts from the visions of the night
When deep sleep falleth on men,
Fear came upon me, and trembling,
Which made all my bones to shake.
Then a spirit passed before my face;
The hair of my flesh stood up.
It stood still, an image was before mine eyes;
There was silence; and I heard a voice saying
Shall mortal man be more just than God?"

Thus was the terror turned into a lesson of comfort and of mercy.

We often magnify troubles and difficulties, and look at them till they seem much greater than they really are.

"Dangers are no more light, if they once seem light; and more dangers have deceived men than forced them: nay, it were better to meet some dangers half way, though they come nothing near, than to keep too long a watch upon their approaches; for if a man watch too long, it is odds he will fall asleep."*

Foresight is very wise, but foresorrow is very foolish; and castles are at any rate better than dungeons, in the air.

Some of our troubles, no doubt, are real enough, but yet are not evils.

It happens, unfortunately too often, that by some false step, intentional or unintentional, we have missed the right road, and gone wrong. Can we then retrace our steps? can we recover what is lost? This may be done. It is too gloomy a view to affirm that

"A word too much, or a kiss too long,
And the world is never the same again."

There are two noble sayings of Socrates, that to do evil is more to be avoided than to suffer it; and that when a man has done evil, it is better for him to be punished than to be unpunished.

We generally speak of selfishness as a fault, and as if it interfered with the general happiness. But this is not altogether correct.

The pity is that so many people are foolishly selfish: that they pursue a course of action which neither makes themselves nor any one else happy.

"Every man," says Goethe, "ought to begin with himself, and make his own happiness first, from which the happiness of the whole world would at last unquestionably follow." It is easy to say that this is too broadly stated, and of course exceptions might be pointed out: but if every one would avoid excess, and take care of his own health; would keep himself strong and cheerful; would make his home happy, and give no cause for the petty vexations which embitter domestic life; would attend to his own affairs and keep himself sober and solvent; would, in the words of the Chinese proverb, "sweep away the snow from before his own door, and never mind the frost upon his neighbor's tiles;" though it might not be the noblest course of conduct; still, how well it would be for their family, relations, and friends. But, unfortunately,

"Look round the habitable world, how few
Know their own good; or, knowing it, pursue."*

It would be a great thing if people could be brought to realize that they can never add to the sum of their happiness by doing wrong. In the case of children, indeed, we recognize this; we perceive that a spoilt child is not a happy one; that it would have been far better for him to have been punished at first and thus saved from greater suffering in after life.

*Bacon.

*Dryden.

It is a beautiful idea that every man has with him a Guardian Angel; and it is true too: for Conscience is ever on the watch, ever ready to warn us of danger.

We often feel disposed to complain, and yet it is most ungrateful:

"For who would lose,
Though full of pain, this intellectual being,
Those thoughts that wander through Eternity;
To perish rather, swallowed up, and lost
In the wide womb of uncreated thought."*

But perhaps it will be said that we are sent here in preparation for another and a better world. Well, then, why should we complain of what is but a preparation for future happiness?

We ought to

"Count each affliction, whether light or grave,
God's messenger send down to thee; do thou
With courtesy receive him; rise and bow;
And, ere his shadow pass thy threshold, crave
Permission first his heavenly feet to lave;
Then lay before him all thou hast: allow
No cloud of passion to usurp thy brow,
Or mar thy hospitality; no wave
Of moral tumult to obliterate
The soul's marmoreal calmness: Grief should be
Like joy, majestic, equable, sedate:
Confirming, cleansing, raising, making free;
Strong to consume small troubles; to commend
Great thoughts, grave thoughts, thoughts lasting to the end." †

Some persons are like the waters of Siloam, and require to be troubled before they can exercise their virtue.

"We shall get more contentedness," says Plutarch, "from the presence of all these blessings if we fancy them as absent, and remember from time to time how people when ill yearn for health, and people in war for peace, and strangers and unknown in a great city for reputation and friends, and how painful it is to be deprived of all these when one has once had them. For then each of these blessings will not appear to us only great and valuable when it is lost, and of no value when we have it. . . . And yet it makes much for contentedness of mind to look for the most part at home and to our own condition; or if not, to look at the case of people worse off than ourselves, and not, as people do, to compare ourselves with those who are better off. . . . . But you will find others, Chians, or Galatians, or Bithynians, not content with the share of glory or power they have among their fellow-citizens, but weeping because they do not wear senators' shoes; or, if they have them, that they cannot be prætors at Rome; or if they get that office, that they are not consuls; or if they are consuls, that they are only proclaimed second and not first. . . . Whenever, then, you admire any one carried by in his litter as a greater man than yourself, lower your eyes and look at those that bare the litter." And again, "I am very taken with Diogenes' remark to a stranger at Lacedæmon, who was dressing with much display for a feast, 'Does not a good man consider every day a feast?' . . . Seeing then that life is the most complete initiation into all these things, it ought to be full of ease of mind and joy;" and if properly understood, would enable us "to acquiesce in the present without repining, to remember the past with thankfulness, and to meet the future hopefully and cheerfully without fear or suspicion."

* Milton.

† Aubrey de Vere.

CHAPTER X.

LABOR AND REST.

"Through labor to rest, through combat to victory."
THOMAS A. KEMPIS.

AMONG the troubles of life I do not, of course, reckon the necessity of labor.

Work indeed, and hard work, if only it is in moderation, is in itself a rich source of happiness. We all know how quickly time passes when we are well employed, while the moments hang heavily on the hands of the idle. Occupation drives away care and all the small troubles of life. The busy man has no time to brood or to fret.

"From toil he wins his spirits light,
From busy day the peaceful night,
Rich, from the very want of wealth,
In Heaven's best treasures, peace and health."*

This applies especially to the labor of the field and the workshop. Humble it may be, but if it does not dazzle with the promise of fame, it gives the satisfaction of duty fulfilled, and the inestimable blessing of health. As Emerson reminds those entering life, "The angels that live with them, and are weaving laurels of life for their youthful brows, are toil and truth and mutual faith."

Labor was truly said by the ancients to be the price which the gods set upon everything worth having. We all admit, though we often forget, the marvellous power of perseverance, and yet all Nature, down to Bruce's spider is continually impressing this lesson on us.

Hard writing, it has been said, makes easy reading; Plato is said to have rewritten the first page of the *Republic* thirteen times; and Carlo Maratti, we are told, sketched the head of Antinoüs three hundred times before he wrought it to his satisfaction.

It is better to wear out than to rust out, and there is "a dust which settles on the heart, as well as that which rests upon the ledge."†

But though labor is good for man, it may be, and unfortunately often is, carried to excess. Many are wearily asking themselves

"Ah why
should life all labor be!"‡

There is a time for all things, says Solomon, a time to work and a time to play: we shall work all the better for reasonable change, and one reward of work is to secure leisure.

It is a good saying that where there's a will there's a way; but while it is all very well to wish, wishes must not take the place of work.

In whatever sphere his duty lies every man must rely mainly on himself. Others can help us, but we must make ourselves. No one else can see for us. To profit by our advantages we must learn to use for ourselves

"The dark lantern of the spirit
Which none can see by, but he who bears it."

It is hardly an exaggeration to say that honest work is never thrown away. If we do not find the imaginary treasure, at any rate we enrich the vineyard.

"Work," says Nature to man, "in every hour, paid or unpaid; see only that thou work, and thou canst not escape the reward: whether thy work be fine or coarse, planting corn or writing epics, so only it be honest work, done to thine own approbation, it shall earn a reward to the senses as well as to the thought: no matter how often defeated, you are born to victory. The reward of a thing well done is to have done it."*

Nor can any work, however persevering, or any success, however great, exhaust the prizes of life.

The most studious, the most successful, must recognize that there yet remain

"So much to do that is not e'en begun,
So much to hope for that we cannot see,
So much to win, so many things to be."†

At the present time, though there may be some special drawbacks, still we come to our work with many advantages which were not enjoyed in olden times. We live in much greater security ourselves, and are less liable to have the fruits of our labor torn violently from us.

In olden times the difficulties of study were far greater than they are now. Books were expensive and cumbersome, in many cases moreover chained to the desks on which they were kept. The greatest scholars have often been very poor. Erasmus used to read by moonlight because he could not afford a candle, and "begged a penny, not for the

*Gray.
†Jefferies.
‡Tennyson.

*Emerson.
†Morris.

love of charity, but for the love of learning."*

Want of time is no excuse for idleness. "Our life," says Jeremy Taylor, "is too short to serve the ambition of a haughty prince or a usurping rebel; too little time to purchase great wealth, to satisfy the pride of a vainglorious fool, to trample upon all the enemies of our just or unjust interest: but for the obtaining virtue, for the purchase of sobriety and modesty, for the actions of religion, God gives us time sufficient, if we make the outgoings of the morning and evening, that is our infancy and old age, to be taken into the computations of a man."

Work is so much a necessity of existence, that it is less a question whether, than how, we shall work. An old proverb tells us that the Devil finds work for those who do not make it for themselves.

If we Englishmen have succeeded as a race, it has been due in no small measure to the fact that we have worked hard. Not only so, but we have induced the forces of Nature to work for us. "Steam," says Emerson, "is almost an Englishman."

The power of work has especially characterized our greatest men. Cecil said of Sir Walter Raleigh that he "could toil terribly."

We are most of us proud of belonging to the greatest Empire the world has ever seen. It may be said of us with special truth in Wordsworth's words that

"The world is too much with us; late and soon
Getting and spending, we lay waste our powers."

Yes, but what world? The world will be with us sure enough, and whether we please or not. But what sort of world it will be for us will depend greatly on ourselves.

We are told to pray not to be taken out of the world, but to be kept from the evil.

There are various ways of working. Quickness may be good, but haste is bad.

* Coleridge.

"Wie das Gestirn
Ohne Hast
Ohne Rast
Drehe sich Jeder
Um die eigne Last."*

"Like a star, without haste, without rest, let every one fulfil his own hest."

Newton is reported to have described as his mode of working that "I keep the subject constantly before me, and wait till the first dawnings open slowly by little and little into a full and clear light,"

"The secret of genius," says Emerson, "is to suffer no fiction to exist for us; to realize all that we know; in the high refinement of modern life, in Arts, in Sciences, in books, in men, to exact good faith, reality, and a purpose; and first, last, midst, and without end, to honor every truth by use."

Lastly, work secures the rich reward of rest, we must rest to be able to work well, and work to be able to enjoy rest.

"We must no doubt beware that our rest become not the rest of stones, which so long as they are torrent tossed and thunder-stricken maintain their majesty; but when the stream is silent, and the storm past, suffer the grass to cover them, and the lichen to feed on them, and are ploughed down into the dust. . . . The rest which is glorious is of the chamois couched breathless in its granite bed, not of the stalled ox over his fodder."†

When we have done our best we may wait the result without anixety.

"What hinders a man, who has clearly comprehended these things, from living with a light heart and bearing easily the reins; quietly expecting everything which can happen and enduring that which has already happened? Would you have me to bear poverty? Come and you will know what poverty is when it has found one who can act well the part of a poor man. Would you have me

* Goethe.
† Ruskin.

to possess power? Let me have power, and also the trouble of it. Well, banishment? Wherever I shall go, there it will be well with me."*

The Buddhists believe in many forms of future punishment; but the highest reward of virtue is Nirvana — the final and eternal rest.

Very touching is the appeal of Ashmanezer to be left in peace, which was engraved on his Sarcophagus at Sidon,— now in Paris.

"In the month of Bul, the fourteenth year of my reign, I, King Ashmanezer, King of the Sidonians, son of King Tabuith, King of the Sidonians, spake, saying: 'I have been stolen away before my time — a son of the flood of days. The whilom great is dumb: the son of gods is dead. And I rest in this grave, even in this tomb, in the place which I have built. My adjuration to all the Ruling Powers and all men: Let no one open this resting-place, nor search for treasure, for there is no treasure with us; and let him not bear away the couch of my rest, and not trouble us in this resting place by disturbing the couch of my slumbers. . . . For all men who should open the tomb of my rest, or any man who should carry away the couch of my rest, or any one who trouble me on this couch: unto them there shall be no rest with the departed: they shall not be buried in a grave, and there shall be to them neither son nor seed. . . . . There shall be to them neither root below nor fruit above, nor honor among the living under the sun.'"†

The idle man does not know what it is to rest. Hard work, moveover, tends not only to give us rest for the body, but, what is even more important, peace to the mind. If we have done our best to do, and to be, we can rest in peace.

"En la sua voluntade è nostra pace."‡ In His will is our peace; and in such peace the mind will find its truest delight, for

"When care sleeps the soul wakes."

In youth, as is right enough, the idea of exertion, and of struggles, is inspiriting and delightful; but as years advance the hope and prospect of peace and of rest gain ground gradually, and

"When the last dawns are fallen on gray,
And all life's toils and ease complete,
They know who work, not they who play,
If rest is sweet."*

CHAPTER XI.

RELIGION.

"For what doth the Lord require of thee, but to do justly, to love mercy, and to walk humbly with thy God."—MICAH.

"Pure religion and undefiled is this, to visit the fatherless and wieows in their affliction, and to keep himself unspotted from the world."—JAMES I.

"The letter killetd, but the spirit giveth life."
2 CORINTHIANS.

It would be quite out of place here to enter into any discussion of theological problems or to advocate any particular doctrines. Nevertheless I could not omit what is to most so great a comfort and support in sorrow and suffering, and a source of the purest happiness.

We commonly, however, bring together under this term two things which are yet very different: the religion of the heart, and that of the head. The first deals with conduct, and the duties of Man; the second with the nature of the supernatural and the future of the soul, being in fact a branch of knowledge.

Religion should be a strength, guide, and comfort, not a source of intellectual anxiety or angry argument. To persecute for religion's sake implies belief in a jealous, cruel, and unjust Deity. If we have done torment oneself about the truth, to torment oneslf about the result is to doubt the goodness of God, and,

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*Epictetus,

†From Sir M. S. Grant Duff's *"A Winter in Syria."*

‡Dante.

*Symonds.

in the words of Bacon, "to bring down the Holy Ghost, instead of the likeness of a dove, in the shape of a raven." "The letter killeth, but the spirit giveth life," and the first duty of religion is to form the highest possible conception of God.

Many a man, however, and still more many a woman, render themselves miserable on entering life by theological doubts and difficulties. These have reference, in ninety-nine cases out of a hundred, not to what we should do, but to what we should think. As regards action, conscience is generally a ready guide; to follow it is the real difficulty. Theology, on the other hand, is a most abstruse science; but as long as we honestly wish to arrive at truth we need not fear that we shall be punished for unintentional error. "For what," says Micah, "doth the Lord require of thee, but to do justly, to love mercy, and to walk humbly with thy God." There is very little theology in the Sermon on the Mount, or indeed in any part of the Gospels; and the differences which keep us apart have their origin rather in the study than the Church. Religion was intended to bring peace on earth and goodwill towards men, and whatever tends to hatred and persecution, however correct in the letter, must be utterly wrong in the spirit.

How much misery would have been saved to Europe if Christians had been satisfied with the Sermon on the Mount!

Bokhara is said to have contained more than three hundred colleges, all occupied with theology, but ignorant of everything else, and it was probably one of the most bigoted and uncharitable cities in the world. "Knowledge puffeth up, but charity edifieth."

We must not forget that

> "He prayeth best who loveth best
> All things both great and small."

Theologians too often appear to agree that

> "The awful shadow of some unseen power
> Floats, though unseen, among us;"*

and in the days of the Inquisition many must have sighed for the cheerful childlike religion of the Greeks, if they could but have had the Nymphs and Nereids, the Fays and Faeries, with Destiny and Fate, but without Jupiter and Mars.

Sects are the work of Sectarians. No truly great religious teacher, as Carlyle said, ever intended to found a new Sect.

Diversity of worship, says a Persian proverb, "has divided the human race into seventy-two nations." From among all their dogmas I have selected one—"Divine Love." And again, "He needs no other rosary whose thread of life is strung with the beads of love and thought."

There is more true Christianity in some pagan Philosophers than in certain Christian theologians. Take, for instance, Plato, Marcus Aurelius, Epictetus, and Plutarch.

"Now I, Callicles," says Socrates, "am persuaded of the truth of these things, and I consider how I shall present my soul whole and undefiled before the judge in that day. Renouncing the honors at which the world aims, I desire only to know the truth, and to live as well as I can, and, when the times comes, to die. And to the utmost of my power, I exhort all other men to do the same. And in return for your exhortation of me, I exhort you also to take part in the great combat, which is the combat of life, and greater than every other earthly conflict."

"As to piety towards the Gods," says Epictetus, "you must know that this is the chief thing, to have right opinions about them, to think that they exist, and that they administer the All well and justly; and you must fix yourself in this principle (duty), to obey them, and to yield to them in everything which happens, and voluntarily to follow it

*Shelley.

as being accomplished by the wisest intelligence."

"Do not act," says Marcus Aurelius, "as if thou wert going to live ten thousand years. Death hangs over thee. While thou livest, while it is in thy power, be good. . . .

"Since it is possible that thou mayest depart from life this very moment, regulate every act and thought accordingly. But to go away from among men, if there be gods, is not a thing to be afraid of, for the gods will not involve thee in evil: but if indeed they do not exist, or if they have no concern about human affairs, what is it to me to live in a universe devoid of gods, or devoid of Providence. But in truth they do exist, and they do care for human things, and they have put all the means in man's power to enable him not to fall into real evils. And as for the rest, if there was anything evil, they would have provided for this also, that it should be altogether in a man's power not to fall into it."

And Plutarch: "The Godhead is not blessed by reason of his silver and gold, nor yet Almighty through his thunder and lightnings, but on account of knowledge and intellegence."

It is no doubt very difficult to arrive at the exact teaching of Eastern Moralists, but the same spirit runs through Oriental Literature. For instance, in the *Toy Cart,* when the wicked Prince wishes Vita to murder the Heroine, and says that no one would see him, Vita declares "All nature would behold the crime — the Genii of the Grove, the Sun, the Moon, the Winds, the Vault of Heavens, the firm-set Earth, the mighty Yama who judges the dead, and the conscious Soul."

Take even the most extreme type of difference. Is the man, says Plutarch, "a criminal who holds there are no gods; and is not he that holds them to be such as the superstitious believe them, is he not possessed with notions infinitely more atrocious? I for my part would much rather have men say of me that there never was a Plutarch at all, nor is now, than to say that Plutarch is a man inconstant, fickle, easily moved to anger, revengeful for trifling provocations, vexed at small things."

There is no doubt a tone of doubting sadness in Roman moralists, as in Hadrian's dying lines to his soul—

> "Animula, vagula, blandula
> Hospes, comesque corporis
> Qua nunc abibis in loca:
> Pallidula, rigida, nudula,
> Nec, ut soles, dabis jocos."

The same spirit indeed is expressed in the epitaph on the tomb of the Duke of Buckingham in Westminister Abbey—

> "Dubius non improbus vixi
> Incertus morior, non perturbatus
> Humanum est nescire et errare,
> Deo confido
> Omnipotenti benevolentissimo;
> Ens entium miserere mei."

Many things have been mistaken for religion, selfishness especially, but also fear, hope, love of music, of art, of pomp; scruples often take the place of love, and the glory of heaven is sometimes made to depend upon precious stones and jewelry. Many, as has been well said, run after Christ, not for the miracles, but for the loaves.

In many cases religious differences are mainly verbal. There is an Eastern tale of four men, an Arab, a Persian, a Turk, and a Greek, who agreed to club together for an evening meal, but when they had done so they quarrelled as to what it should be. The Turk proposed Azum, the Arab Aneb, the Persian Anghur, while the Greek insisted on Staphylion. While they were disputing

> "Before their eyes did pass,
> Laden with grapes, a gardener's ass,
> Sprang to his feet each man, and showed,
> With eager hand, that purple load.
> 'See Azum,' said the Turk; and 'see
> Anghur,' the Persian; 'what should be
> Better.' 'Nay Aneb, Aneb 'tis,'
> The Arab cried The Greek said, 'This
> Is my Staphylion.' Then they brought
> Their grapes in peace.
> Hence be ye taught."*

It is said that on one occasion, when Dean Stanley had been explain-

*Arnold. Pearls of the Faith.

ing his views to Lord Beaconsfield, the latter replied, "Ah! Mr. Dean, that is all very well, but you must remember,—No dogmas, no Deans." To lose such Deans as Stanley would indeed be a great misfortune; but does it follow? Religions, far from being really built on Dogmas, are too often weighed down and crushed by them. No one can doubt that Stanley has done much to strengthen the Church of England.

We may not always agree with Spinoza, but is he not right when he says, "The first precept of the divine law, therefore, indeed its sum and substance, is to love God unconditionally, as the supreme good—unconditionally, I say, and not from any love or fear of aught besides?" And again, that the very essence of religion is belief in "a Supreme Being who delights in justice and mercy, whom all who would be saved are bound to obey, and whose worship consists in the practice of justice and charity towards our neighbors?"

Doubt is of two natures, and we often confuse a wise suspension of judgment with the weakness of hesitation. To profess an opinion for which we have no sufficient reason is clearly illogical, but when it is necessary to act we must do so on the best evidence available, however, slight that may be. Herein lies the importance of common sense, the instincts of a General, the sagacity of a Statesman. Pyrrho, the recognized representative of doubt, was often wise in suspending his judgment, however foolish in hesitating to act, and in apologizing when, after resisting all the arguments of philosophy, an angry dog drove him from his position.

Collect from the Bible all that Christ thought necessary for his disciples, and how little Dogma there is. "Pure religion and undefiled is this, to visit the fatherless and widows in their affliction, and to keep himself unspotted from the world." "By this shall all men know that ye are my disciples, if ye have love one to another." "Suffer little children to come unto me." And one lesson which little children have to teach us is that religion is an affair of the heart and not of the mind only.

Why should we expect Religion to solve questions with reference to the origin and destiny of the Universe? We do not expect the most eleborate treatise to tell us the origin of electricity or of heat. Natural History throws no light on the origin of life. Has Biology ever professed to explain existence?

"Simonides was asked at Syracuse by Hiero, who or what God was, when he requested a day's time to think of his answer. On subsequent days he always doubled the period required for deliberation; and when Hiero inquired the reason, he replied that the longer he considered the subject, the more obscure it appeared."

The Vedas say, "In the midst of the sun is the light, in the midst of light is truth, and in the midst of truth is the imperishable being." Deity has been defined as a circle whose center is everywhere, and whose circumference is nowhere, but the "God is love" of St. John appeals more forcibly to the human soul.

The Church is not a place for study or speculation. Few but can sympathize with Eugenie de Guérin in her tender affection for the little Chapel at Cahuze where she tells us she left "tant de misères."

Doubt does not exclude Faith.

> "Perplexed in faith, but pure in deeds
> At last he beat his music out.
> There lies more faith in honest doubt,
> Believe me, than in half the creeds."*

And if we must admit that many points are still, and probably long will be involved in obscurity, we may be pardoned if we indulge ourselves in various speculations both as to our beginning and our end.

*Tennyson.

"Our birth is but a sleep and a forgetting;
The soul that rises with us, our life's star
Hath had elsewhere its setting,
And cometh from afar;

Not in entire forgetfulness,
And not in utter nakedness,
But trailing clouds of glory do we come
From God who is our home."*

Unfortunately many have attempted to compound for wickedness in life by purity of belief, a vain and fruitless effort. To do right is the sure ladder which leads up to Heaven, though the true faith will help us to find and to climb it.

"It was my duty to have loved the highest,
It surely was my profit had I known,
It would have been my pleasure had I seen."

But though religious truth can justify no bitterness, it is well worth any amount of thought and study.

I hope I shall not be supposed to depreciate any honest effort to arrive at truth, or to undervalue the devotion of those who have died for their religion. But surely it is a mistake to regard martyrdom as a merit, when from their own point of view it was in reality a privilege.

Let every man be persuaded in his own mind

"Truth is the highest thing that man may keep."†

To arrive at truth we should spare ourselves no pain, but certainly inflict none on others.

We may be sure that quarrels will never advance religion, and that to persecute is no way to convert. No doubt those who consider that all who do not agree with them will suffer eternal torments, seem logically justified in persecution even unto death. Such a course, if carried out consistently, might stamp out a particular sect, and any sufferings which could be inflicted here would on this hypothesis be as nothing in comparison with the pains of Hell. Only it must be admitted that such a view of religion is incompatible with any faith in the goodness of God, and seems quite irreconcilable with the teaching of Christ.

Moreover, the Inquisition has even from its own point of view proved generally a failure. The blood of the martyrs is the seed of the Church.

"In obedience to the order of the Council of Constance (1415) the remains of Wickliffe were exhumed and burnt to ashes, and these cast into the Swift a neighboring brook running hard by, and thus this brook hath conveyed his ashes into Avon; Avon into Severn; Severn into the narrow seas; they into the main ocean. And thus the ashes of Wickliffe are the emblem of his doctrine, which now is dispersed all the world over."*

The Talmud says that when a man once asked Shamai to teach him the law in one lesson, Shamai drove him away in anger. He then went to Hillel with the same request. Hillel said, "Do unto others as you would have others do unto you. This is the whole Law; the rest, merely Commentaries upon it."

The Religion of the lower races is almost as a rule one of terror and of dread. Their deities are jealous and revengeful, cruel, merciless, and selfish, hateful and yet childish. They require to be propitiated by feasts and offerings, often even by human sacrifices. They are not only exacting, but so capricious that, with the best intentions, it is often impossible to be sure of pleasing them. From such evil beings Sorcerers and Witches derived their hellish powers. No one was safe. No one knew where danger lurked. Actions apparently the most trifling might be fraught with serious risk; objects apparently the most innocent might be fatal.

In many cases there are supposed to be deities of Crime, of Misfortunes, of Disease. These wicked Spirits naturally encourage evil rather than good. An energetic friend of mine was sent to a district in India, where smallpox was specially prevalent, and where one of the principal Temples was dedicated to the God-

*Wordsworth.
†Chaucer.

*Fuller.

dess of that disease. He had the people vaccinated, in spite of some opposition, and the disease disappeared, much to the astonishment of the natives. But the priests of the Deity of Smallpox were not disconcerted; only they deposed the Image of their discomfited Goddess, and petitioned my friend for some emblem of himself which they might install in her stead.

We who are fortunate enough to live in this comparatively enlightened century hardly realize how our ancestors suffered from their belief in the existence of mysterious and malevolent beings; how their life was embittered and overshadowed by these awful apprehensions.

As men, however, have risen in civilization, their religion has risen with them; they have by degrees acquired higher and purer conceptions of divine power.

We are only just beginning to realize that a loving and merciful Father would not resent honest error, not even perhaps the attribution to him of such odious injustice. Yet what can be clearer than Christ's teaching on this point. He impressed it over and over again on his disciples. "The letter killeth, but the spirit giveth life."

"If," says Ruskin, "for every rebuke that we utter of men's vices, we put forth a claim upon their hearts; if, for every assertion of God's demands from them, we should substitute a display of His kindness to them; if side by side, with every warning of death, we could exhibit proofs and promises of immortality; if, in fine, instead of assuming the being of an awful Deity, which men, though they cannot and dare not deny, are always unwilling, sometimes unable, to conceive; we were to show them a near, visible, inevitable, but all-beneficent Deity, whose presence makes the earth itself a heaven, I think there would be fewer deaf children sitting in the market-place."

But it must not be supposed that those who doubt whether the ultimate truth of the Universe can be expressed in human words, or whether, even if it could, we should be able to comprehend it, undervalue the importance of religious study. Quite the contrary. Their doubts arise not from pride, but from humility: not because they do not appreciate divine truth, but on the contrary they doubt whether we can appreciate it sufficiently, and are sceptical whether the infinite can be reduced to the finite.

We may be sure that whatever may be right about religion, to quarrel over it must be wrong. "Let others wrangle," said St. Augustine, "I will wonder."

Those who suspend their judgment are not on that account sceptics, and it is often those who think they know most, who are especially troubled by doubts and anxiety.

It was Wordsworth who wrote

> "Great God, I had rather be
> A Pagan suckled in some creed outworn;
> So might I, standing on this pleasant lea,
> Have glimpses that would make me less forlorn."

In religion, as with children at night, it is darkness and ignorance which create dread; light and love cast out fear.

In looking forward to the future we may fairly hope with Ruskin that "the charities of more and more widely extended peace are preparing the way for a Christian Church which shall depend neither on ignorance for its continuance, nor on controversy for its progress, but shall reign at once in light and love."

CHAPTER XII.

THE HOPE OF PROGRESS

"To what then may we not look forward, when a spirit of scientific inquiry shall have spread through those vast regions in which the progress of civilization, its sure precursor, is actually commenced and in active progress? And what may we not expect from the exertions of powerful minds called into action under circumstances totally different from any which have yet existed in the world, and over an extent of territory far surpassing that which has hitherto produced the whole harvest of human intellect."—HERSCHEL.

There are two lines, if not more, in which we may look forward with hope to progress in the future. In the first place, increased knowledge of nature, of the properties of matter, and of the phenomena which surround us, may afford to our children advantages far greater even than those which we ourselves enjoy. Secondly, the extension and improvement of education, the increasing influence of Science and Art, of Poetry and Music, of Literature and Religion,—of all the powers which are tending to good, will, we may reasonably hope, raise man and make him more master of himself, more able to appreciate and enjoy his advantages, and to realize the truth of the Italian proverb, that wherever light is, there is joy.

One consideration which has greatly tended to retard progress has been the floating idea that there was some sort of ingratitude, and even impiety, in attempting to improve on what Divine Providence had arranged for us. Thus Prometheus was said to have incurred the wrath of Jove for bestowing on mortals the use of fire; and other improvements only escaped similar punishment when the ingenuity of priests attributed them to the special favor of some particular deity. This feeling has not even yet quite died out. Even I can remember the time when many excellent persons had a scruple or prejudice against the use of chloroform, because they fancied that pain was ordained under certain circumstances.

We are told that in early Saxon days Edwin, King of Northumbria, called his nobles and his priests around him, to discuss whether a certain missionary should be heard or not. The king was doubtful. At last there rose an old chief, and said:—"You know, O King, how, on a winter evening, when you are sitting at supper in your hall, with your company around you, when the night is dark and dreary, when the rain and the snow rage outside, when the hall inside is lighted and warm with a blazing fire, sometimes it happens that a sparrow flies into the bright hall out of the dark night, flies through the hall and then flies out at the other end into the dark night again. We see him for a few moments, but we know not whence he came nor whither he goes in the blackness of the storm outside. So is the life of man. It appears for a short space in the warmth and brightness of this life, but what came before this life, or what is to follow this life, we know not. If, therefore, these new teachers can enlighten us as to the darkness that went before, and the darkness that is to come after, let us hear what they have to teach us."

It is often said, however, that great and unexpected as recent discoveries have been, there are certain ultimate problems which must ever remain unsolved. For my part, I would prefer to abstain from laying down any such limitations. When Park asked the Arabs what became of the sun at night, and whether the sun was always the same, or new each day, they replied that such a question was foolish, being entirely beyond the reach of human investigation.

M. Comte, in his *Cours de Philosophie Positive* as recently as 1842, laid it down as an axiom regarding the heavenly bodies, "We may hope to determine their forms, distances, magnitude, and movements, but we shall never by any means be able to study their chemical composition or mineralogical structure." Yet within a few years this supposed impossibility has been actually accomplished, showing how unsafe it is to limit the possibilities of science.*

It is, indeed, as true now as in the time of Newton, that the great ocean of truth lies undiscovered before us. I often wish that some President of the Royal Society, or of the British

*Lubbock. *Fifty Years of Science.*

Association, would take for the theme of his annual address "The things we do not know." Who can say on the verge of what discoveries we are perhaps even now standing! It is extraordinary how slight a margin may stand for years between Man and some important improvement. Take the case of the electric light, for instance. It had been known for years that if a carbon rod be placed in an exhausted glass receiver, and a current of electricity be passed through it, the carbon glowed with an intense light, but on the other hand it became so hot that the glass burst. The light, therefore, was useless, because the lamp burst as soon as it was lighted. Edison hit on the idea that if you made the carbon filament fine enough, you would get rid of the heat and yet have abundance of light. Edison's right to this patent has been contested on this very ground. It has been said that the mere introduction of so small a difference as the replacement of a thin rod by a fine filament was so slight an item that it could not be patented. The improvements by Swan, Lane, Fox, and others, though so important as a whole, have been made step by step.

Or take again the discovery of anæsthetics. At the beginning of the century Sir Humphrey discovered laughing gas, as it was then called. He found that it produced complete insensibility to pain and yet did not injure health. A tooth was actually taken out under its influence, and of course without suffering. These facts were known to our chemists, they were expained to the students in our great hospitals, and yet for half a century the obvious application occured to no one. Operations continued to be performed as before, patients suffered the same horrible tortures, and yet the beneficent element was in our hands, its divine properties were known, but it never occured to any one to make use of it.

I may give one more illustration. Printing is generally said to have been discovered in the fifteenth century; and so it was for all practical purposes. But in fact printing was known long before. The Romans used stamps; on the monuments of the Assyrian kings the name of the reigning monarch may be found duly printed. What then is the difference? One little, but all-important step. The real inventor of printing was the man into whose mind flashed the fruitful idea of having separate stamps for each letter, instead of for separate words. How slight seems the difference, and yet for 3000 years the thought occurred to no one. Who can tell what other discoveries, as simple and yet as far-reaching, lie at this very moment under our very eyes!

Archimedes said that if you would give him room to stand on, he would move the earth, One truth leads to another; each discovery renders possible another, and, what is more, a higher.

We are but beginning to realize the marvellous range and complexity of Nature, I have elsewhere called attention to this with special reference to the problematical organs of sense possessed by many animals.*

There is every reason to hope that future studies will throw much light on these interesting structures. We may, no doubt, expect much from the improvement in our microscopes, the use of new re-agents, and of mechanical appliances; but the ultimate atoms of which matter is composed are so infinitesimally minute, that it is difficult to forseee any manner in which we may hope for a final solution of these problems.

Loschmidt, who has since been confirmed by Stony and Sir W. Thomson, calculates that each of the ultimate atoms of matter is at most $\frac{1}{50,000,000}$ of an inch in diameter. Under these circumstances we can

*The Senses of Animals

not, it would seem, hope at present for any great increase of our knowledge of atoms by improvements in the microscope. With our present instruments we can perceive lines ruled on glass which are $\frac{1}{90,000}$ of an inch apart; but owing to the properties of light itself, it would appear that we cannot hope to be able to perceive objects which are much less than $\frac{1}{100,000}$ of an inch in diameter. Our microscopes may, no doubt, be improved, but the limitation lies not in the imperfection of our optical appliances, but in the nature of light itself.

It has been calculated that a particle of albumen $\frac{1}{80,000}$ of an inch in diameter contains no less than 125,000,000 of molecules. In a simpler compound the number would be much greater; in water, for instance, no less than 8,000,000,000. Even then, if we could construct microscopes far more powerful than any which we now possess, they could not enable us to obtain by direct vision any idea of the ultimate organization of matter. The smallest sphere of organic matter which could be clearly defined with our most powerful microscopes may be, in reality, very complex; may be built up of many millions of molecules, and it follows that there may be an almost infinite number of structural characters in organic tissues which we can at present foresee no mode of examining.*

Again, it has been shown that animals hear sounds which are beyond the range of our hearing, and I have proved they can perceive the ultra-violet rays, which are visible to our eyes.†

Now, as every ray of homogeneous light which we can perceive at all, appears to us as a distinct color, it becomes probable that these ultra-violet rays must make themselves apparent to animals as a distinct and separate color (of which we can form no idea), but as different from the rest as red is from yellow, or green from violet. The question also arises whether white light to these creatures would differ from our white light in containing this additional color.

These considerations cannot but raise the reflection how different the world may—I was going to say must—appear to other animals from what it does to us. Sound is the sensation produced on us when the vibrations of the air strike on the drum of our ear. When they are few, the sound is deep; as they increase in number, it becomes shriller and shriller; but when they reach 40,000 in a second, they cease to be audible. Light is the effect produced on us when waves of light strike on the eye. When 400 millions of millions of vibrations of ether strike the retina in a second, they produce red, and as the number increases the color passes into orange, then yellow, green, blue, and violet. But between 40,000 vibrations in a second and 400 millions of millions we have no organ of sense capable of receiving the impression. Yet between these limits any number of sensations may exist. We have five senses, and sometimes fancy that no others are possible. But it is obvious that we cannot measure the infinite by our own narrow limitations.

Moreover, looking at the question from the other side, we find in animals complex organs of sense, richly supplied with nerves, but the function of which we are as yet powerless to explain. There may be fifty other senses as different from ours as sound is from sight; and even within the boundaries of our own senses there may be endless sounds which we cannot hear, and colors, as different as red from green, of which we have no conception. These and a thousand other questions remain for solution. The familiar world which surrounds us may be

* Lubbock. *Fifty Years of Science.*
† *Ants, Bees, and Wasps.*

a totally different place to other animals. To them it may be full of music which we cannot hear, of color which we cannot see, of sensations which we cannot conceive. To place stuffed birds and beasts in glass cases, to arrange insects in cabinets, and dried plants in drawers, is merely the drudgery and preliminary of study; to watch their habits, to understand their relations to one another, to study their instincts and intelligence, to ascertain their adaptations and their relations to the forces of Nature, to realize what the world appears to them; these constitute, as it seems to me at least, the true interest of natural history, and may even give us the clue to senses and perceptions of which at present we have no conception.*

From this point of view the possibilities of progress seem to me to be almost unlimited.

So far again as the actual condition of man is concerned, the fact that there has been some advance cannot, I think, be questioned.

In the Middle Ages, for instance, culture and refinement scarcely existed beyond the limits of courts, and by no means always there. The life in English, French, and German castles was rough and almost barbarous. Mr. Galton has expressed the opinion, which I am not prepared to question, that the population of Athens, taken as a whole, was as superior to us as we are to Australian savages. But even if that be so, our civilization, such as it is, is more diffused, so that unquestionably the general European level is much higher.

Much, no doubt, is owing to the greater facility of access to the literature of our country, to that literature, in the words of Macauley; "the brightest, the purest, the most durable of all the glories of our country; to that Literature, so rich in precious truth and precious fiction; to that Literature which boasts of the prince of all poets, and of the prince of all philosophers; to that Literature which has exercised an influence wider than that of our commerce, and mightier than that of our arms."

Few of us make the most of our minds. The body ceases to grow in a few years; but the mind, if we will let it, may grow as long as life lasts.

The onward progress of the future will not, we may be sure, be confined to mere material discoveries. We feel that we are on the road to higher mental powers; that problems which now seem to us beyond the range of human thought will receive their solution, and open the way to still further advance. Progress, moreover, we may hope, will be not merely material, not merely mental, but moral also.

It is natural that we should feel a pride in the beauty of England, in the size of our cities, the magnitude of our commerce, the wealth of our country, the vastness of our Empire. But the true glory of a nation does not consist in the extent of its dominion, in the fertility of the soil, or the beauty of Nature, but rather in the moral and intellectual preëminence of the people.

And yet how few of us, rich or poor, have made ourselves all we might be. If he does his best, as Shakespeare says, "What a piece of work is man! How noble in reason! How infinite in faculty! in form and movement, how express and admirable!" Few indeed, as yet, can be said to reach this high ideal.

The Hindoos have a theory that after death animals live again in a different form; those that have done well in a higher, those that have done ill in a lower grade. To realize this is, they find, a powerful incentive to a virtuous life. But whether it be true of a future life or not, it is certainly true of our present existence. If we do our best for a day, the next

* Lubbock. *The Senses of Animals.*

morning we shall rise to a higher life; while if we give way to our passions and temptations, we take with equal certainty a step downwards towards a lower nature.

It is an interesting illustration of the Unity of Man, and an encouragement to those of us who have no claims to genius, that, though of course there have been exceptions, still on the whole, periods of progress have generally been those when a nation has worked and felt together; the advance has been due not entirely to the efforts of a few great men, but also of a thousand little men; not to a single genius, but to a national effort.

Think, indeed, what might be.

> "Ah! when shall all men's good
> Be each man's rule, and universal Peace
> Lie like a shaft of light across the land,
> And like a lane of beams athwart the sea,
> Thro' all the circle of the golden year."*

Our life is surrounded with mystery, our very world is a speck in boundless space; and not only the period of our own individual life, but that of the whole human race is, as it were, but a moment in the eternity of time. We cannot imagine any origin, nor foresee the conclusion.

But though we may not as yet perceive any line of research which can give us a clue to the solution, in another sense we may hold that every addition to our knowledge is one small step towards the great revelation.

Progress may be more slow, or more rapid. It may come to others and not to us. It will not come to us if we do not strive to deserve it. But come it surely will.

> "Yet one thing is there that ye shall not slay,
> Even thought, that fire nor iron can affright."†

The future of man is full of hope, and we can foresee the limits of his destiny.

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*Tennyson.
†Swinburne

CHAPTER XIII.

THE DESTINY OF MAN.

> "For I reckon that the sufferings of this present time are not worthy to be compared with the glory which shall be revealed in us"—ROMANS viii. 18.

BUT though we have thus a sure and certain hope of progress for the race, still, as far as man is individually concerned, with advancing years we gradually care less and less for many things which gave us the greatest pleasure in youth. On the other hand, if our time has been well used, if we have warmed both hands wisely "before the fire of life," we may gain even more than we lose. If our strength becomes less, we feel also the less necessity for exertion. Hope is gradually replaced by memory: and whether this adds to our happiness or not depends on what our life has been.

There are of course some lives which diminish in value as old age advances, in which one pleasure fades after another, and even those which remain gradually lose their zest; but there are others which gain in richness and peace all, and more, than that of which time robs them.

The pleasures of youth may excel in keenness and in zest, but they have at the best a tinge of anxiety and unrest; they cannot have the fullness and depth which may accompany the consolations of age, and are amongst the richest rewards of an unselfish life.

For as with the close of the day, so with that of life; there may be clouds, and yet if the horizon is clear, the evening may be beautiful.

Old age has a rich store of memories. Life is full of

> "Joys too exquisite to last,
> And yet more exquisite when past."*

Swedenborg imagines that in heaven the angels are advancing continually to the spring-time of their youth, so that those who have lived longest are really the youngest; and have

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* Montgomery.

we not all had friends who seem to fulfil this idea? who are in reality—that is in mind—as fresh as a child: of whom it may be said with more truth than of Cleopatra that

"Age cannot wither nor custom stale
Their infinite variety."

"When I consider old age," says Cicero, "I find four causes why it is thought miserable: one, that it calls us away from the transaction of affairs; the second, that it renders the body more feeble, the third that it deprives us of almost all pleasures: the fourth, that it is not very far from death. Of these causes let us see, if you please, how great and how reasonable each of them is."

To be released from the absorbing affairs of life, to feel that one has earned a claim to leisure and repose, is surely in itself no evil.

To the second complaint against old age, I have already referred in speaking of Health.

The third is that it has no passions. "O noble privilege of age! if indeed it takes from us that which is in youth our greatest defect." But the higher feelings of our nature are not necessarily weakened; or rather, they may become all the brighter, being purified from the grosser elements of our lower nature.

Then, indeed, it might be said that "Man is the sun of the world; more than the real sun. The fire of his wonderful heart is the only light and heat worth gauge or measure." *

"Single," says Manu, "is each man born into the world; single he dies; single he receives the reward of his good deeds; and single the punishment of his sins. When he dies his body lies like a fallen tree upon the earth, but his virtue accompanies his soul. Wherefore let Man harvest and garner virtue, that so he may have an inseparable companion in that gloom which all must pass through, and which it is so hard to traverse."

Is it not extraordinary that many men will deliberately take a road which they know is, to say the least, not that of happiness. That they prefer to make others miserable, rather than themselves happy.

Plato, in the Phædrus, explains this by describing Man as a Composite Being, having three natures, and compares him to a pair of winged horses and a charioteer. "Of the two horses one is noble and of noble origin, the other ignoble and of ignoble origin; and the driving, as might be expected, is no easy matter." The noble steed endeavors to raise the chariot, but the ignoble one struggles to drag it down.

"Man," says Shelley, "is an instrument over which a series of external and internal impressions are driven, like the alternations of an ever-changing wind over an Æolian lyre, which move it by their motion to ever-changing melody."

Cicero mentions the approach of death as the fourth drawback of old age. To many minds the shadow of the end is ever present, like the coffin in the Egyptian feast, and overclouds all the sunshine of life.

But ought we so to regard death? Shelley's beautiful lines,

"Life, like a Dome of many-colored glass,
Stains the white radiance of Eternity,
Until death tramples it to fragments,"

contain, as it seems to me at least, a double error. Life need not stain the white radiance of eternity; nor does death necessarily trample it to fragments.

Man has, says Coleridge,

"Three treasures,—love and light
And calm thoughts, regular as infants' breath;
And three firm friends, more sure than day and night,
Himself, his Maker, and the Angel Death."

Death is "the end of all, the remedy of many, the wish of divers men, deserving better of no men than of those to whom she came before she was called."*

It is often assumed that the journey to

"The undiscovered country from whose bourne
No traveller returns"

*Emerson.

*Seneca.

must be one of pain and suffering. But this is not so. Death is often peaceful and almost painless.

Bede during his last illness was translating St. John's Gospel into Anglo-Saxon, and the morning of his death his secretary, observing his weakness, said, "There remains now only one chapter, and it seems difficult to you to speak." "It is easy," said Bede; "take your pen and write as fast as you can." At the close of the chapter the scribe said, "It is finished," to which he replied, "Thou hast said the truth, *consummatum est.*" He then divided his little property among the brethren, having done which he asked to be placed opposite to the place where he usually prayed, said "Glory be to the Father, and to the Son, and to the Holy Ghost," and as he pronounced the last word he expired.

Goethe died without any apparent suffering, having just prepared himself to write, and expressed his delight at the return of spring.

We are told of Mozart's death that "the unfinished requiem lay upon the bed, and his last efforts were to imitate some peculiar instrumental effects, as he breathed out his life in the arms of his wife and their friend Süssmaier."

Plato died in the act of writing; Lucan while reciting part of his book on the war of Pharsalus; Blake died singing; Wagner in sleep with his head on his wife's shoulder. Many have passed away in their sleep. Various high medical authorities have expressed their surprise that the dying seldom feel either dismay or regret. And even those who perish by violence, as for instance in battle, feel, it is probable, but little suffering.

But what of the future? There may be said to be now two principal views. There are some who believe indeed in the immortality of the soul, but not of the individual soul; that our life is continued in that of our children would seem indeed to be the natural deduction from the simile of St. Paul, as that of the grain of wheat is carried on in the plant of the following year.

So long indeed as happiness exists it is selfish to dwell too much on our own share in it. Admit that the soul is immortal, but that in the future state of existance there is a break in the continuity of memory, that one does not remember the present life, and from this point of view is not the importance of identity involved in that of continuous memory? But however this may be according to the general view, the soul, though detached from the body, will retain its conscious identity, and will awake from death, as it does from sleep; so that if we cannot ffirm that

"Millions of spiritual creatures walk the Earth,
Unseen, both when we wake, and when we sleep."*

at any rate they exist somewhere else in space, and we are indeed looking at them when we gaze at the stars, though to our eyes they are as yet invisible.

In neither case, however, can death be regarded as an evil. To wish that youth and strength were unaffected by time might be a different matter.

"But if we are not destined to be immortal, yet it is a desirable thing for a man to expire at his fit time. For, as nature prescribes a boundary to all other things, so does she also to life. Now old age is the consummation of life, just as of a play: from the fatigue of which we ought to escape, especially when satiety is superadded."†

From this point of view, then, we need

"Weep not for death,
'Tis but a fever stilled,
A pain suppressed,— a fear at rest,
A solemn hope fulfilled.
The moonshine on the slumbering deep
Is scarcely calmer. Wherefore weep?

* Milton.

† Cicero.

"Weep not for death;
The fount of tears is sealed,
Who knows how bright the inward light
To those closed eyes revealed?
Who knows what holy love may fill
The heart that seems so cold and still."

Many a weary soul will have recurred with comfort to the thought that

"A few more years shall roll,
A few more seasons come,
And we shall be with those that rest
Asleep within the tomb.

"A few more struggles here,
A few more partings o'er,
A few more toils, a few more tears,
And we shall weep no more."

By no one has this, however, been more grandly expressed than by Shelley.

"Peace, peace! he is not dead, he doth not sleep!
He hath awakened from the dream of life.
'Tis we who, lost in stormy visions, keep
With phantoms an unprofitable strife,
He has outsoared the shadows of our night.
Envy and calumny, and hate and pain,
And that unrest which men miscall delight,
Can touch him not and torture not again.
From the contagion of the world's slow stain
He is secure, and now can never mourn
A heart grown cold, a head grown gray, in vain—"

Most men, however, decline to believe that

"We are such stuff
As dreams are made of, and our little life
Is rounded with a sleep." *

According to the more general view death frees the soul from the encumbrance of the spirit, and summons us to the seat of judgment. In fact,

"There is no Death! What seems so is transition;
This life of mortal breath
Is but a suburb of the life elysian,
Whose portal we call Death." †

We have bodies, "we are spirits." "I am a soul," said Epictetus, "dragging about a corpse." The body is the mere perishable form of the immortal essence. Plato concluded that if the ways of God are to be justified, there must be a future life.

To the aged in either case death is a release. The Bible dwells most forcibly on the blessing of peace. "My peace I give unto you: not as the world giveth, give I unto you." Heaven is described as a place where the wicked cease from troubling, and the weary are at rest.

But I suppose every one must have asked himself in what can the pleasures of heaven consist.

"For all we know
Of what the blessed do above
Is that they sing, and that they love." *

It would indeed accord with few men's ideal that there should be any "struggle for existence" in heaven. We should then be little better off than we are now. This world is very beautiful, if we could only enjoy it in peace. And yet mere passive existence — mere vegetation — would in itself offer few attractions. It would indeed be almost intolerable.

Again, the anxiety of change seems inconsistent with perfect happiness; and yet a wearisome, interminable monotony, the same thing over and over again for ever and ever without relief or variety, suggests dulness rather than bliss.

I feel that to me, said Greg, "God has promised not the heaven of the ascetic temper, or the dogmatic theologian, or of the subtle mystic, or of the stern martyr ready alike to inflict and bear; but a heaven of purified and permanent affections — of a book of knowledge with eternal leaves, and unbounded capacities to read it — of those we love ever round us, never misconceiving us, or being harassed by us — of glorious work to do, and adequate faculties to do it — a world of solved problems, as well as of realized ideals."

"For still the doubt came back,—Can God provide
For the large heart of man what shall not pall,
Nor through eternal ages' endless tide
On tired spirit fall?

"These make him say,—If God has so arrayed
A fading world that quickly passes by,
Such rich provision of delight has made
For every human eye,

What shall the eyes that wait for him survey
When his own presence gloriously appears,
In worlds that were not founded for a day,
But for eternal years?" †

Here Science seems to suggest a possible answer: the solution of problems which have puzzled us here; the acquisition of new ideas; the unrolling the history of the past; the world of animals and plants; the

* Shakespeare.
† Longfellow.

* Waller.
† Trench.

secrets of space; the wonders of the stars and of the regions beyond the stars. To become acquainted with all the beautiful and interesting spots of our own world would indeed be something to look forward to, and our world is but one of many millions. I sometimes wonder as I look away to the stars at night whether it will ever be my privilege as a disembodied spirit to visit and explore them. When we had made the great tour fresh interests would have arisen, and we might well begin again.

Here there is an infinity of interest without anxiety. So that at last the only doubt may be.

"Lest an eternity should not suffice
To take the measure and the breadth and height
Of what there is reserved in Paradise
Its ever-new delight." *

Cicero surely did not exaggerate when he said, "O glorious day! when I shall depart to that divine company and assemblage of spirits, and quit this troubled and polluted scene. For I shall go not only to those great men of whom I have spoken before, but also to my son Cato, than whom never was better man born, nor more distinguished for pious affection; whose body was burned by me, whereas, on the contrary, it was fitting that mine should be burned by him. But his soul not deserting me, but oft looking back, no doubt departed to these regions whither it saw that I myself was destined to come. Which, though a distress to me, I seemed patiently to endure: not that I bore it with indifference, but I comforted myself with the recollection that the separation and distance between us would not continue long. For these reasons, O Scipio (since you said that you with Lælius were accustomed to wonder at this), old age is tolerable to me, and not only not irksome, but even delightful. And if I am wrong in this, that I believe the souls of men to be immortal, I willingly delude myself: nor do I desire that this mistake, in which I take pleasure, should be wrested from me as long as I live; but if I, when dead, shall have no consciousness, as some narrow-minded philosophers imagine, I do not fear lest dead philosophers should ridicule this my delusion."

Nor can I omit the striking passage in the *Apology*, when pleading before the people of Athens, Socrates says, "Let us reflect in another way, and we shall see that there is great reason to hope that death is a good; for one of two things—either death is a state of nothingness and utter unconsciousness, or, as men say, there is a change and migration of the soul from this world to another. Now if you suppose that there is no consciousness, but a sleep like the sleep of him who is undisturbed even by the sight of dreams, death will be an unspeakable gain. For if a person were to select the night in which his sleep was undisturbed even by dreams, and were to compare with this the other days and nights of his life, and then were to tell us how many days and nights he had passed in the course of his life better and more pleasantly than this one, I think that any man, I will not say a private man, but even the great king will not find many such days or nights, when compared with the others. Now, if death is like this, I say that to die is gain; for eternity is then only a single night. But if death is the journey to another place, and there, as men say, all the dead are, what good, O my friends and judges, can be greater than this?

"If, indeed, when the pilgrim arrives in the world below, he is delivered from the professors of justice in this world, and finds the true judges, who are said to give judgment there,—Minos, and Rhadamanthus, and Æacus, and Triptolemus, and other sons of God who were righteous in their own life,—that pilgrimage will be worth mak-

* Trench.

ing. What would not a man give if he might converse with Orpheus, and Musæus, and Hesoid, and Homer? Nay, if this be true, let me die again and again. I myself, too, shall have a wonderful interest in there meeting and conversing with Palamedes, and Ajax the son of Telamon, and other heroes of old, who have suffered death through an unjust judgment; and there will be no small pleasure, as I think, in comparing my own sufferings with theirs. Above all, I shall then be able to continue my search into true and false knowledge; as in this world, so also in that; and I shall find out who is wise, and who pretends to be wise, and is not. What would not a man give, O judges, to be able to examine the leader of the great Trojan expedition; or Odysseus or Sisyphus, or numberless others, men and women too! What infinite delight would there be in conversing with them and asking them questions. In another world they do not put a man to death for asking questions; assuredly not. For besides being happier in that world than in this, they will be immortal, if what is said be true.

"Wherefore, O judges, be of good cheer about death, and know of a certainty that no evil can happen to a good man, either in life or after death. He and his are not neglected by the gods; nor has my own approaching end happened by mere chance. But I see clearly that to die and be released was better for me; and therefore the oracle gave no sign. For which reason, also, I am not angry with my condemners, or with my accusers; they have done me no harm, although they did not mean to do me any good; and for this I may gently blame them. The hour of departure has arrived, and we go our ways — I to die and you to live. Which is better God only knows."

In the *Wisdom of Solomon* we are promised that—

"The souls of the righteous are in the hand of God, and there shall no torment touch them.

"In the sight of the unwise they seemed to die; and their departure is taken for misery.

"And their going from us to be utter destruction: but they are in peace.

"For though they be punished in the sight of men, yet is their hope full of immortality.

"And having been a little chastised, they shall be greatly rewarded: for God proved them, and found them worthy for himself."

And assuredly, if in the hour of death the conscience is at peace, the mind need not be troubled. The future is full of doubt, indeed, but fuller still of hope.

If we are entering upon a rest after the struggles of life,

> "Where the wicked cease from troubling,
> And the weary are at rest,"

that to many a weary soul will be a welcome borne, and even then we may say,

> "O Death! where is thy sting?
> O Grave! where is thy victory?"

On the other hand, if we are entering on a new sphere of existence, where we may look forward to meet not only those of whom we have heard so often, those whose works we have read and admired, and to whom we owe so much, but those also whom we have loved and lost; when we shall leave behind us the bonds of the flesh and the limitations of our earthly existence; when we shall join the Angels, and Archangels, and all the company of Heaven,— then, indeed, we may cherish a sure and certain hope that the interests and pleasures of this world are as nothing compared to those of the life that awaits us in our Eternal Home.

THE END.

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CHARLES DARWIN

I. INTRODUCTORY NOTICE.

BY PROF. T. H. HUXLEY, F.R.S.

Very few, even among those who have taken the keenest interest in the progress of the revolution in natural knowledge set afoot by the publication of the *Origin of Species*, and who have watched, not without astonishment, the rapid and complete change which has been effected both inside and outside the boundaries of the scientific world in the attitude of men's minds toward the doctrines which are expounded in that great work, can have been prepared for the extraordinary manifestation of affectionate regard for the man, and of profound reverence for the philosopher, which followed the announcement of the death of Mr. DARWIN.

Not only in these islands, where so many have felt the fascination of personal contact with an intellect which had no superior, and with a character which was even nobler than the intellect; but, in all parts of the civilized world, it would seem that those whose business it is to feel the pulse of nations and to know what interests the masses of mankind, were well aware that thousands of their readers would think the world the poorer for DARWIN's death, and would dwell with eager interest upon every incident of his history. In France, in Germany, in Austro-Hungary, in Italy, in the United States, writers of all shades of opinion, for once unanimous, have paid a willing tribute to the worth of our great countryman, ignored in life by the official representatives of the kingdom, but laid in

death among his peers in Westminster Abbey by the will of the intelligence of the nation.

It is not for us to allude to the sacred sorrows of the bereaved home at Down; but it is no secret that, outside that domestic group, there are many to whom Mr. DARWIN's death is a wholly irreparable loss. And this not merely because of his wonderfully genial, simple, and generous nature; his cheerful and animated conversation, and the infinite variety and accuracy of his information; but because the more one knew of him, the more he seemed the incorporated ideal of a man of science. Acute as were his reasoning powers, vast as was his knowledge, marvelous as was his tenacious industry, under physical difficulties which would have converted nine men out of ten into aimless invalids; it was not these qualities, great as they were, which impressed those who were admitted to his intimacy with involuntary veneration, but a certain intense and almost passionate honesty by which all his thoughts and actions were irradiated, as by a central fire.

It was this rarest and greatest of endowments which kept his vivid imagination and great speculative powers within due bounds; which compelled him to undertake the prodigious labors of original investigation and of reading, upon which his published works are based; which made him accept criticisms and suggestions from any body and every body, not only without impatience, but with expressions of gratitude sometimes almost comically in excess of their value; which led him to allow neither himself nor others to be deceived by phrases, and to spare neither time nor pains in order to obtain clear and distinct ideas upon every topic with which he occupied himself.

One could not converse with DARWIN without being reminded of SOCRATES. There was the same desire to find some one wiser than himself; the same belief in the sovereignty of reason; the same ready humor; the same sympathetic interest in all the ways and works of men But instead of turning away from the problems of nature as hopelessly insoluble, our modern Philosopher devoted his whole life to attacking them in the spirit of HERACLITUS and of DEMOCRITUS, with results which are as the substance of which their speculation were anticipatory shadows.

The due appreciation or even enumeration of these results is neither practicable nor desirable at this moment. There is a time for all things —a time for glorying in our ever-extending conquests over the realm of nature, and a time for mourning over the heroes who have led us to victory.

None have fought better, and none have been more fortunate, than CHARLES DARWIN. He found a great truth trodden under foot, reviled by bigots, and ridiculed by all the world; he lived long enough to see it, chiefly by his own efforts, irrefragably established in science, inseparably incorporated with the common thoughts of men, and only hated and feared by those who would revile, but dare not. What shall a man more desire than this? Once more the image of SOCRATES rises unbidden, and the noble peroration of the *Apology* rings in our ears as if it were CHARLES DARWIN's farewell:

"The hour of departure has arrived, and we go our ways—I to die, and you to live. Which is the better, God only knows."

II. CHARACTER AND LIFE.

BY G. J. ROMANES, F.R.S.

The object of this notice is to give a brief account of the life, and a proportionately still more brief account of the work of Mr. DARWIN. But while we recognize in him perhaps the greatest genius and the most fertile thinker, certainly the most important generalizer and one of the few most

successful observers in the whole history of biological science, we feel that no less great, or even greater than the wonderful intellect was the character of the man. Therefore it is in his case particularly and pre-eminently true that the first duty of biographers will be to render some idea, not of what he did, but of what he was. And this, unfortunately, is just the point where all his biographers must necessarily fail. For while to those favored few who were on terms of intimate friendship with him, any language by which it is sought to portray his character must seem inadequate, to every one else the same language must appear the result of enthusiastic admiration, finding vent in extravagant panegyric. Whatever is great and whatever is beautiful in human nature found in him so luxuriant a development, that no place or chance was left for any other growth, and in the result we beheld a magnificence which, unless actually realized, we should scarcely have been able to imagine. Any attempt, therefore, to describe such a character must be much like an attempt to describe a splendid piece of natural scenery or a marvelous work of art; the thing must itself have been seen, if any description of it is to be understood.

But without attempting to describe Mr. DARWIN's character, if we were asked to indicate the features which stood out with most marked prominence, we should first mention those which, from being conspicuous in his writings, are already more or less known to all the world. Thus, the absorbing desire to seek out truth for truth's sake, combined with a characteristic disregard of self, led not only to the caution, patience, and candor of his own work—which are proverbial—and to the generous satisfaction which he felt on finding any of his thoughts or results independently attained by the work of others; but also to a keen and vivid freshness of interest in every detail of a new research, such as we have sometimes seen approached by much younger men when the research happens to have been their own. And indeed what we may call this fervid youthfulness of feeling extended through all Mr. DARWIN's mind, giving, in combination with his immense knowledge and massive sagacity, an indescribable charm to his manner and conversation. Animated and fond of humor, his wit was of a singularly fascinating kind, not only because it was always brilliant and amusing, but still more because it was always hearty and good-natured. Indeed, he was so exquisitely refined in his own feelings, and so almost painfully sensitive to any display of questionable taste in others, that he could not help showing in his humor, as in the warp and woof of his whole nature, that in him the man of science and the philosopher were subordinate to the gentleman. His courteous consideration of others, also, which went far beyond anything that the ordinary usages of society require, was similarly prompted by his mere spontaneous instinct of benevolence.

For who can always act? but he,
  To whom a thousand memories call
  Not being less but more than all
The gentleness he seemed to be,

Best seem'd the thing he was, and join'd
  Each office of the social hour
  To noble manners, as the flower
And native growth of noble mind;

Nor ever narrowness or spite,
  Or villain fancy fleeting by,
  Drew in the expression of an eye,
Where God and nature met in light.

And this leads us to speak of his kindness, which, whether we look to its depth or to its width, must certainly be regarded as perhaps the most remarkable feature of his remarkable disposition. The genuine delight that he took in helping every one in their work—often at the cost of much personal trouble to himself—in throwing out numberless suggestions for others to profit by, and in kindling the enthusiasm of the humblest tyro in science; this was the outcome of a great and generous heart, quite as

much as it was due to a desire for the advancement of science. Nothing seemed to give him a keener joy than being able to write to any of his friends a warm and glowing congratulation upon their gaining some success; and the exuberance of his feelings on such occassions generally led him to conceive a much higher estimate of the importance of the results attained than he would have held had the success been achieved by himself. For the modesty with which he regarded his own work was no less remarkable than his readiness enthusiastically to admire the work of others; so that, to any one who did not know him well, this extreme modesty, from its very completeness and unconsciousness, might almost have appeared the result of affectation. At least, speaking for ourselves, when we first met him, and happened to see him conversing with a greatly younger man, quite unknown either in science or literature, we thought it must have been impossible that Mr. DARWIN—then the law giver to the world of biology—could with honest sincerity be submitting, in the way he did, his matured thought to the judgment of such a youth. But afterward we came fully to learn that no one was so unconscious of Mr. DARWIN's worth as Mr. DARWIN himself, and that it was a fixed habit of his mind to seek for opinions as well as facts from every available quarter. It must be added, however, that his tendency to go beyond the Scriptural injunction in the matter of self-approval, and to think of *others* more highly than he ought to think, never clouded his final judgment upon the value of their opinions; but spontaneously following another of these injunctions, while proving all things, he held fast only to that which was good. "In malice be ye children, but in understanding be ye men."

On the whole, then, we should say that Mr. DARWIN's character was chiefly marked by a certain grand and cheerful simplicity, strangely and beautifully united with a deep and thoughtful wisdom, which, together with his illimitable kindness to others and complete forgetfulness of himself, made a combination as lovable as it was venerable. It is, therefore, not to be wondered at that no man ever passed away leaving behind him a greater void of enmity, or a depth of adoring friendship more profound.

But, as we have said, it is impossible to convey in words any adequate conception of a character which in beauty as in grandeur can only, with all sobriety, be called sublime. If the generations are ever to learn, with any approach to accuracy, what Mr. DARWIN was, his biographers may best teach them by allowing this most extraordinary man to speak for himself through the medium of his correspondence, as well as through that of his books; and therefore, as a small foretaste of the complete biography which will some day appear, we shall quote a letter in which he describes the character of his great friend and teacher, the late Prof. HENSLOW, of Cambridge. We choose this letter to quote from on account of the singular manner in which the writer, while describing the character of another, is unconsciously giving a most accurate description of his own. It is of importance also that in any biographical history of Mr. DARWIN, Professor HENSLOW's character should be duly considered, seeing that he exerted so great an influence upon the expanding powers of Mr. DARWIN's mind. We quote the letter from the Rev. L. JENYNS's *Memoir of the late Prof. Henslow.*

"I went to Cambridge early in the year 1828, and soon became acquainted, through some of my brother entomologists, with Prof. HENSLOW, for all who cared for any branch of natural history were equally encouraged by him. Nothing could be more simple, cordial, and unpretending than the encouragement which he afforded to all young naturalists. I soon became intimate with him, for he had a remarkable power of mak-

ing the young feel completely at ease with him, though we were all awe-struck with the amount of his knowledge. Before I saw him, I heard one young man sum up his attainments by simply saying that he knew everything. When I reflect how immediately we felt at perfect ease with a man older, and in every way so immensely our superior, I think it was as much owing to the transparent sincerity of his character as to his kindness of heart, and perhaps even still more to a highly remarkable absence in him of all self-consciousness. We perceived at once that he never thought of his own varied knowledge or clear intellect, but solely on the subject in hand. Another charm, which must have struck every one, was that his manner to a distinguished person and to the youngest student was exactly the same: to all, the same winning courtesy. He would receive with interest the most trifling observation in any branch of natural history, and however absurd a blunder one might make, he pointed it out so clearly and kindly that one left him in no way disheartened, but only determined to be more accurate the next time. So that no man could be better formed to win the entire confidence of the young and to encourage them in their pursuits. . .

"During the years when I associated so much with Prof. HENSLOW, I never once saw his temper even ruffled. He never took an ill natured view of any one's character, though very far from blind to the foibles of others. It always struck me that his mind could not be well touched by any paltry feeling of envy, vanity, or jealousy. With all this equability of temper, and remarkable benevolence, there was no insipidity of character. A man must have been blind not to have perceived that beneath this placid exterior there was a vigorous and determined will. When principle came into play, no power on earth could have turned him an hair's breadth. . . .

"In intellect, as far as I could judge, accurate powers of observation, sound sense, and cautious judgment seemed to predominate. Nothing seemed to give him so much enjoyment as drawing conclusions from minute observations. But his admirable memoir on the geology of Anglesea shows his capacity for extended observations and broad views. Reflecting over his character with gratitude and reverence, his moral attributes rise, as they should do in the highest characters, in pre-eminence, over his intellect."

CHARLES ROBERT DARWIN was born at Shrewsbury on February 12, 1809. His father was Dr. R. W. DARWIN, F.R.S., a physician of eminence, who, as his son used frequently to remark, had a wonderful power of diagnosing diseases, both bodily and mental, by the aid of the fewest possible questions; and his quickness of perception was such that he could even divine, in a remarkable manner, what was passing through his patients' minds. That, like his son, he was benevolently inclined, may be inferred from a little anecdote which we once heard Mr. DARWIN tell of him while speaking of the curious kinds of pride which are sometimes shown by the poor. For the benefit of the district in which he lived Dr. DARWIN offered to dispense medicines *gratis* to any one who applied and was not able to pay. He was surprised to find that very few of the sick poor availed themselves of his offer, and guessing that the reason must have been a dislike to becoming the recipients of charity, he devised a plan to neutralize this feeling. Whenever any poor persons applied for medical aid, he told them that he would supply the medicine, but that they must pay for the bottles. This little distinction made all the difference, and ever afterward the poor used to flock to the doctor's house for relief as a matter of right.

Mr. DARWIN's mother was a daughter of JOSIAH WEDGWOOD. Little is at present known concerning his early life, and it is questionable

whether we can hope to learn much with reference to his boyhood or youth, till the time when he entered at Edinburgh. We can, therefore, only say that he went to Shrewsbury School, the head master of which was at that time Dr. BUTLER, afterward Bishop of Lichfield. He was sent to Edinburgh (1825) because it was intended that he should follow his father's profession, and Edinburgh was then the best medical school in the kingdom. He studied under Prof. JAMESON, but does not seem to have profited at all by whatever instruction he received; for not only did it fail to awaken in him any special love of natural history, but even seems to have had the contrary effect.

The prospect of being a medical practitioner proving distasteful to him, he was, after two sessions at Edinburgh, removed to Christ's College, Cambridge, with the view of his entering the Church. He took his B.A. in 1831, and his M.A. in 1837. There being no Natural Sciences Tripos at that time, his degree was an ordinary one. While at Cambridge he attracted the notice of the late Rev. Prof. HENSLOW, who had just previously exchanged the Professorship of Mineralogy for that of Botany. From the above description of this man's character and attainments, it is sufficiently evident that he was a worthy teacher of a worthy pupil; and the world owes an immense debt of gratitude to him for having been the means of enthusiastically arousing and sagaciously directing the first love and the early study of natural science in the mind of DARWIN. No one can be more deeply moved by a sense of this gratitude than was Mr. DARWIN himself. His letters, written to Prof. HENSLOW during his voyage round the world, overflow with feelings of affection, veneration, and obligation to his accomplished master and dearest friend — feelings which throughout his life he retained with undiminished intensity. As he used himself to say, before he knew Prof. HENSLOW, the only objects of natural history for which he cared were foxes and partridges. But owing to the impulse which he derived from the field excursions of the HENSLOW class, he became while at Cambridge an ardent collector, especially in the region of entomology; and we remember having heard him observe that the first time he ever saw his own name in print was in connection with the capture of an insect in the fens.

During one of the excursions Prof. HENSLOW told him that he had been commissioned (through Prof. PEACOCK) to offer any competent young naturalist the opportunity of accompanying Captain FITZROY as a guest on the surveying voyage of the *Beagle*, and that he would strongly urge its acceptance on him. Mr. DARWIN had already formed desire to travel, having been stimulated thereto by reading HUMBOLDT'S *Personal Narrative;* so after a short hesitation on the part of his father, who feared that the voyage might "unsettle" him for the Church, the matter was soon decided, and in December of 1838 the expedition started. During the voyage he suffered greatly from sea-sickness, which, together with the fasting and fatigue incidental to long excursions over-land, was probably instrumental in producing the dyspepsia to which, during the remainder of his life, he was a victim. Three years after returning from this voyage of circumnavigation, he married, and in 1842 settled at Down, in Kent. The work which afterward emanated from that quiet and happy English home, which continued up to the day of his death, and which has been more effectual than any other in making the nineteenth century illustrious, will form the subject of our subsequent articles.

III. WORK IN GEOLOGY.

BY ARCHIBALD GEIKIE, F.R.S.

No man of his time has exercised upon the science of Geology a profounder influence than CHARLES DARWIN. At an early period of his life he took much interest in geological studies, and in later years, while engaged in other pursuits, he kept himself acquainted with the progress that was being made in this department of natural knowledge. His influence upon it has been twofold, arising partly from the importance and originality of some of his own contributions to the literature of the science, but chiefly from the bearing of his work on other branches of natural history.

When he began to direct his attention to geological inquiry the sway of the Cataclysmal school of geology was still paramount. But already the Uniformitarians were gathering strength, and, before many years were past, had ranged themselves under the banner of their great champion, LYELL. DARWIN, who always recognized his indebtedness to LYELL's teaching, gave a powerful impulse to its general reception by the way in which he gathered from all parts of the world facts in its support. He continually sought in the phenomena of the present time the explanation of those of the past. Yet he was all the while laying the foundation on which the later or Evolutional school of geology has been built up.

DARWIN's specially geological memoirs are not numerous, nor have they been of the same epoch-making kind as his biological researches. But every one of them bears the stamp of his marvelous acuteness in observation, his sagacity in grouping scattered facts, and his unrivalled far-reaching vision that commanded all their mutual bearings, as well as their place in the general economy of things. His long travels in the *Beagle* afforded him opportunities of making himself acquainted with geological phenomena of the most varied kinds. With the exception of one or two minor papers written in later years, it may be said that all his direct contributions to geology arose out of the *Beagle* voyage. The largest and most important part of his geological work deal with the hypogene forces of nature—those that are concerned in volcanoes and earthquakes, in the elevation of mountains and continents, in the subsidence of vast areas of the sea-bottom, and in the crumpling, foliation, and cleavage of the rocks of the earth's crust. His researches in these subjects were mainly embodied in the *Geology of the Voyage of the Beagle*—a work which, in three successive parts, was published under the auspices of the Lords of the Treasury.

The order chosen by DARWIN for the subjects of these three parts probably indicates the relative importance with which they were regarded by himself. The first was entitled *The Structure and Distribution of Coral Reefs* (1842). This well-known treatise, the most original of all its author's geological memoirs, has become one of the recognized classics of geological literature. The origin of those remarkable rings of coral-rock in mid-ocean had given rise to much speculation, but no satisfactory solution of the problem had been proposed. After visiting many of them, and examining also coral-reefs that fringe islands and continents, he offered a theory which for simplicity and grandeur strikes every reader with astonishment. It is pleasant after the lapse of many years to recall the delight with which one first read the *Coral Reefs*, how one watched the facts being marshalled into their places, nothing being ignored or passed lightly over, and how step by step one was led up to the grand conclusion of wide oceanic subsidence. No more admirable example of scientific method was ever given to the world, and even if he had written nothing else, this

treatise alone would have placed DARWIN in the very front of investigators of nature.

The second part was entitled *Geological Observations of the Volcanic Islands visited during the Voyage of H.M S. Beagle, together with some Brief Notices on the Geology of Australia and the Cape of Good Hope* (1844). Full of detailed observations, this work still remains the best authority on the general geological structure of most of the regions it describes. At the time it was written, the "Crater of Elevation theory," though opposed by CONSTANT, PREVOST, SCROPE, and LYELL, was generally accepted, at least on the Continent. DARWIN, however, could not receive it as a valid explanation of the facts, and though he did not adopt the views of its chief opponents, but ventured to propose a hypothesis of his own, the observations impartially made and described by him in this volume must be regarded as having contributed toward the final solution of the question.

The third and concluding part bore the title of *Geological Observations on South America* (1846). In this work the author embodied all the materials collected by him for the illustration of South American geology save some which had already been published elsewhere. One of the most important features of the book was the evidence which it brought forward to prove the slow, interrupted elevation of the South American Continent during a recent geological period. On the western sea-board he showed that beds of marine shells could be traced more or less continuously for a distance of upward of 2,000 miles, that the elevation had been unequal, reaching in some places at least to as much as 1,300 feet, that in one instance, at a hight of 85 feet above the sea, undoubted traces of the presence of man occurred in a raised beach, and hence that the land had there risen 85 feet since Indian man had inhabited Peru. These proofs of recent elevation may have influenced him in the conclusion which he drew as to the marine origin of the great elevated plains of Chili. But at that time there was a general tendency among British geologists to detect evidence of sea-action everywhere, and to ignore or minimize the action of running water and wind-drift upon the land. An important chapter of the volume, devoted to a discussion of the phenomena of cleavage and foliation, is well known to every student of the literature of metamorphism.

The official records of the *Beagle* did not, however, include all that DARWIN wrote on the geology of the voyage. He contributed to the *Transactions* of the Geological Society (vol. v. 1840) a paper on the connection of volcanic phenomena. In the same publication (vi. 1842) appears another, on the erratic boulders of South America; while a third, on the geology of the Falkland Islands, was published later.

While dealing with the subterranean agents in geological change, he kept at the same time an ever wachful eye upon the superficial operations by which the surface of the globe is modified. He is one of the earliest writers to recognize the magnitude of the denudation to which even recent geological accumulations have been subjected. One of the most impressive lessons to be learnt from his account of Volcanic Islands is the prodigious extent to which they have been denuded. As just stated, he was disposed to attribute more of this work to the action of the sea than most geologists would now admit; but he lived himself to modify his original views, and on this subject his latest utterances are quite abreast of the time. It is interesting to note that one of his early geological papers was on the Formation of Mould (1840), and that after the lapse of forty years he returned to this subject, devoting to it the last of his volumes. In the first sketch we see the patient observation and shrewdness of inference so

eminently characteristic of the writer, and in the finished work the same faculties enriched with the experience of a long and busy life. In bringing to light the operations of the earthworm, he called the attention of geologists to an agency, the real efficiency of which they probably do not yet appreciate. ELIE DE BEAUMONT looked upon the layer of grass-covered soil as a permanent datum-line from which the denudation of exposed surfaces might be measured. But, as DARWIN showed, the constant transference of soil from beneath to the surface, and the consequent exposure of the materials so transferred to be dried and blown away by wind, or to be washed to lower levels by rain, must tend slowly but certainly to lower the level even of undisturbed grass-covered land.

To another of his early papers reference may be made, from its interest in the history of British geology. BUCKLAND, following in the footsteps of AGASSIZ, had initiated that prodigious amount of literature which has now been devoted to the records of the Glacial period in this country, by reading to the Geological Society a paper "On Diluvio-glacial Phenomena in Snowdonia and in adjacent parts of North Wales" (1841). DARWIN, whose wanderings in South American had led him to study the problems presented by erratic blocks, took an early opportunity of visiting the Welsh district described by BUCKLAND, and at once declared himself to be a believer in the former presence of glaciers in Britain. His paper (1843) in which this belief is stated and enforced by additional observations, stands almost at the top of the long list of English contributions to the history of the Ice Age.

The influence exercised upon the progress of geology by DARWIN's researches in other than geological fields, is less easy to be appraised. Yet it has been far more widespread and profound than that of his direct geological work. Even as far back as the time of the voyage of the *Beagle*, he had been led to reflect deeply on some of LYELL's speculations upon the influence of geological changes on the geographical distribution of animals. From that time the intimate connection between geological history and biological progress seems to have been continually present in his mind. It was not, however, until the appearance of the *Origin of Species* in 1859 that the full import of his reflections was perceived. His chapter on the "Imperfection of the Geological Record" startled geologists as from a profound slumber. It would be incorrect to say that he was the first to recognize the incompleteness of the record; but certainly until the appearance of that famous chapter the general body of geologists was blissfully unconscious of the essentially fragmentary character of the geological record. DARWIN showed why this must necessarily be the case; how multitudes of organic types, both of the sea and of the land, must have decayed and never have been preserved in any geological deposit; how, even if entombed in such accumulations, they would in great measure be dissolved away by the subsequent percolation of water. Returning to some of his early speculations, he pointed out that massive geological deposits rich in fossils could only have been laid down during subsidence, and only where the supply of sediment was sufficient to let the sea remain shallow, and to entomb the organic remains on its floor before they had decayed. Hence, by the very conditions of its formation, the geological record, instead of being a continuous and tolerably complete chronicle, must be intermittent and fragmentary. The sudden appearance of whole groups of allied species of fossils on certain horizons had been assumed by some eminent authorities as a fatal objection to any doctrine of the transmutation of species. But DARWIN now claimed this fact as only another evidence of the enormous gaps in geological history. Reiterating again and again

that only a small fraction of the world had been examined geologically, and that even that fraction was still but imperfectly known, he called attention to the history of geological discovery as furnishing itself a strong argument against those who reasoned as if the geological record were a full chronicle of the history of life upon the earth. There is a natural tendency to look upon the horizon upon which a fossil species first appears as marking its birth, and that on which it finally disappears as indicating its extinction. DARWIN declared this assumption to be "rash in the extreme." No palæontologist or geologist will now gainsay this assertion. And yet how continually do we still hear men talking of the stages of the geological record, as if these were sharply marked off everywhere by the first appearance and final disappearance of certain species. The boldness with which DARWIN challenged some of these long-rooted beliefs is not less conspicuous than the modesty and deference with which his own suggestions were always given. "It is notorious," he remarked, "on what excessively slight differences many palæontologists have founded their species; and they do this the more readily if the specimens come from different sub-stages of the same formation."

Starting from this conception of the nature of the geological record, DARWIN could show that the leading facts made known by palæontology could be explained by his theory of descent with modification through natural selection. New species had slowly come in, as old ones had slowly died out. Once the thread of succession had been broken it was never taken up again; an extinct species or group never reappeared, yet extinction was a slow and unequal process, and a few descendants of ancient types might be found lingering in protected and isolated situations. "We can understand how it is that all the forms of life, ancient and recent, make together one grand system; for all are connected by generation. From the continued tendency to divergence, the more ancient a form is, the more generally it differs from those now living. The inhabitants of each successive period in the world's history have beaten their predecessors in the race for life, and are in so far higher in the scale of nature; and this may account for that vague, yet ill-defined sentiment, felt by many palæontologists, that organization on the whole has progressed. If it should hereafter be proved that ancient animals resemble to a certain extent the embryos of more recent animals of the same class, this fact will be intelligible."

Again, what a flood of fresh light was poured upon geological inquiry by the two chapters on Geographical Distribution in the *Origin of Species!* A new field of research, or, at least, one in which comparatively little had been yet attempted, was there opened out. The grouping of living organisms over the globe was now seen to have the most momentous geological bearings. Every species of plant and animal must have had a geological history, and might be made to tell its story of the changes of land and sea.

In fine, the spirit of Mr. DARWIN's teaching may be traced all through the literature of science, even in departments which he never himself entered. No branch of research has benefited more from the infusion of this spirit than geology. Time-honored prejudices have been broken down, theories that seemed the most surely based have been reconsidered, and, when found untenable, have been boldly discarded. That the Present must be taken as a guide to the Past, has been more fearlessly asserted than ever. And yet it has been recognized that the present differs widely from the past, that there has been a progress everywhere, that Evolution and not Uniformitarianism has been the law by which geological history has been governed. For the impetus with which these views have been advanced in every civilized country,

we look up with reverence to the loved and immortal name of CHARLES DARWIN.

IV. WORK IN BOTANY.

BY W. T. THISELTON DYER, F.R.S.

In attempting to estimate the influence which Mr. DARWIN's writings have exerted on the progress of botanical science, we must necessarily discriminate between the indirect effect which his views have had on botanical research generally, and the direct results of his own contributions. No doubt in a sense the former will seem in the retrospect to overshadow the latter. For in his later writings Mr. DARWIN was content to devote himself to the consideration of problems which, in a limited field, brought his own theoretical views to a detailed test, and so may ultimately seem to be somewhat merged in them. Yet these writings can never fail to command our admiration even viewed apart from all else that Mr. DARWIN did. It is wonderful enough that so great a master in biological science should, at an advanced age, have been content to work with all the fervor and assiduity of youth at phenomena of vegetable life apparently minute and of the most special kind. To him, no doubt, they were not minute, but instinct with a significance that the professed botanical world had for the most part missed seeing in them failing the point of view which Mr. DARWIN himself supplied. It is not too much to say that each of his botanical investigations, taken on its own merits, would alone have made the reputation of any ordinary botanist.

Mr. DARWIN's attitude toward botany, as indeed to biological studies generally, was, it should always be remembered, in his early life essentially that of a naturalist of the school of LINNÆUS and HUMBOLDT—a point of view unfortunately now perhaps a little out of fashion. Nature in all its aspects spoke to his feelings with a voice that was living and direct. The writer of these lines can well remember Mr. DARWIN gently complaining that some of this warm enthusiasm for nature, as it presents itself unanalysed to ordinary healthy vision, seemed to be a little dulled in the younger naturalists of the day. The pages of the *Journal of Researches* show no such restraint, but abound with passages in which Mr. DARWIN's unstudied and simple language is carried by the force of warm impression and perfect joy in nature to a level of singular beauty. One passage may be quoted as an illustration; it is from the description of Bahia in chapter xxi:

"When quietly walking along the shady pathways, and admiring each successive view, I wished to find language to express my ideas. Epithet after epithet was found too weak to convey to those who have not visited the intertropical regions, the sensation of delight which the mind experiences. I have said that the plants in a hothouse fail to communicate a just idea of the vegetation, yet I must recur to it. The land is one great wild, untidy, luxuriant hothouse, made by nature for herself, but taken possession of by man, who has studded it with gay houses and formal gardens. How great would be the desire in every admirer of nature to behold, if such were possible, the scenery of another planet! Yet to every person in Europe, it may be truly said, that at the distance of only a few degrees from his native soil, the glories of another world are opened to him. In my last walk I stopped again and again to gaze on these beauties, and endeavored to fix in my mind forever, an impression which at the time I knew sooner or later must fail. The form of the orange-tree, the cocoanut, the palm, the mango, the tree-fern, the banana, will remain clear and separate; but the thousand beauties which unite these into one perfect scene must fade away; yet they will leave, like a tale heard in childhood, a picture full of indistinct, but most beautiful figures."

A spirit such as this, penetrating an intelligence such as Mr. DARWIN's, would not content itself with the superficial interest of form and color. These, in his eyes, were the outward and visible signs of the inner secrets. The fascination of sense which the former imposed upon him but stimulated his desire to unveil the latter. In the Galapagos we are not then surprised to find him ardently absorbed in the problems which the extraordinary distribntion of the plants, no less than of other organisms presented:—"I indiscriminately collected," he says, "everything in flower on the different islands, and fortunately kept my collections separate."

After tabulating the results which they yielded after systematic determination, he proceeds:

"Hence we have the truly wonderful fact, that in James Island, of the thirty-eight Galapageian plants, or those found in no other part of the world, thirty are exclusively confined to this one island; and in Albemarle Island, of the twenty-six aboriginal Galapageian plants, twenty-two are confined to this one island, that is, only four are known to grow on the other islands of the Archipelago; and so on, as shown in the above table, with the plants from Chatham and Charles Island."

It is impossible in reading the *Origin of Species* not to perceive how deeply Mr. DARWIN had been impressed by the problems presented by such singularities of plant distribution as he met with in the Galapagos. And of such problems up to the time of its publication no intelligible explanation had seemed possible. SIR JOSEPH HOOKER had indeed prepared the ground by bringing into prominence, in numerous important papers, the no less striking phenomena which were presented when the vegetation of large areas came to be analysed and compared. No one therefore could estimate more justly what Mr. DARWIN did for those who worked in this field. How the whole theory of the geographical distribution of plants stood after the publication of the *Origin of Species* cannot then be better estimated than from the summary of the position, contained in SIR JOSEPH HOOKER's recent Address to the Geographical Section of the meeting of the British Association at York.

"Before the publication of the doctrine of the origin of species by variation and natural selection, all reasoning on their distribution was in subordination to the idea that these were permanent and special creations; just as, before it was shown that species were often older than the islands and mountains they inhabited, naturalists had to make their theories accord with the idea that all migration took place under existing conditions of land and sea. Hitherto the modes of dispersion of species, genera and families had been traced, but the origin of representative species, genera, and families, remained an enigma; these could be explained only by the supposition that the localites where they occurred presented conditions so similar that they favored the creation of similar organisms. But this failed to account for representation occurring in the far more numerous cases where there is no discoverable similarity of physical conditions, and of their not occurring in places where the conditions are similar. Now under the theory of modification of species after migration and isolation, their representation in distant localities is only a question of time and changed physical conditions. In fact, as Mr. DARWIN well sums up, all the leading facts of distribution are clearly explicable under this theory; such as the multiplication of new forms, the importance of barriers in forming and separating zoological and botanical provinces; the concentration of related species in the same area; the linking together under different latitudes of the inhabitants of the plains and mountains, of the forests, marshes, and deserts, and the linking of these with the

extinct beings which formerly inhabited the same areas; and the fact of different forms of life occurring in areas having nearly the same physical conditions."

If Mr. DARWIN had done no more than this for botanical science he would have left an indelible mark on its progress. But the consideration of the various questions which the problem of the origin of species presented led him into other inquiries in which the results were scarcely less important. The key-note of a whole series of his writings is struck by the words with which the eighth chapter of the *Origin of Species* commences:

"The view generally entertained by naturalists is that species, when intercrossed, have been specially endowed with the quality of sterility, in order to prevent the confusion of all organic forms."

The examination of this principle necessarily obliged him to make a profound study of the conditions and limits of sterility. The results embodied in his well-known papers on dimorphic and trimorphic plants afforded an absolutely conclusive proof that sterility was not inseparably tied up with specific divergence. But the question is handled in the most cautious way, and when the reader of the chapter on hybridism arrives at the concluding words, in which Mr. DARWIN declares that on this ground "there is no fundamental distinction between species and varieties," he finds himself in much the same intellectual position as is produced by the Q.E.D. at the end of a geometrical demonstration.

It was characteristic of Mr. DARWIN's method of study to follow up on its own account, as completely as possible, when opportunity presented, any side issue which had been raised apparently incidentally in other discussions. Indeed, it was never possible to guess what amount of evidence Mr. DARWIN had in reserve behind the few words which marked a mere step in an argument. It is from his practice of bringing out from time to time the contents of his unseen treasure-house that we gain some insight into the scientific fertility of his later years, at first sight so inexplicably prolific. Many of his works published during that period may be properly regarded in the light of disquisitions on particular points of his great theory. The researches on the sexual phenomena of heterostyled plants, alluded to above, which were communicated to the Linnean Society in a series of papers ranging over the years 1862-8, ultimately found their complete development in the volume *On the Different Forms of Flowers on Plants of the same Species*, published in 1877. In the same way, the statement in the *Origin of Species*, that "the crossing of forms only slightly differentiated favors the vigor and fertility of their offspring," finds its complete expansion in *The Effects of Cross and Self-Fertilization in the Vegetable Kingdom*, published in 1876.

The *Origin of Species* in the form in which it has become a classic in scientific literature was originally only intended as a preliminary *précis* of a vast accumulation of facts and arguments which the author had collected. It was intended to be but the precursor of a series of works in which all the evidence was to be methodically set out and discussed. Of this vast undertaking only one portion, the *Variation of Plants and Animals under Domestication*, was ever actually published. Apart from its primary purpose it produced a profound impression, especially on botanists. This was partly due to the undeniable force of the argument from analogy stated in a sentence in the introduction: "Man may be said to have been trying an experiment on a gigantic scale; and it is an experiment which nature, during the long lapse of time, has incessantly tried." But it was still more due to the unexpected use of the vast body of apparently trivial facts and observations which Mr. DARWIN with astonishing industry had disinterred from weekly

journals and ephemeral publications of all sorts and unexpectedly forced into his service. Like MOLIÈRE's Monsieur Jourdain, who was delighted to find that he had been unwittingly talking prose all his life, horticulturists who had unconsciously molded plants almost at their will at the impulse of taste or profit were at once amazed and charmed to find that they had been doing scientific work and helping to establish a great theory. The criticism of practical men, at once most tenacious and difficult to meet, was disarmed; these found themselves hoisted with their own petard. Nor was this all. The exclusive province of science was in biological phenomena forever broken down; every one whose avocations in life had to do with the rearing or use of living things, found himself a party to the "experiment on a gigantic scale," which had been going on ever since the human race withdrew for their own ends plants or animals from the feral and brought them into the domesticated state.

Mr. DARWIN with characteristic modesty had probably underrated the effect which the *Origin of Species* would have as an argumentative statement of his views. When he came to realize this, it probably seemed to him unnecessary to submit to the labor of methodizing the vast accumulations which he had doubtless made for the second and third installments of the detailed exposition of the evidence which he had promised. As was hinted at the commencement, his attention was rather drawn away from the study of evidence already at the disposal of those who cared to digest and weigh it, to the exploration of the field of nature with the new and penetrating instrument of research which he had himself forged. Something too must be credited to the intense delight which he felt in investigating the phenomena of living things. But he doubtless saw that the work to be done was to show how morphological and physiological complexity found its explanation from the principle of natural selection. This is the idea which is ever dominant. Thus he concludes his work on climbing plants: "It has often been vaguely asserted that plants are distinguished from animals by not having the power of movement. It should rather be said that plants acquire and display this power only when it is of some advantage to them; this being of comparatively rare occurrence, as they are affixed to the ground, and food is brought to them by the air and rain." The diversity of the power of movement in plants naturally engaged his attention, and the last but one of his works—in some respects perhaps the most remarkable of his botanical writings—was devoted to showing that this diversity could be regarded as derived from a single fundamental property: "All the parts or organs of every plant while they continue to grow . . . are continually circumnutating." Whether this masterly conception of the unity of what has hitherto seemed a chaos of unrelated phenomena will be sustained time alone will show. But no one can doubt the importance of what Mr. DARWIN has done in showing that for the future the phenomena of plant movement can and indeed must be studied from a single point of view.

Along another line of work Mr. DARWIN occupied himself with showing what aid could be given by the principle of natural selection in explaining the extraordinary structural variety exhibited by plant morphology. The fact that cross-fertilization was an advantage, was the key with which, as indicated in the pages of the *Origin of Species*, the bizarre complexities of orchid flowers could be unlocked. The detailed facts were set out in a well-known work, and the principle is now generally accepted with regard to flowers generally. The work on insectivorous plants gave the results of an exploration similar in its object, and bringing under one common physiological point of view a variety of the most diverse and

most remarkable modifications of leaf-form.

In the beginning of these remarks the attempt has already been made to do justice to the mark Mr. DARWIN has left on the modern study of geographical botany (and that implies a corresponding influence on phyto-palæontology). To measure the influence which he has had on any other branches of botany, it is sufficient to quote again from the *Origin of Species*: "The structure of each part of each species, for whatever purpose used, will be the sum of the many inherited changes through which the species has passed during its successive adaptations to changed habits and conditions of life." These words may almost be said to be the key-note of SACHS's well known text-book, which is the most authoritative modern exposition of the facts and principles of plant-structure and function; and there is probably not a botanical class-room or work-room in the civilized world where they are not the animating principle of both instruction and research.

Nothwithstanding the extent and variety of his botanical work, Mr. DARWIN always disclaimed any right to be regarded as a professed botanist. He turned his attention to plants doubtless because they were convenient objects for studying organic phenomena in their least complicated forms; and this point of view, which, if one may use the expression without disrespect, had something of the amateur about it, was in itself of the greatest importance. For, from not being, till he took up any point, familiar with the literature bearing on it, his mind was absolutely free from any prepossession. He was never afraid of his facts or of framing any hypothesis, however startling, which seemed to explain them. However much weight he attributed to inheritance as a factor in organic phenomena, tradition went for nothing in studying them. In any one else such an attitude would have produced much work that was crude and rash. But Mr. DARWIN—if one may venture on language which will strike no one who had conversed with him as overstrained—seemed by gentle persuasion to have penetrated that reserve of nature which baffles smaller men. In other words, his long experience had given him a kind of instinctive insight into the method of attack of any biological problem, however unfamiliar to him, while he rigidly controlled the fertility of his mind in hypothetical explanations by the no less fertility of ingeniously-devised experiment. Whatever he touched, he was sure to draw from it something that it had never before yielded, and he was wholly free from that familiarity which comes to the professed student in every branch of science, and blinds the mental eye to the significance of things which are overlooked because always in view.

The simplicity of Mr. DARWIN's character pervaded his whole method of work. ALPHONSE DE CANDOLLE visited him in 1880 and felt the impression of this: "He was not one of those who would construct a palace to lodge a laboratory. I sought out the greenhouse in which so many admirable experiments had been made on hybrids. It contained nothing but a vine." There was no affectation in this. Mr. DARWIN provided himself with every resource which the methods of the day or the mechanical ingenuity of his sons could supply, and when it had served its purpose it was discarded. Nor had he any prepossession in favor of one kind of scientific work more than another. His scientific temperament was thoroughly catholic and sympathetic to anything which was not a mere regrinding of old scientific dry bones. He would show his visitors an *Epipactis* which for years came up in the middle of one of his gravel walks with almost as much interest as some new point which he had made out in a piece of work actually in hand. And though he had long abandoned any active interest in systematic work,

only a few months before his death he had arranged to provide funds for the preparation of the new edition of STEUDEL'S Nomenclator,* which, at his earnest wish, has been projected at Kew.

V. WORK IN ZOOLOGY.

BY G. J. ROMANES, F.R.S.

The influence which our great naturalist has exerted upon zoology is unquestionably greater than that which has been exerted by any other individual; and as it depends on his generalizations much more than upon his particular researches, we may best do justice to it by taking a broad view of the effects of Darwinism on zoology, rather than by detailing those numberless facts which have been added to the science by the ever vigilant observations of DARWIN. Nevertheless, we may begin our survey by enumerating the more important results of his purely zoological work, not so much because these have been rarely equaled by the work of any other zoologist, as because we may thus give due prominence to the remarkable association of qualities which was presented by Mr. DARWIN's mind. This association of qualities was such that he was able fully to appreciate and successfully to cultivate every department and ramification of biological research—whether morphological, physiological, systematic, descriptive, or statistical—and at the same time to rise above the *minutiæ* of these various branches, to take those commanding views of the whole range of nature and of natural science which have produced so enormous a change upon our means of knowledge and our modes of thought. No laborer in the field of science has ever plodded more patiently through masses of small detail; no master-mind on the highest elevation of philosophy has ever grasped more world-transforming truth.

Taking the purely zoological work in historical order, we have first to consider the observations made during the voyage of the *Beagle*. These, however, are much too numerous and minute to admit of being here detailed. Among the most curious are those relating to the scissor-beak bird, niata cattle, aëronaut spiders, upland geese, sense of sight and smell in vultures; and among the most important are those relating to the geographical distribution of species. The results obtained on the latter head are of peculiar interest, inasmuch as it was owing to them that Mr. DARWIN was first led to entertain the idea of evolution. As displaying the dawn of this idea in his mind we may quote a passage or two from his *Voyage of a Naturalist*, where these observations relating to distribution are given:

"These mountains (the Andes) have existed as a great barrier since the present races of animals have appeared, and therefore, unless we suppose the same species to have been created in two different places, we ought not to expect any closer similarity between the organic beings on the opposite sides of the Andes, than on the opposite shores of the ocean."

"The natural history of these islands (of the Galapagos Archipelago) is eminently curious, and well deserves attention. Most of the organic productions are aboriginal creations, found nowhere else; there is even a difference between the inhabitants of the different islands; yet all show a marked relationship with those of America, though separated from that continent by an open space of ocean between 500 and 600 miles in width. The Archipelago is a little world within itself, or rather a satellite attached to America, whence it has derived a few stray colonists, and has received the general character of its

* An enumeration of the names and synonyms of all described flowerings plants with their native countries.

indigenous productions. Considering the small size of the islands, we feel astonished at the number of their aboriginal beings, and at their confined range. Seeing every height crowned with its crater, and the boundaries of most of the lava-streams still distinct, we are led to believe that within a period geologically recent, the unbroken ocean was here spread out. Hence, both in space and time, we seem to be brought somewhat near to that fact—that mystery of mysteries—the first appearance of new beings on this earth."

Next in order of time we have to notice the *Monograph of the Cirripedia.* This immensely elaborate work was published by the Ray Society in two volumes, comprising together over 1,000 large octavo pages, and 40 plates. These massive books (which were respectively published in 1851 and 1854) convey the results of several years of devoted inquiry, and are particularly interesting, not only on account of the intrinsic value of the work, but also because they show that Mr. DARWIN's powers of research were not less remarkable in the direction of purely anatomical investigation than they were in that of physiological experiment and philosophical generalization. No one can even glance through this memoir without perceiving that if it had stood alone it would have placed its author in the very first rank as a morphological investigator. The prodigious number and minute accuracy of his dissections, the exhaustive detail with which he worked out every branch of his subject—sparing no pains in procuring every species that it was possible to procure, in collecting all the known facts relating to the geographical and geological distribution of the group, in tracing the complicated history of metamorphoses represented by the individuals of the sundry species, in disentangling the problem of the homologies of these perplexing animals, etc.—all combine to show that had Mr. DARWIN chosen to devote himself to a life of purely morphological work, his name would probably have been second to none in that department of biology. We have to thank his native sagacity that such was not his choice. Valuable as without any question are the results of the great anatomical research which we are considering, we cannot peruse these thousand pages of closely-written detail without feeling that, for a man of Mr. DARWIN's exceptional powers, even such results are too dearly bought by the expenditure of time required for obtaining them. We cannot, indeed, be sorry that he engaged in and completed this solid piece of morphological work, because it now stands as a monument to his great ability in this direction of inquiry; but at the same time we feel sincerely glad that the conspicuous success which attended the exercise of such ability in this instance did not betray him into other undertakings of the same kind. Such undertakings may suitably be left to establish the fame of great though lesser men; it would have been a calamity in the history of our race if CHARLES DARWIN had been tempted by his own ability to become a comparative anatomist.

But as we have said—and we repeat it lest there should be any possibility of mistaking what we mean—the results which attended this laborious inquiry were of the highest importance to comparative anatomy, and of the highest interest to comparative anatomists. The limits of this article do not admit of our giving a summary of these results, so we shall only allude to the one which is most important. This is the discovery of "Complemental Males." The manner in which this discovery was made in its entirety is of interest, as showing the importance of remembering apparently insignificant observations which may happen to be incidentally made during the progress of a research. For Mr. DARWIN writes:

"When first dissecting *Scalpellum vulgare*, I was surprised at the almost constant presence of one or more very

minute parasites, on the margins of both scuta, close to the umbones. I carelessly dissected one or two specimens, and concluded that they belonged to some new class or order among the Articulata, but did not at the time even conjecture that they were Cirripedes. Many months afterward, when I had seen in *Ibla* that an hermaphrodite could have a complemental male, I remembered that I had been surprised at the small size of the vesiculæ seminales in the hermaphrodite *S. vulgare*, so that I resolved to look with care at these parasites; on doing so I now discovered that they were Cirripedes, for I found that they adhered by cement, and were furnished with prehensile antennæ, which latter, I observed with astonishment, agreed in every minute character, and in size, with those of *S. vulgare*. I also found that these parasites were destitute of a mouth and stomach; that consequently they were short-lived but that they reached maturity; and that all were males. Subsequently five other species of the genus Scalpellum were found to present more or lsss closely-analogous phenomena. These facts, together with those given under *Ibla* (and had it not been for this latter genus, I never probably should have struck on the right line in my investigation), appear sufficient to justify me in provisionally considering the truly wonderful parasites of the several species of Scalpellum, as Males and Complemental Males." (vol. i. pp. 292–3).

The remarkable phenomena of sexuality in these animals is summed up thus:

"The simple fact of the diversity in the sexual relations displayed within the limits of the genera Ibla and Scalpellum, appears to me eminently curious. We have (1) a female, with a male (or rarely two) permanently attached to her, protected by her, and nourished by any minute animals which may enter her sac; (2) a female, with successive pairs of short-lived males, destitute of mouth and stomach, inhabiting the pouches formed on the under sides of her two valves; (3) an hermaphrodite, with from one or two, up to five or six, similar short-lived males without mouth or stomach, attached to one particular spot on each side of the orifice of the capitulum; and (4) hermaphrodites, with occasionally one, two, or three males, capable of seizing and devouring their prey in the ordinary Cirripedal method, attached to two parts of the capitulum, in both cases being protected by the closing of the scuta."

With reference to these Complemental Males (so-called "to show that they do not pair with a female, but with a bisexual individual.") Mr. Darwin further observes: "Nothing strictly analogous is known in the animal kingdom; but amongst plants, in the Linnean class Polygamia, closely similar instances abound;" and also that "in the series of facts now given we have one curious illustration more to the many already known, how gradually nature changes from one condition to the other, in this case from bisexuality to unisexuality." (ii. 29).

Lastly, to give only one other quotation from this work, he writes:

"As I am summing up the singularity of the phenomena here presented, I will allude to the marvelous assemblage of beings seen by me within the sac of an *Ibla quadrivalvis*, namely, an old and young male, both minute, worm-like, destitute of a capitulum, with a great mouth and rudimentary thorax and limbs, attached to each other and to the hermaphrodite, which latter is utterly different in appearance and structure; secondly, the four or five free, boat-shaped larvæ, with their curious prehensile antennæ, two great compound eyes, no mouth, and six natatory legs; and lastly, several hundreds of the larvæ, in their first stage of development, globular, with horn-shaped projections on their carapaces, minute single eyes, filiform antennæ, proboscform mouths, and only three pairs of natatory legs. What diverse

beings, with scarcely anything in common, and yet all belonging to the same species!" (i. 293).

Scattered through the *Origin of Species*, the *Variation of Plants and Animals under Domestication*, and the *Descent of Man*, we meet with many purely zoological observations of much interest and importance as such, or apart from their bearing on the general principles and arguments for the illustration or fortification of which they are introduced. In this connection we may particularly allude to the chapters on Variability, Hybridism, and Geographical Distribution—chapters which contain such a large number of new facts, as well as new groupings of old ones, that we cannot undertake to epitomize them in a *résumé* of Mr. DARWIN's work so brief as the present. Nor should we forget to mention in the present connection his experimental proof of the manner in which bees make their hexagonal cells, and of the important part played in the economy of nature by earthworms. Moreover, the hypothesis of sexual selection necessitated the collection of a large body of facts relating to the ornamentation of all classes of animals, from insects and crustacea upward; and whatever we may think about the stability of the hypothesis, there can be no question, from a zoological point of view, concerning the value of this collection of facts as such.

But without waiting to consider further the purely zoological results presented by the work before us, we must turn to consider the effects of this work upon zoological science itself. And here we approach the true magnitude of DARWIN as a zoologist. Of very few men in the history of our race can it be said that they not only enlarged science, but changed it—not only added facts to the growing structure of natural knowledge, but profoundly modified the basal conceptions upon which the whole structure rested; and of no one can this be said with more truth than it can be said of DARWIN. For although it is the case that the idea of evolution had occurred to other minds—in two or three instances with all the force of full conviction—it is no less certainly the case that the idea proved barren. Why did it prove so? Because it had never before been fertilized by the idea of natural selection. To demonstrate, or to render sufficiently probable by inference, the *fact* of evolution (for direct observation of the process is from the nature of the case impossible), required some reasonable suggestion as to the *cause* of evolution, such as is supplied by the theory of natural selection; and when once this suggestion was forthcoming, it mattered little whether it was considered as propounding the only, the chief, or but a subordinate cause; all that was needed to recommend the evidence of evolution to the judgment of science was the discovery of *some* cause which could be reasonably regarded as not incommensurate with *some* of the effects ascribed to it. And, unlike the desperate though most laudable groupings of LAMARCK, the simple solution furnished by DARWIN was precisely what was required to give a *locus standi* to the evidence of descent.

But we should form a very inadequate estimate of the services rendered to science by Mr. DARWIN if we were to stop here. The few general facts out of which the theory of evolution by natural selection is formed—viz. struggle for existence, survival of the fittest, and heredity—were all previously well-known facts; and we may not unreasonably feel astonished that so apparently obvious a combination of them as that which occurred to Mr. DARWIN should have occurred to no one else, with the single exception of Mr. WALLACE. The fact that it did not do so is most fortunate in two respects—first, because it gave Mr. DARWIN the opportunity of pondering upon the subject *ab initio*, and next because it gave the world an opportunity of witnessing the disinterested unselfishness

which has been so signally and so consistently displayed by both these English naturalists. But the greatness of Mr. DARWIN as the reformer of biology is not to be estimated by the fact that he conceived the idea of natural selection; his claim to everlasting memory rests upon the many years of devoted labor whereby he tested this idea in all conceivable ways—amassing facts from every department of science, balancing evidence with the soundest judgment, shirking no difficulty, and at last astonishing the world as with a revelation by publishing the completed proof of evolution. Indeed, so colossal is Mr DARWIN's greatness in this respect, that we doubt whether there ever was a man so well fitted to undertake the work which he has so successfully accomplished. For this work required not merely vast and varied knowledge of many provinces of science, and the very exceptional powers of judgment which Mr. DARWIN possessed, but also the patience to labor for many years at a great generalization, the honest candor which rendered the author his own best critic, and last, though perhaps not least, the magnanimous simplicity of character which, in rising above all petty and personal feelings, delivered a thought-reversing doctrine to mankind with as little disturbance as possible of the deeply-rooted sentiments of the age. In the chapter of accidents, therefore, it is a singularly fortunate coincidence that Mr. DARWIN was the man to whom the idea of natural selection occurred; for although in a generation or two the truth of evolution might have become more and more forced upon the belief of science, and with it the acceptance of natural selection as an operating cause, in our own generation this could only have been accomplished in the way that it was accomplished; we required one such exceptional mind as that of DARWIN to focus the facts, and to show the method.

It seems almost needless to turn from this aspect of our subject to enlarge upon the influence which a general acceptance of the theory of descent has had upon biology. We do not state the case too strongly when we say that this has been the influence which has created organization out of confusion, brought the dry bones to life, and made all the previously dissociated facts of science stand up as an exceeding great army. Let any one turn to the eloquent prophecy with which the pages of the *Origin of Species* terminate—a prophecy which sets forth in order the transforming effect that the doctrine of evolution would in the future exert upon every department of biology—and he may rejoice to think that Mr. DARWIN himself lived to see every word of that prophecy fulfilled. For where is now the "systematist . . . incessantly haunted by the shadowy doubt whether this or that form be a true species?" And has it not proved that "the other and more general departments of natural history will rise greatly in interest—that the terms used by naturalists, of affinity, relationship, community of type, paternity, morphology, adaptive characters, rudimentary and aborted organs, etc, will cease to be metaphorical, and will have a plain signification?" Do we not indeed begin to feel that "we no longer look at an organic being as a savage looks at a ship, as something wholly beyond his comprehension? And when we regard every production of nature as one which has had a long history, when we contemplate every complete structure and instinct as the summing up of many contrivances, each useful to the possessor, in the same way as any great mechanical invention is the summing up of the labor, the experience, the reason, and even the blunders of numerous workmen, when we thus view each organic being," may we not now all say with DARWIN, "How far more interesting—I speak from experience—does the study of natural history become?" And may we not now all see that "a grand and almost

untrodden field of inquiry on the laws of variation, on correlation, on the effects of use and disuse, on the direct action of external conditions" *has* been opened up; that our classifications *have* become "as far as they can be made so, genealogies, and truly give what may be called a plan of creation;" that rules of classifying *do* "become simpler when we have a definite object in view;" and that "aberrant species, which may fancifully be called living fossils," actually *are* of service in supplying "a picture of ancient forms of life?" And again, must we not agree that "when we can feel assured that all the individuals of the same species and all the closely-allied species of most genera, have, within a not very remote period, descended from one parent, and have migrated from some one birthplace; and when we better know the many means of migration, then, by the light which geology now throws, and will continue to throw, on former changes of climate and of the level of the land, we shall surely be able to trace in an admirable manner the former migrations of the inhabitants of the whole world"? And who is now able to question that "by comparing the differences between the inhabitants of the sea on the opposite sides of a continent, and of the various inhabitants on that continent in relation to their apparent means of migration, some light can be thrown on ancient geography"? Or, if we turn to "the noble science of geology," do we not see that we are beginning to "gauge with some security the duration of intervals by a comparison of the preceding and succeeding forms of life"? And last, though not least, have we not found this one short sentence so charged with meaning that a new and extensive science, second in importance to none, may be almost said to have grown out of what it states: "Embryology will often reveal to us the structure, in some degree obscured, of the prototypes"?

If the progress of science during the last two-and-twenty years has in so astonishing a measure verified the prophecy of the *Origin of Species*, surely, in conclusion, we are more than ever constrained to agree with the sentiments expressed by its closing words: "When I view all beings, not as special creations, but as the lineal descendants of some few beings which lived long before the first bed of the Cambrian system was deposited, they seem to me to become ennobled . . . There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved."

VI. WORK IN PSYCHOLOGY.

BY G. J. ROMANES, F.R.S.

The effects upon Psychology of Mr. DARWIN's writings have been so immense, that we shall not overstate them by saying that they are fully comparable with those which we have previously considered as having been exerted by the same writings on geology, botany, and zoology. This fact at first sight can scarcely fail to strike us as remarkable, in view of the consideration that Mr. DARWIN was not only not himself a psychologist, but had little aptitude for, and perhaps less sympathy with, the technique of psychological method. The whole constitution of his mind was opposed to the subtlety of the distinctions and the mysticism of the conceptions which this technique so frequently involves; and therefore he was accustomed to regard the problems of mind in the same broad and general light that he regarded all the other problems of nature. But if at first sight we are inclined to feel surprised that, although possessing none of the

special mental equipments of a psychologist, he should have exerted so enormous an influence upon psychology, our surprise must vanish when we consider the matter a little more attentively. For the truth of this matter is that psychology, in being the science furthest removed from the reach of experimental means and inductive method, is the science which has longest remained in the trammels of *a priori* analysis and metaphysical thought; therefore DARWIN, by casting the eye of a philosophical naturalist upon the facts, without reference to the cobwebs which the specialists had woven around them. was able to gather directly much new information as to their meaning. And the rare sagacity with which he observed and reflected upon the phenomena of mind merely as phenomena or facts of nature, led to the remarkable results which we shall presently have to consider—results which have done more than any other to unmuffle the young science of psychology from the swaddling clothes of its mediæval nursery.

The portions of Mr. DARWIN's writings which refer to mental science are very limited in extent—comprising, in fact, only one chapter in the *Origin of Species*, three in the *Descent of Man*, and a short paper on the development of infantile intelligence. The importance of the effect produced by them is therefore rendered all the more remarkable; but in this connection it seems desirable to state that the chapters to which we have alluded represent, in an exceedingly condensed form, the result of extensive thought and reading. A year or two ago Mr. DARWIN lent the present writer the original drafts of these essays, together with all the notes and memoranda which he had collected on psychological subjects during the previous forty years, and so we can testify that any one who reads these MSS. is more likely to be surprised at the amount of labor which they indicate than at the effect which has been produced by the compressed publication of its results. What strikes one most in reading the MSS. is that which also strikes one most in reading the published *résumé* that has grown out of them—namely, the honest adherence throughout to the strictly scientific, or, as the followers of COMTE would say, positive method of seeking and interpreting facts; speculation, hypothesis, and straw-splitting are everywhere, not so much intentionally avoided, as alien to the whole conception of the manner in which the sundry problems are to be attacked We all know that this conception has not met with universal approval—that more than one writer, adhering to the traditional methods of psychological inquiry, has expressly joined issue upon it. But although it is an easy matter for a technical psychologist to point to an absence of technical thought, and so of a recognition of technical principles, in these parts of Mr. DARWIN's writings, we are persuaded that the *exposé* only serves to reveal a beam in the eye of the technical psychologist which prevents him from seeing clearly how to remove the mote from Mr. DARWIN's. In other words, although it is true that Mr. DARWIN does not recognize the niceties of distinction which seem so important to what we may term the professional mind, it is no less true that in the cases to which we have alluded, the professional mind has failed in its duty of filling up for itself the technical *lacunæ* in Mr. DARWIN's expositions. Such *lacunæ* no doubt occur, but they never really vitiate the integrity of the conclusions; and a trained psychologist would best fulfill his function as an under-builder, by supplying here and there the stones which the hand of the master has neglected to put in. To ourselves it always seems one of the most wonderful of the many wonderful aspects of Mr. DARWIN's varied work, that by the sheer force of some exalted kind of common sense, unassisted by any special acquaintance with psychological method, he should

have been able to strike, as it were, straight down upon some of the most important truths which have ever been brought to light in the region of mental science. These we shall now proceed to consider.

The chapter in the *Origin of Species* to which we have referred, is occupied chiefly with an application of the theory of natural selection to the phenomena of instinct, and in our opinion it has done more than all other psychological writings put together to explain what instinct is, why it is and how it came to be. Before this chapter was published, the only scientific theory concerning the origin of instincts that had been formed was the theory which regarded them as hereditary habits. Because we know that in the individual intelligent adjustments become, by frequent repetition, automatic, it was inferred that the same might be true of the species, and therefore that all instincts were to be regarded as what LEWES has aptly termed "lapsed intelligence." In this view there is, without any question, much truth, and the first thing we have to notice about Mr. DARWIN's writings with reference to instinct is that they not only recognized this truth, but, by elucidating the whole subject of heredity, placed it in a much clearer light than it ever stood before. Mr. DARWIN, however, carried the philosophy of the subject very much further when he agued that, in conjunction with the cause formulated as "lapsing intelligence," there was another at least as potent in the formation of instincts—namely, natural selection. His own statement of the case is so terse that we cannot do better than quote it.

"If MOZART, instead of playing the pianoforte at three years with wonderfully little practice, had played a tune with no practice at all, he might truly be said to have done so instinctively. But it would be a serious error to suppose that the greater number of instincts have been acquired by habit in one generation, and then transmitted by inheritance to succeeding generations. It can be clearly shown that the most wonderful instincts with which we are acquainted, namely, those of the hive-bee and of many ants, could not possibly have been acquired by habit.*

"It will be universally admitted that instincts are as important as corporeal structures for the welfare of each species, under its present conditions of life. Under changed conditions of life, it is at least possible that slight modifications of instinct might be profitable to a species; and if it can be shown that instincts do vary ever so little, then I can see no difficulty in natural selection preserving and continually accumulating variations of instinct to any extent that was profitable. It is thus, I believe, that all the most complex and wonderful instincts have originated."

Briefly, then, in Mr. DARWIN's view, instincts may arise by lapsing intelligence, by natural selection of accidental and possibly non-intelligent variations of habit, or by both principles combined—seeing that "a little dose of judgment" is often commingled with even the most fixed (or most strongly inherited) instincts. One good test of the truth of the view as a whole is that which Mr. DARWIN has himself supplied—namely, searching through the whole range of instincts to see whether any occur which are either injurious to the animals exhibiting them, or benefical only to other animals. Now there is really no authentic case of the former, and the latter are so few in number that they may reasonably be regarded, either as rudiments of instincts once useful (so analogous to the human tail), or as still useful in some unobservable manner (so analogous to the tail of the rattlesnake). The case of aphides secreting honey-

* Because the individuals which exhibit them, being neuters, can never have progeny. It is indeed surprising, as Mr. DARWIN further on observes, that no one previously "advanced this demonstrative case of neuter insects against the well-known doctrine of inherited habit as advanced by LAMARCK."

dew for the benefit of ants occurred to Mr. DARWIN as one which might be adduced against his theory in this connection, and he therefore made some experiments upon the subject, which led him to conclude that "as the excretion is extremely viscid, it is no doubt a convenience to the aphides to have it removed; therefore probably they do not excrete solely for the good of the ants."

A discussion of the variability of instinct, and of the probability that variations should be inherited, leads him to consider the important case of the apparent formation of artificial instincts in our domestic dogs by continued training with selection, and also the not less important case of the effects produced upon natural instincts by the long-continued change of environment to which other of our domestic animals have been exposed. All the facts adduced as resulting from these long-continued though unintentional experiments by man, go to substantiate, in a very unmistakable manner, the theory concerning the origin and development of instincts which we are considering. The chapter concludes with a close consideration of some of the more remarkable instincts which occur in the animal kingdom, such as the parasitic instinct of the cuckoo, the slave-making instinct of ants, and the cell-making instinct of bees. A flood of light is thrown upon the latter, and the old standing problem as to how the bees have come to make their cells in the form which requires the smallest amount of material for their construction, while affording the largest capacity for purposes of storage, is solved.

From this brief account of the chapter on "Instinct," it is evident that the new idea which it starts, and in several directions elaborates, is an idea of immense importance to psychology, and that the broad marks or general principles laid down by it afford large scope for a further filling-in of numberless details by the attentive observation of facts. The phenomena of instinct, indeed, cease to be rebellious to explanation, and range themselves in orderly array under the flag of science.

But not less important than the chapter on "Instinct" are the chapters in the *Descent of Man* on the mental powers of man as compared with those of the lower animals, on the moral sense, and on the development of both during primæval and civilized times. Our estimate of the value of these chapters is so high that we gladly endorse the opinion of the late Prof. CLIFFORD—who was no mean judge upon such matters—when he writes of them as presenting to his mind "the simplest, and clearest, and most profound philosophy that was ever written upon the subject." As the three chapters together cover only eighty pages, it seems needless to render an abstract of them, so we shall only observe that although it is easy to show in them, as Mr. MIVART and others have shown, a want of appreciation of technical terms, and even of Aristotelian ideas, nowhere in the whole range of Mr. DARWIN's writings is his immense power of judicious generalization more conspicuously shown. So much is this the case, that in studying these chapters we have ourselves always felt glad that Mr. DARWIN was not the specialist in psychology which some of his critics seem to suppose that he ought to have been if he presumed to shake their science to its base; had he been such a specialist the great sweep of his thought might have been hindered by comparatively immaterial details.

Of the three chapters which we are considering, the most important is the one on the moral sense. As he himself says:

"This great question (the origin of the moral sense) has been discussed by many writers of consummate ability; and my only excuse for touching upon it, is the impossibility of here passing it over; and because, so far as I know, no one has approached it exclusively from the side of natural

history. The investigation possesses, also, some independent interest, as an attempt to see how far the study of the lower animals throws light on one of the highest psychical faculties of man."

The result of this investigation and study has been to give, if not a new point of departure to the science of ethics, at least a completely new conception as to the origin of the faculties with which that science has to deal; and without attempting to discuss the objections which have been raised against the doctrine, or to enumerate the points of contact between this doctrine and older ethical theories—to neither of which undertakings would our present space be adapted—we may say in general, that, as in the case of instinct, so in that of conscience, we feel persuaded that Mr. DARWIN's genius has been the first to bring within the grasp of human understanding large classes of phenomena which had been previously wholly unintelligible.

"The Expression of the Emotions in Man and Animals" is an essay which may be more suitably mentioned in the present division than in any of the preceding. The work is a highly interesting one, not only on account of its philosophical theories, but also as an extensive accumulation of facts. "The three chief principles" enunciated by the former are: (1) "the principle of serviceable associated habits"; (2) "the principle of antithesis"; and (3) "the principle of actions due to the constitution of the Nervous System, independently from the first of the Will, and independently to a certain extent of Habit." It is shown that the first of these principles leads to the performance of actions expressive of emotions, because "certain complex actions are of direct or indirect service under certain states of mind, in order to relieve or gratify certain sensations desired, etc.; and whenever the same state of mind is induced, however feebly, there is a tendency through the force of habit and association for the same movements to be performed, though they may not then be of the least use." The second principle arises because, "when a directly opposite state of mind is induced, there is a strong and involuntary tendency to the performance of movements of a directly opposite nature, though these are of no use; and such movements are in some cases highly expressive." And the third principle occurs because, "when the sensorium is strongly excited, nerve-force is generated in excess, and is transmitted in certain definite directions, depending on the connection of the nerve-cells, and partly on habit." All these principles are more or less well substantiated by large bodies of facts, and although the essay, from the nature of its subject-matter, is necessarily not of so transforming a character in psychology as those which we have already considered, and although we may doubt whether it gives a full explanation of every display of expressive movement, we think there can be no reasonable question that the three principles above quoted are shown to be true principles, and therefore that the essay is completely successful within the scope of its purposes.

Lastly, we have to allude to the brief paper published in *Mind* on the psychogenesis of a child. These notes were not published till long after they were taken, so that Mr. DARWIN was the first observer, in a department of psychology which—owing chiefly to the attention which his other writings have directed to the phenomena of evolution—is now being very fully explored. The observations relate entirely to matters of fact, and display the same qualities of thoughtfulness and accuracy which are so conspicuous in all his other work.

On the whole, then, we must say that Mr. DARWIN has left as broad and deep a mark upon Psychology as he has upon Geology, Botany, and Zoology. Groups of facts which previously seemed to be separate, are now seen to be bound together in the most intimate manner; and some of

what must be regarded as the first principles of the science, hitherto unsuspected, have been brought to light. No longer is it enough to say that such and such actions are the result of instinct, and so beyond the reach of explanation; for now the very thing to be explained is the character and origin of the instinct—the causes which led to its development, its continuance, its precision and its use. No longer is it enough to consider the instincts manifested by an animal, or a group of animals, as an isolated body of phenomena, devoid of any scientific meaning because standing out of relation to any known causes; for now the whole scientific import of instincts as manifested by one animal depends on the degree in which they are connected by general principles of causation with the instincts that are manifested by other animals. And not only in respect of instincts, but also in respect of intelligence, the science of comparative psychology may be said for the first time really to have begun with the discovery of the general causes in question; while from the simplest reflex actions, up to the most recondite processes of reason and the most imperious dictates of conscience, we are able to trace a continuity of development. A revelation of truth so extensive as this in the department of science which, in most nearly touching the personality of man, is of most importance for man to explore, cannot fail to justify the anticipations of the revealer, who, in referring to psychology, could "in the future see open fields for far more important researches" than those relating to geology and biology. If the proper study of mankind is man, Mr. DARWIN has done more than any other human being to further the most desirable kind of learning, for it is through him that humanity in our generation has first been able to begin its response to the precept of antiquity—*Know thyself*.

The series of brief *résumés* whereby we have endeavored to take a sort of bird's eye view of Mr. DARWIN's great and many labors have now drawn to a close. But we cannot finish this very rudimentary sketch of his work without alluding once more to what was said in the opening paragraphs of the series, and which cannot be more tersely repeated than in Mr. DARWIN's own words there quoted with reference to Prof. HENSLOW: "Reflecting over his character with gratitude and reverence, his moral attributes rise, as they should do in the highest character, in pre-eminence over his intellect."

In the gratitude and reverence which we feel in a measure never to be expressed, we sometimes regret that the ill-health which led to his seclusion prevented the extraordinary beauty of his character from being more generally known by personal intercourse True it is that the world has shown in a wonderful degree a just appreciation of this character, so that many thousands, in many nations, who had never even seen the man, heard that CHARLES DARWIN was dead with a shock like that which follows such an announcement in the case of a well loved friend; still it seems almost sad that when such an exalted character has lived, it should only have been to so comparatively few of us that the last farewell over the open grave at Westminster implied a severance of feelings which had never been formed before, and which, while ever living among the most hallowed lights of memory, we know too well can never be formed again. But to those of us who have now to mourn so unspeakable a loss, it is some consolation to think, while much that was sweetest and much that was noblest in our lives has ended in that death, his great life and finished work still stand before our view; and in regarding them we may almost bring our hearts to cry—Not for him, but for ourselves, we weep.

ALEXANDER VON HUMBOLDT.*

BY LOUIS AGASSIZ.

I am invited to an unwonted task. Thus far I have appeared before the public only as a teacher of Natural History. To-day, for the first time in my life, I leave a field in which I am at home, to take upon myself the duties of a biographer. If I succeed at all, it will be because I so loved and honored the man whose memory brings us together.

ALEXANDER VON HUMBOLDT was born in Berlin in 1769,—one hundred years ago this day,—in that fertile year which gave birth to NAPOLEON, WELLINGTON, CANNING, CUVIER, CHATEAUBRIAND, and so many other remarkable men. All America was then the property of European monarchs. The first throb of the American Revolution had not yet disturbed the relations of the mother country and her colonies Spain held Florida, Mexico, and the greater part of South America; France owned Louisiana; and all Brazil was tributary to Portugal. What stupendous changes have taken place since that time in the political world! Divine right of possession was then the recognized law on which governments were based. A mighty Republic has since been born, the fundamental principle of which is self-government. Progress in the intellectual world, the world of thought, has kept pace with the advance of civil liberty; reference to authority has been superseded by free inquiry; and HUMBOLDT was one of the great leaders in this onward movement. He bravely fought the battle for independence of thought against the tyranny of authority. No man impressed his century intellectually more powerfully, perhaps no man so powerfully as he. Therefore he is so dear to the Germans, with whom many nations unite to do him honor to-day. Nor is it alone because of what he has done for science, or for any one department of research, that we feel grateful to him, but rather because of that breadth and comprehensiveness of knowledge which lifts whole communities to higher levels of culture, and impresses itself upon the unlearned as well as upon students and scholars.

To what degree we Americans are indebted to him, no one knows who is not familiar with the history of learning and education in the last century. All the fundamental facts of popular education in physical science, beyond the merest elementary instruction, we owe to him. We are reaping daily in every school throughout this broad land, where education is the heritage even of the poorest child, the intellectual harvest sown by him. See this map of the United States;—all its important traits are based upon his investigations; for he first recognized the essential relations which unite the physical features of the globe, the laws of climate on which the whole system of insothermal lines is based, the relative height of mountain chains and tablelands, the distribution of vegetation over the whole earth. There is not a text-book of geography or a school-atlas in the hands of our children to-day which does not bear,

* An address delivered at the Centennial Anniversary of the birth of Alexander von Humboldt, under the auspices of the Boston Society of Natural History, (Sept. 14, 1869).

however blurred and defaced, the impress of his great mind. But for him our geographies would be mere enumerations of localities and statistics. He first suggested the graphic methods of representing natural phenomena which are now universally adopted. The first geological sections, the first sections across an entire continent, the first averages of climate illustrated by lines, were his. Every school-boy is familiar with his methods now, but he does not know that HUMBOLDT is his teacher. The fertilizing power of a great mind is truly wonderful; but as we travel farther from the source, it is hidden from us by the very abundance and productiveness it has caused. How few remember that the tidal lines, the present mode of registering magnetic phenomena and oceanic currents, are but the application of HUMBOLDT's researches, and of his graphic mode of recording them!

This great man was a feeble child, and had less facility in his studies than most children. For this reason his early education was intrusted to private teachers, his parents being wealthy, and of a class whose means and position command the advantages denied to so many. It is worthy of note that when he was a little fellow, not more than seven years old, his teacher was CAMPE, author of the German Robinson Crusoe. We can fancy how he amused the boy with the ever fresh story of Crusoe on his desert island, and inspired him even at that early age with the passionate love of travel and adventure which was to bear such fruit in later years. Neither should we omit, in recalling memories of his childhood, his tender relation to his older brother WILLIAM. These two brothers, so renowned in their different departments of learning,—the elder as statesman and philologist, the younger as a student of nature,—were united from their earliest years by an intimate sympathy which grew with their growth and strengthened with their strength. They went together to the University of Frankfort, the younger being then seventeen, WILLIAM nineteen. After two years at Frankfort they went to the University of Göttingen, where they passed the two following years. In these four pregnant years of student life ALEXANDER already sketched the plans which occupied his active mind for more than threescore years and ten.

The character of the German universities is so different from ours, that a word upon his student life may not be out of place here. Untrammeled by prescription and routine, every branch of learning was open to him. Instead of being led through a prescribed course of study, an absolute freedom of selection in accordance with his natural predilections was allowed him. The effect of this is felt through his whole life; there was a universality, a comprehensiveness in his culture, which could not be obtained under a less liberal system of education.

Leaving the University at the age of twenty-one, he began to make serious preparations for the great journeys toward which all his hopes tended. Nothing has impressed me more in reviewing HUMBOLDT's life, than the harmony between the aspirations of his youth and the fulfillment of his riper age. A letter to PFAFF, written in his twenty-fourth year, contains the first outline of the Cosmos; its last sheets were forwarded to the publisher in his ninetieth year, two months before his death. He had thus been an original investigator for nearly seventy years.

His first journey after leaving the University was important rather for the circumstances under which it was made than for any local interest. He went to the Rhine with GEORG FORSTER, who had accompanied COOK in his second journey round the world. He could hardly have been thrown with any one more likely to stimulate his desire to travel than this man, who had visited the South Seas, had seen the savages of the Pacific Islands, and had made valuable

contributions to geographical science. Nor was this their only point of sympathy. GEORG FORSTER was a warm republican; he had espoused the ideas of the French Revolution, and when Mayence became united to the French Republic he was sent as deputy to the National Assembly in Paris. HUMBOLDT was too ardent and too independent to be a laggard in the great public questions of the day. Like FORSTER, he also believed in the Republic of France and in the dawn of civil liberty for Europe. Thus, both in political and scientific preferences, although so different in age, he and FORSTER were sympathetic traveling companions. This excursion was by no means a pleasure trip. Young as he was, HUMBOLDT had knowledge enough to justify him in approaching the most difficult geological question of the day, namely, the origin of the Basalt. At that time the great war was waging between the Neptunists and Plutonists, —that is, between the two great schools in Geology,—one attributing the rocks to fire as the great constructive agent, the other asserting that all rocks were the result of water deposits. The young student brought to these subjects the truthfulness and patience which marked all his later investigations. Carried away neither by theories nor by leaders, he left in abeyance the problem which seemed to him not yet solved. His interest in this and kindred topics carried him to Freiberg, where he studied Geology with WERNER, and where he made acquaintance with LEOPOLD VON BUCH, who became the greatest geologist of the age, and was through life his trusted friend. He also applied himself to Anatomy and Physiology, and made physical investigations on the irritability of the muscular fiber, which he afterward extended to the electric fishes, during his American journey.

All the while he brooded over his schemes of travel, gathering materials in every direction, in order that his mind might be prepared to understand Nature in all her aspects. His desires turned especially toward India. He wished to visit the East, and, reaching India by way of Egypt, Syria, and Persia, to cross the Pacific and return to Europe through America. In this he was foiled; but to his latest day he felt the same longing for a sight of that antique ground of civilization. At this moment all Europe was in a blaze; between contending armies there was little room for peaceful travel and investigation. We find him, therefore, floating between various plans. He went to Paris with the hope of joining BAUDIN's contemplated expedition to Australia. In this he was again baffled, for the breaking out of the war between France and Austria postponed the undertaking indefinitely. His next hope was Spain; he might obtain permission to visit her Transatlantic possessions and study tropical nature under the equator. Here he was successful. The scientific discoverer of America, as the Germans like to call him, was destined to start from the same shore as CHRISTOPHER COLUMBUS. He not only received permission to visit the colonies, but special facilities for his investigations were offered him. This liberality was unexampled on the part of the Spanish government, for in those days Spain guarded her colonies with jealous exclusiveness. His enthusiasm disarmed suspicion, however, and the king cordially sustained his undertaking.

Almost ten years had passed in maturing his plans, preparing himself for their execution and obtaining the means of carrying them out. He was nearly thirty years of age when he sailed from the harbor of Corunna, running out in a dark and stormy night, and so evading the English cruisers which then blockaded the Spanish coast.

There is perhaps no part of HUMBOLDT's life better known to the public, especially in this country, than his American journey. His fascinating "Personal Narrative" is

known to all, and I need not, therefore, describe his course, or dwell upon the details of his personal experience. No period of his life, however, has had a more powerful influence upon knowledge and education than those five years of travel, and therefore I will speak at some length of their scientific results In the very glory of his youth, and yet with an intellectual maturity which belongs to later manhood, his physical activity and endurance kept pace with the fertility and comprehensiveness of his mind. Never was the old proverbial wish, "*Si jeunesse savait, si vieillesse pouvait,*" so near fulfillment; never were the strength of youth and the knowledge of age so closely combined.

At the first step of the journey, namely, his pause at the Canary Islands and ascension of the Peak of Teneriffe, he has left us a graphic picture of the place, of its volcanic phenomena, its geological character, and the distribution of its vegetation, in which are foreshadowed all his later generalizations. Landing in Cumana he made his first long station there. His explorations of the mountains, valleys, and sea-shore in that neighbborhood, his geological researches, his astronomical observations by which the exact position of various localities was determined, his meteorological investigations, and his collections of every kind, were of vast scientific importance He had already begun his studies upon averages of climate, the result of which, known as the "isothermal lines," was one of his most original contributions to science. With the intuition of genius he saw that the distribution of temperature obeyed certain laws. He collected, both from his own observation and from report, all that could be learned of the average temperature in various localities, and combining all these facts he first taught geographers how to trace upon their maps those curves which give in one undulating line the varying aspects of climate upon the whole globe. His physical experiments upon animals and plants, and his collections were also of great value. At Paris he had made the acquaintance of BONPLAND, a young botanist, equally determined with himself to see distant lands, who accompanied him in his journey to South America; and when HUMBOLDT was too exclusively engaged in physical experiments to join in the botanical researches, they were nevertheless not neglected, for BONPLAND was unremitting in the study of plants and in making collections.

After months thus spent in the neighborhood of the coast, HUMBOLDT crossed the Llanos, the great plains which divide the basin of the Orinoco from the sea shore. Here again every step of his journey is marked by original research. He has turned those desert plains into enchanted land by the power of his thought, and left us descriptions, as fascinating from their beauty as they are valuable for their novelty and precision. In his long and painful journey through the valley of the Orinoco he traced the singular network of rivers by which this great stream connects, through the Cassiquiare and the Rio Negro, with the Amazons,—a fresh-water route which is, no doubt, yet to become one of the highways of the world. Had it not been for the illiberality of the Portuguese government, he would probably have gone down the Rio Negro to the Amazons, and would perhaps have changed completely the course which he ultimately took. He was, however, turned back from the mighty river by a prohibition which made it dangerous to proceed farther on pain of imprisonment and the possible renunciation of all his cherished plans. When, in my late exploration of the Amazonian Valley, I read his narrative again, on the spot, I could not but contrast the cordial liberality which smoothed every difficulty in my path with the dangers, obstacles, and suffering which beset his. I approached, however, so near the scene of his labors that I was constantly able to compare my results

with his, and to recognize the extent of his knowledge and the comprehensiveness of his views, even where the progress of science led to a different interpretation of the facts.

I omit all notice of his visit to Cuba, and his journey through Mexico, interesting as they were, remarking only that to him we owe the first accurate maps of those regions So imperfect were those published before him, that even toward the close of the last century the position of Mexico differed by about three hundred miles in the maps published by different geographers. HUMBOLDT's is the first general map of Mexico and Cuba based upon astronomical observations.

The next great stage of the American journey is along the ridge of the Andes. There is a picturesque charm about this part of the undertaking which is irresistible. At that time traveling in those mountains was infinitely more difficult than it is now. We follow him with his train of mules, bearing the most delicate instruments, the most precious scientific apparatus, through the passes of the great chain. Measuring the mountains,—sounding the valleys as he went,—tracing the distribution of vegetation on slopes 20,000 feet high, —examining extinct and active volcanoes,—collecting and drawing animals and plants,—he brought away an incredible amount of information which has since filtered into all our scientific records, remodeled popular education, and become the common property of the civilized world. Many of these ascensions were attended with infinite danger and difficulty. He climbed Chimborazo to a height of 18,000 feet at a time when no other man had ever ascended so far above the level of the sea, and was prevented from reaching the summit by an impassable chasm, in which he nearly lost his life. When, a few years later, GAY-LUSSAC made his famous ascent in a balloon, for the sake of studying atmospheric phenomena, he rose only 1,200 feet heigher.* Returning from the Andes, HUMBOLDT skirted the Pacific from Truxillo to Acapulco, and paused in Mexico again. There he ascended all the great mountains in the neighborhood, continuing and completing the same investigations which he had pursued with such persistency through his whole laborious journey. He studied volcanic action, mines, the production of precious metals, their influence upon civilization and commerce, latitudes and longitudes, averages of climate, relative heights of mountains, distribution of vegetation, astronomical and meteorological phenomena. From Mexico he went to Havana, and from Havana sailed for Philadelphia. His stay in this country was short. He was cordially received by JEFFERSON on his visit to Washington, and warmly welcomed by scientific men in Philadelphia. But he made no important researches in the United States, and sailed for Europe soon after his arrival.

He returned to Paris in 1804, having been five years absent from Europe. It was a brilliant period in science, letters, and politics in the great capital. The Republic was still in existence; the throes of Revolution were over, and the reaction toward monarchical ideas had not yet culminated in the Empire. LAPLACE, GAY-LUSSAC, CUVIER, DESFONTAINES, DELAMBRE, OLTMANNS, FOURCROY, BERTHOLLET, BIOT, DOLOMIEU, LAMARCK, and LACÉPÈDE were leaders then in the learned world. The young traveler, bringing intellectual and material treasures even to men who had grown old in research, was welcomed by all, and in this great centre of social and intellectual life he made his home for the most part, from 1805 to 1827; from the last days of the Republic, through the rise and fall of

* The ascension of Mont Blanc by DE SAUSSURE was the only exploit of that kind on record before. Even as late as 1842 the ascent of the Jungfrau attracted some attention. Nowadays tourists may run up the highest summits of the Alps to drink the health of their friends.

the Empire, to the restoration of the Bourbons. He devoted himself to the publication of his results, and secured as his collaborators in this work the ablest men of the day. CUVIER, LATREILLE, and VALENCIENNES worked up the zoological collections, BONPLAND and KUNTH directed the publication of the botanical treasures, OLTMANNS undertook the reduction of the astronomical and barometrical observations, while he himself jointly with GAY-LUSSAC and PROVENÇAL made investigations upon the respiration of fishes and upon the chemical constitution of the atmosphere and the composition of water, which have left their mark in the annals of chemistry. While of course superintending more or less all the publications, HUMBOLDT himself was engaged especially with those upon physical geography, meteorology, and geology. The mere enumeration of the volumes resulting from this great expedition is impressive. It embraces three folio volumes of geographical, physical, and botanical maps, including scenery, antiquities, and the aboriginal races; twelve quarto volumes of letter press, three of which contain the personal narrative, two are devoted to New Spain, two to Cuba, two to zoology and comparative anatomy, two to astronomy, and one to a physical description of the tropics. The botanical results of the journey occupy not less than thirteen folio volumes, ornamented with magnificent colored plates. As all these works are in our Public Library in Boston, I would invite my hearers to a real intellectual treat and a gratification of their æsthetic tastes, in urging them to devote some leisure hour to turning over the leaves of these magnificent volumes. A walk through the hothouses of the largest botanical garden —and unfortunately we have no such on this continent—could hardly be more impressive than an examination of these beautiful plates. Add to these a special work on the position of rocks in the two hemispheres, one on the isothermal lines, his innumerable smaller papers, and lastly, five volumes on the history of geography and the progress of nautical astronomy during the fifteenth and sixteenth centuries, more or less directly connected with HUMBOLDT's own journey, though published in later years. His investigations into the history of the discovery of America have a special interest for us. We learn from him that the name of our continent was first introduced into the learned world by WALTZEEMÜLLER, a German professor, settled at St. Didié, in Lorraine,—HYLACOMYLUS, as he called himself at a time when scholars were wont to translate their names into the dead languages, and thought it more dignified to appear under a Greek or Latin garb. This cosmographer published the first map of the New World, with an account of the journeys of AMERICUS VESPUCCI, whose name he affixed to the lands recently discovered. HUMBOLDT shows us, also, that COLUMBUS's discovery was no accident, but grew naturally out of the speculations of the time, themselves the echo of a far-off dream, which he follows back into the dimness of Grecian antiquity. We recognize again here the characteristic features of HUMBOLDT's mind, in his constant endeavor to trace discoveries through all the stages of their progress.

Although he made his head-quarters in Paris, it became necessary for HUMBOLDT, during the preparation of so many extensive works, to undertake journeys in various parts of Europe; to examine and re-examine Vesuvius, and compare its mode of action, its geological constitution, and the phenomena of its eruptions with what he had seen of the volcanoes of South America. On one of these occasions he ascended Vesuvius in company with GAY-LUSSAC and LEOPOLD VON BUCH. That single excursion, undertaken by such men, was fruitful in valuable additions to knowledge. At other times he went to consult rare books in the great libraries of Germany and England, or to discuss with

his brother in Berlin, or with trusted friends in other parts of Europe, the work in which he was engaged, comparing notes, assisting at new experiments, suggesting further inquiries, ever active, ever inventive, ever suggestive, ever fertile in resource, —neither disturbed by the great political commotions which he witnessed, nor tempted from his engrossing labors by the most brilliant offers of public service or exalted position. It was during one of his first visits to Berlin, where he went to consult about the organization of the University with his brother WILLIAM, then Minister of State in Prussia, that he published those fascinating "Views of Nature," in which he has given pictures of the tropics as vivid and as exciting to the imagination as if they lived on the canvas of some great artist.

The question naturally arises, Who provided for the expenses of these extensive literary undertakings? HUMBOLDT himself. No one knows exactly what he spent in the publication of his works. Some approach to an estimate may, however, be made by computing the cost of printing, paper, and engraving, which cannot have amounted to less than two hundred and fifty thousand dollars. No doubt the sale indemnified him in some degree, but all know that such publications do not pay. The price of a single copy of the complete work on America is two thousand dollars,—double that of the great national work published by France upon Egypt, for the publication of which the government spent about eight hundred thousand dollars. Of course very few copies can be sold of a work of this magnitude. But from his youth upward HUMBOLDT spent his private means liberally, not only for the carrying out and subsequent publication of his own scientific undertakings, but to forward the work of younger and poorer men. The consequence was that in old age he lived upon a small pension granted to him by the King of Prussia.

His many-sideness was remarkable. He touched life at all points. He was the friend of artists, no less than of scientific and literary men. His desire to make his illustrations worthy of the great objects they were to represent brought him into constant and intimate relation with the draughtsmen and painters of his day. Even DAVID did not think it below his dignity to draw an allegoric title-page for the great work. He valued equally the society of intelligent and cultivated women, such as Madame DE STAEL, Madame RÈCAMIER, RAHEL, BETTINA, and many others less known to fame. He was intimate with statesmen, politicians, and men of the world. Indeed, the familiarity of HUMBOLDT with the natural resources of the countries he had visited,—with their mineral products and precious metals,—made his opinion valuable not only in matters of commerce, but important also to the governments of Europe; and after the colonies of South America had achieved their independence, the allied powers of Europe invited him to make a report upon the political condition of the new republics. In 1822 he attended the Congress of Verona, and visited the South of Italy with the King of Prussia. Thus his life was associated with the political growth and independence of the New World, as it was intimately allied with the literary, scientific, and artistic interests of the Old. He never, however, took an active part in politics at home, and yet all Germany looked upon him as identified with the aspirations of the liberal party, of which his brother WILLIAM was the most prominent representative.

Before closing this period of HUMBOLDT's life I would add a few words more in detail upon the works published by him after his return from South America. One of the first fruits in the rich harvest reaped from this expedition was the successful attempt to which I have already alluded at representing graphically the physical features of that continent. Thus far such representations

had mainly consisted in maps and the delineation of the characteristic plants and animals. HUMBOLDT devised a new method, equally impressive to the eye and comprehensive in its outlines. Impressed by the fact that vegetation changes its character as it ascends upon the side of high mountains,—thus presenting successive terraces upon their slopes,—he conceived the idea, already suggested by his examination of the Peak of Teneriffe, of drawing upon the outline of a conical mountain the different aspects of its surface from the level of the sea to its highest peak. Thus he could exhibit at a glance all the successive zones of vegetation. Afterward he extended these comparisons to the temperate and arctic zones, and ascertained that, as we proceed further north, the gradation of the vegetation, at the level of the ocean, corresponds to its succession upon mountain slopes,—until, toward the Arctics, it assumes a remarkable resemblance to the plants found near the line of perpetual snows under the Tropics. But this is not all. The intervening expanse from North to South, as far as the equator, and then in reverse order to the Antarctic regions, also exhibits, in proportion to the elevation of the land, a vegetation characterized by intermediate forms.

In the same way he reproduced the general appearance of the inequalities of the earth's surface by drawing ideal sections across the regions described. In the first place, through Spain, afterward from La Guayra to Caraccas across the Cumbre, from Cartagena to Santa Fé de Bogotà, and finally through the whole continent of America, from Acapulco to Vera Cruz. And this not by mere approximations, but founding his profiles upon his own barometric and astronomical observations, which he multiplied to such an extent that his works are to this day the chief source of information concerning the physical geography of the regions visited by him.

Not satisfied with this, he undertook to represent, in like manner, the internal structure of the earth, drawing similar charts upon which the relative position of the rocks, with signs to indicate their mineralogical character, is faithfully portrayed. The first chart of this kind was drawn by him in Mexico in 1804, and presented to the School of Mines of that city. It was afterward published in the Atlas of the American Journey.—We are thus indebted to him for the whole of that graphic method which has made it possible to delineate, in visible outlines, the true characteristics of physical phenomena; for afterward this method was applied to the representation of the oceanic currents, the direction of the prevalent winds, the tidal waves, the rise and fall of our lakes and rivers, the amount of rain falling upon different parts of the earth's surface, the magnetic phenomena, the lines of equal average temperature, the relative height of our plains, table-lands and mountain chains, their internal structure, and the distribution of plants and animals. Even the characteristic features of the History of Mankind are now tabulated in the same way upon our ethnographical maps, in which the distribution of the races, the highways of navigation and commerce, the difference among men as to language, culture, creeds, nay, even the records of our census, the estimates of the wealth of nations, down to the statistics of agriculture and the averages of virtue and vice, are represented. In short, every branch of mental activity has been vivified by this process, and has undergone an entire transformation under its influence.

His paper upon the isothermal lines was published in the "*Mémoires de la Société d'Arcueil*," a scientific club to which, in the beginning of this century, the most eminent men of the age belonged. Though a mere sketch, the first delineation of the curves uniting different points of the earth's surface which possess the same average annual temperature under varying latitudes, exhibits already

the characteristic features of these lines, which myriads of observations of a later date have only confirmed. No other series of investigations shows, more plainly than this, to what accurate results an observer may arrive, who understands how to weigh critically the meaning of his facts however few they may be.

The barometrical and astronomical observations upon which his numerous maps are based were computed and reduced to their final form by his friend OLTMANNS. They fill two large quarto volumes, and amount to the accurate determination of nearly one thousand localities. They are not taken at random, but embrace points of the highest importance, with reference to the geographical distribution of plants and animals and the range of agricultural products. HUMBOLDT has himself added an introduction to this work in which he gives an account of the instruments used in his observations and the methods pursued by him in his experiments, and discusses the astronomical refractions in the torrid zone.

Thus the physical geography of our days is based upon HUMBOLDT'S investigations. He is, indeed, the founder of Comparative Geography, that all-embracing science of our globe, unfolded with a master hand by KARL RITTER, and which has now its ablest representative in our own GUYOT. His correspondence with BERGHAUS testifies his intense interest in the progress of geographical knowledge. To HUMBOLDT this world of ours is indeed not only the abode of man, it is a growth in the history of the Universe, shaped according to laws, by a long process of successive changes, which have resulted in its present configuration with its mutually dependent features. The work upon the Position of Rocks in the two hemisphere tells the history of that growth as it could be told in 1823, and is of course full of gross anachronisms; but at the same time it exhibits the wonderful power of generalization and combination which HUMBOLDT possessed,—as, for instance, where he says in few beautiful words, fertile in consequences not yet fully appreciated by the naturalists of our day: "When we examine the solid mass of our planet, we perceive that the simple minerals are found in associations which are everywhere the same, and that the rocks do not vary, as organized beings do, according to the differences of latitude or the isothermal lines under which they occur"; thus contrasting in one single phrase the whole organic world with the inorganic in their essential character. In practical geology we owe to him the first recognition of the Jurassic formation. It was he who introduced into our science those happy expressions, "geological horizon" and "independence of geological formations." He also paved the way for ELIE DE BEAUMONT'S determination of the relative age of mountain chains by his discussion upon the direction of stratified rocks and by the parallels he drew between the age of plutonic and sedimentary formations; nor had it escaped him that distant floræ and faunæ, though of the same age, may be entirely different.

The collection of zoological and anatomical papers, in two quarto volumes, with numerous colored plates, is full of valuable contributions to the Natural History of Animals, from his own pen, as well as that of his collaborators. The most remarkable are his description of the Condor, which must have delighted the French zoologists, who could not fail to compare it with the glowing pages of their own BUFFON; his Synopsis of the South American Monkeys, rivalling the works of AUDEBERT and GEOFFROY ST.-HILAIRE; his account of the Electric Eel and the Catfish thrown out by the burning volcanoes of the Andes, contrasted with the Great Natural History of Fishes by LACÉPEDE; his paper on the respiration of Crocodiles and the larynx of Birds and Crocodiles, daring upon his own ground the greatest anatomist of the age, the immortal CUVIER. In-

deed, it must have created a profound sensation in the learned world when a naturalist, all whose previous publications related to physical subjects, suddenly came forward as a master among masters in the treatment of zoological and anatomical questions.

The botanical works appeared under several titles. We have first the "Plantes Équinoxiales" in two folio volumes, with 140 plates, by BONPLAND; the monograph of the Mélastomacées and that of the Rhéxiées, in two folio volumes, with 120 plates, also by BONPLAND; then the Mimosées by KUNTH, in one folio volume, with 60 plates; the revision of the Graminées, in one folio volume, with 220 plates, by KUNTH; and finally the "*Nova Genera et Species Plantarum*" by KUNTH, in seven folio volumes, with 700 plates. Altogether thirteen folio volumes, with 1240 plates, most of which are beautifully colored, and remain unsurpassed for fidelity of description and fullness of illustration. Though the descriptive part of these splendid volumes is from the pen of his fellow-traveler BONPLAND, and his younger friend KUNTH, it would be a mistake to suppose that HUMBOLDT had no share in their preparation. Not only did he assiduously collect specimens during the journey, but it was he who made, on the spot, from the living plant, drawings and analyses of the most remarkable and characteristic trees; the general aspect of which could not be preserved in the specimens gathered for the herbarium. Besides this there are entire chapters concerning the geographical distribution of the most remarkable families of plants, their properties, their uses, etc., entirely written by HUMBOLDT himself. It was he, also, who for the first time divided the areas of the regions he had explored into botanical provinces, according to their natural physical features; thus distinguishing the Flora of New Andalusia and Venezuela from that of the Orinoco basin, that of New Granada, that of Quito, that of the Peruvian Andes, and those of Mexico and Cuba. It was he, also, who first showed that the whole Vegetable Kingdom contains, after all, but a few distinct types, which characterize the vegetable carpet of the earth's surface, in different parts of the world under different latitudes and at different heights. He closes one of these expositions with a few words, which I cannot pass by without quoting. "Such investigations," he says, "afford an intellectual enjoyment and foster a moral strength which fortify us against misfortunes, and which no human power can overcome."

In 1827, at the urgent solicitation of his brother, HUMBOLDT transferred his residence from Paris to Berlin. With this step there opens a new phase in his life. Thus far he had been absolutely independent of public or official position. Conducting his researches as a private individual, if he appeared before the public at all, it was only in reading his papers to learned Academies. Now he began to lecture in the University. In his first course, consisting of sixty-one lectures, he sketched the physical history of the world in its broadest outlines,—it was, in truth, the programme of the Cosmos. Since I shall give an analysis of this work in its fitting place, I will say nothing of the lectures here, except that as a teacher, he combined immense knowledge with simplicity of expression, avoiding all technicalities not absolutely essential to the subject.

In the midst of his lectures there came to him an invitation from the Russian government to visit the Russian provinces of Asia. Nothing could be more gratifying to a scientific man than the terms in which this proposition was made. It was expressly stipulated by the Emperor that he wished the material advantages which might accrue from the expedition to be a secondary consideration. HUMBOLDT was to make scientific research and the advancement of knowledge his first aim, and

he might turn his steps in whatever direction he chose. Never before had any government organized an expedition with so little regard to purely utilitarian considerations.

This second great journey of HUMBOLDT is connected with a hope and disappointment of my own. I was then a student in Munich. That University had opened under the most brilliant auspices. Almost every name on the list of professors was also prominent in some department of science or literature. They were not men who taught from text-books or even read lectures made from extracts of original works. They were themselves original investigators, daily contributing to the sum of human knowledge. MARTIUS, OKEN, DÖLLINGER, SCHELLING, FR. VON BAADER, WAGLER, ZUCCARINI, FUCHS, VOGEL, VON KOBELL, were our teachers. And they were not only our teachers but our friends. The best spirit prevailed among the professors and students. We were often the companions of their walks, often present at their discussions, and when we met for conversation or to give lectures among ourselves, as we constantly did, our professors were often among our listeners, cheering and stimulating us in all our efforts after independent research.

My room was our meeting-place,—bedroom, study, museum, library, lecture-room, fencing room,—all in one. Students and professors used to call it the little Academy. Here SCHIMPER and BRAUN for the first time discussed the laws of phyllotaxis, that marvelous rhythmical arrangement of the leaves in plants which our great mathematician in Cambridge has found to agree with the periods of the rotation of our planet. Among their listeners were Professors MARTIUS and ZUCCARINI; and even ROBERT BROWN, while in Munich, during a journey through Germany, sought the acquaintance of these young botanists Here for the first time did MICHAHELLES lay before us the results of his exploration of the Adriatic and adjoining regions. Here BORN exhibited his wonderful preparations of the anatomy of the Lamper-Eel. Here RUDOLPHI made us acquainted with his exploration of the Bavarian Alps and the shores of the Baltic. These my fellow-students in Munich were a bright, promising set,—boys then in age, many of whom did not live to make their names famous in the annals of science. It was in our little Academy that DÖLLINGER, the great master in physiology and embryology, showed to us, his students, before he had even given them to the scientific world, his wonderful preparations exhibiting the vessels of the villosities of the alimentary canal; and here he taught us the use of the microscope in embryological investigation. And here also the great German anatomist, MECKEL, came to see my collection of fish skeletons, of which he had heard from DÖLLINGER. Such associations, of course, made us acquainted with everything of importance which was going on in the scientific world. The preparations of HUMBOLDT for his Asiatic journey excited our deepest interest, and I was filled with a passionate desire to accompany the expedition as an assistant.

General LA HARPE, then residing in Lausanne, who had been the preceptor of both the Emperors ALEXANDER and NICHOLAS of Russia, and who knew HUMBOLDT personally, was a friend of my family, and he wrote to HUMBOLDT in my behalf, asking that I might join the expedition as an assistant. But it was not to be. The preparations for the journey were already made, and EHRENBERG and GUSTAV ROSE, then professors at the University of Berlin, were to be his traveling companions. I should not mention the incident here, but that, slight as it was, it marks the beginning of my personal relation with HUMBOLDT.

The incidents of HUMBOLDT's Asiatic journey are less known to the public at large than those of his longer

American ramblings. Short as it was, however,—for he was absent only nine months,—he brought to the undertaking such an amount of collateral knowledge, that its scientific results are of the utmost importance, and may be considered as the culmination of his mature research and comprehensiveness of views. His success was insured also by the ample preparations of the Russian government, orders having been given along the whole route to grant him every facility. Descending the Volga to Kasan, and hence crossing to Ikaterinenburg over the Ural Mountains, he passed through Tobolsk on the Irtish, to Barnaul on the Obi, and reached the Altai Mountains on the borders of China, thus penetrating into the heart of Asia. His researches into the physical constitution of what was considered the high table-land of Asia revealed the true features of that vast range of mountains. Touched by his cultivated genius, the most insignificant facts became fruitful, and gave him at once a clew to the real character of the land. The presence of fruit-trees and other plants, belonging to families not known to occur in elevated regions, led him to distrust the existence of an unbroken, high, cold table-land, extending over the whole of Central Asia, and by a diligent comparison of all existing documents on the subject, combined with his own observations, he showed that four great parallel mountain ridges, separated by gradually higher and higher level grounds, extend in an east-westerly direction. First, the Altai, bordering on the plains of Siberia, from the northern slope of which descend all the great rivers flowing into the Arctic Ocean,—as the Irtish with the Obi, the Jenisei and the Lena; then the Thian-Shan, south of the plateau of Soongaria; next, the Kuenlun, south of the plateau of Tartary; finally, the Himalaya range, separating the plateau of Thibet from the plains of the Ganges. He showed also the connection of the Himalaya Mountains through the Hindoo-koo and the Demavend with the far-off range of the Caucasus. These east-westerly ranges, giving form and character to the continent of Asia, are then contrasted with the north-southerly direction of the Ghauts, the Soliman and Bolor range, and the Ural Mountains which divide Europe from Asia. Approaching the great highways, over which the caravans of the East, from Delhi and Lahore, reach the northern marts of Samarcand, Bokhara, and Orenburg, he opens to us the most striking vistas of the early communication between the Aryan civilization and the Western lands lying then in the darkness of savage life. He inquired also into the course of the old Oxus, and the former channels between Lake Aral and the Caspian Sea. The level of that great inland salt lake, about two or three hundred feet lower than the surface of the sea, suggested to him its former communication with the Arctic Ocean, when the Steppes of the Kirghis formed an open gulf and the northern waters poured over those extensive plains. After examining the German settlements about the Caspian Sea, he returned to St. Petersburg by way of Orenburg and Moscow.

The scientific results of this journey are recorded in two separate works, the first of which, under the title of "Asiatic Fragments of Climatology and Geology," is chiefly devoted to an account of the inland volcanoes which he had had an opportunity of studying during this journey. He had now examined the volcanic phenomena upon three continents, and had gained an insight more penetrating and more comprehensive than was possessed by any other geologist into their deep connection with all the changes our globe has undergone. Volcanoes were no longer to him mere local manifestations of a limited focus of eruption; he perceived their relation to earthquakes and to all the phenomena coincident with the formation of the inequalities of the earth's surface.

The contrast between the Siberian winter and the great fertility of the neighborhood of Astracan, where he found the finest vineyards he had ever seen, led him to consider anew the causes of the irregularities of temperature under corresponding latitudes, and thus to enlarge his knowledge of the isothermal lines, which he had first sketched in his younger years, and the rationale of which he now clearly set forth. In one comprehensive view he showed the connection between the rotation of the earth, the radiation of its surface, the currents of the ocean, and especially among the latter the Gulf Stream, in their combined influence upon conditions of temperature, producing under identical latitudes such contrasts of climate as exist between Boston, Madrid, Naples, Constantinople, Tiflis on the Caucasus, Hakodadi in Japan, and that part of our own coast in California, where stands the city which bears his own venerated name.

The second work relating to the Asiatic journey appeared under the title of "Central Asia," being an account of his researches into the mountain systems and the climate of that continent. The broadest generalizations relating to the physics of the globe, showing HUMBOLDT's wonderful familiarity with all its external features, are here introduced in a short paper upon the average elevation of the continents above the level of the sea, as compared with the average depths of the ocean. LAPLACE, the great geometer, had already considered the subject; but HUMBOLDT brought to the discussion an amount of facts which showed conclusively that the purely mathematical consideration of the inquiry, as handled by LAPLACE, had been premature. Taking separately into consideration the space occupied upon the earth's surface by mountain ridges with that occupied by high table-lands, and the far more extensive tracts of low plains, HUMBOLDT showed that the average elevation of the earth, estimated by LAPLACE at more than one thousand metres, could in fact be scarcely one third that amount,—a great deal less, indeed, than the average depth of the sea.

In 1830, after his return to Berlin, he was chosen as the fitting messenger from one great nation to another. The Restoration which followed the downfall of NAPOLEON had been overturned by the July revolution, and HUMBOLDT who had lived through the glory of the Republic and the most brilliant days of the Empire was appointed by the King of Prussia to carry an official greeting to LOUIS PHILIPPE and the new dynasty. He had indeed the most friendly relations with the ORLEANS family, and was, from private as well as public considerations, a suitable ambassador on this occasion.

Paris had greatly changed since his return from his first great journey. Many of those who had made the glory of the Academy of Sciences, in the beginning of the century, had passed away, and a new generation had come up. ELIE DE BEAUMONT, DUFRENOY, the younger BRONGNIART, ADRIEN DE JUSSIEU, ISIDORE GEOFFROY, MILNE EDWARDS, AUDOUIN, FLOURENS, GUILLEMAIN, POUILLET, DUPERREY, BABINET, DECAISNE, and others, had risen to distinction, while the older AMPÈRE, the older BRONGNIART, VALENCIENNES, DE BLAINNILLE, ARAGO and GEOFFROY ST.-HILAIRE, had come forward as leaders in science. CUVIER, just the age of HUMBOLDT himself, was still active and ardent in research. His salon, frequented by statesmen, scholars, and artists, was, at the same time, the gathering-place of all the most original thinkers in Paris; and the pleasure of those delightful meetings was unclouded, for none dreamed how soon they were to end forever,—how soon that bright and vivid mind was to pass away from among us.

In those days a fierce discussion was carried on before the Academy as well as in public lectures. GOETHE

had declared the unity of structure in the bony frame of all the Vertebrates, and had laid the foundation of the morphology of plants. These new views had awakened the interests and passions of the whole world of science to a degree hitherto unknown in her peaceful halls. CUVIER, strange to say, had taken ground in opposition to GOETHE'S views upon the Vertebrate type, while GEOFFROY ST.-HILAIRE, a devoted adherent of GOETHE'S ideas, had expressed his convictions in words not always courteous toward CUVIER. The latter had retorted with an overwhelming display of special knowledge, under which the brilliant generalizations of ST.-HILAIRE seemed to be crushed. CUVIER was then giving a course of lectures in the Collége de France on the history of science, into which he wove with passionate animation his objections to the new doctrine. HUMBOLDT attended these lectures regularly, and I had frequently the pleasure of sitting by his side and being the recipient of his passing criticism. While he was impressed by the objections of the master-anatomist, he could not conceal his sympathy for the conception of the great poet, his countryman. Seeing more clearly than CUVIER himself the logic of his investigations, in whispered comments during the lectures, he constantly declared that whatever deficiencies the doctrine of unity might still contain, it must be essentially true, and CUVIER ought to be its expounder instead of its opponent. The great French naturalist did not live to complete these lectures, but the view expressed by his friend was prophetic. CUVIER'S own researches, especially those bearing upon the characteristics of the four different plans of structure of the animal kingdom, have helped to prove, in his own despite, though in a modified form, the truth of the doctrine he so bitterly opposed.

The life which HUMBOLDT now led was less exclusively that of a student than it had been during his former Paris life. He was the ambassador of a foreign court. His official position and his rank in society, as well as his great celebrity, made him everywhere a cherished guest, and HUMBOLDT had the gift of making himself ubiquitous. He was as familiar with the gossip of the fashionable and dramatic world as with the higher walks of life and the abstruse researches of science. He had at this time two residences in Paris,—his lodging at the hotel des Princes, where he saw the great world, and his working-room in the Rue de la Harpe, where he received with less formality his scientific friends. It is with the latter place I associate him; for there it was my privilege to visit him frequently. There he gave me leave to come to talk with him about my work and consult him in my difficulties. I am unwilling to speak of myself on this occasion, and yet I do not know how else I can do justice to one of the most beautiful sides of HUMBOLDT'S character. His sympathy for all young students of nature was one of the noblest traits of his long life. It may truly be said that toward the close of his career there was hardly one prominent or aspiring scientific man in the world who was not under some obligation to him. His sympathy touched not only the work of those in whom he was interested, but extended also to their material wants and embarrassments. At this period I was twenty-four; he was sixty-two. I had recently taken my degree as Doctor of Medicine, and was struggling not only for a scientific position, but for the means of existence also. I have said that he gave me permission to come as often as I pleased to his room, opening to me freely the inestimable advantages which intercourse with such a man gave to a young investigator like myself. But he did far more than this. Occupied and surrounded as he was, he sought me out in my own lodging. The first visit he paid me at my narrow quarters in the Quartier Latin, where I occupied a small room in the hotel du Jardin des Plantes, was

characteristic of the man. After a cordial greeting, he walked straight to what was then my library,—a small book shelf containing a few classics, the meanest editions bought for a trifle along the quays, some works on philosophy and history, chemistry and physics, his own Views of Nature, ARISTOTLE's Zoology, LINNÆUS's Systema Naturæ, in several editions, CURVIER's Règne Animal, and quite a number of manuscript quartos, copies which, with the assistance of my brother, I had made of works I was too poor to buy, though they cost but a few francs a volume. Most conspicuous of all were twelve volumes of the new German Cyclopædia presented to me by the publisher. I shall never forget, after his look of mingled interest and surprise at my little collection, his half sarcastic question as he pounced upon the great Encyclopædia,—"*Was machen Sie denn mit dieser Eselsbrücke?*" What are you doing with this *ass's bridge?*—the somewhat contemptuous name given in Germany to similar compilations. "I have not had time," I said, "to study the original sources of learning, and I need a prompt and easy answer to a thousand questions I have as yet no other means of solving."

It was no doubt apparent to him that I was not over familiar with the good things of this world, for I shortly afterward received an invitation to meet him at six o'clock in the Galerie vitrée of the Palais Royal, whence he led me into one of those restaurants, the tempting windows of which I had occasionally passed by. When we were seated, he half laughingly, half inquiringly asked me whether I would order the dinner. I declined the invitation, saying that we should fare better if he would take the trouble. And for three hours, which passed like a dream, I had him all to myself. How he examined me, and how much I learned in that short time! How to work, what to do, and what to avoid; how to live; how to distribute my time; what methods of study to pursue,—these were the things of which he talked to me on that delightful evening. I do not mention this trivial incident without feeling that it may seem too familiar for the occasion; nor should I give it at all, except that it shows the sweetness and kindliness of HUMBOLDT's nature. It was not enough for him to cheer and stimulate the student; he cared also to give a rare indulgence to a young man who could allow himself few luxuries.

The last period of his life was spent in Berlin, and while there to the end of his long and laborious career he was engaged with the publication of his Cosmos, and also in editing the great work, on the Kavi language, left by his brother WILLIAM, who died in 1835. Besides these important undertakings, he was unceasingly engaged in fostering magnetic observations and the establishment of magnetic observatories. He likewise felt a lively interest in the proposed interoceanic Canal between the Atlantic and Pacific Oceans, the lines for which he had carefully considered in earlier years. Surrounded by loving and admiring friends, covered with honors and distinctions, these days were rich in peaceful enjoyment.

One of the most prominent features of HUMBOLDT's mind, as philosopher and student of nature, consists in the keenness with which he perceives the most remote relations of the phenomena under consideration, and the felicity with which he combines his facts so as to draw the most comprehensive pictures. This faculty is more particularly exhibited in the Cosmos, the crowning effort of his mature life. With a grasp transcending the most profound generalizations of the philosophers of all ages, he draws at first in broad outlines a sketch of the whole Universe. With an eye sharpened by the most improved instruments of the Observatory, and exalted by the experience of all his predecessors, he penetrates into the remotest recesses of space, to seek for the faintest ray of light that may

furnish any information concerning the expanse of the heavenly vault and the age of the celestial bodies. He thus makes the rapidity with which light is propagated a measure of the distance which separates the visible parts of the whole system from one another, as well as a means of approximately estimating the duration of their existence. He next considers the various appearances of the celestial bodies, the different kinds of nebulæ, their form and relations to one another and to the so-called fixed stars; describes in graphic and fascinating language the landscape-like loveliness of their combinations in the Milky-Way and the various constellations; discusses the nature of the doublestars, and, gradually approaching our own system by a comparison of our sun to other suns, rises, by a sublime effort of the imagination, to a conception of the form of their united systems in space. In the description of our solar system one might have expected an exposition similar to the methods adopted by astronomers; but the object of our great physicist is not to write a synopsis of Astronomy. He plunges without hesitation into the earliest history of the formation of our earth, the better to illustrate the relations to one another of the sun and the planets with their satellites, the comets, and the hosts of meteors of all kinds which come flashing, like luminous showers, through the atmosphere. Our globe is reviewed in its turn. First, its structure, the density of its mass, in the estimation of which the oscillations of the pendulum become a plummet-line with which to fathom the inapproachable deep; then the volcanoes are made to reveal the everlasting conflict between the interior caldrons of melted materials and the consolidation of the ruffled surface; the distribution of heat and light, the climates, as depending upon the inequalities of form and relief, the currents of the ocean, as modifying the temperature, the magnetic phenomena, the aurora borealis, the shooting stars, etc., are discussed in turn. The changes which our globe has undergone in the course of ages are next described: how the lands gradually rose above the level of the sea: how they first formed disconnected archipelagos; how mountains grew up in succession, and their relative age; the form and extent of successively larger continental islands, their plants and animals;—nothing escaped his attention; everything is represented in its true place and relation to the whole. Especially attractive are his delineations of the distribution of plants and animals upon the present surface of the earth, of which an account has already been given.

This mode of treating his subjects, emphatically his own, has led many specialists to underrate HUMBOLDT's familiarity with different branches of science; as if knowledge could only be recorded in pedantic forms and a set phraseology.

But HUMBOLDT is not only an observer, not only a physicist, a geographer, a geologist of matchless power and erudition, he knows that nature has its attraction for the soul of man; that, however uncultivated, man is impressed by the great phenomena amid which he lives; that he is dependent for his comforts and the progress of civilization upon the world that surrounds him. This leads to an appreciative analysis of the enjoyment derived from the contemplation of nature, and to considerations of the highest order respecting the influence which natural highways have had upon the races of men, in their distribution upon the whole surface of the globe.

In speaking of his later days I can not omit some allusion to a painful fact connected with his residence at Berlin. The publication of a private correspondence between VARNHAGEN VON ENSE and HUMBOLDT has led to many unfriendly criticisms upon the latter. He has been blamed for holding his place at court, while, in private, he criticised and even satirized severely everything connected with

it. It is not easy to place one's self in the right point of view with reference to these confidential letters. It must be remembered that HUMBOLDT was a Republican at heart. His most intimate friends, from FORSTER, in his early youth, to ARAGO, in his mature years, were ardent Republicans. He shared their enthusiasm for the establishment of self-government among men. An anecdote preserved to us by LIEBER shows that he did not conceal his sympathies, even before the King who honored him so highly. LIEBER, who was present at the conversation, gives the following account of it: "The King of Prussia, HUMBOLDT, and NIEBUHR were talking of the affairs of the day, and the latter spoke in no flattering terms of the political views and antecedents of ARAGO, who, it is well-known, was a very advanced Republican of the Gallican School, an uncomprimising French democrat. FREDERIC WILLIAM the Third simply abominated Republicanism; yet when NIEBUHR had finished, HUMBOLDT said with a sweetness which I vividly remember: "Still this monster is the dearest friend I have in France."

Can we, therefore, be surprised, that in his confidential letters to a sympathizing friend, he should not refrain from expressing his dislike of the petty intrigues and low sentiments which he met among courtiers. I received, myself, a letter from HUMBOLDT, written in the days when the reactionary movements were at their height in Prussia, in which, in a strain of deep sadness and despondency, he expresses his regret at the turn political affairs had taken in Europe, and his disappointment at the failure of those aspirations for freedom with which he had felt the deepest sympathy in his youth. We may wish that this great man had been wholly consistent, that no shadow had rested upon the loyalty of his character, that he had not accepted the friendship and affection of a King whose court he did not respect and whose weaknesses he keenly felt. But let us remember that his official station there gave him the means of influencing culture and education in his native country in a way which he could not otherwise have done, and that in this respect he made the noblest use of his position. His sympathy with the oppressed in every land was profound. We see it in his feeling for the aborigines in South America, in his abhorrence of slavery. I believe that he would have experienced one of the purest and deepest joys of his life had he lived to hear of the abolition of slavery in the United States. His dislike of all subserviency and flattery, whether toward himself or others, was always openly expressed, and was unquestionably genuine.

The philosophical views of HUMBOLDT, his position with reference to the gravest and most important questions concerning man's destiny, and the origin of all things, have been often discussed, and the most opposite opinions have been expressed respecting them by men who seem equally competent to appreciate the meaning of his writings. The modern school of Atheists claims him as their leader; as such we find him represented by BURMEISTER in his scientific letters. Others bring forward his sympathy with Christian culture as evidence of his adherence to Christianity in his broadest sense. It is difficult to find in HUMBOLDT's own writings any clew to the exact nature of his convictions. He had too great regard for truth, and he knew too well the Aryan origin of the traditions collected by the Jews, to give his countenance to any creed based upon them Indeed, it was one of his aims to free our civilization from the pressure of Jewish tradition; but it is impossible to become familiar with his writings without feeling that, if HUMBOLDT was not a believer, he was no scoffer. A reverential spirit for everything great and good breaths through all his pages. Like a true philosopher, he knew that the time had not yet come for a scientific investigation in-

to the origin of all things. Before he attempted to discuss the direct action of a Creator in bringing about the present condition of the Universe, he knew that the physical laws which govern the material world must be first understood; that it would be a mistake to ascribe to the agency of a Supreme Power occurrences and phenomena which could be deduced from the continued agency of natural causes. Until some limit to the action of these causes has been found, there is no place, in a scientfic discussion, as such, for the consideration of the intervention of a Creator.

In the closing paragraph of the first volume of the Cosmos HUMBOLDT distinctly objects to the consideration of the sphere of intelligence in connection with the study of Nature. But the time is fast approaching, and indeed some daring thinkers have actually entered upon the question, —Where is the line between the inevitable action of law and the intervention of a higher power? where is the limit? And here we find the most opposite views propounded. There are those who affirm that, inasmuch as force and matter are found to be a sufficient ground for so many physical phenomena, we are justified in assuming that the whole universe, including organic life, has no further origin. To these, I venture to say, HUMBOLDT did not belong. He had too logical a mind to assume that an harmoniously combined whole could be the result of accidental occurrences. In the few instances where, in his works, he uses the name of God, it appears plainly that he believes in a Creator as a lawgiver and primary originator of all things. There are two passages in his writings especially significant in this respect. In the second volume of the Cosmos, when speaking of the impression man receives from the contemplation of the physical world, he calls nature God's majestic realm,—"*Gottes erhabenes Reich.*" In his allusion to the fearful catastrophe of Carracas, destroyed by an earthquake in 1812, the critical inquirer may even infer that HUMBOLDT believed in a special Providence. For he says with much feeling: "Our friends are no more, the house we lived in is a pile of ruins; the city I have described no longer exists. The day had been very hot, the air was calm, the sky without a cloud. It was Holy Thursday; the people were mostly assembled in the churches. Nothing seemed to foreshadow the threatening misfortune. Suddenly, at four o'clock in the afternoon, the bells which were struck mute that day began to toll. It was the hand of God, and not the hand of man, which rang that funeral dirge." In his own words: "*Es war Gottes, nicht Menschenhand, die hier zum Grabgeläute zwang.*"

One word more before I close. I have appeared before you as the representative of the Boston Natural History Society. It was their proposition to celebrate this memorable anniversary. I feel grateful for their invitation, for the honor they have done me. I feel still more grateful for the generous impulse which has prompted them to connect a HUMBOLDT scholarship, as a memorial of this occasion, with the Museum of Comparative Zoology at Cambridge. I trust this token of good-will may only be another expression of that emulation for progress which I earnestly hope may forever be the only rivarly between these kindred institutions and their younger sister in Salem. We have all a great task to perform. It should be our effort, as far as it lies in our power, to raise the standard of culture of our people, as HUMBOLDT has elevated that of the world. May the community at large feel with equal keenness the importance of each step now taken for the expansion, in every direction, of all the means of the highest culture. The physical suffering of humanity, the wants of the poor, the craving of the hungry and naked, appeal to the sympathy of every one who has a human heart. But there are necessities which only the destitute stu-

dent knows; there is a hunger and thirst which only the highest charity can understand and relieve, and on this solemn occasion let me say that every dollar given for higher education, in whatever special department of knowledge, is likely to have a greater influence upon the future character of our nation than even the thousands and hundreds of thousands and millions which have already been spent and are daily spending to raise the many to material ease and comfort.

In the hope of this coming golden age, let us rejoice together that HUMBOLDT's name will be permanently connected with education and learning in this country, with the prospects and institutions of which he felt so deep and so affectionate a sympathy.

At the Evening Reception which followed the Memorial Address, Professor FREDERIC H. HEDGE, of Harvard University, spoke as follows:

Mr. CHAIRMAN—It is hard gleaning in a field in which AGASSIZ has been with his sickle. But since you call upon me, I will say that the thing which most impressed me, as I listened to the discourse this afternoon, was the psychological marvel of such a nature as HUMBOLDT's and the illustration it affords of the capabilities of the human mind. Here was a man whose inappeasable greed of knowledge had appropriated all the science of his time, who knew all that was known in his day of things below and things above. The word "Cosmos," the title he gave to his immortal work, is an apt designation of the mind of the author,—a mind in which the universe mirrored itself in all its vastness and all its minuteness, with its infinitely great and its no less amazing infinitely little. Where shall we look for the parallel and peer of such a mind? To find his match we have to go back two thousand years. We cannot stop at the name of LAPLACE or of BUFFON; these men were great in single provinces of science, but HUMBOLDT was great in all. We cannot stop at NEWTON or LEIBNITZ, though NEWTON seems to have gravitated with a more absolute *aplomb* to the truth of fact, and though LEIBNITZ, pierced with a finer *apercu* to the heart of things. We cannot stop at BACON, whose merit is not to have found, nor even to have sought with sincerity, but only to have taught men what and how to seek. We cannot stop till we come to ARISTOTLE. And here we have an even parallel. Between HUMBOLDT and ARISTOTLE there are, it seems to me, some points of striking resemblance. Both of these sages mastered and extended the science of their time,—with this difference in favor of the Greek, that he explored the realm of ideas as well as of things; with this difference in favor of the German, that the science of things and their relations — cosmic science — was a thousand-fold more complex and difficult in the nineteenth century of the Christain era than in the fourth of the ante-Christain. Both were fortunate in being partakers of the recent stimulus given by a great philosophic movement,—that of SOCRATES in the one case, in the other that of KANT. Both were contemporaries of great world conquerors and shared the impulse imparted to their time,—the one by ALEXANDER the other by NAPOLEAN the first.

DANTE called ARISTOTLE "*il maestro di color' che sanno*,"—master among them that know. And what better title can be conferred upon HUMBOLDT? Master among them that know,—the master *savant*.

Another thing which fills my soul with profound admiration when I think of HUMBOLDT is the heroism of his life,—a life which exceeded in breadth as well as in length the ordinary limits of mortality. I admire his loyal devotion to the single aim of extending the area of the human mind. I admire the indomitable enterprise which ransacked the globe in search of materials with which to build his monumental Cosmos. I admire no less the indefatigable in-

dustry which methodized and shaped those materials for after ages. A new standard of the possibilities of a single life is given in what he was and what he did. There was no senescence in his experience. He passed away in the midst of tasks which the noon of his life bequeathed to its evening, and which the evening did not seek to escape. And when he died, it seemed as if the civilized world, from the Himalaya to the Andes, sighed in sympathy with the going down of a man who carried a universe in the lobes of his brain, and who counted an ally and a friend wherever nature had a studedent or science a home.

One thing more. The professor has told us of the service which HUMBOLDT rendered to humanity by freeing men from the pressure of Jewish tradition. I accept the statement. From all that was puerile and inadequate in Jewish or Jew-Christian theology he was free himself, and helped to make others free. But the central truth of Judaism, the truth of Semitic monotheism, was as true to him as to any before or since. An impression went abroad at the time of his death that HUMBOLDT was an atheist. We all know how loosely, how unthinkingly, that term is applied. That he did not receive the authropomorphism of the conception I can well suppose. But that he rejected the idea of a conscious intelligence at the heart of the world—that intelligence which all his life was spent in tracing—nothing shall convince me, not even an unguarded saying of his own. For I am persuaded that without the belief in such an Intelligence, and a purpose and a method corresponding therewith, he would not have had the heart to prosecute his inquiries. For what use or instruction, or what satisfaction would there be in observing and classifying material phenomena, if those phenomena represented no order and obeyed no law? And when we say "Order," Mr. Chairman, and when we say "Law," we say God. And when we affirm the constancy of that order and the certainty of that law, we bear witness of one at least of the attributes of Deity,—his unchangeable veracity. Those stated processes which make the life of nature and which HUMBOLDT so loved to note,—the stars in their course, the ever-recurring phases of earth and sky, precession of equinoxes, succession of seasons, gravitation, magnetism,—these are Nature's comment on the text of the Spirit, "God is true." And when HUMBOLDT applied the methods he had learned in academic Europe and the laws announced by students of nature in other centuries,—applied these to the measurement of mountains on the other side of the globe, knowing them to be as apt and applicable then as in all past time, he unwittingly confessed his belief in a God whose "truth endureth through all generations."

But if, after all, it should prove to be the case—if that were possible which I deny—that the greatest scientist of modern time, in his search after truth, had missed the first and most essential of all truths,—the being of God,—what then? Why then I should say that the man himself is the most convincing proof of the truth he missed. I should feel that the marvel of such a mind, a wonder surpassing any of those it explored, must have had its adequate cause; that the finite intelligence which looked creation through presupposes an infinite Intelligence as its origin and ground. The highest mortal can only be explained as the product of a more than mortal power.

Beacon Lights of Science

HISTORY

OF THE

SCIENCE OF POLITICS*

By FREDERICK POLLOCK

CHAPTER I.

Introductory—Place of the Theory of Politics in Human Knowledge.

"They be farre more in number, that love to read of great Armies, bloudy Battels, and many thousands slaine at once, than that minde the Art, by which the Affaires, both of Armies, and Cities, be conducted to their ends."—HOBBES, *Preface to Thucydides.*

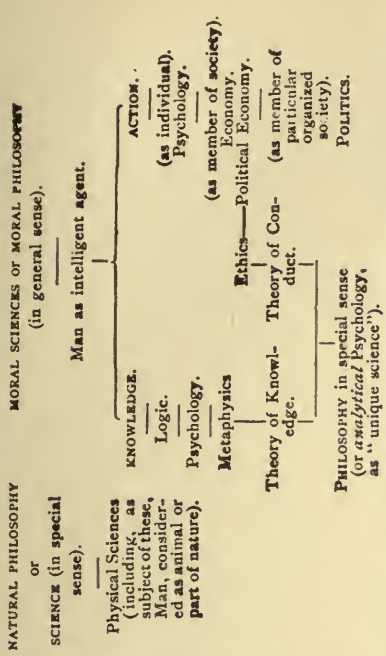
No good Brahman begins any literary work without a formula of salutation to Ganesa, the elephant-headed patron-god of learning. In the West we are not so punctilious about forms; yet we might with some fitness open our undertakings in philosophy and science by saluting expressly or tacitly the memory of ARISTOTLE. For as Greece is to us the mother of almost everything that makes life worthy to be lived, so is ARISTOTLE especially the father of science and scientific method; and during the centuries when the lessons of Greece were forgotten the name and work of ARISTOTLE (used indeed in a manner and for purposes he would have marveled at) were almost the only links that still bound the modern to the Hellenic world. With regard to our present subject ARISTOTLE's claim is evident and eminent. He has been recognized as the founder of political science by the general voice of posterity. There was political speculation before him, but it was he who first brought to bear on political phenomena the patient analysis and unbiased research which are the proper marks and virtues of scientific inquiry The science of politics, like so much else of our knowledge and endeavors to know, begins with ARISTOTLE. In

* This History, like the late Mr. BAGEHOT's well-known works "The English Constitution" and "Physics and Politics", appeared serially in the "*Fortnightly Review*". It was published at intervals between August, 1882, and January of the present year (1883).

this as in other things his organizing genius consolidated the scattered material of his predecessors, and left a compact structure. From ARISTOTLE onward we shall now try to follow the fortunes and growth of this science. It is not a tale of continuous and rapid advance like the history of the exact sciences, or even of those natural sciences in which mathematical precision is not attainable. On the contrary, we shall find much wild speculation, and many grave mistakes. But we shall also find a good deal of real advance, if we attend to what has been done by scientific inquirers rather than what has been put forward under the name of science by social and political agitators, and do not allow the failures to blind our eyes to the successes.

Before we enter on the history it may be as well to take a rough general view of the place of the theory of politics in human knowledge. Many persons would perhaps deny that there is any science of politics at all. If they meant that there is no body of rules from which a Prime Minister may infallibly learn how to command a majority, they would be right as to the fact, but would betray a rather inadequate notion of what science is. There is a science of politics in the same sense, and to the same, or about the same, extent, as there is a science of morals Whatever systematic moralists may have professed to think, it is at least doubtful whether systems of moral philosophy have been of much direct use in helping people to decide actual questions of conduct. For my own part, I would in a case of conscience rather consult a right-minded and sensible friend than any moral philosopher in the world. I should think neither the better nor the worse of his advice if he happened also to be a student of philosophy. Nevertheless few educated persons will refuse to admit that inquiry into the nature and origin of moral rules is legitimate and useful, or will maintain that the endeavor to refer them, historically or rationally, to general principles is altogether idle. Men, being moral beings, are led to reflect on the nature of right and wrong, and the functions of conscience; being citizens, they are equally led to reflect on the nature of the State, the functions of government, and the origin and authority of civil obligation. This latter inquiry is indeed more practical than the other; for political theories of the most general kind often have considerable direct influence in public affairs, which cannot, I think, be said of ethical theories. The declaration of the Rights of Man by the French Constituent Assembly has certainly not been without practical effect. This consists of general statements of what men, as men, are entitled to and may justly demand. If true, the statements are of the utmost importance to politicians and legislators; if false, they are highly mischievous. In either case they purport to be propositions of political science. M. BARTHELEMY ST.-HILAIRE informed the world in 1848 that they were the crown and sum of all the political science of all former ages. Claiming such authority, and having in fact influenced men's minds, the principles thus enounced cannot be merely disregarded; and it is scientific criticism that must establish or refute them. To the persons who deny the necessity or possibility of philosophy it is a sufficient answer that at all events critical philosophy is needful for the exposure of philosophies falsely so called; and in the same way political science must and does exist, if it were only for the refutation of absurd political theories and projects.

To show how I conceive politics to fit into the general scheme of our knowledge, I adopt the old-fashioned division of the sciences into natural and moral. By this I do not mean to commit myself to any general doctrine. I do not see why there should be any one classification which is absolutely right in itself, or why we should not use different classifications for different purposes. From some points



of view it may be proper to neglect entirely the distinction I now mean to use, as is done, for example, by Mr. HERBERT SPENCER is his essay on the classification of the sciences. In ultimate analysis the distinction may be made to vanish. At present I do not want to carry matters to ultimate analysis, but to regard the study of politics as belonging to a kind of inquiries which for ordinary practical purposes are sufficiently well marked off from others. In the natural sciences we have to do with the material world, and man's bodily organism as part thereof. In the moral sciences we have to do with man as intelligent, and to study the laws of his intelligent action. The general aim and method are the same —the discovery of truth by the reasoned investigation of facts; but the means are widely different. In the natural sciences the work is done, broadly speaking, on phenomena present to the senses and with instruments of manual use. In the moral science the matter is present only in reflection, and the instruments are language and books. Hence there are wide differences in the manner of the student's work, the nature of the results, and the power of verifying them; and these are worth marking, if only to perceive that the comparative inexactness of the moral sciences is not the fault of the men who have devoted their abilities to them, but depends, as ARISTOTLE already saw, on the nature of their subject-matter.

The subdivisions of natural science do not now concern us.* The moral sciences may be divided into speculative and practical branches. In the former, we consider man as knowing and thinking; in the latter, as feeling and acting. It is questionable, again, if this division will hold in final analysis. My own opinion is that it will not, or that knowledge and action are not really separable; but it corresponds to a difference sufficiently obvious in the common course of life. For the speculative branch, or the laws of thought, we have logic (whatever its exact place among or beside the speculative sciences ought to be) and metaphysics, which leads us to the all-devouring question of questions—what knowledge is, and how is it possible at all. Thus from the theory of knowledge on the speculative side, as also from ethics, on the practical side, we are landed (or cast adrift might be thought by some the better phrase) on philosophy in the special sense, which is really apart from the sciences, both moral and natural; for the organized knowledge of par-

* Not attempting a complete division, I purposely leave much open: as whether the pure sciences of space and number should stand at the head of the physical sciences, or be set apart by themselves, as not dealing with any one fact of nature but fixing the general conditions of exact knowledge of the external world. Again, I offer no opinion about logic, save that it belongs to the speculative as distinct from the practical side of the moral sciences. There is a question (analogous to that of the pure sciences) whether it is a special science at all, and further and very difficult questions of its relation to psychology and metaphysics.

ticular kinds of phenomena cannot include the analysis of knowledge itself. This I mention by the way, just to show that philosophy will not be exorcised by any ingenious arrangement of the sciences. She laughs at the pitchfork of AUGUSTE COMTE, and comes back at every turn, taking her revenge in a thousand ways on the blunders of popular thinking. Psychology belongs in a manner to both the speculative and the practical branch, being intimately connected alike with metaphysics and with ethics. On the practical side we may regard it as the study of man's action considered simply as an individual. But then we cannot be content with studying men as individuals. They live together in societies, and we know of no time when they did not. Hence the actions of man in society are the subject of a further kind of study, which is now commonly called Sociology. The word is offensive to scholars as being a barbarously formed hybrid;* and although it is too late to quarrel with anybody for using it, I should prefer Economy as a general name for the study of men's common life short of specific reference to the State. Such usage of the term corresponds pretty closely to ARISTOTLE'S. An important branch of this is what we all know as political economy, remarkable as the one department of the moral sciences which has assumed a semi exact character. Another branch is ethics, if with the Greeks we regard ethics as dealing essentially with a man in his relations to his fellow-men. And indeed, whatever may be thought of the existence of absolute or purely self-regarding duties, or of the possibility of a moral sense arising otherwise then in society, it is undoubted that the great bulk of moral duties have regard to other persons. Without passing judgment on controverted questions, therefore we may practically class ethics as a social science. Lastly, we come to consider man not only as a member of society, but as a member of some particular society organized in a particular way, and exercising supreme authority over its members; in other words, we consider man as a citizen, and the citizen in his relations to the State. Thus the field is indicated for the science of politics: a science dealing with matter so rich and various that from the beginning it has been embarrassed by this weight of wealth. Its subdivisions will be more conveniently mentioned when we arrive at the period of its history in which they become distinct. It is enough to say now that the foundation and general constitution of the State, the forms and administration of government, and the principles and method of legislation seem naturally to fall asunder as heads under which the topics of political science may be grouped, though a strictly accurate and exclusive division is hardly possible; and we must add as another head, more clearly marked off from all these, the consideration of the State as a single and complete unit of a higher order, capable of definite relations to other like units.

* If such a Latin word could exist at all, it could only mean a science of partnerships or alliances. One must not push these objections too far, however. Suicide, as was once pointed out by the Cambridge opponent of a Latin thesis, "Recte statuit Paleius de suicidiis," could as a Latin word mean nothing but killing swine.

CHAPTER II.

The Classic Period: PERICLES—SOCRATES—PLATO—ARISTOTLE—*The Greek Ideal of the State.*

ARISTOTLE, as we have said, is the founder of the science; but not even the greatest of men can make a science out of nothing, and a word of remembrance must be given to the men and the conditions that made ARISTOTLE'S work possible. There cannot be a theory of constitutions and statesmanship until civilized politics and statesmen exist in fact, any

more than there can be a theory of ethics unless in a society which is already moral. Political speculation was suggested and invited by the variety of political constitutions existing in Greek cities, and most of all by the brilliant political activity and resource displayed in the city of cities, where in art, in letters, and in civil life the power and beauty of Hellenic genius came to their full height; the city which our own MILTON, an artist in spite of his Puritanism, celebrated as the eye of Greece,* and a living English poet, who has studied Greek poetry and art as deeply as MILTON, and more freely, has sung of in lines not unworthy of her own tragedians:

"The fruitful immortal anointed adored
Dear city of men without master or lord,
Fair fortress and fostress of sons born free
Who stand in her sight and in thine, O sun,
Slaves of no man, subjects of none;
A wonder enthroned on the hills and sea,
A maiden crowned with a fourfold glory
That none from the pride of her head may [rend,
Violet and olive-leaf purple and hoary,
Song-wreath and story the fairest of fame,
Flowers that the winter can blast not or bend;
A light upon earth as the sun's own flame,
A name as his name,
Athens, a praise without end."

PERICLES was the first of Athenian statesmen, and one of the greatest statesmen who have ever lived. The speech delivered by him at the funeral of the Athenians who fell in the first campaign of the Peloponnesian war, and related by THUCYDIDES, contains a description and an ideal of the State which, though sketched out in bold and broad lines and for popular effect, may help us to the knowledge of the soil that was ready for PLATO and ARISTOTLE to till. We cannot be sure, indeed, that PERICLES actually spoke the words attributed to him by THUCYDIDES; but we may be sure, at the very least, that they are such as THUCYDIDES thought PERICLES likely to say, and an Athenian audience to approve: and, considering the publicity and solemnity of the occasion, and the number of persons (THUCYDIDES himself, in all probability, being among them) who must have preserved a vivid memory of what they heard, I am much disposed to think that we have in THUCYDIDES a substantially correct account of what PERICLES did say. What the student of politics has to note is this: there runs all through the speech the conception of the city, not as a mere dwelling-place or provision for material security, but as the sphere of man's higher activity. There is embodied in the city, in its laws, customs, and institutions, a pattern and ideal of life for the citizen. And the glory of Athens is that her ideal is better than that of others; Athens has reached the highest pitch of civilization yet attained, and is a school for all Hellas. She aims at producing a better type of man than other cities; natural abilities being equal, man's faculties are more fully and variously developed at Athens than anywhere else. And this is effected, not by a pedantic and irksome course of training (after the fashion of the Lacedæmonian enemy,* but by the free and generous education of a refined life. "We aim," said PERICLES, "at a life beautiful without extravagance, and contemplative without unmanliness; wealth is in our eyes a thing not for ostentation, but for reasonable use; and it is not the acknowledgment of poverty we think disgraceful, but the want of endeavor to avoid it,"—words

* True, it is by the mouth of Satan; but MILTON constantly neglects the caution expressed at a later time about letting the devil have the best tunes.

* The Spartans have had their day of glorification from rhetoricians and second-hand scholars. To me they have always appeared the most odious impostors in the whole history of antiquity. Even in the military art to which they sacrificed everything else they were repeatedly distanced by others, as witness their discomfiture by the light infantry of the Athenian IPHICRATES: and with all their pretentious discipline they produced in the whole course of their wars only two officers who are known to have been gentlemen, BRASIDAS and CALLICRATIDAS.

from which our modern society still has much to learn. And it was this loftiness of aim, this appreciation of the worth of human life, which justified Athens in aiming likewise at primacy among the Greek States. If PERICLES had used the jargon of modern diplomacy, he would have said that Athens had a mission to fulfill in holding up the best attainable exemplar of a civilized community. And therefore he bade the Athenians to quit themselves like men for a city dear to them by such titles, and to be strong in their fathers' renown and in their own courage, knowing that their renown too would be preserved, not by the praise of poets, which may be idle or exaggerated, but by the lasting marks of their achievements in history. On this part of the speech we cannot dwell now, but one may be allowed to hope that no Englishman reads it without feeling a glow of something more than cosmopolitan sympathy for the men who delivered Hellas from the invincible armada of the Persian despot, and carried the name and fame of Athens wherever their ships could sail.*

The conception of the State, then, was a very living reality to the Athenians among whom SOCRATES was born and lived. And of the many subjects on which SOCRATES was never tired of questioning and discoursing, we may suppose that this was not the least interesting to his hearers. Yet we have no direct evidence that he dwelt much on it. We can only suspect from PLATO that he had more to say of it than XENOPHON lets us know. XENOPHON reported only what he could understand, and probably we shall never know what we have lost by XENOPHON being a man of timid and commonplace mind—a man who deserved (to say the worst of him at once) to become half a Lacedæmonian and forget how to write Attic. Whatever may be the reason, we find in any case but slender beginnings of political science in the conversations of SOCRATES as reported by him. The passage where SOCRATES enforces obedience to the laws as they stand, comparing a citizen who disregards the law because it may be changed to a soldier who runs away in battle because there may be peace,* may be said to contain a doctrine of civil allegiance. We also find a roughly-sketched classification of forms of government.† The names given are royalty (*Βασιλεία*), tyranny, aristocracy, plutocracy, and democracy. The terms monarchy and oligarchy do not occur here, but appear in PLATO's *Politicus*. It was PLATO likewise who first worked out the theory, lightly touched by SOCRATES, that government is a special art, and, like all other special arts, can be rightly exercised only by competent persons.‡ This is a branch of the general Socratic doctrine that excellence of every kind, including moral virtue, is analogous to that excellence in particular skilled occupations which, as everybody knows, can be acquired by the appropriate kind of discipline, and cannot be acquired otherwise. SOCRATES appears to have used this application of the doctrine by way of practical exhortation to those who possessed political power to take politics seriously. PLATO developed it into fanciful aspirations, which he himself acknowledged to be impracticable, for government by an absolute and perfectly wise despot, who, not being bound by inflexible general rules, will do what is absolutely fitting in every

* An *Index Expurgatorius*, I understand, is being prepared under the auspices of the Universal Rose-water and Anti-State Society, in which the funeral oration of PERICLES (together with Sir W. RALEIGH's Last Fight of the *Revenge*, SHAKESPEARE's *King Henry V.*, Mr. FREEMAN's chapter on the Battle of Hastings, Mr. KINGLAKE's Invasion of the Crimea, the greater part of the historical books of the Old Testament, the whole of the Homeric poems, and other such like immoral publications) will hold a prominent place.

* Xen. Mem., iv. 4, 14.
† Op. cit., iv. 6, 12.
‡ Op. cit., iii. 9, 10.

case that occurs.* The elaborate construction of an ideal commonwealth in his *Republic* proceeds on similar principles. Of course under the actual conditions of life, political franchises cannot be adjusted according to political competence, even if an infallible judge of competence could be found; and the only application that can be made of the position laid down by SOCRATES is to endeavor to secure, as far as may be, that the conditions of competent judgment shall not be wanting to those who must in any case have political power. Lord SHERBROOKE's injunction to educate our masters is thoroughly Socratic both in spirit and form.

The Platonic *Republic*, I think, must be considered as a brilliant exercise of philosophical imagination, not as a contribution to political science. PLATO's latest work, the *Laws*, appears to have been intended as a kind of compromise between the ideas of the *Republic* and the conditions of practical politics. In this it was not successful. Except that it stimulated ARISTOTLE's criticism, it took no definite place in the developement of systematic thinking on political matters. Morover, it is hardly too much to say that PLATO never got to the point of having a theory of the State at all. In the *Politicus* he seeks to determine the character of the ideal statesman, and touches only by a kind of afterthought on actual and practically possible forms of government. It would be best of all to be governed by a perfectly wise ruler unfettered by any laws whatever; but it is worst of all to be in the hands of a ruler who has not wisdom and is not restrained by law. The wise governor whom the philosopher desires being hardly to be discovered in the world as it exists, government by fixed laws is accepted as, though a clumsy business in itself, more tolerable than the tyranny which is the only practical alternative. In the *Republic* again PLATO starts from the character of individual men and its formation. As a Greek naturally would, and as we have seen that PERICLES did, he regarded this as largely depending on the type and institutions of the State in which the individual was a citizen. The individual is for PLATO the city in miniature; and to define the notion of justice, the problem by which the dialogue of the *Republic* is opened, and to the solution of which the whole discussion is ostensibly auxiliary, he magnifies the individual into the State. In order to construct the perfect citizen PLATO finds himself under the need of constructing the State itself. This point of view left its mark impressed upon the work of ARISTOTLE, in whose treatise on politics, as we now have it, the theory of education occupies one-eighth of the whole; an indefensible arrangement according to modern ideas, giving to the subject, as it does, too much for an incidental consideration, and too little for a monograph. It is better, however, to have one's theory of education not exactly in the right place than to have none at all, which last is about the condition in which we moderns have been since the tradition of the Renaissance sank into an unintelligent routine.

ARISTOTLE struck out a new and altogether different path. In the first place he made the capital advance of separating ethics from politics. Not only is this not done in the Platonic writings, but the very opposite course is taken in the *Republic:* man is treated as a *micropolis*, and the city is the citizen writ large. Another and hardly less important point in ARISTOTLE's favor is his method of dealing with political facts and problems. Without abandoing the ideal construction of the State as it ought to be, he sets himself to make out the natural history of the State as it is. He begins not with an ideal, but with the actual conditions of human society and the formation of governments He made a full and minute study of the existing constitutions of

* Plat. Polit., 294.

Greek cities, and thus collected a great body of information and materials, unhappily lost to the modern world. And we regret the loss the more keenly in that we know how accurate ARISTOTLE was, and feel more at home with him than with those who went before him or came after him. PLATO's splendor of imagination and charm of language have indeed deserted us; but we get an exact observation of men and things and a sound practical judgment, which set us on firm ground and assure us of solid progress. A balloon is a very fine thing if you are not anxious to go anywhere in particular; a road is common, and the traveling on it may be tedious, but you come to the journey's end. PLATO is a man in a balloon who hovers over a new land, and now and then catches a commanding view of its contours through the mist. ARISTOTLE is the working colonist who goes there and makes the roads. The more one considers his work, the more one appreciates his good sense, his tact in dealing with a question in the best way possible to him under the given conditions, and his candor toward the reader. When he does not see his way to critical analysis, or does not care just then and there to undertake it, and builds upon the data given by common language and opinion, he frankly tells us what he is doing. He always knows exactly what he is undertaking and works with careful reference to his particular object. His practical insight is very seldom at fault. Even those points in ARISTOTLE's work which are so trite by incessant quotation and allusion that we are now apt to think them obvious, have been repeatedly shown to be neither obvious nor superfluous by the most conclusive of all evidence—the mistakes of clever men who have disregarded them.

These merits are conspicuously shown in the general introduction which forms the first book of ARISTOTLE's *Politics*. He plunges without preface, as his manner is, into the analytical inquiry. A State is a community, and every community exists for the sake of some benefit to its members (for all human action is for the sake of obtaining some apparent good): the State is that kind of community which has for its object the most comprehensive good. The State does not differ from a household, as some imagine, only in the number of its members. We shall see this by examining its elements. To begin at the beginning, man cannot exist in solitude; the union of the two sexes is necessary for life being continued at all, and a system of command and obedience for its being led in safety. Thus the relations of husband and wife, master and servant, determine the household. Households coming together make a village or tribe. The rule of the eldest male of the household is the primitive type of monarchy. Then we get the State as the community of a higher order in which the village or tribe is a unit. It is formed to secure life, it continues in order to improve life. Hence—and this is ARISTOTLE's first great point—the State is not an affair of mere convention. It is the natural and necessary completion of the process in which the family is a step. The family and the village community are

* I may mention an instance that occurs to me in detail. In Eth. Nic., v. 8 (where, thought the book is not of ARISTOTLE's own writing, the matter may be taken as Aristotelian), the harm that may be done by one person to another is classified under four degrees. These are *atychema*, or pure misadventure; *hamartema* or injury by negligence, where the harm might have been foreseen; *adikema*, or injury willful but not premeditated; and *adikia*, or *mochtheria*, where the injury is deliberate. If the notes taken by me many years ago of the late Mr. COPE's lectures to which I here acknowledge my great obligation for what I know of the *Politics*) are correct, Mr. COPE thought this last distinction over-refined. But this, as well as the whole classification, corresponds to the gradation attempted by the law of modern civilized countries with a closeness which, considering the rudimentary state of public law in ARISTOTLE's time, deserves admiration rather than criticism.

not independent or self-sufficient; we look to the State for an assured social existence. The State is a natural institution in a double sense: first, as imposed on man by the general and permanent conditions of his life; then it is the only form of life in which he can do the most he is capable of. Man is born to be a citizen— *Ανθρωπος φυσει πολιτικον ζῶον.* There is hardly a saying in Greek literature so well worn as this: nor is there any which has worn better, or which better deserved to become a proverb. It looks simple enough, but it is one of the truths in which we go on perceiving more significance the more our knowledge increases. This is a thing which happens even in the exact sciences. The full importance of NEWTON's Third Law of Motion, as enounced and explained by himself, escaped his contemporaries, and was not realized even by the leaders of science until a new light was thrown on it by the development of the modern doctrine of energy. NEWTON's law, in NEWTON's own form, has now been restored by SIR W. THOMSON and PROF. TAIT to its rightful place in the forefront of mathematical physics. And we may confidently expect that our children will find more wisdom and light in CHARLES DARWIN's writings than we have as yet found. So, too, in philosophy, we hear that among students in Germany "Back to Kant" has become a kind of watchword; and PROF. MAX MÜLLER has gone out of his way to produce, with labor which would have been great even for a man with nothing else to do, a new translation of KANT's master-work in the centenary year of its original publication. This does not mean that philosophy has been barren ever since KANT, but that the years of a century, even a century remarkable for philosophical interest and activity, are all too short for us to have taken the full measure of a man of KANT's greatness. And in our present case of ARISTOTLE we may well say that twenty centuries have been none too much; for there have been times once and again when there was sore need of a wise and sober man to cry "Back to ARISTOTLE" to nations deluded by specious political fallacies, and no such man was found.

This axiom of ARISTOTLE contradicts by anticipation the worst and the most widely spread of modern errors—the theory of the Social Contract, which, consistently worked out, can lead to nothing but individualism run mad and pure anarchy. Should there be, says ARISTOTLE, a really *cityless* man (as distinct from one who has lost political standing by misadventure; ARISTOTLE was probably thinking of the common case of exile, or the total subversion which had befallen his own native city), what can we say of such a one? He must be either superhuman or beneath contempt; he must be in a natural state of war, with his hand against every man. Now this *απολις*, the clanless and masterless man whom ARISTOTLE regards as a kind of monster, is identical with the natural man of HOBBES and ROUSSEAU. He is the unit out of whom, if there be only enough of them, theorists of the Social Contract school undertake to build up the State. This is an enterprise at which ARISTOTLE would have stared and gasped. We have seen pretty well what comes of it. ROUSSEAU and the Social Contract have had their innings in revolutionary France; and I think we have by this time ample warrant of experience for saying that ARISTOTLE was right, and HOBBES and ROUSSEAU (assuming for the moment that we have the real mind of HOBBES in HOBBES as commonly understood) were altogether wrong.

Thus in ARISTOTLE's view the State is natural and necessary to man; in the rational order it is even prior to to the individual man, since man cannot live a complete or even tolerable life apart from the State. Inasmuch as the State is composed of households, preliminary questions arise which ARISTOTLE included in the general term Economy (the ordering of the *οικία*, which is the component

unit of the πολις); these amount to the study of society apart from the particular form of government. There is nothing or next to nothing, left to be said about ARISTOTLE's much-discussed defense of slavery which comes in at this point. The English reader will do well to bear in mind that ARISTOTLE justifies slavery only under conditions which, if applied in practice, would have greatly mitigated the institution as it existed in his time. Of more permanent interest is the sketch of what ARISTOTLE calls the art of trade or wealth-getting (χρηματιστικη)—an art which, in his view, is not included in that of the general conduct of social life, but is separate and auxiliary to it. It would be going rather too far to call ARISTOTLE the father of political economy on the strength of this incidental discussion. But it is quite plain that he had a shrewd notion of the scientific handling of economical problems. In particular there are some clear and thoroughly sound remarks on exchange and currency. LORD SHERBROOKE (whose bad words for classical studies are after all only *amantium iræ*) cited them with the happiest effect the other day in a paper on Bimetallism. ARISTOTLE goes wrong, indeed, on the matter of the interest of money, and professed moralists and statesmen went wrong for many centuries after him. It is not yet a generation since our own usury laws were finally repealed. Economy, however, is treated by ARISTOTLE as a purely subordinate study, auxiliary to the general welfare of the State and the promotion of the most desirable type of life. Modern economists have found it necessary to work out their problems as if wealth were an end in itself, leaving statesmen to take up the results and place them in their due relation to the wider purposes and aims of society But this leads to some danger of forgetting that there really are other and higher aims in life, and nothwithstanding ARISTOTLE's economical errors, we may do well to take a lesson from him herein, or rather from the Greeks: for on this point ARISTOTLE represents the universal feeling of the cultivated Greek society of his time.

Before entering upon any details on his own account, ARISTOTLE clears the way by criticism of some earlier political speculations, PLATO's and others. What he says of the community of goods and so forth in PLATO's *Republic* is open to the remark that PLATO was constructing an ideal which he knew to be impracticable, and ARISTOTLE criticises as if he were dealing with a practical proposal. But the intrinsic value of ARISTOTLE's opinions is not affected by this, nor has it been in any way diminished by the lapse of time and growth of experience His decisive condemnation of communism remains as forcible, as just, and I fear it must be said as necessary, as ever it was. No one has better expressed what in our time has been called the magic of ownership. "Carefulness is least in that which is common to most: for men take thought in the chief place for their own, and less for the common stock." Duly regulated private ownership combines the supposed advantages of communism with those of several enjoyment. The higher and only true communism for men in society is that of the proverb, "Friends' goods are common." How to foster and maintain a state of generous friendship in which a man shall give and take in turn of the good things of life, so that property shall in effect be several in title, but common in use—that is the high social problem which the communist evades and the true statesman must attack. "Moreover, the pleasure we take in anything is increased beyond expression when we esteem it our own; and I conceive that the individual's affection for himself is by no means casual, but is of man's very nature."* ARISTOTLE goes on to show that the grievances which are now

* Pol., ii. 5, 5—8.

the communist's stock-in-trade, as much as they were in his time, have no necessary or real connection with the existence of private property; and in the course of this criticism he repeats his warning that the State is not to be considered as a mere magnified family, nor yet as an alliance of independent and similar individuals, but as a specific organism made up of divers parts, all working together, and each fitted for its own proper function. A scheme for the division of property among the citizens in equal shares, which had acquired some reputation in ARISTOTLE's day, is dealt with by him in the same spirit. He goes straight to the roof of the matter with a piercing question. It is all very well, he says, to make plans for equal distribution, or for limiting the amount of property that may be held by one owner, but supposing it done, the deaths and births of a single generation will bring about an altered relation of citizens to property, and upset all your calculations. After the question of property you will have a question of population before you: and how do you mean to dispose of that? Again, it is idle to talk of equality for its own sake, as if it were an absolute good: an equality in pinching poverty would not help us much. Nor would all be done even if you could fix exactly the reasonable and sufficient portion, and give everybody that; "it is of more importance to equalize men's wants than their substance." This is another of ARISTOTLE's deep and pregnant sayings; forgetfulness of it has made shipwreck of many splendid expectations. It would be impracticable in this place, and for the purpose now in hand, to follow into more detail ARISTOTLE's discussion of ideal and actual constitutions. Enough has been said to give some sort of general notion of his critical method.

Still less shall we attempt to follow ARISTOTLE into the special part of his work, where he considers the institution of a model State and the several possible types of government. But there remains something of the general part to which we may give a word. The third book of the *Politics* still deals with preliminary questions. It fixes the general terminology and classification of forms of government (which, let us note in passing, have been retained in use ever since), and includes a discussion corresponding to what we now call the theory of sovereignty. One incidental question is, what do we mean by a citizen? Who is a citizen in the full sense? The full citizen, in ARISTOTLE's meaning, is defined by the right to take part in legislation and the administration of justice. This corresponds with curious exactness to the old English notion of the "lawful man;" and it corresponds very nearly to the modern understanding of political franchises in the constitutional countries, though neither ARISTOTLE nor any one for many centuries later had thought of the indirect form of legislative power conferred by the right of sending representatives to form a legislative assembly. In the Greek view the size of the State was limited by the number of citizens who could effectually take a direct part in public affairs. Babylon was all within one wall, but it was not a city in the proper Greek sense; that is not a city which can be taken by an invader at one end (as the tale went of Babylon) a couple of days before the other end knows of it.* What then constitutes the identity of a State, since lying within a ring-fence will not? Is it continuity of race within the manageable compass of a State, as the river is the same though the particles of water are constantly changing? Neither is this enough, says ARISTOTLE; for a tragic and a comic chorus are not the same, though the men who perform in

* Pol., iii. 3, 5. The collection of geographically continuous parishes covered with buildings in the counties of Middlesex, Surrey, and Kent which is called London in popular language would have been a hopelessly bewildering object to an old Greek; but of one thing he would have been sure, and rightly, that nothing could well be less like a *polis*.

them may be the same. Continuity of constitution is also needful. After a revolution which changes the type of government there is no longer the same State, though it may be called by the same name. ARISTOTLE was obviously not thinking of international relations, which would be entirely confused by applying this test; for example, all treaties to which France was a party would have been annulled over and over again in the course of the past century. But no theory of the relations of independent States to one another was put into shape until long after this time. From ARISTOTLE's pure natural history point of view there is much to be said for drawing the line where he does.

Again, having defined the citizen and the city, where shall we find our criterion of the merit of particular constitutions? The answer is clear and simple. A normal or right constitution is that which is framed and administered for the common good of all, whether the sovereign power be with one, with few, or with the many. A constitution framed in the exclusive interest of a class, even though it be a majority of the whole, is wrongful and perverse. Royalty, aristocracy, and commonwealth πολιτεία are the normal forms; their respective corruptions are tyranny, oligarchy, and democracy—tyranny being a monarchical government worked for the advantage of the monarch over all subjects; oligarchy, the government of a privileged class for the advantage of the rich over the poor; and democracy, the government of the multitude for the advantage of the poor over the rich. *Tyranny* is still always used in a bad sense, and *oligarchy* generally; but as to *democracy* ARISTOTLE's distinction has fallen out of political language, perhaps because his term for the normal State was specific enough. In English there would be no difficulty in using *Commonwealth* or *Republic* in ARISTOTLE's good sense, and *Democracy* in his bad one; but it has never been done.

A last word may be added on the Greek ideal of the State, if it should still be thought we have nothing to learn from it. In his latest publication MR. HERBERT SPENCER bids us look forward to a state of ultimate enlightenment on political matters, in which "law will have no other justification than that gained by it as maintainer of the conditions to complete life in the associated state." This is almost as much as to say that, after all this time, we are at last coming up to the level of ARISTOTLE, or we might indeed say of PERICLES. For in ARISTOTLE's view "complete life in the associated state" is precisely the end and aim of government. It is what the city exists for, and a government which does not honestly aim at it has no business to exist. All other ends are subordinate to this. The other ends or reasons assigned in later times (and MR. SPENCER seems to think that they are such as would now be assigned by most people) would have appeared to ARISTOTLE absurd or irrelevant.* In fairness to ourselves, however, we must remember that the problems of modern statecraft are of much greater extent and more formidable complexity than those of Greek political philosophers. After all, the citizens for whose welfare ARISTOTLE conceived the State to exist were, even in the most democratic of constitutions, a limited and privileged class. They are people of leisure and culture, not living by the work of their hands. To make a true citizen of the worker in mechanical arts, the handicraftsman who has not leisure, is thought by ARISTOTLE a hopeless task, and this even with reference to the skilled and finer kinds of work. The grosser kind of labor is assumed to be done by slaves, who are wholly outside the sphere of political right. Not that ARISTOTLE would neglect the welfare of inferior freemen or even of slaves. He would have the

* The *legal* doctrine of the authority of law is a different matter altogether. It belongs to the theory of sovereignty, which we shall come to later.

statesman make them comfortable, and bring them as near happiness as their condition admits. But of happiness in the true sense they are incapable. We have swept away these restrictions, and find ourselves applying the ideal of a Greek city to our vast and heterogeneous modern political structures—a tremendous extension of the difficulties. If we are not much more successful than the Greeks, the task is greater and the aim higher.

ARISTOTLE was in a singularly favorable position for his political studies. By circumstances in no way touching his personal credit, he was discharged from taking an active part in public affairs. He could survey the Greek world as a disinterested observer, and the tranquillity produced by the establishment of Macedonian supremacy gave increased opportunities of observation, while the practical extinction of Greek independence had not yet borne its fruit in the visible decay of public life. After ARISTOTLE's time the decay spread rapidly, and its effects were striking. His immediate successors are said to have worked on the theory of politics, but their books are lost and very little seems to be known of their results. In the later Greek schools political speculation became stagnant. The old public spirit was supplanted by a kind of cosmopolitan indifference. The Roman conqueror was regarded by the Greek rhetoricians as the ruling Englishman in India is now regarded by the Brahman—as a masterful barbarian sent by the fates, whose acts and institutions were of no importance to the philosophic mind.* Whatever genuine philosophical interest was left ran to the study of ethics, and that as a study regarding the conduct, not of man as a citizen, but simply of man living among men. In many things the post-Aristotelian schools not merely failed to make any advance on what ARISTOTLE had left, but fell back from the point he had reached. Accordingly they contributed to political science nothing worth mentioning. In EPICURUS we may find a rudimentary form of the Social Contract,* and the stoics had one fine idea, that of the world as a kind of great city in which individual cities were like households. This idea (which is more than once used by CICERO) might, under other conditions, have led them to consider the relations of independent States to one another, and perhaps to develop something like international law. But there were no independent States left; there was only the Roman power which had absorbed all the civilized world, surrounded by dimly known and more or less barbarous tribes and kingdoms. In the early Roman period there is one example of a Greek who made a serious study of Roman institutions, POLYBIUS. His panegyric of the Roman constitution is remarkable as presenting, in a distinct form and concrete application, the theory of mixed and balanced powers which was so much in vogue with British publicists of the eighteenth century, and is hardly yet obsolete among their Continental imitators.

The Romans were great as rulers and administrators, and they created systematic law. But in philosophy they were simply the pupils and imitators of the Greeks, and showed themselves as little capable of invention in politics as in any other branch. CICERO, a man both of letters and of affairs, devoted a considerable part of his life to making Latin a philosophical language. He succeeded admirably in transcribing the current ideas of the Greek schools, especially those of the Stoics, in a language far more attractive and eloquent than that of his post-Aristotelian models. More than this he did not attempt,

* Of course there were exceptions among thoughtful Greeks. But I believe it is generally true that no Greek author through the whole period of Roman dominion shows any interest in Latin literature, or treats the Romans as intellectual equals.

*συνθήκη τις ὑπὲρ τοῦ μὴ βλάπτειν μηδὲ βλάπτεσθαι.

and in any case did not achieve. Nobody that I know of has yet succeeded in discovering a new idea in the whole of CICERO's philosophical or semi-philosophical writings; and the portions of his work on the Commonwealth which have come down to us in a fragmentary state are no exception to this. His theory was mainly Stoic, and the chief peculiarity of the work was a pretty full historical discussion of the Roman constitution, which, after the example of POLYBIUS, he praised as combining the merits of all forms of government. Even Roman law, the really great and original work of Roman intellect, owes something of its theoretical form to Greek philosophy—how much it is not our business to consider in this place. Jurisprudence is a branch of politics, but too peculiar a branch for its history to be dwelt on in a general sketch like the present But the Greeks themselves, as we have just said, ceased to produce anything of vital interest The overmastering might of the Roman empire, leveling men of all kindreds and nations in a common subjection, finished the work which the Macedonian supremacy had begun, and with political independence the scientific study of politics became extinct. It was a sleep of many centuries that followed, broken only by half-conscious stirrings in the Middle Ages. There were brilliant attempts and notable precursors. But there was no serious revival of interest in the theory of politics until the Renaissance; and the definite new birth of political thinking, and its consecutive growth in forms adapted to the civilization of modern Europe, may fairly be dated from HOBBES, and at most cannot be put back earlier than MACHIAVELLI.

CHAPTER III.

The Mediæval Period: The Papacy and the Empire—THOMAS AQUINAS—DANTE—BRACTON—MARSILIO OF PADUA.

Under the Roman Empire the absence of independent political life on the one hand, and the vast development of municipal law and administration on the other, left no room for theoretical politics. It was enough for the Roman lawyers that supreme power over the Roman world had been conferred on CÆSAR. So things remained until the Empire was broken up. On its ruins there gradually arose a new state of society, and ultimately of public law. But still the conditions of political philosophy were wanting. The cultivated leisure in which Greek speculation was nurtured, and which ARISTOTLE required as the security for even an ordinary citizen's political competence, had been utterly destroyed, and awaited reconstruction. The new or renovated institutions that were consolidating the shattered frame of European civilization were as yet hardly political in any proper sense. As Prof. BRYCE has well said, the Middle Ages were essentially unpolitical. Only one great question came into prominence in the thirteenth and fourteenth centuries, and drew to itself whatever power or interest men's minds then had in the theoretical treatment of affairs of State. This was the controversy between the temporal and the spiritual power. It was the common ground of the disputants that the Papacy and the Empire were both divinely ordained, and each in its own sphere had universal jurisdiction over Christendom. The point of difference was as to the relation of these two jurisdictions to one another. Was the temporal ruler in the last resort subordinate to the spiritual, as the lesser to the greater light? or were their dignities co-ordinate and equal? The whole reign of FREDERICK II., by the confession even of his enemies the most extraordinary man of his age, was an unremitting battle between the Roman Emperor and the Roman Pontiff on this ground. FREDERICK, who had entered on his office as the special favorite of the Holy See, found himself ere long in open hostility to it, and at last under its formal ban. Indications are not

wanting that he was prepared not only to maintain the independence of the Empire, but to carry the war into the enemy's camp. He aimed at nothing less than making himself supreme in spiritual as well as temporal government. It seems not clear how far his plans were laid in detail, but his general intention is certain. He openly treated the Papal censures as of no authority, and affected in his own person the titles especially appropriate to spiritual dominion. He called himself, or encouraged his followers to call him, the vicar of God on earth, the reformer of the age, a new ELIJAH discomfiting the priests of Baal. He denounced the Pope as a Pharisee anointed with the oil of iniquity and sitting in the seat of corrupt judgment, a false vicar of CHRIST and deceiving serpent, who disturbed the world out of mere envy of the majesty and prosperity of the Empire. It is thought that he contemplated the erection of a new Church in subjection to the Empire, whose center would have been in Sicily.* The princes and people of Europe looked by no means unfavorably on FREDERICK's anti-papal policy. But in what seemed its full tide of success it was cut short by a death almost sudden, and at the time not free from suspicion. The excommunicated Emperor's memory was darkened, as was always the fate of the Roman See's enemies, by the fame of monstrous heresies and blasphemies. In his lifetime these charges got little credence. ST. LOUIS of France, the model of Catholic kings, turned a deaf ear to them. FREDERICK himself indignantly repudiated and retorted them. But he had notoriously committed the unpardonable crime of making a treaty on just and equal terms with the Sultan of Egypt, which indeed was a sign of political ideas too much in advance of his time to be acceptable; and the hostility of a power which outlives dynasties, and never forgets or forgives, had its effect in the long run. DANTE felt bound to place FREDERICK II. among the unbelievers in his *Inferno*, though all his sympathies must have gone with him in his lifelong struggle against the Roman Curia.*

The strife which FREDERICK II. had failed to conclude in action was left as a heritage for the ingenuity of mediæval dialectics. It produced a considerable literature, among which there were two books, one on either side, bearing names of lasting renown. The Papal claims were defended in a treatise *Of the Government of Princes*, begun, but left unfinished, by THOMAS AQUINAS, and continued by his disciple, PTOLEMY of Lucca; the independence of the Empire was maintained by DANTE in his equally celebrated *De Monarchia*.† We cannot say that these works develop anything like a complete political theory. So far as they make an approach to this, they show an unconscious reaction from the Aristotelian to the Platonic way of handling the subject. Both the Imperialist and the Curialist champion abandon the problem of distributing power on rational principles among the different elements in the State. They fall back on unlimited monarchy as the only means of keeping the peace, and trust to Providence for the ruler being endowed with wisdom.‡ DANTE goes even further

* Huilliard-Bréholles, *Vie et Correspondance de Pierre de la Vigne*, Paris, 1865. The learned author draws an ingenious parallel between FREDERICK II. and his minister PETER DE VINEA and our HENRY VIII. and THOMAS CROMWELL.

* The words put into the mouth of PETER DE VINEA (*Inf.*, xiii. 64--75) afford positive proof, if it were needed.

† As to the *De Regimine Principum*, I follow M. FRANCK's opinion (*Réformateurs et Publicistes de l'Europe*, Paris, 1864) that there is no reason to doubt the attribution of the two first books to ST. THOMAS himself. The third is a later, but not much later, addition; the fourth is incongruous with the body of the work, and bears the stamp of the Renaissance.

‡ ST. THOMAS disapproves tyrannicide, but holds that a tyrannical ruler may be justly deposed, at all events in an elective monarchy.

than St. Thomas. His argument is not only for monarchy as the best form of government, but for a universal monarchy as necessary for the welfare of mankind; and he maintains that the universal monarch, having no rival to fear and no further ambition to satisfy, can have no motive for ruling otherwise than wisely and justly. The *Monarcha* of Dante's treatise is Plato's heaven-born statesman, the *ανηρ βασιλικος*, transferred from the Greek city to the larger stage of mediæval Christendom. It is only under his rule, Dante says, that true freedom is possible to men, and this is the justification of his universal dominion. Aristotle's doctrine, that the merit of a government must be tested by its promotion of the common weal of all the subjects, is fully and expressly adopted.

"Since the Monarch is full of love for men, as was before touched upon, he will have all men good, which cannot be if they live under perverted constitutions:* wherefore the Philosopher in his Politics saith: *That in a perverted Commonwealth the good man is a bad citizen; but in a rightful one* good man *and* good citizen *are convertible terms.* And the aim of such rightful commonwealths is liberty, to wit that men may live for their own sake. For citizens are not for the sake of the Consuls, nor a nation for the King; but contrairiwise the Consuls are for the sake of the citizens, the King for the sake of the nation. For as a commonwealth is not subordinate to laws, but laws to the commonwealth; so men who live according to law are not for the service of the lawgiver, but he for theirs; which is the Philosopher's opinion in that which he hath left us concerning the present matter. Hence it is plain also that though a Consul or King in regard of means be the lord of others, yet in regard of the end they are the servants of others: and most of all the Monarch who without doubt is to be deemed the servant of them all."

We are not concerned here with the scholastic arguments in favor of monarchy, drawn from the intrinsic excellence of unity as compared with plurality, which are used both by Dante and by St. Thomas; nor can we dwell at length on Dante's reasons for identifying his ideal monarch with the actual prince who wore the crown of the revived Western Empire. They deserve some passing mention, however, if only to show what had taken the place of political science in even the best minds of the time. There is nothing more curious in literature than the proof in the second book of the *De Monarchia* that the Roman people were ordained of God to conquer the world. The Psalmist, Aristotle, Cicero, Virgil, and Aquinas are cited as equally relevant and binding authorities; and the application of the language of the second Psalm to the Roman dominion is almost as strong as anything addressed to Frederick II. by his Chancellor and courtiers. It is argued that the Roman victories over all the other powers of the earth were not mere vulgar conquests, but due and formal trial by battle of the dispute for universal sovereignty, the result of which declared the judgment of God.* Most curious of all is the argument that the title of the Roman Empire was confirmed by the highest possible authority in the passion of Christ. The sin of Adam was punished in Christ, but there is no punishment without competent jurisdiction; and, since Christ represented all mankind, a jurisdiction extending to all mankind was in this case the only competent one. Such a universal jurisdiction was that of Rome as exercised by Pilate. In the third and last book Dante proves that the authority of the Roman Empire proceeds immediately from God, and

* "Quod esse non potest apud oblique politizantes," with reference to the *parekbaseis* of Aristotle's classification.

* The "formalia duelli" prescribed by Dante as the conditions of a just and judicially decisive war are, as might be expected, extremely vague.

is not held of the Pope or the Church. His minute refutations of the reasons adduced on the Papal side from the sun and moon, the offerings of the Magi, the two swords, and so forth, now seem to us only one degree less grotesque than the reasons themselves.

Yet there is an earnest endeavor in this work of DANTE's, though it is but feeling about in a dim twilight, to find a solid ground for a real system of European public law. The monarch he conceives is not a universal despot, but a governor of a higher order set over the princes and rulers of particular States, and keeping the peace between them. He is to have the jurisdiction, in modern language, of an international tribunal. "Wheresoever contention may be, there judgment ought to be;" and therefore the monarch is needful to give judgment in the contentions which arise between independent princes. The desire for such an authority had not apparently been felt by the Greek philosophers. DANTE says nothing of the manner in which the Emperor's jurisdiction is to be exercised, or of the means whereby his judgments are to be executed. He must have known that his idea was far removed from anything likely to be put in practice. Even now we have made but feeble and halting steps toward realizing it. Still the idea was a noble one, and we may say for it of DANTE, in his own words concerning his master VIRGIL

"Onorate l'altissimo poeta."

For the rest, we must say of all the mediæval writers on politics, as we said before of PLATO, but in a much more unqualified sense, that they really have no theory of the State. Their aim is to maintain the cause of the Papacy or of the Empire as the case be. Disinterested study of politics was a thing beyond them. Our own BRA TON has elements of a constitutional doctrine, but such beggarly elements as only to show the poverty of the age in systematic thought on such matters. He rejects the notion of an English king being an absolute sovereign. The king is under the law, and if he attempts to govern against law, the great men of the land who are his companions must do something to check him. But how or by what authority the check is to be applied we are not told: much less where, if not in the crown, the ultimate political authority really is. MARSILIO of Padua, who wrote early in the fourteenth century, shows a certain return to Aristotelian method and results. He defended government by the majority by the same argument that ARISTOTLE had already used as applicable to the imperfect condition of actually existing communities. True it is that the people at large are not fit to govern; but they can tell whether they are well or ill governed, as a man knows whether his shoe fits him or not without being a shoemaker. MARSILIO likewise distinctly marked the separation of the executive power (which he calls by its modern name) from the legislative; moreover, he advocated a complete separation of temporal from spiritual authority, and would have the temporal laws and magistrates make no difference of persons on the score of religious opinion. Being a zealous Imperialist, MARSILIO proceeded to deny the pre-eminence of the Roman See even in spiritual matters, and naturally incurred excommunication. Half a century later his steps were followed with no small vigor and effect (but this time for Gallican, not Imperial ends) in the French dialogue known as the *Songe du Verger* of which the authorship is attributed to RAOUL DE PRESLES.*

CHAPTER IV,

The modern Period: MACHIAVELLI —JEAN BODIN—SIR THOMAS SMITH —HOBBES.

The modern study of politics, however, begins with MACHIAVELLI. Not that he made any definite or per-

* FRANCK, op. cit., pp. 135—151, 219—250.

manent contribution to political theory which can be laid hold of as a principle fertile of new consequences. His works are more concerned with the details of statecraft than with the analysis of the State. But we find in him, for the first time since ARISTOTLE, the pure passionless curiosity of the man of science. We find the separation of Ethics and Politics, which had fallen into neglect, not only restored, but forming the groundwork of all MACHIAVELLI's reasoning, and made prominent even to the point of apparent paradox and scandal. MACHIAVELLI takes no account of morality. He assumes certain ends to be in the view of a prince or nation. They might be, we know by his own life and sufferings that often they were, ends of which MACHIAVELLI himself disapproved. But he considers, as a purely intellectual problem, by what means an Italian ruler of the sixteenth century is most likely to attain those ends. Religion and morality are in his assumed point of view simply instruments in the hand of the ruler; not masters, not always even safe guides, but useful servants and agents. The art of politics depends on the constant principles and motives of human self-interest. Its details are to be learnt from history and experience. MACHIAVELLI's own account of his best known (though perhaps not his most important) work, as he gave it in a familiar letter to his friend FRANCESCO VETTORI, leaves nothing to desire in clearness as far as it goes. The letter describes how he spends the day in out-of-door pursuits; fowling in the season, or looking after his wood cutting, and then gossiping or playing cards at the roadside inn nearest his country retreat, picking up news and noting men's various humors. But his time of real pleasure is in the evening; then he casts off his rough and muddy country dress, and arrays himself as becomes a statesman in good company; his company are the ancients, among whose history and thoughts he spends this time, forgetting misfortune and poverty. He has meditated over what he learns from these companions, and set down the chief results "I have made," he says, "a treatise *De Principatibus*, where I go to the depth of my ability into the consideration of this matter, discussing what is the nature of sovereignty,* what kinds of it there are, how they are acquired, how maintained, and for what causes lost. He describes his treatise, that is, as a study of pure natural history, an inquiry by what means despotic rulers (such as then abounded in Italy, some of greater, some of smaller pretensions) are, in fact, successful or unsuccessful in consolidating their power. And that is exactly what the book is on the face of it. MACHIAVELLI does not approve or advise fraud and treachery, as he has been charged with doing. His own public conduct, so far as known (and he was a public servant for many years), was upright both abroad and at home. He only points out that power gained in certain ways must be maintained, if at all, by corresponding means. It is not strange that a man living among Italian politics, such as they then were, and as they were closely observed and described by himself, should regard the separation of policy from morality as a remediless evil which must be accepted. There is no ground for saying that he did not perceive it to be an evil at all. Nor is it to be set down as the evil fruit of his advice that other despots and usurpers in later times have been successful by those arts which MACHIAVELLI described as leading to success, NAPOLEON III for example. No man ever learnt the secret of despotism out of a book.

It has always been assumed, however that MACHIAVELLI had some

* MACHIAVELLI's *Principato* is not easy to translate exactly. He means by it every form of personal government, under whatever title, as opposed to popular government (*repubblica*): these being the only two kinds into which he thinks it worth while for his purposes to divide governments in general.

further object in his political writings: and much controversial ingenuity has been expended on determining what it was. All kinds of opinions have been advanced, from the vulgar prejudice that MACHIAVELLI was a cynical counselor of iniquity to the panegyric of the modern writers who place MACHIAVELLI with DANTE and MAZZINI as one of the great preparers and champions of Italian unity.* This latter view contains at all events more truth than the old one. MACHIAVELLI, though by education and preference a republican, despaired of a strong and stable republican government in the Italian States as he knew them. The one pressing need for the restoration of prosperity to Italy was to deliver her from the invaders, French, German, and Spanish, who spoiled and ruined her: and this could be done, as it seemed to MACHIAVELLI, only by some Italian prince wiser, more fortunate, and more nobly ambitious than others making himself the chief power in Italy, and gathering such strength of native arms as would enable him to withstand the foreigner. For an end so sacred in Italian eyes all the political means of the times were justified; and beside the possibility of attaining it questions of municipal politics and forms of domestic government sank into insignificance National unity and independence was to be made the supreme end, even if it had to be attained through a military despotism. We, who have seen German unity accomplished (allowing for differences of civilization and manners) in almost exactly the same fashion that MACHIAVELLI conceived for Italy, can at any rate not suppose that his idea was chimerical. That such was indeed one of his leading ideas is beyond doubt. It is not only avowed in the last chapter of the *Prince*, but the subordination of internal to external politics throughout MACHIAVELLI's work is explicable by this fixed purpose, and by this only. For MACHIAVELLI as for DANTE, the question of assuring political life at all is still pressing to be solved before there is time to consider narrowly what is the best form of it. In ARISTOTLE's phrase, the process of γίγνεσθαι τοῦ ζῆν ἕνεκεν is as yet barely accomplished, and the final problem of εὖ ζῆν is thrust into the background. Therefore even MACHIAVELLI, full as he is of observation and practical wisdom, is only on the threshold of political science. His doctrine is a theory of the preservation of States rather than a theory of the State.

In JEAN BODIN's treatise *Of the Commonwealth*, we get for the first time the definite enunciation of at least one capital point of modern political doctrine. He is entitled, indeed, to share with HOBBES the renown of having founded the modern theory of the State; and it may be said of him that he seized on the vital point of it at the earliest time when it was possible. The doctrine referred to is that of political sovereignty. In every independent community governed by law there must be some authority, whether residing in one person or several, whereby the laws themselves are established, and from which they proceed. And this power, being the source of law, must itself be above the law: not above duty and moral responsibility, as BODIN carefully explains; but above the municipal ordinances of the particular State—the positive laws, in modern phrase—which it creates and enforces. Find the person or persons whom the constitution of the State permanently invests with such authority, under whatever name, and you have found the sovereign. "Sovereignty is a power supreme over citizens and subjects, itself not bound by the laws." This power somewhere is necessary to an independent State, and its presence is the test of national independence. Such is in outline the principle of sovereignty as stated by BODIN, taken up a century later by HOBBES, and adopted by all modern publicists

* F. COSTÈRO, Preface to *Il Principe*, etc., Milan, 1875.

with only more or less variation in the manner of statement. It is one of the things which appear tolerably simple to a modern reader. The history of English politics and legislation has made it specially acceptable to English readers, and to an English lawyer it needs a certain effort of imagination to conceive that people ever thought otherwise. Yet a little consideration will make it equally obvious that the proposition could not have assumed a definite shape much before the sixteenth century. The legal supremacy of the State is conceivable only when the State has acquired a local habitation and a permanent establishment. The mediæval system of Europe was not a system of States in our sense or in the Greek sense. It was a collection of groups held together in the first instance by ties of personal dependence and allegiance, and connected among themselves by personal relations of the same kind on a magnified scale. Lordship and homage, from the Emperor down to the humblest feudal tenant, were the links in the chain of steel which saved the world from being dissolved into a chaos of jarring fragments. The laws and customs which were obeyed by princes and people, by lords and their men, were not thought of as depending on the local government for their efficacy. The Roman law, in particular, was treated as having some kind of intrinsic and absolute authority. We see its influence even in England, where it was never officially received. Men sought in the shadow of the Roman Empire and its dead institutions the unity of direction and government which their actual life had not yet found. The old unity of the clan had disappeared, and it was only gradually and slowly, as kingdoms were consolidated by strong rulers, that the newer unity of the nation took its place. Here and there, as in England, where a clear territorial definition was from an early time assured by the geographical nature of things, and foreign disturbance was easily kept aloof, a true national feeling and life rose up soon and waxed apace. But on the continent the fifteenth century was still a time when nations were forming rather than formed; and when in the succeding century the French monarchy began to feel its real strength, the masterly definitions of Bodin gave expression to a change in the political face of Europe which was yet young.

Bodin was a man of vast and—with one strange exception, his polemic against sorcerers—of enlightened learning. On public economy and many other matters his opinions were far in advance of those current in his age. He not only strove to put in practice, but distinctly announced as a necessary principle, the foundation of political theory on a broad base of historical observation. Like Machiavelli, he showed in his own conduct as a citizen a settled attachment to freedom and justice, and suffered for his constancy. Yet we find in Bodin's doctrine, as in that of Machiavelli before him and of Hobbes after him, a certain apparent leaning in favor of absolute power. He not only defines sovereignty as a power not subject to the laws, but, on the contrary, maker and master of them—a power which so far may belong to one, to few, or to many, to a king, to an assembly, or to both together—but he is prone to identify the theoretical sovereign with the actual king in a State where a king exists. For his own country this might be done without grave difficulty; but Bodin was not content without foreign instances, and England, where even in the hands of the Tudors the power of the Crown had reached its utmost height, gave him a great deal of trouble. He recognizes more fairly than Hobbes the possibility of a limited monarchy. The Emperor, he says, is no absolute sovereign, for he is bound by the ordinances and decrees of the German princes. Probably Bodin's position is to be accounted for by his practical view of the French monarchy. Doubtless the king's

power appeared to him, as indeed it was, the only one then capable of governing France with tolerable efficiency and equity. And it is curious to see what limits BODIN, herein less rigidly consistent than HOBBES, proceeds to impose on monarchical power after he has defined it as unlimited. Sovereign authority, as we have seen, is the absolute power in the State, whatever that may be. It is that power which is neither temporary, nor delegated, nor subject to particular rules which it cannot alter, nor answerable to any other power on earth. "*Maiestas nec maiore potestate, nec legibus ullis, nec tempore definitur . . . princeps populusque in quibus maiestas inest rationen rerum gestarum nemini prœterquam immortali Deo reddere coguntur.*" * And such power, as matter of legal and historical fact, belongs to the kings of France, but this only means that they have no legal duties to their subjects. They have moral duties, or, as BODIN says in the language of the jurisprudence of his day, they remain bound by the law of nature: "*Quod summum in Republica imperium legibus solutum diximus, nihil ad divinas aut naturæ leges pertinet.*" Thus an absolute prince is bound in moral duty and honor by his conventions with other princes and rulers, and even with his own subjects. In certain cases he is bound by the promises of his predecessors; though no sovereign power can bind its successors in the sense of making a law that shall be unalterable and of perpetual obligation. BODIN shows at some length, and with much perspicuity, both on principle and by historical examples, the idleness of assuming to make laws irrevocable. The sovereign power could, it is admitted, repeal the law but for the clause forbidding repeal. But such a clause is itself part of the law, so that the sovereign can repeal the body and the supposed safeguard of the law together. If there is a legislative power which cannot do this, it is not really sovereign. So far BODIN is on firm ground, and seems in full possession of the modern theory. He has distinguished legal obligation in the strict sense from purely moral and honorable duties on the one hand, and from the duties created by convention between independent powers on the other. He has made a great step toward the clear separation of the legal from the ethical sphere of thought within political science itself—a thing only less in importance than ARISTOTLE'S original separation of Politics from Ethics.

But at this point BODIN'S sureness of foot fails him. He tells us of organic laws or rules which may be so closely associated with the very nature of this or that sovereignty that they cannot be abrogated by the sovereign power itself, and he instances the rule of succession to the French crown. Again, there are institutions of society, such as the family and property, which he assumes as the foundation of the State; and with these even the sovereign power cannot meddle.* From the inviolability of property he draws the consequence that not the most absolute monarch can lawfully tax his subjects without their consent. At this day we should say that these are excellent maxims of policy, but do not affect the State's legal supremacy, or (to anticipate the classical English name for the thing as it appears in our own constitution) the omnipotence of Parliament. There are things which no ruler in his senses would do, things which very few or none can afford to do. Just so there are many things a private man is legally entitled to do which he will not do if he is wise, or which no man of common sense or common good

* BODIN'S own Latin version of his work is really a new recension, and is fuller and more precise in language than the French.

* BODIN charges ARISTOTLE with omitting the family from his definition of the State. As ARISTOTLE explicitly leads up to the State from the family, and defines the family as the unit of the State, it is difficult to see what BODIN meant.

feeling will do. But his legal right is not thereby affected. And so, too, particular authorities in the State may have legal powers which are in practice never exercised, and which it would be impolitic to exercise in almost any conceivable case. There is no doubt that in England the Crown is legally entitled to refuse assent to a Bill passed by both houses of Parliament, though such a thing has not been done for more than a century and a-half, and as far as human foresight can go will never be done again. As a harsh or foolish exercise of legal or political rights does not cease to be within the agent's right because it is harsh or foolish, so an unwise or morally wrongful act of sovereign power is not the less an act of sovereign power because it is unwise or wrong. On this point, therefore, BODIN is not consistent. But this is nothing to be wondered at: it seldom happens that an acute thinker who is in the main in advance of his time either fully accomplishes the working out of his own ideas or sees the way clear to it.

BODIN's opinions in matters of detail are for the most part worthy of his exposition of leading principles. He condemned slavery without reserve, and advocated a comprehensive toleration of religious opinion. Not only did he anticipate, as we have just seen, the analytical method of HOBBES; he anticipated the historical method of MONTESQUIEU by a detailed discussion of the influence of climate and geographical conditions on political institutions and governments. His work attained a great reputation in a short time. Besides the author's own Latin version, an English translation appeared early in the seventeenth century. There is little doubt that BODIN not only prepared the way for HOBBES and MONTESQUIEU, but that both of them—writers differing from one another as widely as possible in method, manner, and purpose—actually studied and profited by him.

Turning to England, we find attempts in speculative politics arising out of the study of the English constitution and laws as early as the fifteenth century. FORTESCUE, both in his book *De laudibus legum Angliæ* and in his less known treatises on the Law of Nature and the Monarchy of England, is careful to represent the king's power as not absolute but limited by the law, or, to use the language borrowed by him from ST. THOMAS AQUINAS's *De Regimine Principum*, not "royal" but "political." The King is the head of the body politic, but can act only according to its constitution and by the appropriate organs in each case. And it is said in general terms that the king's power is derived from the consent of the people. But the question where political supremacy really lies is not followed up. Neither is any definite theory of the origin of government put forward. MORE's *Utopia* calls for mention on account of its literary fame; but, though it contains incidentally not a few shrewd criticisms, open and covert, on the state of English society in the first quarter of the sixteenth century, we cannot count it as an addition to political science. It is a Platonic or ultra-Platonic fancy, bred of the Platonism of the Renaissance. Even more than the *Republic* of PLATO it belongs to the poetry as distinguished from the philosophy of politics. In the *De Republica Anglorum*, or *English Commonwealth*, of SIR THOMAS SMITH, first published after the author's death in 1583, we find something much more like a forerunner of HOBBES. Indeed, so clear and precise are SMITH's chapters on Sovereignty that one is tempted to think that he must somehow have had knowledge of BODIN's work. At the outset he defines political supremacy in a manner by no means unlike BODIN's. When he comes to English institutions in particular, he states the omnipotence of Parliament in the most formal manner, and so far as I know for the first time, as if on purpose to contradict BODIN's argument that the monarchy of England is really absolute. It is true that BODIN's *De*

Republica was published only in 1577, the year of SMITH's death. But we know that SMITH's work was composed while he was embassador at the French court, and considering how long books often waited for publication at that time, it is fairly supposable that BODIN's treatise, or at least the introductory part of it, was already in existence, and that a certain number of scholars were acquainted with its contents. Even a century later a great deal of private communication of this kind went on. SIR THOMAS SMITH's principles, wherever he got them, have the merit of being much the clarest which down to that time had been put into shape by an English author or in the English language.

We now come to HOBBES, with whom the modern school of political theory begins. ARISTOTLE effected the separation of Ethics from Politics: from HOBBES, or rather through HOBBES, we get the further separation of policy from legality—of that which is wise or expedient from that which is allowed by positive law. The political theory of HOBBES runs more or less through everything that he wrote, but is especially contained in his *Leviathan*. This famous and much-decried treatise contains a great deal of curious learning of all sorts, including not a few theological eccentricities. But the principles laid down by HOBBES which have had a serious effect upon later political thinking may be reduced to two. One of these is the principle of sovereignty; the other is the theory of the origin of civil society in contract. We have already seen the doctrine of sovereignty as it was stated in the preceding century by BODIN. With him it rested on a pure analysis of the fact of civilized government. In every form of government you must come at last to some power which is absolute, to which all other powers of the State are subject, and which itself is subject to none. The possession of such power is sovereignty, and the person or body in whom it resides is the sovereign. HOBBES is in one respect less enterprising and straightforward than BODIN. In his anxiety to fortify the doctrine of sovereignty and to leave no excuse for disputing the authority of the State, he gives an elaborate account of the construction of the State by an original covenant between its members. This imaginary covenant, modified in its terms and circumstances according to the conclusion which the particular author sought to establish, became familiar to later publicists as the Original or Social Contract. If we are called upon to say in one sentence what HOBBES did, we must say that he supported a clear and sound doctrine by a needless and untenable fiction, and for the purpose of deducing consequences from it which it would not bear. This, however, is no more than has to be said of many of the most able men in all ages. HOBBES's firm grasp of all his ideas, and the admirable clearness with which his arguments and results, whether right or wrong, are invariably stated, make him the first classic of English political science.

Let us now see how HOBBES goes to work to construct the State. Men, taking them all round, are by nature equal, none being so strong in body or mind that he need not be in fear of others, or so weak that he may not be dangerous to them. Men living without any common power set over them would be in a state of mutual fear and enmity, that is, in a state of war. Such a state of things in permanence would be intolerable; in it there is no property, no law, and no justice. Every man will aim at securing his own safety, and for that purpose will take all he can get Peace is good, but life is necessary, and in the state of war it is our right to use all means to defend ourselves.

The only way to peace is for men to abandon so much of their natural rights as is inconsistent with living in peace. This again can only be done by mutual agreement, and the faithful performance of such an agreement, as evidently tending to self preservation, is a rule of rea-

son, or in HOBBES's use of the term, "a law of nature." But a mere agreement to live together in peace is insufficient. Men's individual passions and ambitions would speedily break up a society resting on no better foundation. There must be "a common power to keep them in awe, and to direct their actions to the common benefit." This is effected by all the members of the community giving up their natural rights to some man or body of men in whom their united power is henceforth to be vested. Every member of the community gives up to the chosen head the right of governing himself on condition that every other member does the same. The person or body so invested with the power of the whole becomes a kind of new person; "and he that carrieth this person is called *sovereign*, and hath sovereign power; and every one besides, his *subject*."

It is by no means easy to make out whether HOBBES intended this to be taken as a true account of the manner in which civil governments had been established as a matter of fact. I think he would have been prepared to say that it would make no difference to his argument whether it were so or not; at any rate, he is prepared to show to any one who presumes to traverse the story of the original covenant that if he disputes it he has no title to live in society at all. HOBBES proceeds to deduce from this institution of the Commonwealth, as he calls it, the attributes of sovereignty. The sovereign's authority is derived from the consent of the subjects, and he is their agent for the purpose of directing their united strength for the common benefit; but he is an agent with unlimited discretion, and with an authority which cannot be revoked. The subjects cannot change the form of government, for that would be a breach of the original covenant both toward the sovereign and toward one another. The sovereign cannot forfeit his power, for he made no covenant, and there is none therefore which he can break. Any subject who dissents from the institution of the sovereign thereby ceases to be a member of the community and remits himself to the original state of war, in which any one who can may destroy him without violating any right. For similar reasons the sovereign is irresponsible and unpunishable. No man can complain of what his agent does within the authority given him, and in the case of a political sovereign all acts of sovereignty have been authorized beforehand by all the subjects. Holders of sovereign power may commit iniquity but not injustice. The sovereign, again, is the sole judge of what is necessary for the defense and security of the commonwealth, and, in particular, of the question what doctrines are fit to be taught in it. There are likewise annexed to sovereignty the powers of legislature and judicature, of making war and peace, of choosing counselors and officers, of rewarding and punishing, and of regulating titles and precedence. All these rights are indivisible and incommunicable; the sovereign may delegate them, but cannot abandon them. HOBBES is perfectly aware that the sovereign thus defined need not be one man; but he is nevertheless anxious to show that in England the king alone is sovereign. Yet he gives very little express argument to this topic. He shows, as BODIN has shown before him, that sovereign power cannot be divided, and this he seems to think fatal to all doctrines of mixed or limited monarchy. The loose language of some constitutional advocates is taken by him as stamping their cause itself with repugnance to the nature of things. It does not occur to him as possible that sovereignty should be vested in a compound as well as in a simple body.

The limits of sovereignty, or the liberty of the subject, as they may be indifferently called in HOBBES's view, are defined as consisting in those powers or rights of the individual man which he cannot surrender by any covenant. Thus no man can be bound to kill himself, to abstain from

self-preservation, or to accuse himself; and more generally, the obligation of subjects to the sovereign lasts no longer than he has power to protect them.

HOBBES's further consideration of civil laws gives him occasion to enter more in detail upon the relation of the sovereign power in a State to its municipal laws. His definition, with its introductory explanation, really contains all the points which have only in the present century been worked out by the English school of jurisprudence.

"Law in general is not counsel but command; nor a command of any man to any man; but only of him whose command is addressed to one formerly" (*i. e.* already, by having agreed to be his subject) "obliged to obey him. And as for civil law, it addeth only the name of the person commanding, which is *persona civitatis*, the person of the Commonwealth.

"Which considered, I define civil law in this manner Civil law is to every subject those rules which the Commonwealth hath commanded him by word, writing, or other sufficient sign of the will, to make use of for the distinction of right and wrong; that is to say, of what is contrary and what is not contrary to the rule."

Right and wrong, in the legal sense, are that which the State has allowed and forbidden, and nothing else. To understand this is one of the first conditions of clear legal and political thinking, and it is HOBBES's great merit to have made this clear beyond the possibility of misunderstanding. No one who has grasped HOBBES's definition can ever be misled by verbal conceits about laws of the State which are contrary to natural right, or the law of nature, not being binding. All such language is mischievous, as confusing the moral and political grounds of positive law with its actual force. In practice we all know that the officers of the State cannot entertain complaints that the laws enacted by the supreme power in the State are in the complainant's opinion unjust. It would be impossible for government to be carried on if they did. Laws have to be obeyed, as between the State and the subject, not because they are reasonable, but because the State has so commanded. The laws may be, and in a wisely ordered State will be, the result of the fullest discussion which the nature of the case admits, and subsequent criticism may be allowed or even invited. But while the laws exist they have to be obeyed. The citizen who sets himself against the authority of the State is thereby, so far as in him lies, dissolving civil society; and this was the solid truth which HOBBES expressed in the curiously artificial form of his original convenant. Some of HOBBES's consequences from his definition of civil law are these. The sovereign is the sole legislator in all commonwealths, and having power to make and repeal laws is not subject to the civil law. For practical purposes it would be more useful to convert this proposition and say that the ultimate test of sovereignty in a given commonwealth is the unlimited power of legislation. If HOBBES had applied the rule in this form to England, he would have found some trouble in escaping SIR THOMAS SMITH's conclusion. Then customary law depends for its force on "the will of the sovereign signified by his silence." For custom "is no longer law, than the sovereign shall be silent therein." When it is said that law can never be against reason, this is true, but with the explanation that the commonwealth, that is, "the sovereign, which is the person of the commonwealth," is the supreme judge of what is reasonable. The next consequence would startle the reader who took up HOBBES expecting to find in him nothing but maxims of despotism. It is that law, being a command addressed to the subject, must be communicated in order to be effectual. No one is answerable for breach of the law who is incapable of entering into the original covenant of institution or understanding its consequences; nor is a man answerable

if without his own default he had not "the means to take notice of any particular law."

We said above that the distinction between legality and policy comes to us through HOBBES. The survey of HOBBES's leading doctrines has now enabled us to see how it comes. HOBBES defines legal sovereignty and legal obligation with admirable strength and precision; but then he endeavors to swallow up policy, and to a considerable extent even morality, in positive law. This made it necessary to carry the work of division further. But it was a long time before this was done. It was AUSTIN who completed the process in England: and even his philosophy of positive law is encumbered and entangled with trappings of moral philosophy which have no business there. It would not be too much to say that Professor HOLLAND's *Elements of Jurisprudence* is the first work of pure scientific jurisprudence which has appeared in England —that is of the general science of law distinctly separated from the ethical part of politics. HOBBES had indeed influence enough in England to provoke a reaction. But its leaders applied themselves to the wrong part of HOBBES's work. Instead of making the doctrine of sovereignty the starting-point of fresh criticism and construction, they endeavored to avoid HOBBES's consequences by devising a different sort of original contract as the assumed foundation of society.* This task we shall see undertaken by the publicists of the eighteenth century. We shall see the original contract, seized on as a watchword by the enthusiasm of ROUSSEAU, grow from an arid fiction into a great and dangerous deceit of nations. But we shall also meet with penetrating and observant minds, which the construction of society by fiction fails to satisfy. We shall see the dawn of the historical method in the great Frenchman MONTESQUIEU; we shall see it in its full power in the work of one greater than MONTESQUIEU, one of the profoundest political thinkers, and yet, by no fault of his own, one of the least fortunate statesmen who ever lived—our own BURKE.

* The right kind of improvement on HOBBES was attempted by SPINOZA in his unfinished *Tractatus Politicus*. But the general aversion to SPINOZA's philosophy which prevailed for a century after his death prevented this, so far as I know, from having any influence whatever.

CHAPTER V.

The Modern Period (continued): HOOKER — LOCKE — ROUSSEAU — BLACKSTONE.

The movement in political speculation of which LOCKE stands at the head was the result not of a pure development of scientific ideas, but of the necessity for having a theory to justify accomplished facts. LOCKE's Essay on Civil Government is in truth an elaborate apology for the revolution of 1688; not ostensibly for its righteousness or policy in the particular circumstances, but for the possibility of such a proceeding being rightful in any circumstances. The partisans of JAMES II. took their stand on a supposed indefeasible right of kings, derived from a supposed divine institution of monarchy. The doctrine of divine right has to modern eyes no sort of merit. It was not rational, it was not ingenious, it was not even ancient. A certain sanctity had indeed attached to kings from time immemorial. But this belonged to the office, not to the person apart from the office. Because the man had a kind of sacred character while he was king, it by no means followed that being once made king he could not be unmade, or was entitled to retain and exercise the office without conditions. The notion of the office itself being something above human disposition and jurisdiction had been introduced only in the current century. Still, absurd as it was, it was fortified by a great show of respectable authority. It had taken root in many minds, and become a motive or a stumbling-block in many good men's consciences. The

Whigs needed an antidote, and LOCKE found one in his modified version of the original compact. HOOKER had to some extent prepared the way. Long before his time FORTESCUE, and probably others, had, in a confused fashion, represented the English constitution as in some way founded on the deliberate assent of the original founders of the Commonwealth. In the first book of HOOKER's treatise of the Laws of Ecclesiastical Polity the conception takes a distinct shape. The plainer-spoken doctrine of the natural state of war which afterward gave so much offense in HOBBES is virtually foreshadowed in HOOKER's paragraph on the condition of men without civil government: and the origin of government is in express terms referred to "deliberate advice, consultation, and composition between men." HOOKER adds his opinion that there is "no impossibility in nature considered by itself, but that men might have lived without any public regiment;" a phrase which looks like a willful contradiction of ARISTOTLE's axiom though, considering the respect with which HOOKER constantly cites ARISTOTLE, it is difficult to believe that it was in fact so meant. We may also discover both here and in the unfinished eighth book a nascent theory of sovereignty, but it is nascent at most. Had the divine to whom the name of Judicious was eminently applied by the next generation worked out anything definite in this direction, it would probably have shown more regard for the historical conditions of English politics and the practical possibilities of government than the heroic method of HOBBES.

LOCKE sets to work to cast the ideas of HOOKER (whom he expressly cites) into a better defined form. His definition of political power is curiously lumbering and loaded with qualifications, as if he were afraid of giving a handle to despotism. He begins with a state of nature, but he conceives of it otherwise than HOBBES. The mark of the state of nature is the "want of a common judge with authority;" but men in this state are not in absolute anarchy. They are subject to the law of reason, which "teaches all mankind, who will but consult it, that being all equal and independent, no one ought to harm another in his life, health, liberty, or possession." The state of war arises only when some one, not having the law of reason before his eyes, puts himself out of its protection by offering violence to others. LOCKE has an answer in due form to the question by what right the others may resist and even kill the offender. In the state of nature every one alike has the executive power of the law of nature; and this power is even in modern societies the only justification for the exercise of sovereignty over aliens within the territorial dominion of a State. One would here expect LOCKE to come at once to the original compact; but he is too wary for this. He will first establish as much private right as he can; and he argues with much ingenuity for a natural right of property which is altogether antecedent to government. Every man is said to have "a property in his own person," and this is extended to things which he has changed from their natural state by doing work upon them, or in LOCKE's phrase, "hath mixed his labor with" Conflict of interests is foreseen, and is accordingly forestalled by the rule of nature that the right of property is limited by capacity of enjoyment, or at any rate of permanent safe custody. After some preliminary discussion of the constitution of the family we come at length to political society, which is described in a curiously indecisive manner. Man "hath by nature a power not only to preserve his property, that is, his life, liberty, and estate, against the injuries and attempts of other men, but to judge of and punish the breach of that law" (*i. e.* the law of nature) "in others . . . But because no political society can be nor subsist, without having in itself the power to preserve the property, and in order thereunto, punish the offenses of all of that society; there, and there only,

is political society, where every one of the members hath quitted this natural power, and resigned it up into the hands of the community in all cases that exclude him not from appealing for protection to the law established by it. And thus all private judgment of every particular member being excluded, the community comes to be umpire by settled standing rules, indifferent and the same to all parties." Every man, as with HOBBES, gives up his actual power to the community; but he gives up not absolutely, but for particular and limited purposes. Whoever joins an existing commonwealth becomes a party to the original contract on which it rests by accepting the benefit of it, and is as much bound as if he had been present and assisting at the first institution. LOCKE then proves (no doubt as against HOBBES) that an absolute monarchy is not a civil society at all, for an absolute monarch, being no "common judge with authority" to decide between himself and his subjects, is really in the state of nature with regard to them. When a political society is formed the right of a majority to be the ultimate source of power is deduced as a practical necessity Without such right the commonwealth could not act as one body at all. And for this LOCKE appeals to actual usage: "We see that in assemblies empowered to act by positive laws, where no number is set by that positive law which empowers them, the act of the majority passes for the act of the whole, and of course determines, as having by the law of nature and reason the power of the whole."

Political society, then, is in LOCKE's theory constituted by the compact of its original members, a compact renewed from generation to generation in the person of every citizen when he comes to an age of discretion to choose his allegiance. If he chooses, as in the vast majority of cases he does, to go on living in the State where he was brought up, he thereby becomes a party to its Constitution, and authorizes its sovereignty over him. But the sovereignty of the society is not absolute. It is limited to the ends for which it was conferred; the State is like a corporate joint-stock company, whose operations he cannot lawfully extend beyond the purposes for which it was incorporated. Men have established governments not to control their lives altogether, but "for the mutual preservation of their lives, liberties, and estates." Forms of government may be and are various, but the fundamental principles are the same. The legislative power is supreme, and all members of the State owe obedience to it; but its authority is not arbitrary. First, it must be exercised as it was given, for the good of the subjects. Secondly, it must dispense justice by standing laws and authorized judges; for under irregular arbitrary power the subjects would be worse off than in the state of nature. Thirdly, no man can be deprived of any part of his property without his own consent, given either in person or by his representatives; or as LOCKE more correctly puts it in summing up, "they must not raise taxes on the property of the people, without the consent of the people, given by themselves or their deputies." Fourthly, the legislature cannot transfer its powers to any other person or body. These are organic maxims of government which (so far as one can make sure of LOCKE's meaning) cannot be dispensed with by any power whatever. Excellent maxims they are, but we should now say that they are rules of political expediency, not limits to the legal capacity of the authority by whom laws themselves are made.

LOCKE is aware, it should be said, of the objection that the state of nature is an unproved and improbable assumption, and the original contract, therefore, no better than a fiction. He seriously endeavors to deal with it, though the attempt cannot be pronounced successful. The state of nature, he says, is exhibited as a thing really existing in modern times by the relation of independent States to one another. As to the want of evidence

that it was the primeval state of mankind in general, he says that the very obscurity of all early records and absence of positive knowledge leaves the ground all the more clear for any probable hypothesis of the origin of society.

Subject to these conditions, which in some points curiously resemble those imposed on sovereignty by BODIN, LOCKE is quite clear that "whilst the government subsists, the legislative is the supreme power; for what can give laws to another must needs be superior to him." But its authority is not indefeasible: "being only a fiduciary power to act for certain ends," it may be forfeited by misuse. Under every form of government the community retains a supreme power of self-preservation, a power which, underlying all positive institutions, and not being bound to any of them, "can never take place till the government be dissolved." HOBBES would say that this alleged power is merely a specious name for the *de facto* possibility of a successful rebellion, followed by a return to the natural state of war, in other words for that anarchy which is to be avoided at all costs. Further on LOCKE, as if to meet this objection, is at no small pains to show that the dissolution of governments is to be distinguished from that of societies. "Where the society is dissolved, the government cannot remain." but governments may be altered or dissolved from within, and the society not be destroyed. LOCKE seems to regard the original agreement as having two stages. First, people agree to live in a commonwealth; next, that the institutions of their particular commonwealth shall have this or that form. So far as the agreement concerns the establishment of a community in general, it is perpetual and irrevocable; so far as it places authority in the hands of a dynasty or an assembly, it is subject to a revision whenever organic change is demanded by the common good. LOCKE illustrates his position by cases hypothetical in terms, but having a transparent reference to the English constitution and the Revolution of 1688. He never distinctly faces the question whether a change of government can take place within the limits of positive law. This omission seems remarkable when we remember that the Convention Parliament, "lawfully, fully, and freely representing all the estates of the people of this realm," had expressed itself on this point in the affirmative in sufficiently plain terms. It is impossible to read the Bill of Rights carefully without seeing that its framers were convinced not only of the justice and policy but of the strict legality of their proceedings. Technical difficulties were felt as to the exact manner in which James II. had legally ceased to be king. But the Revolution was conducted throughout as a reformation within the law, nay, as a restoration of the law, not as a breaking of legal bonds which had become intolerable. It was LOCKE's way, however, to swallow up legality in policy almost as much as HOBBES had swallowed up policy in legality.

At one point LOCKE comes down, as against HOBBES, on the hard bottom of facts, and does it with great effect. He expects the objection that "this hypothesis" (of the possible forfeiture of political power) "lays a ferment for frequent rebellion." And he answers, "No more than any other hypothesis; for when the people are made miserable, and find themselves exposed to the ill usage of arbitrary power, cry up their governors as much as you will, for sons of Jupiter; let them be sacred or divine, descended or authorized from heaven; give them out for whom or what you please, the same will happen." The preaching of HOBBES's irrevocable covenant of sovereignty, or FILMER's patriarchal title of kings deduced from ADAM, will not make people endure a government that is in fact unendurable. It is by no means clear that HOBBES was not ready to say it would; it is clear, at any rate, from divers passages in his *Leviathan* and

elsewhere, that he set an exaggerated value upon the influence of political theories propagated under color of civil or ecclesiastical authority. He seems to have thought the bulk of men would believe whatever their superiors told them, even when their own obvious interests were concerned, and the sovereign might make them believe what he pleased if he took care to allow no superior but himself.

For the rest, the hesitations and half-truths of LOCKE and his followers are partly to be accounted for by the practical conditions of their work. They dared not say distinctly that the king of England was not sovereign in the political sense of sovereignty. LOCKE says, for example, that "in some commonwealths where the legislative is not always in being, and the executive is vested in a single person, who has also a share in the legislative, there that single person in a very tolerable sense may also be called supreme." Besides this, LOCKE was evidently afraid on principle of over-definition. He is nowhere so precise on the supreme authority of Parliament (for the English Parliament is constantly in his mind when he speaks of the "legislative") as SIR THOMAS SMITH a century before him. On prerogative, again, he is not so plain-spoken or exact as SELDEN had been. SELDEN, like a clear-headed lawyer, said there was no mystery at all. Prerogative is the law which peculiarly concerns the Crown, and is not different in kind from any other branch of law.* With LOCKE there is still a shadow of mystery about it. Prerogative is a vague and extraordinary discretion, limited, like the legislative power itself, by the rule that it must be employed in good faith for the public advantage.

The plastic fiction of the original contract had been used by HOBBES to generate the absolute power of his *Leviathan*, and by LOCKE to show that a moderate constitutional government not merely was justified by the law of nature, but was the only government so justified. It remained for ROUSSEAU to employ the same fiction for purposes which HOBBES would have thought the very madness of anarchy, and at which LOCKE would have been appalled. LOCKE's propositions, as Mr. MORLEY has pointed out, are guarded by practical reserves, on all sides, and are as far as possible from being universal dogmas. ROUSSEAU was more popular than LOCKE, and more dogmatic than HOBBES. The result was that the *Contrat Social* became one of the most successful and fatal of political impostures.*

ROUSSEAU's social contract is distinguished from that of other speculators in purporting to create a common and sovereign power and yet leave every contracting party as free as he was before, and owing obedience only to himself. Every man gives up himself and his individual rights as fully as in HOBBES's covenant. But the surrender is to the whole society, not to a sovereign. "*Chacun se donnant à tous ne se donne à personne.*" The terms of the contract (for ROUSSEAU knows all about the terms) are as follows:—"Each of us puts his person and faculties in a common stock under the sovereign direction of the general will; and we receive every member as an inseparable part of the whole." Every member is called *citizen* as having a share in the sovereignty, *subject* as owing obedience to the laws made by the State. Whoever refuses to obey the general will is to be compelled by the whole body to obey it: "which

* SELDEN, "Table-talk," *s. v.* Prerogative.

* It contains incidentally one of the many fallacies of international law which have been warmly espoused (by no means out of pure philanthropy) by certain Continental statesmen and publicists: "*La guerre n'est point une relation d'homme à homme, mais une relation d'état à état.*" This leads straight to the monstrous proposition that no one not specially authorized by the State may defend his own homestead against an invader, and is used by the publicists in question for that purpose.

is as much as to say that he will be compelled to be free"—an ominous phrase. The sovereign power thus created is spoken of in a tone which HOBBES could not surpass. It is inalienable, indivisible, and, it would seem, infallible, if you can only get the "general will" truly expressed. The sovereign is bound to be just in the sense of having no respect of persons. Law is defined by the one mark of generality, so that the choice of a king or a dynasty cannot be a legislative act. A definition by which the Bill of Rights is partly a law and partly not, and the Act of Settlement is not one at all, does not particularly commend itself to the English student of politics. ROUSSEAU's object is apparently to reconcile HOBBES's dictum that no law can be unjust, which he adopts, with his own definition of the justice required in the sovereign. Further, no power in the State can be sovereign. The legislator is not sovereign, but the organ and servant of the sovereign community. The government is not the sovereign, but a mediator between the community in its corporate and sovereign capacity and its individual members as subjects. As the government cannot legislate, so the sovereign cannot govern directly. But the tendency of governments is to aim at usurping sovereignty; sooner or later the ruler subjugates the sovereign, and the fundamental pact of society is broken. This is the inherent weakness of all commonwealths, by which they ultimately perish. The political as well as the natural body is on the way to death from the moment it begins to live.

ROUSSEAU does not fail to see that the complete exercise of sovereign power, according to his notion of it, is impossible; for how are the sovereign people all to come together? His answer is that modern States are a great deal too large; he would restore the independent Greek city, or what he supposed it to be. When the people are assembled every citizen is equally a magistrate, and all government is in abeyance. Representative government, where it exists, is only a makeshift; deputies of the people cannot really represent its power, they can be only limited agents whose acts need ratification. English liberty is an illusion; for the English people is the slave of the Parliament it makes. Political representation is indeed no better than a rag of feudal iniquity. Thus for want of a proper declaration of the "general will" there is hardly a nation on earth which possesses laws in any proper sense. But then, how to unite the just and true sovereignty of the people with the size and defensive resources of the modern State? ROUSSEAU promised to deal at large with this question, but did not perform his promise in the *Contrat Social*, or any other published writing.* Apparently his plan would have been the establishment of some sort of federal government for purposes of external policy. The federal constitution of Switzerland, though in his time a very imperfect one, would have no doubt furnished a good part of his matter for this head.

The social contract had sometimes been represented as including, or identical with, a contract between the king or other ruler and the people. ROUSSEAU formally repudiates this. Government is created, in his view, not by contract, but by an act of sovereignty. The supposed contract, he says (truly enough, but the remark comes strangely from him), would be not civil but merely natural, and would be under the sanction of no common authority. There is only one contract, the original contract of society; this leaves no room for any other, for the community has acquired by it all the rights of its individual members. So confident is ROUSSEAU in the indefeasible rights of the sovereign people that he seems to approve of delega-

* It is stated that he left materials on this subject which were destroyed from political scruples. Their custodian need not have feared to publish them. It would have been difficult to add to the mischief wrought by the *Contrat Social* without their aid.

tions of authority which constitutional writers like LOCKE thought dangerous and unwarrantable. He speaks with equanimity of a dictatorship. In the days of the Committee of Public Safety the Jacobin governors of France more than acted up to his principles. One more great difficulty remained about the exercise of the sovereign people's rights. ROUSSEAU had of course, like all other absolute theorists on government, to make out why a dissenting citizen should be bound by the will of the majority. This he does in a fashion both more sophistical and more clumsy than LOCKE's. LOCKE indeed is frank enough in his appeal to practical convenience on this point.

Thus much for a rapid sketch of ROUSSEAU's political system, of which the historical importance is that it is in great measure answerable for the Declaration of the Rights of Man.* This Declaration (which belongs to the earliest stage of the Revolution) carries the confusion of legal right and political expediency, and the enunciation of pompous platitudes under qualifications so wide as to make them illusory, to a pitch seldom, if ever, equaled in any other political document. The birth of all men free and with equal rights, the collective sovereignity of the nation, and the "*volonté générale*" which positive laws express, are taken straight from ROUSSEAU. It would be unjust to deny all merit to the Declaration. The 7th, 8th, and 9th articles express, in language fairly free from objection, important maxims of legislation and administrative jurisprudence. But so far as the Declaration embodies a political theory, it is a standing warning to nations and statesmen not to commit themselves to formulas The original contract between king and people had been much talked of at Westminster in the debates on the abdication of JAMES II. : but happily we escaped having it embodies in the Bill of Rights. The effect of the Principles of 1789, as the Declaration of the Rights of Man is often called, has been to hinder and prevent the development of politics in France, in practice as well as in theory, to an almost incalculable extent.

While ROUSSEAU's *Contrat Social* was almost fresh from the press. BLACKSTONE was handling LOCKE's principles in England after qu te another fashion. If we dismiss from our minds BENTHAM's fervid criticism, and approach BLACKSTONE in an unprejudiced mood, we shall find that he not only was faithful to his lights, but materially improved on LOCKE in more than one point.* For one thing, he distinctly refuses to believe in the state of nature as an historical fact, and thereby avoids a difficulty which LOCKE had palliated rather than met by ingenious but weak excuses. "Society had not its formal beginning from any convention of individuals." BLACKSTONE treats the family as the unit of society, and reduces the original contract, though he does not abandon the term, to the fact that men hold together in society because they cannot help it. On the doctrine of sovereignty, again, he is much clearer than LOCKE. In all forms of government "there is and must be a supreme, irresistible, absolute, uncontrolled authority, in which the *jura summa imperii* or the rights of sovereignty reside." And he affirms, as against LOCKE's vague reservations, that in

* The full text of this document (which most historians strangely neglect) is given in HENRI MARTIN'S *Histoire de la France depuis* 1789, vol. i. p. 78.

* It is easy for us now to make light of BLACKSTONE'S constitutional theory. Two things, I conceive, ought to be remembered in fairness to him. (1) BLACKSTONE wrote as a lawyer; and, as far as positive law goes, a hopeless deadlock was and is quite possible in the working of the English Constitution as it stood in his time and stands now. (2) The distribution of real political power between the Crown and the two Houses of Parliament was still undefined at the date of BLACKSTONE'S description. We now say that political power, as distinct from legal sovereignty, is in the last resort with the majority of the House of Commons. BLACKSTONE not only would not but could not have said so.

England this authority belongs to Parliament, and there is no legal possibility of looking further. "What the Parliament doth, no authority upon earth can undo." The separation of law from policy is still far from complete, but BLACKSTONE is nearer to the true state of the facts than either HOBBES or LOCKE.

CHAPTER VI.

The Modern Period (continued): HUME—MONTESQUIEU—BURKE.

ROUSSEAU and BLACKSTONE have been taken out of their order in time for the convenience of bringing into one view the social contract in its various forms. Meantime the doctrine had not escaped criticism on its native soil. HUME, taking a double pleasure, we may be sure, in dissecting a philosophical fallacy which was almost a Whig article of faith, exposed its hollowness in such fashion as really left nothing more to be said. But HUME was a destroyer, not a rebuilder. He had nothing to put in the place of the beloved fiction, which accordingly went on living in political commonplace, as Mr. STEPHEN has said, long after the brains were out. His own political conceptions were poor and mechanical, and his idea of a perfect commonwealth is one of the most barren and least pleasing exercises of political imagination ever produced.

It was a Frenchman who supplied beforehand, if his countrymen would have appreciated it, an antidote to ROUSSEAU'S fictions. MONTESQUIEU, with all his faults and irregularities, is the father of modern historical research. His information was often crude and imperfect, his inferences often hasty, and his judgment often misdirected. Yet he held fast to the great truth that serious politics cannot be constructed in the air by playing with imaginary men of no particular race or country, and building them up into arbitrary combinations, as a child builds castles with wooden bricks. He applied himself to study political institutions as belonging to societies of definite historical types, and determined by historical conditions One may remember with a certain pride that he was a member of our own Royal Society, which thus early recognized in his person that the questions of politics as well as of physics may be treated in a scientific spirit, so as to give a truly scientific character to the inquirer's work.

MONTESQUIEU'S plan included two ideas, which were brilliant in themselves and quite out of the common course of the publicists of the time. He aimed at constructing a comparative theory of legislation and institutions adapted to the political needs of different forms of government, and a comparative theory of politics and law based on wide observation of the actual systems of different lands and ages. In the first branch of this design MACHIAVELLI had, after a sort, been before him, but in a limited field and for a special purpose. The second was entirely new. We have already said that the execution was not equal to the conception. The means did not exist for making it so. Few books are so unfit to be judged by extracts or cursory inspection as the *Esprit des Lois*. There are many chapters in it which might have come from a mere gossiping collector of travelers' tales. Nor is MONTESQUIEU by any means always happy in his reflections. He was above many of the illusions of his time, but he could not escape the besetting temptation of the eighteenth century to regard men as more rational than they are. Thus we find him assigning conjectural reasons of State policy for all kinds of barbarous customs, more or less correctly reported by Jesuit missionaries and others. He rightly saw that customs which appear to us foolish or monstrous do not exist without any reason at all. He no less rightly saw that the institutions of a society depend on its particular conditions, and must be studied in connection with them; but in counting the conditions he left out the men

themselves. He did not see that to understand a civil society widely differing from our own we must first get some knowledge of the ancestral habits and character of its members, and of the stage they have reached in general culture. In one word, he stopped short of discovering that institutions are an affair of race as well as of circumstances; not far short, for he went a considerable way in the aplication of physiology to politics. It is not so much that MONTESQUIEU neglects race as that he exaggerates the modifying effect of external conditions. And we also find his historical method, imperfect as it was, preserving him from a great many current mistakes. For example, he completely sees through the rose-colored accounts of the Chinese empire which were the common stock of eighteenth century moralists and even of VOLTAIRE, and this because he has taken the trouble to study the facts as a whole.

Again, MONTESQUIEU's remarks on England, of which he has a good many (though sometimes thinly disguised, like LOCKE's, in the form of suppositions), are by no means free from mistakes; but they show on the whole a wonderful insight into the effectual forces of English policy, and what is more, into the English character.* It is needless to say much of his general enlightenment and robustness of mind. A writer who in the middle of the eighteenth century could suggest, though in an ironical passage, an international convention against the slave trade, needs no further commendation. Once more, he meets with rare straightforwardness the ancient objection to popular government—that the people at large are not competent in politics. It is not to be expected, says MONTESQUIEU, that they should be competent, nor does it much matter. The main thing is that they should be interested Experience and discussion must be trusted to make error find its level. "*Dans une nation libre, il est très-souvent indifférent que les particuliers raisonnent bien ou mal; il suffit qu'ils raisonnent: de là sort la liberté, qui garantit des effets de ces mêmes raisonnements.*"

MONTESQUIEU was vastly honored in his own country, but very little attended to. BURKE fared even worse; he had the melancholy satisfaction of seeing his wisest counsels neglected, and seeing the neglect of them followed by the evils he predicted; and when at last he was taken into favor it was because his political reason fell in for once with the blind passions of those who had denounced him as a renegade.

Just now I said that MONTESQUIEU was a difficult author to give a fair representation of in any summary manner. For, though he professes to be systematic, he is too discursive and unequal to be judged of in abridgement. Neither will an epitome of the matter serve much for knowledge of his real import, since his merit is often far more in the disposition and handling than in the matter itself. With BURKE the difficulty is yet greater; he is full of ideas more instructive than other men's systems, but they are so admirably woven into the discussion of particular and actual questions that they refuse to be torn out as examples of him. They proceed from a settled way of thinking, but are nowhere reduced into a connected argument. A light of great wisdom shines in almost everything of BURKE's making, but it is a diffused light, of which the focus is not revealed but only conjectured. This is in the first place due to the manner of BURKE's life and to the occasions of his activity; but it is also connected with the nature of his thought itself. We may be pretty sure that BURKE would under no conditions have constructed a formal theory of politics. He mistrusted formalism even to excess, and was never so happy as when he used the most splendid power of political reasoning ever exhibited in English oratory to

* On some points of English foreign and colonial policy MONTESQUIEU is almost prophetic.—*Esp. des Lois*, book xx. c. 27.

denounce the danger of reasoning overmuch. He was not afraid to say that he feared definitions "Metaphysics cannot live without definitions, but prudence is cautious how she defines." He declared himself "resolved not to be wise beyond what is written in the legislative record and practice." Not only is BURKE not formally complete as a political teacher, but if we look for formal consistency in him we shall not find it. When he is denouncing the monstrous penal laws of Ireland he sets the conventional value of positive laws as low as possible. Curiously anticipating in one point almost the very language of the greatest master of the modern historical school, BURKE says that "as a law directed against the mass of the nation has not the nature of a reasonable institution, so neither has it the authority: *for in all forms of government the people is the true legislator*;* and whether the immediate and instrumental cause of the law be a single person or many, the remote and efficient cause is the consent of the people, either actual or implied; and such consent is absolutely essential to its validity." Even the whole people "have no right to make a law prejudicial to the whole community." When the same BURKE is combating the Declaration of the Rights of Man he speaks of legal power in a strangely different tone. In the tracts on the Popery Laws HOBBES is just mentioned as having broached a monstrous ductrine; in the *Reflections on the French Revolution* we catch for a moment the ring of HOBBES's doctrine almost in HOBBES's own words. "If civil society be the offspring of convention that convention must be its law;" no person can claim any right inconsistent with it. "That he may obtain justice he gives up his right of determining what it is in points the most essential to him. That he may secure some liberty he makes a surrender in trust of the whole of it." Government is a thing apart from natural rights; it is contrived to provide for men's wants and to restrain their passions, which "can only be done *by a power out of themselves*"—HOBBES's "common power to keep them in awe." And for the moment we think BURKE is ready to fall down and worship the Leviathan if Leviathan will put a sword in his hand to smite the Jacobins with.

Yet it is the same BURKE who speaks in both places, and really with the same voice. His anger against Protestant oppression in Ireland and Jacobin violence in France comes from one and the same root His constant purpose, whether in the affairs of Ireland, of England, or of France, is to appeal to experience against dogmatism. He will have for the guide of politics neither the bare letter of positive institutions nor bare deduction from universal propositions, but a rule of equity and utility founded on and preserving the rights and liberties which exist. He will treat politics as an experimental science, not a scheme of *a priori* demonstration. Once he was challenged with substantial defection from his principles His *Reflections on the French Revolution* were said to be repugnant to his former public life. The result was the *Appeal from the New to the Old Whigs*, in which, by dint of criticising the Jacobin theory of society, BURKE is brought nearer than in any other of its works to an explicit statement of his own.

We are bidden, he says, in the name of the supreme authority of the people to recognize as a matter, not of extraordinary necessity, but of common right, an unlimited power of changing the foundations of government. What are the people? "A number of vague, loose individuals"—the imaginary parties to the social contract—are not a people, neither can they make themselves one off-hand by convention. A "multitude told by heads" is no more a people after it has been told than before. The corporate unity of a

* Compare SAVIGNY's "Das Gesetz ist das Organ des Volksrechts."

people is artificial indeed; but art is long, and for that very reason a nation is easier unmade than made. And how is the supreme authority of the people exercised? By the will of a majority But what power has the majority to bind the rest? Again an artificial power, nay, a most artificial power. First there is a fiction to make one corporate person of many men; then another fiction, "one of the most violent fictions of positive law," to enable a majority to act as this one person. And on these artificial and judicial conceptions, confusing, as BURKE says, judicial with civil principles, the French revolutionary speculators would rest the authority of positive law itself. Whether a majority shall have power to decide, in what cases, and what majority, is an affair of convention. These people have no right, on their own principles, to exercise any of the authorities of a State. If "prescription and long possession form no title to property," what better claim have they than a horde of brigands or squatters to the territory called France? Civil society will not come by counting of heads; it is a social organism and a social discipline. And if it is artificial in its perfection, yet it is more truly a state of nature "than a savage and incoherent mode of life," or rather it is this because it is artificial, for "art is man's nature." Such is the substance of BURKE's comment on the fundamental axiom of ARISTOTLE. Man is born to be a citizen in that he comes into an existing social order, and is attached to it by duties of others to himself and himself to others, which are not, and cannot be, of his own making. He does not come into the world as an unrelated unit and acquire by some convention a fantastic title to some hundred-thousandth undivided part of the indivisible sovereignty of the people.

Never was there a more complete tearing to pieces and trampling under foot of political sophistries. The *Contrat Social* is reduced in BURKE's powerful hands to what he has elsewhere called it—"chaff and rags and paltry blurred shreds of paper about the rights of man." It seems hardly possible that such a critic should fall into sophistries himself; but he thought little of being guarded, and more than once he stumbles. Regarding political science as above all things experimental and practical he took up, as he tells us himself, whatever point he thought most in need of defense, and urged his case without qualification of the matter, and without thinking much of other sides. Thus we find in him forms of statement and objection which in a lesser man we should call obtuse. Believing as he justly did, in the respect due to the continuity of the present with the past, and to associations which cannot be replaced, he looked on the analysis of the ultimate forces of society as a kind of sacrilege. He could see no practical security for the British Constitution if the French principles of 1789 were to be held tolerable even in speculation. The security of the sympathizers with the revolution—those who profess to be peaceable ones—"amounts in reality to nothing more than this, that the difference between their republican system and the British limited monarchy is not worth a civil war" And this is called by BURKE "the poorest defensive principle that ever was infused into the mind of man against the attempts of those who will enterprise." As if in the last resort any frame of society whatever had any other defensive principle, or as if any stronger were conceivable. HOBBES could find no firmer ground to set under the feet of the Leviathan. The vast majority of men adhere to their established institutions, not because they admire them, not even because of any positive prejudice in their favor, but because they dread the unknown. They cling to any tolerable certainty for certainty and custom's sake, and when they break loose from their accustomed order it is a vehement presumption that their present state is not only imperfect but intolerable. When it comes to that point no pre-

scriptive majesty of the ancient order will help it, not though the voice of a BURKE were there to defend it. In 1832 a large part of the English people were of opinion that the difference between an unreformed and a reformed Parliament *was* worth a civil war; and it was the knowledge of their opinion and of their readiness in extremity to act on it that then narrowly saved the State. BURKE failed to see this in the case of the French Revolution, and therefore was violent and one-sided. Shallow or false he could not be; stripped of their rhetorical exaggerations, or often even with them, his charges were mostly true, and his foresight of the course of events was marvelously fulfilled. In 1789, and even later, many good people, both in Paris and London, were dreaming of a happy and peaceful change from the old French monarchy to some new version of the British Constitution. BURKE warned them from the first that at all events they would not see *that*, and he was terribly in the right.

After BURKE it was impossible for any one in England to set up the Social Contract again, either in ROUSSEAU'S or in LOCKE'S form, for any effectual purpose. There is another distinct contribution both to political science and to exactness of reasoning in practical politics, which I think we may ascribe to him: the separation of expediency from legality. It might be difficult to show in his writings any full and formal enunciation of this; but it is the whole burden of his great speeches and letters on the American War. Englishmen were declaiming on the right of the British Parliament to tax the colonists. BURKE told them the abstract right might be what it would, but they were fighting against justice, convenience, and human nature, and for the sake of their abstract right were making a breach in the dominions of the British Crown. The event signally and unhappily showed his wisdom.

BURKE, however, was too great for his generation. He restored history to its place in politics, but, like some of the greatest thinkers in pure philosophy, he left no disciples. The formal development of political science in the present century is not traced to him, but was taken up in England from a wholly different side, and on the Continent by an independent impulse, though in a spirit, and sometimes even in a form, which have more affinities with BURKE than with any other Englishman.

CHAPTER VII.

The Present Century: Political Sovereignty — Limits of State Intervention — BENTHAM — AUSTIN — MAINE — BAGEHOT — KANT — AHRENS — SAVIGNY — CORNEWALL LEWIS — JOHN STUART MILL — HERBERT SPENCER — LABOULAYE.

We have now come down to the beginning of this century, a date from which the development of political speculation becomes too vast and multifarious to be dealt with on a uniform scale in such a summary sketch as the present. A choice must of necessity be made among the various branches of the subject. An attempt to exhibit their general character is made in the accompanying tables. In one group we have the oldest branch of political science, the general theory of the State and its possible forms. This has received much additional definition at the hands of modern authors, and in England in particular the doctrine of sovereignty has been found capable of further discussion and working out than its founders imagined. In a second group comes the study of particular institutions and the action of the State for particular purposes, which may be called as a whole the theory of Government. Here seems to be the fittest place for the question of what things ought to be dealt with by the State and what left alone, a question associated with sundry terms and phrases such as *laissez faire*, limits of the State, individual liberty. Then a more technical branch of the subject

has to do with the State in its legal aspect, in other words with the method, form, and application of positive law. This may be named the theory of legislation in a wide sense, and legal science as specially understood by lawyers may be regarded in the logical order as an offshoot from it, though the shoot is considerably larger than the parent stem, and, in historical order, much older. Lastly, the State is personified for the purpose of external action, and regarded as having duties toward other States and claims upon them. A systematic doctrine of these duties and rights is given by the law of nations and the speculative theories which profess to support or account for it. This division, except as to the last branch, is to a great extent not really a division of different subjects, but a distinction of the forms and relations under which the same subjects are presented; neither does it attempt exact analysis, which indeed the nature of the matter hardly admits. But it may serve to show the range and variety of modern political science.

THEORETICAL POLITICS.	APPLIED POLITICS.
A. THEORY OF THE STATE. Origin of Polity. *a.* Historical. *b.* Rational. Constitution. Classification of forms of government. Political Sovereignty.	A. THE STATE. Existing forms of government. Confederations and Federal States. Independence.
B. THEORY OF GOVERNMENT. Forms of institutions. Representative and Ministerial Government. Executive Departments. Defense and Order. Revenue and Taxation. Wealth of Nations. Province and Limits of Positive Law.	B. GOVERNMENT. Constitutional Law and Usage. Parliamentary Systems. Cabinet and Ministerial Responsibility. Administrative Constitutions. Army, Navy, Police. Currency, Budget, Trade. State regulation or non-interference.
C. THEORY OF LEGISLATION. Objects of Legislation. General Character and Divisions of Positive Law (Philosophy of Law or General Jurisprudence). Method and Sanction of Laws. Interpretation and Administration. Language and Style (Nomopoetic or Mechanics of Law-making).	C. LAWS AND LEGISLATION. Legislative Procedure. (Embodiment of theory in legislative form: memora dum, *exposé des motifs, etc.*) Jurisprudence of particular States. Courts of Justice and their machinery. Judicial precedents and authority.
D. THEORY OF THE STATE AS ARTIFICIAL PERSON. Relations to other States and bodies of men. International Law.	D. THE STATE PERSONIFIED. Diplomacy, Peace and War. Treaties and Conventions. International agreements for furtherance of justice, commerce, communications, etc.

It seems natural to choose for closer inspection such topics as, being in themselves important, have been more than others handled by English writers and connected with practical questions of legislation and policy. Dismissing international law, which otherwise answers this description, as too technical and standing too much apart, we find political sovereignty and the limits of State intervention to be topics of the desired kind. On these English literature, if not abundant, can make a fair show, and on one or other of them a great part of modern English political discussion has turned, so far as it has involved speculative ideas at all. It will therefore be convenient to mention particularly what has been done by English writers on these subjects, marking in other directions only the most general characters of the different modern schools of political theory.

There is no doubt who has the first claim upon us. It was BENTHAM who, after the interval of a century, took up the theory of sovereignty where HOBBES had left it, and showed it to be capable of a reasonable interpretation, and fruitful of practical consequences. His *Fragment on Government*, a short book, but containing all his leading ideas, appeared in 1776. Not only the ideas are there, but they are much better expressed than in BENTHAM's own later versions of them. No man ever labored more assiduously than BENTHAM in his old age to make the outward form of his thoughts repulsive or ridiculous to the public. Happily the thoughts have now become common property, and the later volumes of BENTHAM's collected works may repose undisturbed, save by any curious student of the follies of great men who may have the patience to see what violence can be done to the

English language by a philosopher under the dominion of his own inventions. The *Fragment* is a merciless criticism on the introductory part of BLACKSTONE's Commentaries, then in the height of their first renown. BENTHAM was stirred to indignation by the tone of comfortable optimism that pervaded BLACKSTONE's classical treatise. He denounced BLACKSTONE as an enemy of reform whose sophistry was so perverse as to be almost a crime, an official defender of abuses with a "sinister bias of the affections." It does not now concern us to adjust the merits of the controversy as between BLACKSTONE and his critics. It should be remembered, however, that while much of BENTHAM's animadversion is captious and unfair in detail, he was quite right in attacking the people who maintained that English law as it stood in 1776 was the perfection of reason, and in taking BLACKSTONE as their best representative. And to BLACKSTONE's merits as an expounder he does full justice, declaring that "he it is who, first of all institutional writers, has taught jurisprudence to speak the language of the scholar and the gentleman." But we must pass on to BENTHAM's own doctrine.

The foundation of the modern English theory of the State is laid in BENTHAM's definition of political Society. "When a number of persons (whom we may style subjects) are supposed to be in the habit of paying obedience to a person, or an assemblage of persons, of a known and certain description (whom we may call governor of governors), such persons altogether (subjects and governors) are said to be in a state of political society."* It is worth noting, in the light of SIR H. MAINE's later criticism, that BENTHAM explicitly admits the difficulty there may be in deciding whether in a particular society a known and certain governor is habitually obeyed, and consequently whether the society should be reckoned political or natural; a natural society being defined as one where this habitual obedience does not exist. He is quite aware that there is in the facts of human society nothing corresponding to the definition with perfect accuracy. "Few, in fact, if any, are the instances of this habit being perfectly *absent*, certainly none at all of its being perfectly *present*." Practically the mark of a political society is "the establishment of names of office," the existence of people set apart for the business of governing and issuing commands.

Laws are the commands of the supreme governor, or to use the term now adopted, the sovereign. And the field of the supreme governor's authority is indefinite. In practice, indeed, it is limited by the possibility of resistance, and there are conditions under which resistance is morally justifiable or proper. But these conditions are not capable of general or precise definition. For the purpose of scientific analysis the power of the sovereign must be treated as unlimited. The difference between free and despotic governments is in the constitution of the sovereign authority, not in its power; in the securities for the responsibility of the particular persons who exercise it, and for free criticism of the manner of its exercise, not in any nominal restriction of its scope. To say that a supreme legislature cannot do this or that, or that any act of such a body is illegal, is an abuse of language.* "Why cannot? What is there that should hinder them?" Those who profess to discuss the power of the sovereign are really discussing, in a confused and obscure way, whether the acts of that power

* I spare the reader BENTHAM's profuse italics and capitals.

* BENTHAM excepts the case where the authority of a supreme body is "limited by express convention" with some other State or States. Here, however, the supreme body in the particular State is not the true sovereign, or is not so for all purposes. This is the case, as BENTHAM hints, in all federal governments. In federal affairs the ultimate sovereign is the power, whatever it be, which can alter the federal constitution.

are useful or mischievous; in the last resort, whether they are so mischievous that resistance appears better than submission.

This alone is a considerable advance. BENTHAM, like HOBBES, exposes the fallacy of a limited supremacy; but, unlike HOBBES, he distinguishes between the legal duty of obedience (the supreme power itself being supposed unchallenged) and the political doctrine of non-resistance. The sovereign prince or assembly governs without any assigned superior or formal check, but always at the peril of being in fact overthrown, if it appears to a competent number of the subjects that the evils of submission are greater than those of resistance. HOBBES, if called on to state his real position in BENTHAM's language, would no doubt have said that the evils of resistance are always greater; but BENTHAM would have declined either to accept this as evident, or to accept HOBBES's forcible description of the miseries of a state of war as amounting to proof. In short, to be legally supreme governor is one thing, and to govern as you please is another. Political duty is one thing, moral duty is another. In the political sense (which at the present time we rather call legal) supreme governors cannot have any duties. BENTHAM is particularly severe on BLACKSTONE for speaking of the duty of the sovereign to make laws.

Yet we may say in another sense that the duty of the sovereign to make laws is BENTHAM's capital discovery in political science. For BENTHAM has, besides and beyond the formal theory of sovereignty, a decided and confident theory as to the purpose for which governments exist. They exist for the common advantage of the governed; or, in terms which to BENTHAM appeared more accurate, in order to promote the greatest happiness of the greatest number. Only one standard can be found by which their acts can be judged, that of general utility. Here BENTHAM found the rule both of private morals and of public expedience; and the practical inference from combining this with his theory of sovereignty is that the State has no excuse for being backward in well-doing. The greatest happiness is the end of human action; abuses and grievances exist; let then the supremacy of the State, the most powerful form of human action, be set to work to abolish them. Let the machinery of government and justice be simplified; let irrational and anomalous rules be swept away; let the motives of abuse and corruption be removed, and political duties made plain and easy of comprehension. Let there be no superstition about old rules being inviolable merely because they are old. Let no prescriptive privilege stand in the way of the general good. Above all, let none pretend a want of power to do these things. The State bears not sovereignty in vain. *Non est potestas super terram quae comparetur ei*, says HOBBES: therefore fear the sovereign and obey. True, says BENTHAM, obedience is good; but while I "obey punctually" I will "censure freely." What is sovereignty for, if it is not to be directed by every light of reason toward the attainment of the common happiness? The formula of the greatest happiness is made a hook to put in the nostrils of Leviathan, that he may be tamed and harnessed to the chariot of utility. Such is the connection between BENTHAM's theory of the State and his theory of legislation. Taken together they give us the ideal of modern legislation, in which the State is active, not merely in providing remedies for new mischiefs, but in the systematic reform and improvement of its own institutions. Down to the last century legislation was considered as an exceptional instrument of policy, and in England at all events regarded with a certain jealousy. The mysterious authority of custom which to this day rules the Eastern world was still in the air of Europe. The change which has come over the spirit and methods

of law-making in the last few generations is almost entirely due to BENTHAM.

We have nothing to do here with the ethical value of BENTHAM's doctrine. It is enough to say that it had to be seriously modified even by his immediate followers. But there is no doubt of its power in the political field. Had it been more subtle, it might have been less successful. It had exactly that amount of generality and apparent reasonableness which even in England will make speculative conceptions operative in practice. Everybody thinks he knows what happiness means; and for practical purposes, indeed, it matters little whether it is precisely known or not. A public judgment of happiness, expediency, well-being, or whatever else we call it, is in the nature of human affairs a rough thing at best; and there is plenty of work to be done which ought to be done on any possible view of the nature of duty. The main point was to rouse the State to consciousness of its power and its proper business; and by persistent and confident iteration BENTHAM did this effectually.

We cannot, again, say anything here either of the many actual reforms which may be traced to BENTHAM, or, on the other hand, of that part of his proposals, by no means an inconsiderable one, which was hopelessly out of relation to the feelings and habits of mankind. There is an extraordinary mixture in his work of practical good sense on some topics with impracticable extravagance and obstinacy on others.* But there is no leisure to discuss this, nor would there be much profit. BENTHAM's eccentricities have passed away harmlessly, save so far as they prejudiced the reception of his really valuable ideas. It remained to complete the separation of the theory of political sovereignty from that of the ethical and historical foundation of political society. This was done by AUSTIN, who finally cleared the way, with labor which now seems uncouth and excessive, to the conception of a pure science of positive law. The worker in this field assumes the sovereign authority of the State as for his purposes the ultimate source of laws and legal institutions as they exist, and he analyzes and classifies them without regard to the moral, social, or historical reasons which may have moved the sovereign to approve them. Of course this can be done only by a process of highly formal abstraction, and the abstraction cannot be maintained in its ideal purity when we come to dealing with even the simplest facts. This, however, is really the case with all scientific and philosophical abstractions; and if AUSTIN's manner had been less dogmatic, and I fear we must say pedantic, a great deal of misunderstanding might have been saved. As it was, further criticism became indispensable, and has been supplied by SIR HENRY MAINE in the two last chapters of his *Early History of Institutions*, and later by Mr. FREDERIC HARRISON in the *Fortnightly Review*. Still more lately Professor HOLLAND has exhibited the results of the English school in a form wholly freed from the old controversial encumbrances, and thereby freed also from the extreme insularity which has prevented AUSTIN's work entirely, and BENTHAM's to a great extent, from being appreciated by Continental thinkers. BENTHAM's importance in the science of politics and legislation is ignored even by the minority of foreign critics who in psychology and ethics are fairly in sympathy with the English school; and I am not aware of anything tending to qualify SIR H. MAINE's statement that AUSTIN is entirely unknown out of this country. After all, the con-

* BENTHAM's want of touch of public feeling and its tendencies comes out in startling ways in his doctrine of penalties. Utilitarianism is, in common understanding, associated with rational philanthropy, and justly so on the whole. Yet BENTHAM seems to have thought it practicable and rather desirable to burn incendiaries alive, and several of his other suggestions are both cruel and otherwise absurd.

temporaries and followers of SAVIGNY could hardly be expected to take much interest in authors of whom one was ostentatiously ignorant of Roman law and the philosophy of law that has grown out of its modern study, and the other, knowing it mechanically but not intelligently, seldom cites its literature but in a tone of perverse depreciation. Perhaps we may now hope for better things.

Meanwhile the doctrine of sovereignty has opened up another field of research at the back, so to speak, of the domain of positive law. We have separated the actual existence and authority of government from the foundations and reasons of government. The voice of the sovereign is the command of the State, and the State acknowledges no superior But the sovereign may be an artificial and composite body. Such is now the case in every civilized country in the world, with the doubtful exceptions of Russia and Turkey.* This raises a new distinction between formal and substantial, or if we substitude *legal* for BENTHAM'S *political*, and set free the latter term for a new special use, we may say between legal and political sovereignty. Where does the supreme power of a corporate or compound sovereign in practice reside? Even in the simplest case of a single assembly, say the Athenian Demos, the whole assembly is formally sovereign, but practically the whole are not sovereign unless they are unanimous. The power of the whole is exercised by a majority; whoever wishes it exercised in a particular way must persuade a majority to think with him, and if he can do this it is enough. What then of him who persuades the majority—PERICLES for example? Is he sovereign too? Or if ASPASIA persuades PERICLES? Is not this the vain and infinite search for causes of causes? The answer is plain. Successful persuasion is not sovereignty. PERICLES persuaded the majority of Athenian citizens, but that majority has no need to persuade any one: it commands. And a majority one way or the other will always be found. We may conceive, indeed, though not believe, that a sovereign assembly should be equally divided, and that there should be nobody with authority to give a casting vote. In this practically impossible case the form of sovereignty would be unimpaired, but the State would be at a dead-lock.

From this we may proceed to imagine the more complex cases of assemblies voting not collectively, but by sections or estates; of several bodies meeting and deliberating separately, but acting only by the concurrent decision of all; and finally to apply these ideas to the peculiar system of the British constitution, which appears to us by long habit familiar and natural, and has been copied, with variations partly designed and partly undesigned, all over the world. We have seen what confusion arose among the earlier publicists from unwillingness to carry out the separation of politics from ethics. A similar confusion long prevailed in the thought of British publicists, because they could not or would not distinguish legal supremacy from the practical power of guiding its exercise. Parliament is the supreme power in England, or, in our technical terms, is the sovereign. Everybody since HOBBES, who vainly strove to deny it (though even he admitted a corporate sovereign to be theoretically possible), has admitted and asserted so much. But what is Parliament? Who is the wielder of sovereign power? Let us open the last volume of statutes. "Be it enacted by the Queen's most excellent majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows." Here are, to all appearance, three distinct powers; they might

* Neither the Czar nor the Sultan, I believe, has absolute legal supremacy in ecclesiastical affairs,

have been, and as matter of history were near being, four. It is part of the positive law of the land, the law by which courts of justice are governed, that to make a new law they must all agree. The Crown cannot legislate without the estates of the realm, nor with one House of Parliament against the other, nor can the Houses of Parliament jointly or severally legislate without the Crown. But what is to make them agree? What security is there that they shall not constantly disagree? Why do Englishmen go about their business in confidence that this complicated machine, with apparently independent parts, will work smoothly and all together?

As far as the purely legal constitution goes, it is like a clock with three distinct sets of works for the hour and minute hands and the striking part, and no provision for their keeping the same time. The publicists of the last century were content to say, in effect, that the component parts of Parliament were really independent, and (to use the language of their own time) in a state of nature with regard to one another. The risk of a deadlock, so far from being unreal, was regarded as the peculiar virtue of the British constitution, and as exercising a moderating influence on all parties. It was argued with great ingenuity that the powers of King, Lords, and Commons were not only different in kind, but that they had been kept apart by the wisdom of our ancestors because the conjunction of them in the hands of any one man or assembly would be fatal to liberty. De Lolme proved that the balance could not subsist if the executive power were not one, or the legislative were not divided. The doctrine of sovereignty, even in its barely legal aspect, is a complete solvent of this theory. No one who has assimilated Hobbes can go on believing in the balance of constitutional powers. It has been shown by the late Mr. Bagehot (as thinking people must have felt before his time, but did not plainly say) that the British Constitution in its modern form gives the practical sovereignty to the majority of the House of Commons, and gives it in a most effectual manner. The machine works as well as it does, not because the powers are balanced, but because in the last resort there is only one power. The ultimate unity of sovereignty is disguised by the very means which secure it; for those means do not appear at all on the legal face of our institutions. Government is carried on by a system of understandings, which for the most part have never been authentically defined, much less acquired the force of positive law. The study of these informal conventions, as distinct from the positive constitutional law which in the United States and in most Continental countries is to be found in some one solemn act of state, and in our country in such statutes as Magna Charta, the Bill of Rights, and the Act of Settlement, is really a new branch of political science I am not aware that any special study of it has been made on the Continent, and I think its rise here is a sufficient proof that the doctrine of the English school is not the mean and barren empiricism which its enemies accuse it of being.

It is good, however, to know one's enemies, especially when they are both honorable and formidable. And something must be said, before we pass to our other specially chosen subject, of the drift of political speculation on the Continent. It has been hinted that in the main it is hostile to our school; and so it is. Yet it is possible to exaggerate the opposition between English and Continental publicists, and to treat as fundamental differences of method what are really differences of definition and handling. Thus Bentham's ethical theory is opposed to those of modern Continental philosophers or their English adherents, say Kant or Coleridge, as a system founded on experiences, the others being derived from transcendental ideas. And it is assumed that the like opposition holds

between the respective political theories. For my part I do not think it holds, at least not without much qualification, even on the ethical ground. The principle of utility seems to me no whit less dogmatic than the principle of the practical reason. Whatever validity either of them has depends on its correctness as an interpretation of human experience, and they both appeal to experience to justify them. But on the political ground it is abundantly clear that BENTHAM is as much a dogmatist as any propounder of *Naturrecht*. He assigns a final cause to the State by abstract consideration of human motives in general, such as they appear to him, and without taking the slightest trouble to consult history or specific facts, and he constructs a universal theory of legislation accordingly. Still more dogmatic is AUSTIN's method, which, if it could be perfectly carried out, would lead to a formal analysis entirely indifferent to any practical end, or to the actual historical contents of any legal system. Let us not make too much haste to flatter ourselves that we are not as these dogmatizing Germans.

The Continental schools, or the two branches of the Continental school, may be described as ethical and historical. By the ethical school I mean (leaving apart for the present all minor differences, which, indeed, we have no time to consider) those authors who throw their main strength on investigating the universal moral and social conditions of government and laws, or at any rate civilized government and laws, and expounding what such government and laws are or ought to be, so far as determined by conformity to those conditions. This is the nearest account I can give in few words of what is implied in modern usage by the terms law of nature, *droit naturel*, or *Naturrecht:* in modern usage, I say, for it would be only confusing the matter to trouble ourselves just now with all the meanings which have been given to the law of nature by different schools of philosophy from the Stoics downward. Obviously this is a legitimate branch of political science in itself; how much we can get out of it is, until we have tried, another matter, but nobody can be blamed for trying. And the study has not in itself any necessary connection with any particular doctrine of ethics. The construction of pattern institutions and rules of law which abounds in BENTHAM's works comes for the most part under the description of *Naturrecht*, not being limited in terms or intention to the circumstances of England or any other particular country. His chapter on "Title by Succession," in "Principles of the Civil Code," is as much *Naturrecht* as anything one can find in Germany, for it lays down rules purporting to be justified by the universal nature of human relations, and qualified by no respect of time or place. And BENTHAM's *Naturrecht* is really no more congenial to the positive law which lawyers discuss and administer than that of AHRENS or KANT. An English lawyer may come upon a bit of land in one parish which decends to all the tenant's sons equally, and a bit in the next parish which descends to the youngest son alone. It concerns him not for the matter in hand which rule looks more like an expression of the rational will of the community, or better fitted to promote the greatest happiness. Each rule will be enforced as to the land subject to it, and without discussion of its being reasonable or otherwise, and his client's title will depend on the correct ascertainment and application of the rule as it exists. Again, if there is any work of political reasoning which belongs purely and simply to the English school, it is the collection of notes appended to the first draft of the Indian Penal Code, a most interesting and instructive document, which, to the great loss of English students, is still accessible only in the cumbrous form of a Parliamentary Paper. But the substance of these notes, except so far as they relate to

provisions specially adapted to the circumstances of British India, and except so far as the framers of the Code may have been influenced, without knowing it, by any peculiarities of English positive law, is no less pure and simple *Naturrecht*.

Still there is no doubt that there is a certain mutual repulsion between the English and the Continental mode of treating these inquiries. We must not say British, for Scotland goes with the Continent. What is the explanation of this? The German or Germanizing philosopher is ready with an easy one. "It just means," he would say, "that you English have not taken the pains to understand modern philosophy. You are still in the darkness of the præ-Kantian epoch, and you will never get a real theory of the State or of law till you come out of it. When you show signs of doing that, we may attend to what you have to say." There are Englishmen on the other hand who would be no less ready with their answer. "We confess," they would say, "that we know very little of your transcendental philosophies, and care less. It appears to us that you get nothing out of them but interminable vague talk about *Persönlichkeit* and *Menschenwürde*, or *le bien* and *l'idéal*, as the case may be, and that when it comes to distinct questions of policy you have to deal with them really by the same empirical methods as we do, and in much more cumbrous language." In each of these charges there is some truth and much exaggeration. Continental critics ignore the English school because they suppose it to be tied down to BENTHAM's form of utilitarianism, whereas the true character of English political science is to be found in the series of distinctions by which our publicists have assigned separate fields to political ethics, constitutional politics, and positive law. The process was begun by HOBBES and virtually completed by HUME. HOBBES began it unconsciously by trying to make legal supremacy the final and conclusive standard of political ethics. The Whigs, with LOCKE's aid, strove to restore the ethical element by working the law of nature, through the machinery of the original contract, into the technical conception of political supremacy itself. The original contract was slain by HUME and trampled upon by BURKE, and the separation of the ethical part of politics, as the theory of legislation and government, from the analytical part, as the theory of the State and of positive law, was forced upon BENTHAM and his successors. The theory of legislation must to some extent involve a theory of ethics, though it need not involve, in my opinion, any decision upon the ultimate metaphysical questions of ethics. But the analytical branch of political science, including the pure science of positive laws, is altogether independent of ethical theories. And that is the definite scientific result which we in England say that the work of the past century has given us. The precision and abstraction which we have succeeded in giving to our technical terms is still mistaken by foreign students, and even by able Scottish followers of the Continental methods like Professor LORIMER of Edinburgh, for crudeness and narrowness of thought.

The English student, in turn, is naturally repelled by this misunderstanding, and is prone to assume that no solid good is to be expected of philosophers who have not yet clearly separated in their minds the notion of things as they are from that of things as they ought to be. The German school seems to him to mix up the analytical with the practical aspect of politics, and politics in general with ethics, in a bewildering manner. When he reads that there are "natural laws" which are "necessary inferences from the facts of nature," and "fix the principles of jurisprudence as a whole," and that nevertheless "positive laws never have been, and probably never will be, perfectly discovered,"—and these dicta

from Professor LORIMER's book are favorable specimens—he is not unlikely to give up further pursuit in despair. But he is not justified in despairing. Let him not assume that we and the Germans are talking about the same things when we use corresponding terms, or even an Englishman and a Scotsman, when they use the same terms. Let him allow for the necessary difference in point of view between those who have the two words *law* and *right*, and those for whom *Recht* or *droit* covers both, so that our "law" and "right" (even when "right" means the particular right of an individual) appear as aspects of one and the same thing, "*Recht im subjectiven Sinne*" and "*Recht in subjectiver Hinsicht.*" Probably the Germans think this a difference to their advantage. We do not; but the difference must be remembered in any case. And when we take the thing as we find it, not expecting it to be something else, we may discover this mysterious and terrible *Naturrecht* to be no worse than a theory of government and legislation; or, to preserve better the wide generality given to it by its authors, a kind of teleology of the State and its institutions, differing much, indeed, from anything of the kind in English literature, and as much involved with ethical philosophy of Kantian or post Kantian schools as BENTHAM's theory of legislation is involved with his utilitarianism. But we shall make out, held in solution as it were in this unfamiliar vehicle, much subtle discrimination and sound political thought, and we shall hope that the two methods may come, if not as yet to an alliance or *modus vivendi*, at least to intelligent and useful criticism of one another.

Take Prof. AHRENS's definition of law. He says (to translate his words freely) that it is the rule or standard governing as a whole the conditions for the orderly attainment of whatever is good, or assures good, for the individual and society, so far as those conditions depend on voluntary action.* This, the Englishman will say at once, tells me (if I can understand it) what law *is for*; but it fails to tell me what it *is*. Very well, but we have made up our mind to that. The Germans do not care about the pure analysis or anatomy of political ideas; we only have to regard the definition as applying to the scope of law, not its positive character. But then the definition assumes that we know what is good. What does Prof. AHRENS mean by *good?* Well, Professor AHRENS has a perfectly explicit answer to that. "Good is whatever we recognize as fitted to satisfy the needs of man," meaning, it appears from the context, a normal or reasonable man, and including the need of culture and improvement. Therefore law has for its object in a general way, it would seem, the provision of security for the proper and reasonable satisfaction of the desires of men living in society. But satisfied desires are the elements of happiness. Happiness is the sum of satisfied desires, whatever test we adopt as to the kind of desires that shall be admitted to make up the sum, and their relative value. Happiness, therefore, in some sense, is the aim of laws and government, and the deduction of law from the rational nature of man brings us out for practical purposes not so very far from BENTHAM. Neither is the difference between the two points of view to be attributed to any essential difference between the English and the German mind. It appears to me to be much more probably accounted for by the difference of historical conditions. In England the positive law of the land has for centuries been single, strong, and conspicuous in all public life, and therefore positive law presented itself as an adequate object for distinct scientific study. In Germany there were down to our own time a great number of independent States, many of them very small, and each with its own local law, but all

* Introduction to HOLTZENDORFFS *Encyclopadie der Rechtswissenschaft*.

having their laws framed more or less on the same sort of pattern, and looking for authority, in the absence of specific enactment or custom, to a common stock of Roman or Romanized German tradition. In this state of things it was impossible that theory should not busy itself with the common stock of ideas to the neglect of the multitude of their varying applications in actual use. And it is significant that in the United States, where a number of independent municipal jurisdictions (with the exception of the few States not settled from England) find their general source of authority in the common law, much as the German States found theirs in the Roman law, and share the common stock of English legal ideas, exactly the same thing is now happening. In spite of English tradition and communications, the bent of modern American publicists appears to be decidedly toward the Continental habit of thought. They believe in the Common Law like English judges of the seventeenth century, and in the Law of Nature like German philosophers.

The historical method in politics, as understood on the Continent, is not opposed to what I have called the deductive, but apart from it. Publicists of the historical school seek an explanation of what institutions are, and are tending to be, more in the knowledge of what they have been and how they came to be what they are, than in the analysis of them as they stand. SAVIGNY, the greatest master of jurisprudence in modern times, is the chief representative of the historical school in Germany, though the application of the method to the general theory of politics fills but a small proportion of his admirable work. In England BURKE is recognized by the Germans themselves, as his forerunner, and COLERIDGE'S political writings, which, though less practical, are similar in their spirit and influence, must be assigned to the same class. The general idea of the historical method may be summed up in the aphorism, now familiar enough, that institutions are not made, but grow. Thus SAVIGNY, instead of giving a formal definition of law, describes it as an aspect of the total common life of a nation; not something made by the nation as matter of choice or convention, but like its manners and language, bound up with its existence, and indeed helping to make the nation what it is; so that (as we have already noted) he says, in almost the same words as BURKE, that the people is always the true legislator: *Das Gesetz ist das Organ des Volksrechts.* Thus COLERIDGE, in his essay on Church and State, considers the Church of England not as he actually finds it, nor yet as somebody might wish the Church to be if he were devising an ideal commonwealth, but in what he calls its idea, that is, what the English Church, from its place and conditions in the English commonwealth seemed to him fitted to be, and but for disturbing causes might be. This method leads to a certain optimism which is its danger; not the rationalist optimism of the eighteenth century which makes out that whatever is, is best, but a speculative optimism which tries to see that whatever is becoming, or is continuously in a way to be, is best. I have elsewhere indicated the affinity between the historical method and the modern scientific doctrine of evolution, and we may call this the optimism of historical evolution. For the rest, the historical method is many-sided, and for that reason I have avoided as much as possible the word school. It is needless to dwell on the power with which SIR HENRY MAINE has used it among ourselves to throw light on legal and political ideas. And if we seek the application of it to the field of the English Constitution, it is excellently represented by Mr. FREEMAN. CORNEWALL LEWIS'S book on the *Methods of Observation and Reasoning in Politics*, though more properly belonging, in the terminology I should adopt, to the philosophy of history, is likewise a

good English example of the method in a more general way.

Want of space must be the excuse for omitting to follow out or even indicate other modern developments of political speculation. It would be tempting to trace in BLUNTSCHLI's work the result of a philosophical temper combined with technical training and a wide command of historical knowledge; to endeavor to fix the place of Positivism among other recent theories, or to assign the relation to previous English thought of the system even now being unfolded by Mr. HERBERT SPENCER, a much more important one in my opinion than AUGUSTE COMTE's. But not one of these topics could be deal with to any good purpose in the room we have left. A few words on the question of the "limits of the State" may however be allowed; the more so as, having been already handled in a popular manner by three of our best modern essayists, J. S. MILL, Mr. H. SPENCER, and Mr. HUXLEY, it is more or less familiar to all educated readers. This question may be said to arise out of the doctrine of sovereignty. For when it becomes clear that it is futile, and indeed contradictory to limit the supreme power in a State by any formal or positive ordinance, one is led to consider whether any general rules of policy may be laid down as to what the State may wisely attempt and what it will do more wisely to leave alone. In the field of political economy we have already got fairly definite principles of this kind, though their application is still widely disputed.

But there is a larger inquiry as to the general control of the State over the private action of its citizens, whether severally or in associaion; and this is what we shall now glance at. It was definitely stated in its modern form by WILHELM VON HUMBOLDT in a little book written in 1791, but not published till after the writer's death, sixty years later. Meanwhile a good many things had happened. Among others, WILHELM VON HUMBOLDT himself, who in this book had proved that public instruction was one of the things the State ought on no account to meddle with, had been the Prussian Minister of Education. I do not know that he ever retracted his former opinion; he had no occasion to do so, not having published it; but deeds are more eloquent than words in such a case. His earlier essay was, in fact, the most natural protest of an active mind against the fussy paternal government of the little German States in the latter half of the eighteenth century. No doubt it was expressed in general terms. Equally general in terms, as we have seen, was LOCKE's plea for the Revolution of 1688. How far HUMBOLDT's arguments remained applicable to Prussia or other German States in 1851, it is not our business to inquire. It seems, however, a curious and at first sight a gratuitous proceeding to adopt them as at that time applicable to the state of government and public opinion in England. But we have a way of infelicitous borrowing from our neighbors. In metaphysics SIR WILLIAM HAMILTON had, some little time before, invented, by a wonderful misunderstanding of KANT, the specter called the Unconditioned, which was gravely taken by himself and a few disciples for a hopeful foundation of systematic philosophy. Somewhat after the same fashion the English publicist who was afterward HAMILTON's most brilliant opponent was pleased to take up the cry of the over-regulated Prussian, and the result was the essay which we all know as *Mill on Liberty*. The same line was taken up by EÖTVÖS, in Hungary (the Hungary of thirty years ago), and Mr. EDOUARD LABOULAYE in France a few years later, summed up and adopted the arguments of all these writers; with what provocation, any one who knows even slightly what French administration has been any time this century, and particularly during the second Empire, may easily guess. It must not be overlooked that the tradi-

tion of BENTHAM and political utilitarianism contributed something to the minimizing view of the State's functions. For law, being viewed exclusively as command and restraint, came to be thought of as in its nature an evil; and of course it followed that there ought to be as little of it as was compatible with the preservation of society. More lately Mr. SPENCER has followed on the same side (though he declared himself in his earliest work, *Social Statics*, some years before J. S. MILL's essay was published),* and has been encountered by Mr. HUXLEY, who has called the minimizing doctrine by the ingenious name of "Administrative Nihilism." This is not acceptable to Mr. SPENCER, and he proposes the more neutral but less striking term, "Specialized Administration." MILL's particular exposition has also been vigorously criticised by Mr. Justice STEPHEN in his book named *Liberty, Equality, Fraternity*. English citizens may thus, at the cost, or rather with the gain, of reading a volume or two of the best English writing of our time, easily put themselves in possession of the arguments on one important question of theoretical politics.

The only remark of my own I have to add is this: that the minimizers appear not to distinguish sufficiently the action of the State in general from its centralized action. There are many things which the State cannot do in the way of central government, or not effectually, but which can be very well done by the action of local governing bodies. But this is a question between the direct and the delegated activity of the State, not between State action and individual enterprise. It is just as much against the pure principles of HUMBOLDT and Mr SPENCER for the Town Council of Birmingham or Manchester to regulate the gas and water supply of its own town as it would be for the Board of Trade to regulate it.

As to the question in its general bearing, I do not think it can be fully dealt with except by going back to the older question, "What does the State exist for?" And although I have no space to justify myself, I will bear witness that for my own part I think this a point at which we may well say, "Back to ARISTOTLE." The minimizers tell us that the State exists only for protection. ARISTOTLE tell us that it was founded on the need for protection, but exists for more than protection—γινομενη μὲν τῶ ζῆν ἕνεκεν, οὖσα δὲ τοῦ εὖ ζῆν. Not only material security, but the perfection of human and social life is what we aim at in that organized co-operation of many men's lives and works which is called the State. I fail to see good warrant of either reason or experience for limiting the corporate activity of a nation by hard and fast rules. We must fix the limit by self-protection, says MILL; by negative as opposed to positive regulation, says Mr. SPENCER. But where does protection leave off and interference begin? If it is negative and proper regulation to say a man shall be punished for building his house in a city so that it falls into the street, is it positive and improper regulation to say that he shall so build it, if he builds at all, as to appear to competent persons not likely to fall into the street? It is purely negative regulation, and may therefore be proper, to punish a man for communicating an infectious disease by neglect of common precautions. Why is it improper to compel those precautions, when the danger is known to exist, without waiting for somebody to be actually infected? Mr. SPENCER would have the State protect both property and contracts. I have heard a zealous maintainer of Mr. SPENCER's views on this point outdo his master by arguing, and not inaptly, that the State should protect only

* There are things in *Social Statics* which Mr. SPENCER would now hardly defend, such as the supposed "right of the individual to ignore the State," which is the very *reductio ad absurdum* of individualism. In the natural organism a member that attempts to ignore the body is taught its mistake swiftly and sharply enough.

property in the strict sense, and leave contracts to take care of themselves. Perhaps somebody else may say that law is restraint, and restraint is force, and the State ought to use its force only against actual force; in other words, to protect persons directly, and property not otherwise than indirectly through persons; from which it would be but one step more to the triumphant establishment of the perfect "liberty of the subject" in HOBBES's state of nature, which is a state of universal war. I prefer to say with Professor HUXLEY, who is no dealer in empty phrases, that government is the corporate reason of the community; with BURKE, philosopher and statesman, that a State "is not a partnership in things subservient only to the gross animal existence of a temporary and perishable nature," but "a partnership in all science, a partnership in all art, a partnership in every virtue, and in all perfection;" and with HOBBES, but in a higher and deeper sense than he enforced, *Non est super terram potestas quae comparetur ei.*

CONTENTS.

Beacon Lights of Science

THE HISTORY OF LANDHOLDING IN ENGLAND

By JOSEPH FISHER, F.R.H.S.

"Much food is in the tillage of the poor, but there is that is destroyed for want of judgment."
--PROV. 13:23.

"Of all arts, tillage or agriculture is doubtless the most useful and necessary, as being the source whence the nation derives its subsistence. The cultivation of the soil causes it to produce an infinite increase. It forms the surest resource and the most solid fund of riches and commerce for a nation that enjoys a happy climate. . . . The cultivation of the soil deserves the attention of the Government, not only on account of the invaluable advantages that flow from it, but from its being an obligation imposed by nature on mankind."—VATTEL.

INTRODUCTION.

THIS work is an expansion of a paper read at the meeting of the Royal Historical Society in May, 1875, and will be published in the volume of the Transactions of that body. But as it is an expensive work, and only accessible to the Fellows of that Society, and as the subject is one which is now engaging a good deal of public consideration, I have thought it desirable to place it within the reach of those who may not have access to the larger and more expensive work.

I am aware that much might be added to the information it contains, and I possess materials which would have more than doubled its size, but I have endeavored to seize upon the salient points, and to express my views as concisely as possible.

I have also preferred giving the exact words of important Acts of Parliament to any description of their objects.

If this little essay adds any information upon a subject of much public interest, and contributes to the just settlement of a very important question, I shall consider my labor has not been in vain. JOSEPH FISHER.

WATERFORD, November 3, 1875.

I DO not propose to enter upon the system of landholding in Scotland or Ireland, which appears to me to bear the stamp of the Celtic origin of the people, and which was preserved in Ireland long after it had disappeared in other European countries formerly inhabited by the Celts. That ancient race may be regarded as the original settlers of a large portion of the European continent, and its land system possesses a remarkable affinity to that of the Sla-

vonic, the Hindoo, and even the New Zealand races. It was originally Patriarchal, and then Tribal, and was communistic in its character.

I do not pretend to great originality in my views. My efforts have been to collect the scattered rays of light, and to bring them to bear upon one interesting topic. The present is the child of the past. The ideas of bygone races affect the practices of living people. We form but parts of a whole; we are influenced by those who preceded us, and we shall influence those who come after us. Men cannot disassociate themselves either from the past or the future.

In looking at this question there is, I think, a vast difference which has not been sufficiently recognized. It is the broad distinction between the system arising out of the original occupation of land, and that proceeding out of the necessities of conquest; perhaps I should add a third—the complex system proceeding from an amalgamation, or from the existence of both systems in the same nation. Some countries have been so repeatedly swept over by the tide of conquest that but little of the aboriginal ideas or systems have survived the flood. Others have submitted to a change of governors and preserved their customary laws; while in some there has been such a fusion of the two systems that we cannot decide which of the ingredients was the older, except by a process of analysis and a comparison of the several products of the alembic with the recognized institutions of the class of original or of invading peoples.

Efforts have been made, and not with very great success, to define the principle which governed the more ancient races with regard to the possession of land. While unoccupied or unappropriated, it was common to every settler. It existed for the use of the whole human race. The process by which that which was common to all became the possession of the individual has not been clearly stated. The earlier settlers were either individuals, families, tribes, or nations. In some cases they were nomadic, and used the natural products without taking possession of the land; in others they occupied districts differently defined. The individual was the unit of the family, the patriarch of the tribe. The commune was formed to afford mutual protection. Each sept or tribe in the early enjoyment of the products of the district it selected was governed by its own customary laws. The cohesion of these tribes into states was a slow process; the adoption of a general system of government still slower. The disintegration of the tribal system, and dissolution of the commune, was not evolved out of the original elements of the system itself. but was the effect of conquest; and, as far as I can discover, the appropriation to individuals of land which was common to all, was mainly brought about by conquest, and was guided by impulse rather than regulated by principle.

Mr. Locke thinks that an individual became sole owner of a part of the common heritage by mixing his labor with the land, in fencing it, making wells, or building; and he illustrates his position by the appropriation of wild animals, which are common to all sportsmen, but become the property of him who captures or kills them. This acute thinker seems to me to have fallen into a mistake by confounding *land* with *labor*. The improvements were the property of the man who made them, but it by no means follows that the expenditure of labor on land gave any greater right than to the labor itself or its representative.

It may not be out of place here to allude to the use of the word *property* with reference to land; *property*—from *proprium*, my own—is something pertaining to man. I have a property in myself. I have the right to be free. All that proceeds from myself, my thoughts, my writings, my works, are property; but no man made land, and therefore it is not property. This incorrect application of the word is the more striking in England, where the largest title a man can have is "tenancy in fee," and a tenant holds but does not own.

Sir William Blackstone places the

possession of land upon a different principle. He says that, as society became formed, its instinct was to preserve the peace; and as a man who had taken possession of land could not be disturbed without using force, each man continued to enjoy the use of that which he had taken out of the common stock; but, he adds, that right only lasted as long as the man lived. Death put him out of possession, and he could not give to another that which he ceased to possess himself.

Vattel (book i., chap. vii.) tells us that "the whole earth is destined to feed its inhabitants; but this it would be incapable of doing if it were uncultivated. Every nation is then obliged by the law of nature to cultivate the land that has fallen to its share, and it has no right to enlarge its boundaries or have recourse to the assistance of other nations, but in proportion as the land in its possession is incapable of furnishing it with necessaries." He adds (chap. xx.), "When a nation in a body takes possession of a country, everything that is not divided among its members remains common to the whole nation, and is called public property."

An ancient Irish tract, which forms part of the Senchus Mor, and is supposed to be a portion of the Brehon code, and traceable to the time of St. Patrick, speaks of land in a poetically symbolic, but actually realistic manner, and says, "Land is perpetual man." All the ingredients of our physical frame come from the soil. The food we require and enjoy, the clothing which enwraps us, the fire which warms us, all save the vital spark that constitutes life, is of the land, hence it is "*perpetual man.*" Selden ("Titles of Honor," p. 27), when treating of the title "King of Kings," refers to the eastern custom of homage, which consisted not in offering the person, but the elements which composed the person, *earth* and *water*—"*the perpetual man*" of the Brehons—to the conqueror. He says:

"So that both titles, those of King of Kings and Great King, were common to those emperors of the two first empires: as also (if we believe the story of Judith) that ceremonies of receiving an acknowledgment of regal supremacy (which, by the way, I note here, because it was as homage received by kings in that time from such princes or people as should acknowledge themselves under their subjection) by acceptance upon their demand of *earth* and *water*. This demand is often spoken of as used by the Persian, and a special example of it is in Darius' letters to Induthyr, King of the Scythians, when he first invites him to the field; but if he would not, then bringing to your sovereign as gifts earth and water, come to a parley. And one of Xerxes' ambassadors that came to demand earth and water from the state of Lacedæmon, to satisfy him, was thrust into a well and earth cast upon him."

The earlier races seem to me, either by reasoning or by instinct, to have arrived at the conclusion that every man was, in right of his being, entitled to food; that food was a product of the land, and therefore every man was entitled to the possession of land, otherwise his life depended upon the will of another. The Romans acted on a different principle, which was "the spoil to the victors." He who could not defend and retain his possessions became the slave of the conqueror, all the rights of the vanquished passed to the victor, who took and enjoyed as ample rights to land as those naturally possessed by the aborigines.

The system of landholding varies in different countries, and we cannot discover any idea of abstract right underlying the various differing systems; they are the outcome of law, the will of the sovereign power, which is liable to change with circumstances. The word *law* appears to be used to express two distinct sentiments; one, the will of the sovereign power, which, being accompanied with a penalty, bears on its face the idea that it may be broken by the individual who pays the penalty: "Thou shalt not eat of the fruit of the tree, for on the day thou eatest thereof thou shalt die," was a law. All laws, whether emanating from an absolute monarch or from the representatives of the majority of a state, are mere expressions of the will of the sovereign power, which may be exacted by force. The second use of the word *law* is a

record of our experience—*e.g.*, we see the tides ebb and flow, and conclude it is done in obedience to the will of a sovereign power; but the word in that sense does not imply any violation or any punishment. A distinction must also be drawn between laws and codes; the former existed before the latter. The *lex non scripta* prevailed before letters were invented. Every command of the Decalogue was issued, and punishment followed for its breach, before the existence of the engraved tables. The Brehon code, the Justinian code, the Draconian code, were compilations of existing laws; and the same may be said of the common or customary law of England, of France, and of Germany.

I am aware that recent analytical writers have sought to associate *law* with *force*, and to hold that law is a command, and must have behind it sufficient force to compel submission. These writers find at the outset of their examination, that customary law, the "*Lex non scripta*," existed before force, and that the nomination to sovereign power was the outcome of the more ancient customary law. These laws appear based upon the idea of common good, and to have been supported by the "posse comitatus" before standing armies or state constabularies were formed. Vattel says (book i., chap. ii.), "It is evident that men form a political society, and submit to laws solely for their own advantage and safety. The sovereign authority is then established only for the common good of all the citizens. The sovereign thus clothed with the public authority, with everything that constitutes the moral personality of the nation, of course becomes bound by the moral obligations of that nation and invested with its rights." It appears evident, that customary law was the will of small communities, when they were sovereign; that the cohesion of such communities was a confirmation of the customs of each, that the election of a monarch or a parliament was a recognition of these customs, and that the moral and material *force* or power of the sovereign was the outcome of existing laws, and a confirmation thereof. The application of the united force of the nation could be rightfully directed to the requirements of ancient, though unwritten customary law, and it could only be displaced by legislation, in which those concerned took part.

The duty of the sovereign (which in the United Kingdom means the Crown and the two branches of the legislature) with regard to land, is thus described by Vattel:

"Of all arts, tillage or agriculture is doubtless the most useful and necessary, as being the source whence the nation derives its subsistence. The cultivation of the soil causes it to produce an infinite increase. It forms the surest resource, and the most solid fund of riches and commerce for a nation that enjoys a happy climate. The sovereign ought to neglect no means of rendering the land under his jurisdiction as well cultivated as possible. . . . Notwithstanding the introduction of private property among the citizens, the nation has still the right to take the most effectual measures to cause the aggregate soil of the country to produce the greatest and most advantageous revenue possible. The cultivation of the soil deserves the attention of the Government, not only on account of the invaluable advantages that flow from it, but from its being an obligation imposed by nature on mankind."

Sir Henry Maine thinks that there are traces in England of the commune or *mark* system in the village communities which are believed to have existed, but these traces are very faint. The subsequent changes were inherent in, and developed by, the various conquests that swept over England; even that ancient class of holdings called "Borough English," are a development of a warlike system, under which each son, as he came to manhood, entered upon the wars, and left the patrimonial lands to the youngest son. The system of gavelkind which prevailed in the kingdom of Kent, survived the accession of William of Normandy, and was partially effaced in the reign of Henry VII. It was not the aboriginal or communistic system, but one of its many successors.

The various systems may have run one into the other, but I think there

are sufficiently distinct features to place them in the following order :

1st. The *Aboriginal.*

2d. The *Roman.* Population about 1,500,000.

3d. The *Scandinavian* under the Anglo-Saxon and Danish kings—A.D. 450 to A.D. 1066. The population in 1066 was 2,150,000.

4th. The *Norman*, from A.D. 1066 to A.D. 1154. The population in the latter year was 3,350,000.

5th. The *Plantagenet*, from 1154 to 1485 ; in the latter the population was 4,000,000.

6th. The *Tudor*, 1485 to 1603, when the population was 5,000,000.

7th. The *Stuarts*, 1603 to 1714, the population having risen to 5,750,000.

8th. The *Present*, from 1714. Down to 1820 the soil supported the population ; now about one half lives upon food produced in other countries. In 1874 the population was 23,648,607.

Each of these periods has its own characteristic, but as I must compress my remarks, you must excuse my passing rapidly from one to the other.

I. THE ABORIGINES.

The aboriginal period is wrapped in darkness, and I cannot with certainty say whether the system that prevailed was Celtic and Tribal. An old French customary, in a MS. treating upon the antiquity of tenures, says : "The first English king divided the land into four parts. He gave one part to the *Arch Flamens* to pray for him and his posterity. A second part he gave to the earls and nobility, to do him knight's service. A third part he divided among husbandmen, to hold of him in socage. The fourth he gave to mechanical persons to hold in burgage." The terms used apply to a much more recent period and more modern ideas.

Cæsar tells us "that the island of Britain abounds in cattle, and the greatest part of those within the country never sow their land, but live on flesh and milk. The sea-coasts are inhabited by colonies from Belgium, which, having established themselves in Britain, began to cultivate the soil."

Diodorus Siculus says, "The Britons, when they have reaped their corn, by cutting the ears from the stubble, lay them up for preservation in subterranean caves or granaries. From thence, they say, in very ancient times, they used to take a certain quantity of ears out every day, and having dried and bruised the grains, made a kind of food for their immediate use."

Jeffrey of Monmouth relates that one of the laws of Dunwalls Molnutus, who is said to have reigned B.C. 500, enacted that the ploughs of the husbandmen, as well as the temples of the gods, should be sanctuaries to such criminals as fled to them for protection.

Tacitus states that the Britons were not a free people, but were under subjection to many different kings.

Dr. Henry, quoting Tacitus, says, "In the ancient German and British nation the whole riches of the people consisted in their flocks and herds ; the laws of succession were few and simple : a man's cattle, at death, were equally divided among his sons ; or, if he had no sons, his daughters ; or if he had no children, among his nearest relations. These nations seem to have had no idea of the rights of primogeniture, or that the eldest son had any title to a larger share of his father's effects than the youngest."

The population of England was scanty, and did not probably exceed a million of inhabitants. They were split up into a vast number of petty chieftainries or kingdoms ; there was no cohesion, no means of communication between them ; there was no sovereign power which could call out and combine the whole strength of the nation. No single chieftain could oppose to the Romans a greater force than that of one of its legions, and when a footing was obtained in the island, the war became one of detail ; it was a provincial rather than a national contest. The brave, though untrained and ill-disciplined warriors, fell before the Romans, just as the Red Man of North America was vanquished by the English settlers.

II. THE ROMAN.

The Romans acted with regard to all conquered nations upon the maxim, "To the victors the spoils." Britain was no exception. The Romans were the first to discover or create an *estate of uses* in land, as distinct from an estate of possession. The more ancient nations, the Jews and the Greeks, never recognized *the estate of uses*, though there is some indication of it in the relation established by Joseph in Egypt, when, during the years of famine, he purchased for Pharaoh the lands of the people. The Romans having seized upon lands in Italy belonging to conquered nations, considered them public lands, and rented them to the soldiery, thus retaining for the state the estate in the lands, but giving the occupier an estate of uses. The rent of these public lands was fixed at one tenth of the produce, and this was termed *usufruct* —the use of the fruits.

The British chiefs, who submitted to the Romans, were subjected to a tribute or rent in corn; it varied, according to circumstances, from one fifth to one twentieth of the produce. The grower was bound to deliver it at the prescribed places. This was felt to be a great hardship, as they were often obliged to carry the grain great distances, or pay a bribe to be excused. This oppressive law was altered by Julius Agricola.

The Romans patronized agriculture. Cato says, "When the Romans designed to bestow the highest praise on a good man, they used to say he understood agriculture well, and is an excellent husbandman, for this was esteemed the greatest and most honorable character." Their system produced a great alteration in Britain, and converted it into the most plentiful province of the empire; it produced sufficient corn for its own inhabitants, for the Roman legions, and also afforded a great surplus, which was sent up the Rhine. The Emperor Julian built new granaries in Germany, in which he stored the corn brought from Britain. Agriculture had greatly improved in England under the Romans.

The Romans do not appear to have established in England any military tenures of land, such as those they created along the Danube and the Rhine; nor do they appear to have taken possession of the land; the tax they imposed upon it, though paid in kind, was more of the nature of a tribute than a rent. Though some of the best of the soldiers in the Roman legions were Britons, yet their rule completely enervated the aboriginal inhabitants—they were left without leaders, without cohesion. Their land was held by permission of the conquerors. The wall erected at so much labor in the north of England proved a less effectual barrier against the incursions of the Picts and Scots than the living barrier of armed men which, at a later period, successfully repelled their invasions. The Roman rule affords another example that material prosperity cannot secure the liberties of a people, that they must be armed and prepared to repel by force any aggression upon their liberty or their estates.

"Who will be free, *themselves* must strike the blow."

The prosperous "Britons," who were left by the Romans in possession of the island, were but feeble representatives of those who, under Caractacus and Boadicea, did not shrink from combat with the legions of Cæsar. Uninured to arms, and accustomed to obedience, they looked for a fresh master, and sunk into servitude and serfdom, from which they never emerged. Yet under the Romans they had thriven and increased in material wealth; the island abounded in numerous flocks and herds; and agriculture, which was encouraged by the Romans, flourished. This wealth was but one of the temptations to the invaders, who seized not only upon the movable wealth of the natives, but also upon the land, and divided it among themselves.

The warlike portion of the aboriginal inhabitants appear to have joined the Cymri and retired westward. Their system of landholding was non-feudal, inasmuch as each man's land was divided among all his sons. One of the

laws of Hoel Dha, King of Wales in the tenth century, decreed "that the youngest son shall have an equal share of the estate with the eldest son, and that when the brothers have divided their father's estate among them, the youngest son shall have the best house with all the office houses; the implements of husbandry, his father's kettle, his axe for cutting wood, and his knife; these three last things the father cannot give away by gift, nor leave by his last will to any but his youngest son, and if they are pledged they shall be redeemed." It may not be out of place here to say that this custom continued to exist in Wales; and on its conquest Edward I. ordained, "Whereas the custom is otherwise in Wales than England concerning succession to an inheritance, inasmuch as the inheritance is partible among the heirs-male, and from time whereof the memory of man is not to the contrary hath been partible, Our Lord the King will not have such custom abrogated, but willeth that inheritance shall remain partible among like heirs as it was wont to be, with this exception that bastards shall from henceforth not inherit, and also have portions with the lawful heirs; and if it shall happen that any inheritance should hereafter, upon failure of heirs-male, descend to females, the lawful heirs of their ancestors last served thereof. We will, of our especial grace, that the same women shall have their portions thereof, to be assigned to them in our court, although this be contrary to the custom of Wales before used."

The land system of Wales, so recognized and regulated by Edward I., remained unchanged until the reign of the first Tudor monarch. Its existence raises the presumption that the aboriginal system of landholding in England gave each son a share of his father's land, and, if so, it did not correspond with the Germanic system described by Cæsar, nor with the tribal system of the Celts in Ireland, nor with the feudal system subsequently introduced.

The polity of the Romans, which endured in Gaul, Spain, and Italy, and tinged the laws and usages of these countries after they had been occupied by the Goths, totally disappeared in England; and even Christianity, which partially prevailed under the Romans, was submerged beneath the flood of invasion. Save the material evidence of the footprints of "the masters of the world" in the Roman roads, Roman wall, and some other structures, there is no trace of the Romans in England. Their polity, laws, and language alike vanished, and did not reappear for centuries, when their laws and language were reimported.

I should not be disposed to estimate the population of England and Wales, at the retirement of the Romans, at more than 1,500,000. They were like a flock of sheep without masters, and, deprived of the watch-dogs which overawed and protected them, fell an easy prey to the invaders.

III. THE SCANDINAVIANS.

The Roman legions and the outlying semi-military settlements along the Rhine and the Danube, forming a cordon reaching from the German Ocean to the Black Sea, kept back the tide of barbarians, but the volume of force accumulated behind the barrier, and at length it poured in an overwhelming and destructive tide over the fair and fertile provinces whose weak and effeminate people offered but a feeble resistance to the robust armies of the north. The Romans, under the instruction of Cæsar and Tacitus, had a faint idea of the usages of the people inhabiting the verge that lay around the Roman dominions, but they had no knowledge of the influences that prevailed in "the womb of nations," as Central Europe appeared to the Latins, who saw emerging therefrom hosts of warriors, bearing with them their wives, their children, and their portable effects, determined to win a settlement amid the fertile regions owned and improved by the Romans.

These incursions were not colonization in the sense in which Rome understood it; they were the migrations of a people, and were as full, as complete, and as extensive as the Israelitish in-

vasion of Canaan—they were more destructive of property, but less fatal to life. These migratory hosts left a desert behind them, and they either gained a settlement or perished. The Roman colonies preserved their connection with the parent stem, and invoked aid when in need; but the barbarian hosts had no home, no reserves. Other races, moving with similar intent, settled on the land they had vacated. These brought their own social arrangements, and it is very difficult to connect the land system established by the aborigines with the system which, after a lapse of some hundreds of years, was found to prevail in another tribe or nation which had occupied the region that had been vacated.

Neither Cæsar nor Tacitus gives us any idea of the habits or usages of the people who lived north of the Belgæ. They had no notion of Scandinavia nor of Sclavonia. The Walhalla of the north, with its terrific deities, was unknown to them; and I am disposed to think that we shall look in vain among the customs of the Teutons for the basis from whence came the polity established in England by the invaders of the fifth century. The Anglo-Saxons came from a region north of the Elbe, which we call Schleswig-Holstein. They were kindred to the Norwegians and the Danes, and of the family of the sea robbers; they were not Teutons, for the Teutons were not and are not sailors. The Belgæ colonized part of the coast—*i.e.*, the settlers maintained a connection with the mainland; but the Angles, the Saxons, and the Jutes did not colonize, they migrated; they left no trace of their occupancy in the lands they vacated. Each separate invasion was the settlement of a district; each leader aspired to sovereignty, and was supreme in his own domains; each claimed descent from Woden, and, like Romulus or Alexander, sought affinity with the gods. Each member of the Heptarchy was independent of, and owed no allegiance to, the other members; and marriage or conquest united them ultimately into one kingdom.

The primary institutions were moulded by time and circumstance, and the state of things in the eleventh century was as different from that of the fifth as those of our own time differ from the rule of Richard II. Yet one was as much an outgrowth of its predecessor as the other.

Attempts have been made, with considerable ingenuity, to connect races with each other by peculiar characteristics, but human society has the same necessities, and we find great similarity in various divisions of society. At all times, and in all nations, society resolved itself into the upper, middle. and lower classes. Rome had its Nobles, Plebeians, and Slaves; Germany its Edhilingi, Frilingi, and Lazzi; England its Eaorls, Thanes, and Ceorls. It would be equally cogent to argue that, because Rome had three classes and England had three classes, the latter was derived from the former, as to conclude that, because Germany had three classes, therefore English institutions were Teutonic. If the invasion of the fifth century were Teutonic we should look or similar nomenclature, but there is as great a dissimilarity between the English and German names of the classes as between the former and those of Rome.

The Germanic *mark* system has no counterpart in the land system introduced into England by the Anglo-Saxons. If village communities existed in England, it must have been before the invasion of the Romans. The German system, as described by Cæsar, was suited to nomads—to races on the wing, who gave to no individual possession for more than a year, that there might be no home ties. The *mark* system is of a later date, and was evidently the arrangement of other races who permanently settled themselves upon the lands vacated by the older nations. And I may suggest whether, as these lands were originally inhabited by the Celts, the conquerors did not adopt the system of the conquered.

Even in the nomenclature of *Feudalism*, introduced into England in the fifth century, we are driven back to Scandinavia for an explanation. The word

feudal as applied to land has a Norwegian origin, from which country came Rollo, the progenitor of William the Norman. Pontoppidan ("History of Norway," p. 290) says, "The *Odhall*, right of Norway, and the *Udall*, right of Finland, came from the words '*Odh*,' which signifies *proprietors*, and '*all*,' which means *totum*. A transposition of these syllables makes *all odh*, or *allodium*, which means absolute property. *Fee*, which means stipend or pay, united with *oth*, thus forming *Fee-oth* or *Feodum*, denoting stipendiary property." Waeterus states that the word *allode*, *allodium*, which applies to land in Germany, is composed of *an* and *lot*—*i.e.*, land obtained by lot.

I therefore venture the opinion that the settlement of England in the fifth and sixth centuries was not Teutonic or Germanic, but SCANDINAVIAN.

The lands won by the swords of all were the common property of all; they were the lands of the people, *Folc-land*; they were distributed by lot at the *Folc-gemot*; they were *Odh-all* lands; they were not held of any superior, nor was there any service save that imposed by the common danger. The chieftans were elected and obeyed, because they represented the entire people. Hereditary right seems to have been unknown. The essence of feudalism *was a life estate*, the land reverted either to the sovereign or to the people upon the death of the occupant. At a later period the monarch claimed the power of confiscating land, and of giving it away by charter or deed; and hence arose the distinction between *Folc-land* and *Boc-land* (the land of the book or charter), a distinction somewhat similar to the *freehold* and *copyhold* tenures of the present day. King Alfred the Great bequeathed "his *Boc-land* to his nearest relative; and if any of them have children it is more agreeable to me that it go to those born on the male side." He adds, "My grandfather bequeathed his land on the spear side, not on the spindle side; therefore if I have given what he acquired to any on the female side, let my kinsman make compensation."

The several ranks were thus defined by Athelstane:

"1st. It was whilom in the laws of the English that the people went by ranks, and these were the counsellors of the nation, of worship worthy each according to his condition—'eorl,' 'ceorl,' 'thegur,' and 'theodia.'

"2d. If a ceorl thrived, so that he had fully five hides (600 acres) of land, church and kitchen, bell-house and back gatescal, and special duty in the king's hall, then he was thenceforth of thane-right worthy.

"3d. And if a thane thrived so that he served the king, and on his summons rode among his household, if he then had a thane who him followed, who to the king utward five hides, had, and in the king's hall served his lord, and thence, with his errand, went to the king, he might thenceforth, with his fore oath, his lord represent at various needs, and his and his plant lawfully conduct wheresoever he ought.

"4th. And he who so prosperous a vicegerent had not, swore for himself according to his right or it forfeited.

"5th. And if a 'thane' thrived so that he became an eorl, then was he thenceforth of eorl-right worthy.

"6th. And if a merchant thrived so that he fared thrice over the wide sea by his own means (or vessels), then was he thenceforth of thane-right worthy."

The oath of fealty, as prescribed by the law of Edward and Guthrum, was very similar to that used at a later period, and ran thus:

"Thus shall a man swear fealty: By the Lord, before whom this relic is holy, I will be faithful and true, and love all that he loves, and shun all that he shuns, according to God's law, and according to the world's principles, and never by will nor by force, by word nor by work, do aught of what is loathful to him, on condition that he me keep, as I am willing to deserve, and all that fulfil, that our agreement was, when I to him submitted and chose his will."

The *Odh-all* (noble) land was divided into two classes: the *in-lands*, which were farmed by slaves under *Bailiffs*, and the *out-lands*, which were let to ceorls either for one year or for a term. The rents were usually paid in kind, and were a fixed proportion of the produce. Ina, King of the West Saxons, fixed the rent of ten hides (1200 acres), in the beginning of the

eighth century, as follows: 10 casks honey, 12 casks strong ale, 30 casks small ale, 300 loaves bread, 2 oxen, 10 wedders, 10 geese, 20 hens, 10 chickens, 10 cheeses, 1 cask butter, 5 salmon, 20 lbs. forage, and 100 eels. In the reign of Edgar the Peaceable (tenth century), land was sold for about four shillings of the then currency per acre. The Abbot of Ely bought an estate about this time, which was paid for at the rate of four sheep or one horse for each acre.

The freemen (*Liberi Homines*) were a very numerous class, and all were trained in the use of arms. Their *Folcland* was held under the penalty of forfeiture if they did not take the field, whenever required for the defence of the country. In addition, a tax, called Danegeld, was levied at a rate varying from two shillings to seven shillings per hide of land (120 acres); and in 1008, each owner of a large estate, 310 hides, was called on to furnish a ship for the navy.

Selden ("Laws and Government of England," p. 34) thus describes the freemen among the Saxons, previous to the Conquest:

"The next and most considerable degree of all the people is that of the *Freemen*, anciently called *Frilingi*,* or *Free-born*, or such as are born free from all yoke of arbitrary power, and from all law of compulsion, other than what is made by their voluntary consent, for all freemen have votes in the making and executing of the general laws of the kingdom. In the first, they differed from the *Gauls*, of whom it is noted that the *commons* are never called to council, nor are much better than servants. In the second, they differ from many free people, and are a degree more excellent, being adjoined to the lords in judicature, both by advice and power (*consilium et authoritates adsunt*), and therefore those that were elected to that work were called *Comites ex plebe*, and made one rank of *Freemen* for wisdom superior to the rest. Another degree of these were beholden for their riches, and were called *Custodes Pagani*, an honorable title belonging to military service, and these were such as had obtained an estate of such value as that their ordinary arms were a helmet, a coat of mail, and a gilt sword. The rest of the freemen were contented with the name of *Ceorls*, and had as sure a title to their own liberties as the *Custodes Pagani* or the country gentlemen had."

* This is a Teutonic, not an Anglo-Saxon term; the Anglo-Saxon word is Thane.

Land was liable to be seized upon for treason and forfeited; but even after the monarchs had assumed the functions of the *Folc-gemot*, they were not allowed to give land away without the approval of the great men; charters were consented to and witnessed in council. "There is scarcely a charter extant," says Chief Baron Gilbert, "that is not proof of this right." The grant of Baldred, King of Kent, of the manor of Malling, in Sussex, was annulled because it was given without the consent of the council. The subsequent gift thereof, by Egbert and Athelwolf, was made with the concurrence and assent of the great men. The kings' charters of escheated lands, to which they had succeeded by a personal right, usually declared "that it might be known that what they gave was their own."

Discussions have at various times taken place upon the question, "Was the land-system of this period *feudal?*" It engaged the attention of the Irish Court of King's Bench, in the reign of Charles I., and was raised in this way: James I. had issued "a commission of defective titles." Any Irish owner, upon surrendering his land to the king, got a patent which reconvened it on him. Wentworth (Lord Stafford) wished to *settle* Connaught, as Ulster had been *settled* in the preceding reign, and, to accomplish it, tried to break the titles granted under "the commission of defective titles." Lord Dillon's case, which is still quoted as an authority, was tried. The plea for the Crown alleged that the honor of the monarch stood before his profit, and as the commissioners were only authorized to issue patents to hold *in capite*, whereas they had given title "to hold *in capite*, by knights' service out of Dublin Castle," the grant was bad. In the course of the argument, the existence of feudal tenures, before the landing of William of Normandy, was discussed, and Sir Henry Spelman's views,

as expressed in the Glossary, were considered. The Court unanimously decided that feudalism existed in England under the Anglo-Saxons, and it affirmed that Sir Henry Spelman was wrong. This decision led Sir Henry Spelman to write his "Treatise on Feuds," which was published after his death, in which he reasserted the opinion that feudalism was introduced into England at the Norman invasion. This decision must, however, be accepted with a limitation; I think there was no separate order of *nobility* under the Anglo-Saxon rule. The king had his councillors, but there appears to have been no order between him and the *Folc-gemot*. The Earls and the Thanes met with the people, but did not form a separate body. The Thanes were country gentleman, not senators. The outcome of the heptarchy was the Earls or Ealdermen; this was the only order of nobility among the Saxons; they corresponded to the position of lieutenants of counties, and were appointed for life. In 1045 there were nine such officers; in 1065 there were but six. Harold's earldom, at the former date, comprised Norfolk, Suffolk, Essex, and Middlesex; and Godwin's took in the whole south coast from Sandwich to the Land's End, and included Kent, Sussex, Hampshire, Wilts, Devonshire, and Cornwall. Upon the death of Godwin, Harold resigned his earldom, and took that of Godwin, the bounds being slightly varied. Harold retained his earldom after he became king, but on his death it was seized upon by the Conqueror, and divided among his followers.

The Crown relied upon the *Liberi Homines* or freemen. The country was not studded with castles filled with armed men. The *House* of the Thane was an unfortified structure, and while the laws relating to land were, in my view, essentially *feudal*, the government was different from that to which we apply the term *feudalism*, which appears to imply baronial castles, armed men, and an oppressed people.

I venture to suggest to some modern writers that further inquiry will show them that *Folc-land* was not confined to commonages, or unallotted portions, but that at the beginning it comprised all the land of the kingdom, and that the occupant did not enjoy it as owner-in-severalty; he had a good title against his fellow-subjects, but he held under the *Folc-gemot*, and was subject to conditions. The consolidation of the sovereignty, the extension of laws of forfeiture, the assumption by the kings of the rights of the popular assemblies, all tended to the formation of a second set of titles, and *boc-land* became an object of ambition. The same individual appears to have held land by both titles, and to have had greater powers over the latter than over the former.

Many of those who have written on the subject seem to me to have failed to grasp either the *object* or the *genius* of FEUDALISM. It was the device of conquerors to maintain their possessions, and is not to be found among nations, the original occupiers of the land, nor in the conquests of states which maintained standing armies. The invading hosts elected their chieftain, they and he had only a life use of the conquests. Upon the death of one leader another was elected, so upon the death of the allottee of a piece of land it reverted to the state. The *genius* of FEUDALISM was life ownership and non-partition. Hence the oath of fealty was a personal obligation, and investiture was needful before the new feudee took possession. The state, as represented by the king or chieftain, while allowing the claim of the family, exercised its right to select the individual. All the lands were considered *Beneficia*, a word which now means a charge upon land, to compensate for duties rendered to the state. Under this system, the feudatory was a commander, his residence a barrack, his tenants soldiers; it was his duty to keep down the aborigines, and to prevent invasion. He could neither sell, give, nor bequeath his land. He received the surplus revenue as payment for personal service, and thus enjoyed his *benefice*. Judged in this way, I think the feudal system existed before the Norman Conquest. Slavery and serfdom undoubt-

edly prevailed. The country prospered under the Scandinavians; and, from the great abundance of corn, William of Poitiers calls England "the storehouse of Ceres."

IV. THE NORMANS.

The invasion of William of Normandy led to results which have been represented by some writers as having been the most momentous in English history. I do not wish in any way to depreciate their views, but it seems to me not to have been so disastrous to existing institutions, as the Scandinavian invasion, which completely submerged all former usages. No trace of Roman occupation survived the advent of the Anglo-Saxons; the population was reduced to and remained in the position of serfs, whereas the Norman invasion preserved the existing institutions of the nation, and subsequent changes were an outgrowth thereof.

When Edward the Confessor, the last descendant of Cedric, was on his deathbed, he declared Harold to be his successor, but William of Normandy claimed the throne under a previous will of the same monarch. He asked for the assistance of his own nobles and people in the enterprise, but they refused at first, on the ground that their feudal compact only required them to join in the defence of their country, and did not coerce them into affording him aid in a completely new enterprise; and it was only by promising to compensate them out of the spoils that he could secure their co-operation. A list of the number of ships supplied by each Norman chieftain appears in Lord Lyttleton's "History of Henry III." vol. i., appendix.

I need hardly remind you that the settlers in Normandy were from Norway, or that they had been expelled from their native land in consequence of their efforts to subvert its institutions, and to make the descent of land hereditary, instead of being divisible among all the sons of the former owner. Nor need I relate how they won and held the fair provinces of northern France—whether as a fief of the French Crown or not, is an open question. But I should wish you to bear in mind their affinity to the Anglo-Saxons, to the Danes, and to the Norwegians, the family of Sea Robbers, whose ravages extended along the coasts of Europe as far south as Gibraltar, and, as some allege, along the Mediterranean. Some questions have been raised as to the means of transport of the Saxons, the Jutes, and the Angles, but they were fully as extensive as those by which Rollo invaded France or William invaded England.

William strengthened his claim to the throne by his military success, and by a form of election, for which there were many previous precedents. Those who called upon him to ascend it alleged "that they had always been ruled by legal power, and desired to follow in that respect the example of their ancestors, and they knew of no one more worthy than himself to hold the reins of government."

His alleged title to the crown, sanctioned by success and confirmed by election, enabled him, in conformity with existing institutions, to seize upon the lands of Harold and his adherents, and to grant them as rewards to his followers. Such confiscation and gifts were entirely in accord with existing usages, and the great alteration which took place in the principal fiefs was more a change of persons than of law. A large body of the aboriginal people had been, and continued to be, serfs or villeins; while the mass of the freemen (*Liberi Homines*) remained in possession of their holdings.

It may not be out of place here to say a few words about this important class, which is in reality the backbone of the British constitution; it was the mainstay of the Anglo-Saxon monarchy; it lost its influence during the civil wars of the Plantagenets, but reasserted its power under Cromwell. Dr. Robertson thus draws the line between them and the vassals:

"In the same manner *Liber homo* is commonly opposed to *Vassus* or *Vassalus*, the former denoting an allodial proprietor, the latter one who held of a superior. These

freemen were under an obligation to serve the state, and this duty was considered so sacred that *freemen* were prohibited from entering into holy orders, unless they obtained the consent of the sovereign."

De Lolme, chap. i., sec. 5, says :

"The *Liber homo*, or freeman, has existed in this country from the earliest periods, as well as of authentic as of traditionary history, entitled to that station in society as one of his constitutional rights, as being descended from free parents in contradistinction to 'villains,' which should be borne in remembrance, because the term 'freeman' has been, in modern times, perverted from its constitutional signification without any statutable authority."

The *Liberi Homines* are so described in the Doomsday Book. They were the only men of honor, faith, trust, and reputation in the kingdom ; and from among such of these as were not barons, the knights did choose jurymen, served on juries themselves, bare offices, and dispatched country business. Many of the *Liberi Homines* held of the king *in capite*, and several were freeholders of other persons in military service. Their rights were recognized and guarded by the 55th William I. ;* it is entitled :

"CONCERNING CHEUTILAR OR FEUDAL RIGHTS, AND THE IMMUNITY OF FREEMEN.

"We will also, and strictly, enjoin and concede that all freemen (*Liberi Homines*) of our whole kingdom aforesaid, have and hold their land and possessions well and in peace, free from every unjust exaction and from Tallage, so that nothing be exacted or taken from them except their free service, which of right they ought to do to us and are bound to do, and according as it was appointed (*statutum*) to them, and given to them by us, and conceded by hereditary right for ever, by the common council (*Folc-gemot*) of our whole realm aforesaid."

These freemen were not created by the Norman Conquest, they existed prior thereto ; and the laws, of which this is one, are declared to be the laws of Edward the Confessor, which William re-enacted. Selden, in "The Laws and Government of England," p. 34, speaks of this law as the first Magna Charta. He says :

"Lastly, the one law of the kings, which may be called the first *Magna Charta* in the Norman times (55 William I.), by which the king reserved to himself, from the *freemen* of this kingdom, nothing but their free service, in the conclusion saith that their lands were thus granted to them in inheritance of the king by the *Common Council* (*Folc-gemot*) of the whole kingdom ; and so asserts, in one sentence, the liberty of the freemen, and of the representative body of the kingdom."

He further adds :

"The freedom of an *Englishman* consisteth of three particulars : first, in *ownership ;* second, in *voting any law*, whereby ownership is maintained ; and, thirdly, in having an influence upon the *judiciary power* that must apply the law. Now the English, under the Normans, enjoyed all this freedom with each man's own particular, besides what they had in bodies aggregate. This was the meaning of the Normans, and they published the same to the world in a fundamental law, whereby is granted that all *freemen* shall have and hold their lands and possessions in hereditary right for ever ; and by this they being secured from forfeiture, they are further saved from all wrong by the same law, which provideth that they shall hold them well or quietly, and in peace, free from all unjust tax, and from all Tallage, so as nothing shall be exacted nor taken but their *free service*, which, by right, they are bound to perform."

This is expounded in the law of Henry I., cap. 4, to mean that no tribute or tax shall be taken but what was due in the Confessor's time, and Edward II. was sworn to observe the laws of the Confessor.

The nation was not immediately settled. Rebellions arose either from the oppression of the invaders or the restlessness of the conquered ; and, as each outburst was put down by force, there were new lands to be distributed among

* "LV.—De Chartilari seu Feudorum jure et Ingenuorum immunitate. Volumus etiam ac firmiter præcipimus et concedimus ut omnes liberi homines totius Monarchiæ regni nostri prædicti habeant et teneant terras suas et possessiones suas bene et in pace, liberi ab omni, exactione iniusta et ab omni Tallagio : Ita quod nihil ab eis exigatur vel capiatur nisi servicium suum liberum quod de iure nobis facere debent et facere tenentur et prout statutum est eis et illis a nobis datum et concessum iure hæreditario imperpetuum per commune consilium totius regni nostri præicti."

the adherents of the monarch; ultimately there were about 700 chief tenants holding *in capite*, but the nation was divided into 60,215 knights' fees, of which the Church held 28,115. The king retained in his own hands 1422 manors, besides a great number of forests, parks, chases, farms, and houses, in all parts of the kingdom; and his followers received very large holdings.

Among the Saxon families who retained their land was one named Shobington in Bucks. Hearing that the Norman lord was coming to whom the estate had been gifted by the king, the head of the house armed his servants and tenants, preparing to do battle for his rights; he cast up works, which remain to this day in grassy mounds, marking the sward of the park, and established himself behind them to await the despoiler's onset. It was the period when hundreds of herds of wild cattle roamed the forest lands of Britain, and, failing horses, the Shobingtons collected a number of bulls, rode forth on them, and routed the Normans, unused to such cavalry. William heard of the defeat, and conceived a respect for the brave man who had caused it; he sent a herald with a safe conduct to the chief, Shobington, desiring to speak with him. Not many days after, came to court eight stalwart men riding upon bulls, the father and seven sons. "If thou wilt leave me my lands, O king," said the old man, "I will serve thee faithfully as I did the dead Harold." Whereupon the Conqueror confirmed him in his ownership, and named the family Bullstrode, instead of Shobington.

Sir Martin Wright, in his "Treatise on Tenures," published in 1730, p. 61, remarks:

"Though it is true that the possessions of the Normans were of a sudden very great, and that they received most of them from the hands of William I., yet it does not follow that the king took all the lands of England out of the hands of their several owners, claiming them as his spoils of war, or as a parcel of a conquered country; but, on the contrary, it appears pretty plain from the history of those times that the king either had or pretended title to the crown, and that his title, real or pretended, was established by the death of Harold, which amounted to an unquestionable judgment in his favor. He did not therefore treat his opposers as enemies, but as traitors, agreeably to the known laws of the kingdom which subjected traitors not only to the loss of life but of all their possessions."

He adds (p. 63):

"As William I. did not claim to possess himself of the lands of England as the spoils of conquest, so neither did he tyrannically and arbitrarily subject them to feudal dependence; but, as the fedual law was at that time the prevailing law of Europe, William I., who had always governed by this policy, might probably recommend it to our ancestors as the most obvious and ready way to put them upon a footing with their neighbors, and to secure the nation against any future attempts from them. We accordingly find among the laws of William I. a law enacting feudal law itself, not *eo nomine*, but in effect, inasmuch as it requires from all persons the same engagements to, and introduces the same dependence upon, the king as supreme lord of all the lands of England, as were supposed to be due to a supreme lord by the feudal law. The law I mean is the LII. law of William I."

This view is adopted by Sir William Blackstone, who writes (vol. ii., p. 47):

"From the prodigious slaughter of the English nobility at the battle of Hastings, and the fruitless insurrection of those who survived, such numerous forfeitures had accrued that he (William) was able to reward his Norman followers with very large and extensive possessions, which gave a handle to monkish historians, and such as have implicitly followed them, to represent him as having, by the right of the sword, seized upon all the lands of England, and dealt them out again to his own favorites—a supposition grounded upon a mistaken sense of the word conquest, which in its feudal acceptation signifies no more than acquisition, and this has led many hasty writers into a strange historical mistake, and one which, upon the slightest examination, will be found to be most untrue.

"We learn from a Saxon chronicle (A.D. 1085), that in the nineteenth year of King William's reign, an invasion was apprehended from Denmark; and the military constitution of the Saxons being then laid aside, and no other introduced in its stead, the kingdom was wholly defenceless; which occasioned the king to bring over a large army of Normans and Britons, who were

quartered upon, and greatly oppressed, the people. This apparent weakness, together with the grievances occasioned by a foreign force, might co-operate with the king's remonstrance, and better incline the nobility to listen to his proposals for putting them in a position of defence. For, as soon as the danger was over, the king held a great council to inquire into the state of the nation, the immediate consequence of which was the compiling of the great survey called the Doomsday Book, which was finished the next year; and in the end of that very year (1086) the king was attended by all his nobility at Sarum, where the principal landholders submitted their lands to the yoke of military tenure, and became the king's vassals, and did homage and fealty to his person."

Mr. Henry Hallam writes:

"One innovation made by William upon the feudal law is very deserving of attention. By the leading principle of feuds, an oath of fealty was due from the vassal to the lord of whom he immediately held the land, and no other. The King of France long after this period had no feudal, and scarcely any royal, authority over the tenants of his own vassals; but William received at Salisbury, in 1085, the fealty of all landholders in England, both those who held in chief and their tenants, thus breaking in upon the feudal compact in its most essential attribute—the exclusive dependence of *a vassal* upon his lord; and this may be reckoned among the several causes which prevented the continental notions of independence upon the Crown from ever taking root among the English aristocracy."

A more recent writer, Mr. Freeman ("History of the Norman Conquest," published in 1871, vol. iv., p. 695), repeats the same idea, though not exactly in the same words. After describing the assemblage which encamped in the plains around Salisbury, he says:

"In this great meeting a decree was passed, which is one of the most memorable pieces of legislation in the whole history of England. In other lands where military tenure existed, it was beginning to be held that he who plighted his faith to a lord, who was the man of the king, was the man of that lord only, and did not become the man of the king himself. It was beginning to be held that if such a man followed his immediate lord to battle against the common sovereign, the lord might draw on himself the guilt of treason, but the men that followed him would be guiltless. William himself would have been amazed if any vassal of his had refused to draw his sword in a war with France on the score of duty toward an over-lord. But in England, at all events, William was determined to be full king over the whole land, to be immediate sovereign and immediate lord of every man. A statute was passed that every *freeman* in the realm should take the oath of fealty to King William."

Mr. Freeman quotes Stubbs's "Select Charters," p. 80, as his authority. Stubbs gives the text of that charter, with ten others. He says: "These charters are from 'Textus Roffensis,' a manuscript written during the reign of Henry I.; it contains the sum and substance of all the legal enactments made by the Conqueror independent of his confirmation of the earlier laws." It is as follows: "Statuimus etiam ut *omnis liber homo* feodere et sacramento affirmet, quod intra et extra Angliam Willelmo regi fideles esse volunt, terras et honorem illius omni fidelitate cum eo servare et eum contra inimicos defendere."

It will be perceived that Mr. Hallam reads *Liber homo* as "vassal." Mr. Freeman reads them as "freeman," while the older authority, Sir Martin Wright, says: "I have translated the words *Liberi Homines*, 'owners of land,' because the sense agrees best with the tenor of the law."

The views of writers of so much eminence as Sir Martin Wright, Sir William Blackstone, Mr. Henry Hallam, and Mr. Freeman, are entitled to the greatest respect and consideration, and it is with much diffidence I venture to differ from them. The three older writers appear to have had before them the LII. of William I., the latter the alleged charter found in the "Textus Roffensis;" but as they are almost identical in expression, I treat the latter as a copy of the former, and I do not think it bears out the interpretation sought to be put upon it—that it altered either the feudalism of England, or the relation of the vassal to his lord; and it must be borne in mind that not only did William derive his title to the crown from Edward the Confessor, but he preserved the apparent continuity, and re-enacted the laws of his predecessor.

Wilkins' "Laws of the Anglo-Saxons and Normans," republished in 1840 by the Record Commissioners, gives the following introduction :

"Here begin the laws of Edward, the glorious king of England.

"After the fourth year of the succession to the kingdom of William of this land, that is England, he ordered all the English noble and wise men and acquainted with the law, through the whole country, to be summoned before his council of barons, in order to be acquainted with their customs. Having therefore selected from all the counties twelve, they were sworn solemnly to proceed as diligently as they might to write their laws and customs, nothing omitting, nothing adding, and nothing changing."

Then follow the laws, thirty-nine in number, thus showing the continuity of system, and proving that William imposed upon his Norman followers the laws of the Anglo-Saxons. They do not include the LII. William I., to which I shall refer hereafter. I may, however, observe that the demonstration at Salisbury was not of a legislative character ; and that it was held in conformity with Anglo-Saxon usages. If, according to Stubbs, the ordinance was a charter, it would proceed from the king alone. The idea involved in the statements of Sir Martin Wright, Mr. Hallam, and Mr. Freeman, that the *vassal of a lord* was then called on to swear allegiance to the *king*, and that it altered the feudal bond in England, is not supported by the oath of vassalage. In swearing fealty, the vassal knelt, placed his hands between those of his lord's, and swore :

"I become your man from this day forward, of life and limb, and of earthly worship, and unto you shall be true and faithful, and bear you faith for the tenements at that I claim to hold of you, *saving the faith that I owe unto our Sovereign Lord the King.*"

This shows that it was unnecessary to call *vassals* to Salisbury to swear allegiance. The assemblage was of the same nature and character as previous meetings. It was composed of the *Liberi Homines*, the freemen, described by the learned John Selden (*ante*, p. 10), and by Dr. Robertson and De Lolme (*ante*, pp. 12, 13).

But there is evidence of a much stronger character, which of itself refutes the views of these writers, and shows that the Norman system, at least during the reign of William I., was a continuation of that existing previous to his succession to the throne ; and that the meeting at Salisbury, so graphically portrayed, did not effect that radical change in the position of English landholders which has been stated. I refer to the works of EADMERUS ; he was a monk of Canterbury who was appointed Bishop of St. Andrews, and declined or resigned the appointment because the King of Scotland refused to allow his consecration by the Archbishop of Canterbury. His history includes the reigns of William I., William II., and Henry I., from 1066 to 1122, and he gives, at page 173, the laws of Edward the Confessor, which William I. gave to England ; they number seventy-one, including the LII. law quoted by Sir Martin Wright. The introduction to these laws is in Latin and Norman-French, and is as follows :

"These are the laws and customs which King William granted to the whole people of England after he had conquered the land, and they are those which *King Edward his predecessor* observed before him."*

This simple statement gets rid of the theory of Sir Martin Wright, of Sir

* The laws of William are given in a work entitled "Eadmeri Monachi Cantuariensis Historia Novorum," etc. It includes the reigns of William I. and II., and Henry I., from 1066 to 1122, and is edited by John Selden. Page 173 has the following :

"Hæ sunt Leges et Consuetudines quas Willielmus Rex concessit universo Populo Angliæ post subactam terram. Eædum sunt quas Edwardus Rex cognatus ejus observavit ante eum.

"Ces sont les Leis et les Custums que le Rui William granted a tut le peuple de Engleterre apres le Conquest de le Terre. Ice les meismes que le Rui Edward sun Cosin tuit devant lui.

"LII.

"De fide et obsequio erga Regnum.

"Statuimus etiam ut *omnes liberi homines foedere* et sacramento affirment quod intra et extra universum regnum Angliæ (quod olim vocabatur regnum Britanniæ) Willielmo suo domino fideles esse volunt, terras et honores illius fidelitate ubique servare cum eo et contra inimicos et alienigenas defendere."

William Blackstone, of Mr. Hallam, and of Mr. Freeman, that William introduced a new system, and that he did so either as a new feudal law or as an amendment upon the existing feudalism. The LII. law, quoted by Wright, is as follows :

"We have decreed that all *free men* should affirm on oath, that both within and without the whole kingdom of England (which is called Britain) they desire to be faithful to William their lord, and everywhere preserve unto him his land and honors with fidelity, and defend them against all enemies and strangers."

Eadmerus, who wrote in the reign of Henry I., gives the LII. William I. as a confirmatory law. The charter given by Stubbs is a contraction of the law given by Eadmerus. The former uses the words *Omnes liberi homines ;* the latter, the words *Omnis liber homo.* Those interested can compare them, as I shall give the text of each side by side.

Since the paper was read, I have met with the following passage in Stubbs's "Constitutional History of England," vol. i., p. 265 :

"It has been maintained that a formal and definitive act, forming the initial point of the feudalization of England, is to be found in a clause of the laws, as they are called, of the Conqueror, which directs that every freeman shall affirm, by covenant and oath, that 'he will be faithful to King William within England and without, will join him in preserving his land with all fidelity, and defend him against his enemies.' But this injunction is little more than the demand of the oath of allegiance taken to the Anglo-Saxon kings, and is here required not of every feudal dependant of the king, but of every freeman or freeholder whatsoever. In that famous Council of Salisbury, A.D. 1086, which was summoned immediately after the making of the Doomsday survey, we learn, from the 'Chronicle,' that there came to the king 'all his witan and all the landholders of substance in England, whose vassals soever they were, and they all submitted to him and became his men, and swore oaths of allegiance that they would be faithful to him against all others.' In the act has been seen the formal acceptance and date of the introduction of feudalism, but it has a very different meaning. The oath described is the oath of allegiance, combined with the act of homage, and obtained from all landowners whoever their feudal lord might be. It is a measure of precaution taken against the disintegrating power of feudalism, providing a direct tie between the sovereign and all freeholders which no inferior relations existing between them and the mesne lords would justify them in breaking."

I have already quoted from another of Stubbs's works, "Select Charters," the charter which he appears to have discovered bearing upon this transaction, and now copy the note, giving the authorities quoted by Stubbs, with reference to the above passage. He appears to have overlooked the complete narration of the alleged laws of William I., given by Eadmerus, to which I have referred. The note is as follows :

"Ll. William I., § 2, below note ; see Hovenden, ii., pref. p. 5, *seq.*, where I have attempted to prove the spuriousness of the document called the Charter of William I., printed in the ancient 'Laws,' ed. Thorpe, p. 211. The way in which the regulation of the Conqueror here referred to has been misunderstood and misused is curious. Lambarde, in the 'Archaionomia,' p. 170, printed the false charter in which this genuine article is incorporated as an appendix to the French version of the Conqueror's laws, numbering the clauses 51 to 67 ; from Lambarde, the whole thing was transferred by Wilkins into his collection of Anglo-Saxon laws. Blackstone's 'Commentary,' ii. 49, suggested that perhaps the very law (which introduced feudal tenures) thus made at the Council of Salisbury is that which is still extant and couched in these remarkable words, *i.e.*, the injunction in question referred to by Wilkins, p. 228. Ellis, in the introduction to 'Doomsday,' i. 16, quotes Blackstone, but adds a reference to Wilkins, without verifying Blackstone's quotation from his collection of laws, substituting for that work the Concilia, in which the law does not occur. Many modern writers have followed him in referring the enactment of the article to the Council of Salisbury. It is well to give here the text of both passages ; that in the laws runs thus : 'Statuimus etiam ut omnis liber homo foedere et sacramento affirmet, quod intra et extra Angliam Willelmo regi fideles esse volunt, terras et honorem illius omni fidelitate eum eo servare et ante eum contra inimicos defendere' (Select Charters, p. 80). The homage done at Salisbury is described by Florence thus : 'Nec multo post mandavit ut Archiepiscopi, episcopi, abbates, comitas et barones et vicecomitas cum suis militibus die Kalendarum Augustarem sibi occurent Saresberiæ

quo cum venissent milites eorem sibi fidelitatem contra omnes homines jurare coegit.' The 'Chronicle' is a little more full: 'Thæ him comon to his witan and ealle tha Landsittende men the ahtes wæron ofer eall Engleland wæron thæs mannes men the hi wæron and ealle hi bugon to him and wæron his men, and him hold athas sworon thæt he woldon ongean ealle other men him holde beon.'"

Mr. Stubbs had, in degree, adopted the view at which I had arrived, that the law or charter of William I. was an injunction to enforce the oath of allegiance, previously ordered by the laws of Edward the Confessor, to be taken by all freemen, and that it did not relate to vassals, or alter the existing feudalism.

As the subject possesses considerable interest for the general reader as well as the learned historian, I think it well to place the two authorities side by side, that the text may be compared:

LII. William I., as given by Eadmerus.	*Charter from Textus Roffensis, given by Mr. Stubbs.*
"De fide et obsequio erga Regnum. "Statuimus etiam ut *omnes liberi homines foedere* et sacramento affirment quod intra et extra universum regnum Angliæ (quod olim vocabatur regnum Britanniæ) Willielmo suo domino fideles esse volunt, terras et honores illius fidelitate ubique servare cum eo et contra inimicos et alienigenas defendere."	"Statuimus etiam ut *omnis liber homo* feodere et sacramento affirmet, quod intra et extra Angliam Willelmo regi fideles esse volunt, terras et honorem illius omni fidelitate cum eo servare et ante eum contra inimicos defendere."

I think the documents I have quoted show that Sir Martin Wright, Sir William Blackstone, and Messrs. Hallam and Freeman, labored under a mistake in supposing that William had introduced or imposed a new feudal law, or that the vassals of a lord swore allegiance to the king. The introduction to the laws of William I. shows that it was not a new enactment, or a Norman custom introduced into England, and the law itself proves that it relates to freemen, and not to vassals.

The misapprehension of these authors may have arisen in this way: William I. had two distinct sets of subjects. The NORMANS, who had taken the oath of allegiance on obtaining investiture, and whose retinue included vassals; and the ANGLO-SAXONS, among whom vassalage was unknown, who were freemen (*Liberi Homines*) as distinguished from serfs. The former comprised those in possession of Odhal (noble) land, whether held from the Crown or its tenants. It was quite unnecessary to convoke the Normans and their vassals, while the assemblage of the Saxons —*Omnes Liberi Homines*—was not only in conformity with the laws of Edward the Confessor, but was specially needful when a foreigner had possessed himself of the throne.

I have perhaps dwelt too long upon this point, but the error to which I have referred has been adopted as if it was an unquestioned fact, and has passed into our school-books and become part of the education given to the young, and therefore it required some examination.

I believe that a very large portion of the land in England did not change hands at that period, nor was the position of either *serfs* or *villeins* changed. The great alteration lay in the increase in the quantity of *boc-land*. Much of the *folc-land* was forfeited and seized upon, and as the king claimed the right to give it away, it was called *terra regis*. The charter granted by King William to Alan Fergent, Duke of Bretagne, of the lands and towns, and the rest of the inheritance of Edwin, Earl of Yorkshire, runs thus:

"Ego Guilielmus cognomine Bastardus, Rex Angliæ do et concedo tibi nepoti meo Alano Brittaniæ Comiti et hæredibus tuis imperpetuum omnes villas et terras quæ nuper fuerent Comitis Edwini in Eborashina cum feodis militiæ et aliis libertatibus et consuetudinibus ita libere et honorifice sicut idem Edwinus eadem tenuit.

"Data obsidione coram civitate Eboraci."

This charter does not create a different title, but gives the lands as held by the former possessor. The monarch assumed the function of the *folc-gemot*, but the principle remained—the feudee only became tenant for life. Each estate reverted to the Crown on the death of him who held it; but, previous to acquiring possession. the new tenant had to cease to be his own "man," and

became the "man" of his superior. This act was called "homage," and was followed by "investiture." In A.D. 1175, Prince Henry refused to trust himself with his father till his homage had been renewed and accepted, for it bound the superior to protect the inferior. The process is thus described by De Lolme (chap. ii., sec. 1):

"On the death of the ancestor, lands holden by 'knight's service' and by 'grand sergeantcy' were, upon inquisition finding the tenure and the death of the ancestor, seized into the king's hands. If the heir appeared by the inquisition to be within the age of twenty-one years, the king retained the lands till the heir attained the age of twenty-one, for his own profit, maintaining and educating the heir according to his rank. If the heir appeared by the inquisition to have attained twenty-one, he was entitled to demand livery of the lands by the king's officers on paying a relief and doing fealty and homage. The minor heir attaining twenty-one, and proving his age, was entitled to livery of his lands, on doing fealty and homage, without paying any relief."

The idea involved is, that the lands were *held*, and *not owned*, and that the proprietary right lay in the nation, as represented by the king. If we adopt the poetic idea of the Brehon code, that "land is perpetual man," then *homage* for land was not a degrading institution. But it is repugnant to our ideas to think that any man can, on any ground, or for any consideration, part with his manhood, and become by homage the "man" of another.

The Norman chieftains claimed to be peers of the monarch, and to sit in the councils of the nation, as barons-by-tenure and not by patent. This was a decided innovation upon the usages of the Anglo-Saxons, and ultimately converted the Parliament, the *folc-gemot*, into two branches. Those who accompanied the king stood in the same position as the companions of Romulus, they were the *patricians;* those subsequently called to the councils of the sovereign by patent corresponded with the Roman *nobiles*. No such patents were issued by any of the Norman monarchs. But the insolence of the Norman nobles led to the attempt made by the successors of the Conqueror to revive the Saxon earldoms as a counterpoise. The weakness of Stephen enabled the greater feudees to fortify their castles, and they set up claims against the Crown, which aggravated the discord that arose in subsequent reigns.

The "Saxon Chronicles," p. 238, thus describes the oppressions of the nobles, and the state of England in the reign of Stephen:

"They grievously oppressed the poor people with building castles, and when they were built, filled them with wicked men, or rather devils, who seized both men and women who they imagined had any money, threw them into prison, and put them to more cruel tortures than the martyrs ever endured; they suffocated some in mud, and suspended others by the feet, or the head, or the thumbs, kindling fires below them. They squeezed the heads of some with knotted cords till they pierced their brains, while they threw others into dungeons swarming with serpents, snakes, and toads."

The nation was mapped out, and the owners' names inscribed in the Doomsday Book. There were no unoccupied lands, and had the possessors been loyal and prudent, the sovereign would have had no lands, save his own private domains, to give away, nor would the industrious have been able to become tenants-in-fee. The alterations which have taken place in the possession of land since the composition of the Book of Doom, have been owing to the disloyalty or extravagance of the descendants of those then found in possession.

Notwithstanding the vast loss of life in the contests following upon the invasion, the population of England increased from 2,150,000 in 1066, when William landed, to 3,350,000 in 1152, when the great-grandson of the Conqueror ascended the throne, and the first of the Plantagenets ruled in England.

V. THE PLANTAGENETS.

Whatever doubts may exist as to the influence of the Norman Conquest upon the mass of the people—the freemen, the ceorls, and the serfs—there can be no doubt that its effect upon the higher

classes was very great. It added to the existing *feudalism*—the system of Baronage, with its concomitants of castellated residences filled with armed men. It led to frequent contests between neighboring lords, in which the liberty and rights of the freemen were imperilled. It also eventuated in the formation of a distinct order—the peerage—and for a time the constitutional influence of the assembled people, the *folc-gemot*, was overborne.

The principal Norman chieftains were barons in their own country, and they retained that position in England, but their holdings in both were feudal, not hereditary. When the Crown, originally elective, became hereditary, the barons sought to have their possessions governed by the same rule, to remove them from the class of *terra-regis* (folc-land), and to convert them into chartered land. Being gifts from the monarch, he had the right to direct the descent, and all charters which gave land to a man and his heirs, made each of them only a tenant for life ; the possessor was bound to hand over the estate undivided to the heir, and he could neither give, sell, nor bequeath it. The land was *beneficia*, just as appointments in the Church, and reverted, as they do, to the patron to be re-granted. They were held upon military service, and the major barons, adopting the Saxon title Earl, claimed to be *peers* of the monarch, and were called to the councils of the state as barons-by-tenure. In reply to a *quo warranto*, issued to the Earl of Surrey, in the reign of Edward I., he asserted that his ancestors had assisted William in gaining England, and were equally entitled to a share of the spoils. "It was," said he, "by their swords that his ancestors had obtained their lands, and that by his he would maintain his rights." The same monarch required the Earls of Hereford and Norfolk to go over with his army to Guienne, and they replied, "The tenure of our lands does not require us to do so, unless the king went in person." The king insisted ; the earls were firm. "By God, sir Earl," said Edward to Hereford, "you shall go or hang." "By God, sir King," replied the earl, "I will neither go nor hang." The king submitted and forgave his warmth.

The struggle between the nobles and the Crown commenced, and was continued, under varying circumstances. Each of the barons had a large retinue of armed men under his own command, and the Crown was liable to be overborne by a union of ambitious nobles. At one time the monarch had to face them at Runnymede and yield to their demands ; at another he was able to restrain them with a strong hand. The Church and the barons, when acting in union, proved too strong for the sovereign, and he had to secure the alliance of one of these parties to defeat the views of the other. The barons abused their power over the *freemen*, and sought to establish the rule "that every man must have a lord," thus reducing them to a state of vassalage. King John separated the barons into two classes—major and minor ; the former should have at least thirteen knights' fees and a third part ; the latter remained country gentlemen. The 20th Henry III., cap. 3 and 4, was passed to secure the rights of freemen, who were disturbed by the great lords, and gave them an appeal to the king's courts of assize.

Bracton, an eminent lawyer who wrote in the time of Henry III., says :

"The king hath superiors—viz., God and the law by which he is made king ; also his court — viz., his earls and barons. Earls are the king's associates, and he that hath an associate hath a master ; and therefore, if the king be unbridled, or (which is all one) without law, they ought to bridle him, unless they will be unbridled as the king, and then the commons may cry, Lord Jesus, pity us," etc.

An eminent lawyer, time of Edward I., writes :

"Although the king ought to have no equal in the land, yet because the king and his commissioners can be both judge and party, the king ought by right to have companions, to hear and determine in Parliament all writs and plaints of wrongs done by the king, the queen, or their children."

These views found expression in the coronation oath. Edward II. was forced to swear :

"Will you grant and keep, and by your oath confirm to the people of England the laws and customs to them, granted by the ancient kings of England, your righteous and godly predecessors ; and especially to the clergy and people, by *the glorious King St. Edward*, your predecessor?"

The king's answer—"I do them grant and promise."

"Do you grant to hold and keep the laws and rightful customs which the commonalty of your realm shall have chosen, and to maintain and enforce them to the honor of God after your power?"

The king's answer—"I this do grant and promise."

I shall not dwell upon the event most frequently quoted with reference to the era of the Plantagenets—I mean King John's "Magna Charta." It was more social than territorial, and tended to limit the power of the Crown, and to increase that of the barons. The Plantagenets had not begun to call Commons to the House of Lords. The issue of writs was confined to those who were barons-by-tenure, the *patricians* of the Norman period. The creation of *nobles* was the invention of a later age. The baron feasted in his hall, while the slave grovelled in his cabin. Bracton, the famous lawyer of the time of Henry III., says : "All the goods a slave acquired belonged to his master, who could take them from him whenever he pleased." therefore a man could not purchase his own freedom. "In the same year, 1283," says the Annals of Dunstable, "we sold our slave by birth, William Pyke, and all his family, and received one mark from the buyer." The only hope for the slave was, to try and get into one of the walled towns, when he became free. Until the Wars of the Roses, these serfs were greatly harassed by their owners.

In the reign of Edward I., efforts were made to prevent the alienation of land by those who received it from the Norman sovereigns. The statute of mortmain was passed to restrain the giving of lands to the Church, the statute *de donis* to prevent alienation to laymen. The former declares :

"That whereas religious men had entered into the fees of other men, without license and will of the chief lord, and sometimes appropriating and buying, and sometimes receiving them of gift of others, whereby the services that are due of such fee, and which, in the beginning, were provided for the defence of the realm, are wrongfully withdrawn, and the chief lord do lose the escheats of the same (the primer seizin on each life that dropped) ; it therefore enacts : That any such lands were forfeited to the lord of the fee ; and if he did not take it within twelve months, it should be forfeited to the king, who shall enfeoff other therein by certain services to be done for us for the defence of the realm."

Another act, the 6th Edward I., cap. 3, provides :

"That alienation by the tenant in courtesy was void, and the heir was entitled to succeed to his mother's property, notwithstanding the act of his father."

The 13th Edward I., cap. 41, enacts :

"That if the abbot, priors, and keepers of hospitals, and other religious houses, aliened their land they should be seized upon by the king."

The 13th Edward I., cap. 1, *de donis conditionalitiis*, provided :

"*That tenements given to a man, and the heirs of his body, should, at all events, go to the issue, if there were any ; or, if there were none, should revert to the donor.*"

But while the fiefs of the Crown were forbidden to alien their lands, the *freemen*, whose lands were Odhal (noble) and of Saxon descent, the inheritance of which was guaranteed to them by 55 William I. (*ante*, p. 13), were empowered to sell their estates by the statute called *Quia Emptores* (6 Edward I.). It enacts :

"That from henceforth it shall be lawful to every *freeman* to sell, at his own pleasure, his lands and tenements, or part of them : so that the feoffee shall hold the same lands and tenements of the chief lord of the fee by such customs as his feoffee held before."

The scope of these laws was altered in the reign of Edward III. That monarch, in view of his intended invasion of France, secured the adhesion of the

landowners, by giving them power to raise money upon and alien their estates. The permission was as follows, 1 Edward III., cap. 12 :

"Whereas divers people of the realm complain themselves to be grieved because that lands and tenements which be holden of the king in chief, and aliened without license, have been seized into the king's hand, and holden as forfeit : (2.) The king shall not hold them as forfeit in such case, but will and grant from henceforth of such lands and tenements so aliened, there shall be reasonable fine taken in chancery by due process."

1 Edward III., cap. 13 :

"Whereas divers have complained that they be grieved by reason of purchasing of lands and tenements, which have been holden of the king's progenitors that now is, as of honors ; and the same lands have been taken into the king's hands, as though they had been holden in chief of the king as of his crown : (2.) The king will that from henceforth no man be grieved by any such purchase."

De Lolme, chap. iii., sec. 3, remarks on these laws that they took from the king all power of preventing alienation or of purchase. They left him the reversionary right on the failure of heirs.

These changes in the relative power of the sovereign and the nobles took place to enable Edward to enter upon the conquest of France ; but that monarch conferred a power upon the barons, which was used to the detriment of his descendants, and led to the dethronement of the Plantagenets.

The line of demarcation between the two sets of titles, those derived through the Anglo-Saxon laws and those derived through the grants of the Norman sovereigns, was gradually being effaced. The people looked back to the laws of Edward the Confessor, and forced them upon Edward II. But after passing the laws which prevented *nobles* from selling, and empowering *freemen* to do so, Edward III. found it needful to assert his claims to the entire land of England, and enacted in the twenty-fourth year of his reign :

"*That the king is the universal lord and original proprietor of all land in his kingdom ; and that no man doth, or can possess, any part of it but what has mediately or immediately been derived as a gift from him to be held on feodal service.*"

Those who obtained gifts of land, only held or had the use of them ; the ownership rested in the Crown. Feodal service, the maintenance of armed men, and the bringing them into the field, was the rent paid.

The wealth which came into England after the conquest of France influenced all classes, but none more than the family of the king. His own example seems to have affected his descendants. The invasion of France and the captivity of its king reappear in the invasion of England by Henry IV., and the capture and dethronement of Richard II. The prosperity of England during the reign of Edward had passed away in that of his grandson. Very great distress pervaded the land, and it led to efforts to get rid of villeinage. The 1st Richard II. recites :

"That grievous complaints had been made to the Lords and Commons, that villeins and land tenants daily withdraw into cities and towns, and a special commission was appointed to hear the case, and decide thereon."

The complaint was renewed, and appears in Act 9 Richard II., cap. 2 :

"Whereas divers villeins and serfs, as well of the great Lords as of other people, as well spiritual as temporal, do fly within the cities, towns, and places enfranched, as the city of London, and other like, and do feign divers suits against their Lords, to the intent to make them free by the answer of the Lords, it is accorded and assented that the Lords and others shall not be forebound of their villeins, because of the answer of the Lords."

Serfdom or slavery may have existed previous to the Anglo-Saxon invasion, but I am disposed to think that the Saxons, the Jutes, and the Angles reduced the inhabitants of the lands which they conquered, into serfdom. The history of that period shows that men, women, and children were constantly sold, and that there were established markets. One at Bristol, which was frequented by Irish buyers, was put down, owing to the remonstrance of the

bishop. After the Norman invasion the name of *Villein*, a person attached to the *villa*, was given to the serfs. The *village* was their residence. Occasional instances of *enfranchisement* took place; the word signified being made free, and at that time every *freeman* was entitled to a vote. The word *enfranchise* has latterly come to bear a different meaning, and to apply solely to the possession of a vote, but it originally meant the elevation of a *serf* into the condition of a *freeman*. The act of enfranchisement was a public ceremony usually performed at the church door. The last act of ownership performed by the master was the piercing of the right ear with an awl. Many serfs fled into the towns, where they were enfranchised and became freemen.

The disaffection of the common people increased; they were borne down with oppression. They struggled against their masters, and tried to secure their personal liberty, and the freedom of their land. The population rose in masses in the reign of Richard II., and demanded—

1st. The total abolition of slavery for themselves and their children forever;

2d. The reduction of the rent of good land to 4*d*. per acre;

3d. The right of buying and selling, like other men, in markets and fairs;

4th. The pardon of all offences.

The monarch acted upon insidious advice; he spoke them fair at first, to gain time, but did not fulfil his promises. Ultimately the people gained part of their demands. To limit or defeat them, an act was passed, fixing the wages of laborers to 4*d*. per day, with meat and drink, or 6*d*. per day, without meat and drink, and others in proportion; but with the proviso, that if any one refused to serve or labor on these terms, every justice was at liberty to send him to jail, there to remain until he gave security to serve and labor as by law required. A subsequent act prevents their being employed by the week, or paid for holidays.

Previous to this period, the major barons and great lords tilled their land by serfs, and had very large flocks and herds of cattle. On the death of the Bishop of Winchester, 1367, his executors delivered to Bishop Wykeham, his successor in the see, the following: 127 draught horses, 1556 head of cattle, 3876 wedders, 4777 ewes, and 3541 lambs. Tillage was neglected; and in 1314 there was a severe dearth; wheat sold at a price equal to £30 per quarter, the brewing of ale was discontinued by proclamation, in order "to prevent those of middle rank from perishing for want of food."

The dissensions among the descendants of Edward III. as to the right to the Crown aided the nobles in their efforts to make their estates hereditary, and the civil wars which afflicted the nation tended to promote that object. Kings were crowned and discrowned at the will of the nobles, who compelled the freemen to part with their small estates. The oligarchy dictated to the Crown, and oppressed and kept down the freemen. The nobles allied themselves with the serfs, who were manumitted that they might serve as soldiers in the conflicting armies.

From the Conquest to the time of Richard II., only barons-by-tenure, the descendants of the companions of the Conqueror, were invited by writ to Parliament. That monarch made an innovation, and invited others who were not barons-by-tenure. The first dukedom was created the 11th of Edward III., and the first viscount the 18th Henry VI.

Edward IV. seized upon the lands granted by former kings, and gave them to his own followers, and thus created a feeling of uneasiness in the minds of the nobility, and paved the way for the events which were accomplished by a succeeding dynasty. The decision in the Taltarum case opened the question of succession; and Edward's efforts to put down retainers was the precursor of the Tudor policy.

We have a picture of the state of society in the reign of Edward IV. in the Paston Memoirs, written by Margaret Paston. Her husband, John Paston, was heir to Sir John Fastolf. He was bound by the will to establish in Caister

Castle, Fastolf's own mansion, a college of religious men to pray for his benefactor's soul. But in those days might was right, and the Duke of Norfolk, fancying that he should like the house for himself, quietly took possession of it. At that time, Edward was just seated on the throne, and Edward had just been reported to Paston to have said in reference to another suit, that

"He would be your good lord therein as he would to the poorest man in England. He would hold with you in your right; and as for favor, he will not be understood that he shall show favor more to one man to another, not to one in England."

This was a true expression of the king's intentions. But either he was changeable in his moods, or during these early years he was hardly settled enough on the throne always to be able to carry out his wishes. This time, however, in some way or another, the great duke was reduced to submission, and Caister was restored to Paston.

In 1465 a new claimant appeared; and claimants, though as troublesome in the fifteenth as the nineteenth century, proceeded in a different fashion. This time it was the Duke of Suffolk, who asserted a right to the manor of Drayton in his own name, and who had bought up the assumed rights of another person to the manor of Hellesdon. John Paston was away, and his wife had to bear the brunt. An attempt to levy rent at Drayton was followed by a threat from the duke's men, that if her servants "ventured to take any further distresses at Drayton, even if it were but of the value of a pin, they would take the value of an ox in Hellesdon."

Paston and the duke alike professed to be under the law. But each was anxious to retain that possession which in those days seems really to have been nine points of the law. The duke got hold of Drayton, while Hellesdon was held for Paston. One day Paston's men made a raid upon Drayton, and carried off seventy-seven head of cattle. Another day the duke's bailiff came to Hellesdon with 300 men to see if the place were assailable. Two servants of Paston, attempting to keep a court at Drayton in their master's name, were carried off by force. At last the duke mustered his retainers and marched against Hellesdon. The garrison, too weak to resist, at once surrendered.

"The duke's men took possession, and set John Paston's own tenants to work, very much against their wills, to destroy the mansion and break down the walls of the lodge, while they themselves ransacked the church, turned out the parson, and spoiled the images. They also pillaged very completely every house in the village. As for John Paston's own place, they stripped it completely bare; and whatever there was of lead, brass, pewter, iron, doors or gates, or other things that they could not conveniently carry off, they hacked and hewed them to pieces. The duke rode through Hellesdon to Drayton the following day, while his men were still busy completing the wreck of destruction by the demolition of the lodge. The wreck of the building, with the rents they made in its walls, is visible even now" (Introd. xxxv.).

The meaning of all this is evident. We have before us a state of society in which the anarchical element is predominant. But it is not pure anarchy. The nobles were determined to reduce the middle classes to vassalage.

The reign of the Plantagenets witnessed the elevation of the nobility. The descendants of the Norman barons menaced, and sometimes proved too powerful for the Crown. In such reigns as those of Edward I., Edward III., and Henry V., the sovereigns held their own; but in those of John, Edward II., and Henry VI., the barons triumphed. The power wielded by the first Edward fell from the feeble grasp of his son and successor. The beneficent rule of Edward III. was followed by the anarchy of Richard II. Success led to excess. The triumphant party thinned the ranks of its opponents, and in turn experienced the same fate. The fierce struggle of the Red and White Roses weakened each. Guy, Earl of Warwick, "the king-maker," sank overpowered on the field of Tewkesbury, and with him perished many of the most powerful of the nobles. The jealousy of Richard III. swept away his own friends, and the bloody

contest on Bosworth field destroyed the flower of the nobility. The sun of the Plantagenets went down, leaving the country weak and impoverished, from a contest in which the barons sought to establish their own power, to the detriment alike of the Crown and the freemen. The latter might have exclaimed :

"Till half a patriot, half a coward, grown,
We fly from meaner tyrants to the throne."

The long contest terminated in the defeat alike of the Crown and the nobles, but the nation suffered severely from the struggle.

The rule of this family proved fatal to the interest of a most important class, whose rights were jealously guarded by the Normans. The *Liberi Homines*, the freemen, who were *Odhal* occupiers, holding *in capite* from the sovereign, nearly disappeared in the Wars of the Roses. Monarchs who owed their crown to the favor of the nobles were too weak to uphold the rights of those who held directly from the Crown, and who, in their isolation, were almost powerless.

The term *freeman*, originally one of the noblest in the land, disappeared in relation to urban tenures, and was applied solely to the personal rights of civic burghers ; instead thereof arose the term *freeholder* from *free hold*, which was originally a grant *free* from all rent, and only burdened with military service. The term was subsequently applied to land held for leases for lives as contradistinguished from leases for years, the latter being deemed *base* tenures, and insufficient to qualify a man to vote ; the theory being that no man was free whose tenure could be disturbed during his life. Though the *Liberi Homines* or freemen were, as a class, overborne in this struggle, and reduced to vassalage, yet their descendants were able, under the leadership of Cromwell, to regain some of the rights and influence of which they had been despoiled under the Plantagenets.

Fortescue, Lord Chief - Justice to Henry VI., thus describes the condition of the English people :

"They drunk no water, unless it be that some for devotion, and upon a rule of penance, do abstain from other drink. They eat plentifully of all kinds of flesh and fish. They wear woollen cloth in all their apparel. They have abundance of bed covering in their houses, and all other woollen stuff. They have great store of all implements of household. They are plentifully furnished with all instruments of husbandry, and all other things that are requisite to the accomplishment of a great and wealthy life, according to their estates and degrees."

This flattering picture is not supported by the existing disaffection and the repeated applications for redress from the serfs and the smaller farmers, and the simple fact that the population had increased under the Normans—a period of 88 years—from 2,150,000 to 3,350,000, while under the Plantagenets—a period of 300 years—it only increased to 4,000,000, the addition to the population in that period being only 650,000. The average increase in the former period was nearly 14,000 per annum, while in the latter it did not much exceed 2000 per annum. This goes far to prove the evil from civil wars, and the oppression of the oligarchy.

VI. THE TUDORS.

The protracted struggle of the Plantagenets left the nation in a state of exhaustion. The nobles had absorbed the lands of the *freemen*, and had thus broken the backbone of society. They had then entered upon a contest with the Crown to increase their own power ; and to effect their selfish objects, set up puppets, and ranged under conflicting banners, but the Nemesis followed. The Wars of the Roses destroyed their own power, and weakened their influence, by sweeping away the heads of the principal families. The ambition of the nobles failed of its object, when "the last of the barons" lay gory in his blood on the field of Tewkesbury. The wars were, however, productive of one national benefit, in virtually ending the state of serfdom to which the aborigines were reduced by the *Scandinavian* invasion. The exhaustion of the nation prepared the way to changes of a most radical character, and the reign

of the Tudors are characterized by greater innovations and more striking alterations than even those which followed the accession of the Normans.

Henry of Richmond came out of the field of Bosworth a victor, and ascended the throne of a nation whose leading nobles had been swept away. The sword had vied with the axe. Henry VII. was prudent and cunning; and in the absence of any preponderating oligarchical influence, planted the heel of the sovereign upon the necks of the nobles. He succeeded where the Plantagenets had failed. His accession became the advent of a series of measures which altered most materially the system of landholding. The Wars of the Roses showed that the power of the nobles was too great for the comfort of the monarch. The decision in Taltarum's case, in the reign of Edward IV., affected the entire system of entail. Land, partly freed from restrictions, passed into other hands. But Henry went further. He destroyed their physical influence by rigidly putting down retainers; and in one of his tours, while partaking of the hospitality of the Earl of Oxford, he fined him £15,000 for having greeted him with 5000 of his tenants in livery. The rigid enforcement of the laws passed against retainers in former reigns, but now made more penal, strengthened the king and reduced the power of the nobles. Their estates were relieved of a most onerous charge, and the lands freed from the burden of supporting the army of the state.

Henry VII. had thus a large fund to give away; the rent of the land granted in knights' service virtually consisted of two separate funds—one part went to the feudee, as officer or commandant, the other to the soldiery or vassals. The latter part belonged to the state. Had Henry applied it to the re-establishment of the class of freemen (*Liberi Homines*), as was recently done by the Emperor of Russia when he abolished serfdom, he would have created a power on which the Crown and the constitution could rely. This might have been done by converting the holdings of the men-at-arms into allodial estates, held direct from the Crown. Such an arrangement would have left the income of the feudee unimpaired, as it would only have applied the fund that had been paid to the men-at-arms to this purpose; and by creating out of that land a number of small estates held direct from the Crown, the misery that arose from the eviction and destruction of a most meritorious class, would have been avoided. Vagrancy, with its great evils, would have been prevented, and the passing of the Poor laws would have been unnecessary. Unfortunately Henry and his counsellors did not appreciate the consequence of the suppression of retainers and liveries. By the course he adopted to secure the influence of the Crown, he compensated the nobles, but destroyed the agricultural middle class.

This change had an important and, in some respects, a most injurious effect upon the condition of the nation, and led to enactments of a very extraordinary character, which I must submit in detail, inasmuch as I prefer giving the *ipsissima verba* of the statute-book to any statement of my own. To make the laws intelligible, I would remind you that the successful efforts of the nobles had, during the three centuries of Plantagenet rule, nearly obliterated the *Liberi Homines* (whose rights the Norman conqueror had sedulously guarded), and had reduced them to a state of vassalage. They held the lands of their lord at his will, and paid their rent by military service. When retainers were put down, and rent or knights' service was no longer paid with armed men, their occupation was gone. They were unfit for the mere routine of husbandry, and unprovided with funds for working their farms. The policy of the nobles was changed. It was no longer their object to maintain small farmsteads, each supplying its quota of armed men to the retinue of the lord; and it was their interest to obtain money rents. Then commenced a struggle of the most fearful character. The nobles cleared their lands, pulled

down the houses, and displaced the people. Vagrancy, on a most unparalleled scale, took place. Henry VII., to check this cruel, unexpected, and harsh outcome of his own policy, resorted to legislation, which proved nearly ineffectual. As early as the fourth year of his reign these efforts commenced with an enactment (cap. 19) for keeping up houses and encouraging husbandry; it is very quaint, and is as follows:

"The King, our Sovereign Lord, having singular pleasure above all things to avoid such enormities and mischiefs as be hurtful and prejudicial to the commonwealth of this his land and his subjects of the same, remembereth that, among other things, great inconvenience daily doth increase by dissolution, and pulling down, and wilful waste of houses and towns within this his realm, and laying to pasture lands, which continually have been in tilth, *whereby idleness, the ground and beginning of all mischief*, daily do increase; for where, in some towns 200 persons were occupied, and lived by these lawful labors, now there be occupied two or three herdsmen, and the residue full of idleness. The husbandry, which is one of the greatest commodities of the realm, is greatly decayed. Churches destroyed, the service of God withdrawn, the bodies there buried not prayed for, the patrons and curates wronged, the defence of the land against outward enemies feebled and impaired, to the great displeasnre of God, the subversion of the policy and good rule of this land, if remedy be not hastily therefor purveyed: Wherefore, the King, our Sovereign Lord, by the assent and advice, etc., etc., ordereth, enacteth, and establisheth that no person, what estate, degree, or condition he be, that hath any house or houses, that at any time within the past three years hath been, or that now is, or heretofore shall be, let to farm with twenty acres of land at least, or more, laying in tillage or husbandry; that the owners of any such house shall be bound to keep, sustain, and maintain houses and buildings, upon the said grounds and land, convenient and necessary for maintaining and upholding said tillage and husbandry; and if any such owner or owners of honse or house and land take, keep, and occupy any such house or house and land in his or their own hands, that the owner of the said authority be bound in likewise to maintain houses and buildings upon the said ground and land, convenient and necessary for maintaining and upholding the said tillage and husbandry. On their default, the king, or the other lord of the fee, shall receive half of the profits, and apply the same in repairing the houses; bnt shall not gain the freehold thereby."

This act was preceded by one with reference to the Isle of Wight, 4 Henry VII., cap. 16, passed the same session, which recites that it is so near France that it is desirable to keep it in a state of defence. It provides that no person shall have more than one farm, and enacts:

"For remedy, it is ordered and enacted that no manner of person, of what estate, degree, or condition soever, shall take any farm more than one, whereof the yearly rent shall not exceed ten marks; and if any several leases afore this time have been made to any person or persons of divers and snndry farmholds whereof the yearly value shall exceed that sum, then the said person or persons shall choose one farmhold at his pleasure, and the remnant of the leases shall be void."

Mr. Froude remarks (History, p. 26), "An act, tyrannical in form, was singularly justified by its consequences. The farm-houses were rebuilt, the land reploughed, the island repeopled; and in 1546, when the French army of 60,000 men attempted to effect a landing at St. Helens, they were defeated and driven back by the militia, and a few levies transported from Hampshire and the surrounding counties."

Lord Bacon, in his "History of the Reign of Henry VII., says:

"Enclosures, at that time, began to be more freqnent, whereby arable land (which could not be manured withont people and families) was turned into pasture, which was easily rid by a few herdsmen; and tenancies for years, lives, and at will (whereupon mnch of the yeomanry lived) were tnrned into demesnes. This bred a decay of people and (by consequence) a decay of towns, churches, tithes, and the like. The king, likewise, knew full well, and in nowise forgot, that there ensued withal upon this a decay and diminntion of subsidies and taxes; for the more gentlemen, ever the lower books of subsidies. In remedying of this inconvenience, the king's wisdom was admirable, and the parliaments at that time. Enclosures they would not forbid, for that had been to forbid the improvement of the patrimony of the kingdom; nor tillage they would not compel, for that was to strive with nature and utility; but they took a course to take away depopulating enclosures and depopulating

pasturage, and yet not by that name, or by any imperious express prohibition, but by consequence. The ordinance was, that all houses of husbandry, that were used with twenty acres of ground and upward, should be maintained and kept up for ever, together with a competent proportion of land to be used and occupied with them; and in nowise to be severed from them, as by another statute made afterward in his successor's time, was more fully declared: this, upon forfeiture to be taken, not by way of popular action, but by seizure of the land itself, by the king and lords of the fee, as to half the profits, till the houses and land were restored. By this means the houses being kept up, did of necessity enforce a dweller; and the proportion of the land for occupation being kept up, did of necessity enforce that dweller not to be a beggar or cottager, but a man of some substance, that might keep hinds and servants, and set the plough a-going. This did wonderfully concern the might and mannerhood of the kingdom, to have farms, as it were, of a standard sufficient to maintain an able body out of penury, and did, in effect, amortise a great part of the lands of the kingdom unto the hold and occupation of the yeomanry or middle people, of a condition between gentlemen and cottagers or peasants. Now, how much this did advance the military power of the kingdom, is apparent by the true principles of war, and the examples of other kingdoms. For it hath been held by the general opinion of men of best judgment in the wars (howsoever some few have varied, and that it may receive some distinction of case), that the principal strength of an army consisteth in the infantry or foot. And to make good infantry, it requireth men bred, not in a servile or indigent fashion, but in some free and plentiful manner. Therefore, if a state run most to noblemen and gentlemen, and that the husbandman and ploughman be but as their workfolks and laborers, or else mere cottagers (which are but housed beggars), you may have a good cavalry, but never good stable bands of foot; like to coppice woods, that if you leave in them standing too thick, they will run to bushes and briars, and have little clean underwood. And this is to be seen in *France* and *Italy*, and some other parts abroad, where in effect all is nobles or peasantry. I speak of people out of towns, and no middle people; and therefore no good forces of foot: insomuch as they are enforced to employ mercenary bands of *Switzers* and the like for their battalions of foot, whereby also it comes to pass, that those nations have much people and few soldiers. Whereas the king saw that contrariwise it would follow, that *England*, though much less in territory, yet should have infinitely more soldiers of their native forces than those other nations have. Thus did the king secretly sow *Hydra's* teeth; whereupon (according to the poet's fiction) should rise up armed men for the service of this kingdom."

The enactment above quoted was followed by others in that reign of a similar character, but it would appear they were not successful. The evil grew apace. Houses were pulled down, farms went out of tillage. The people, evicted from their farms, and having neither occupation nor means of living, were idle, and suffering. Succeeding sovereigns strove also to check this disorder, and statute after statute was passed. Among them are the 7th Henry VIII., cap. 1. It recites:

"That great inconveniency did daily increase by dissolution, pulling down, and destruction of houses, and laying to pasture, lands which customarily had been manured and occupied with tillage and husbandry, whereby idleness doth increase; for where, in some town-lands, hundreds of persons and their ancestors, time out of mind, were daily occupied with sowing of corn and graynes, breeding of cattle, and other increase of husbandry, that now the said persons and their progeny are disunited and decreased. It further recites the evil consequences resulting from this state of things, and provides that all these buildings and habitations shall be re-edificed and repaired within one year; and all tillage lands turned into pasture shall be again restored into tillage; and in default, half the value of the lands and houses forfeited to the king, or lord of the fee, until they were re-edificed. On failure of the next lord, the lord above him might seize."

This act did not produce that increased tilth which was anticipated. Farmers' attention was turned to sheep-breeding; and in order to supply the deficiency of cattle, an act was passed in the 21st Henry VIII., to enforce the rearing of calves; and every farmer was, under a penalty of 6*s.* 8*d.* (about £3 of our currency), compelled to rear all his calves for a period of three years; and in the 24th Henry VIII. the act was further continued for two years. The culture of flax and hemp was also encouraged by legislation. The 24th Henry VIII., cap. 14, requires every person occupying land apt for tillage, to sow a quarter of an acre

of flax or hemp for every sixty acres of land, under a penalty of 3*s.* 4*d.*

The profit which arose from sheep-farming led to the depasturage of the land; and in order to check it, an act, 25 Henry VIII., cap. 13, was passed. It commences thus:

"Forasmuch as divers and sundry persons of the king's subjects of this realm, to whom God of His goodness hath disposed great plenty and abundance of movable substance, now of late, within few years, have daily studied, practised, and invented ways and means how they might gather and accumulate together into few hands, as well great multitude of farms, as great plenty of cattle and in especial sheep, putting such lands as they can get to pasture and not to tillage: whereby they have not only pulled down churches and towns, and enhanced the old rates of the rents of possessions of this realm, or else brought it to such excessive fines that no poor man is able to meddle with it, but have also raised and enhanced the prices of all manner of corn, cattle, wool, pigs, geese, hens, chickens, eggs, and such commodities almost double above the prices which hath been accustomed, by reason whereof a marvellous multitude of the poor people of this realm be not able to provide meat, drink, and clothes necessary for themselves, their wives, and children, but be so discouraged with misery and poverty, that they fall daily to theft, robbery, and other inconveniences, or pitifully die for hunger and cold; and it is thought by the king's humble and loving subjects, that one of the greatest occasions that moveth those greedy and covetous people so to accumulate and keep in their hands such great portions and parts of the lands of this realm from the occupying of the poor husbandmen, and so use it in pasture and not in tillage, is the great profit that cometh of sheep, which be now come into a few persons' hands, in respect of the whole number of the king's subjects, so that some have 24,000, some 20,000, some 10,000, some 6000, some 5000, and some more or less, by which a good sheep for victual, which was accustomed to be sold for 2*s.* 4*d.* or 3*s.* at most, is now sold for 6*s.*, 5*s.*, or 4*s.* at the least; and a stone of clothing wool, that in some shire of this realm was accustomed to be sold from 16*d.* to 20*d.*, is now sold for 4*s.* or 3*s.* 4*d.* at the least; and in some counties, where it has been sold for 2*s.* 4*d.* to 2*s.* 8*d.*, or 3*s.* at the most, it is now 5*s.* or 4*s.* 8*d.* at the least, and so arreysed in every part of the realm, which things thus used be principally to the high displeasure of Almighty God, to the decay of the hospitality of this realm, to the diminishing of the king's people, and the let of the cloth making, whereby many poor people hath been accustomed to be set on work; and in conclusion, if remedy be not found, it may turn to the utter destruction and dissolution of this realm which God defend."

It was enacted that no person shall have or keep on lands not their own inheritance more than 2000 sheep, under a penalty of 3*s.* 4*d.* per annum for each sheep; lambs under a year old not to be counted; and that no person shall occupy two farms.

Further measures appeared needful to prevent the evil; and the 27th Henry VIII., cap. 22, states that the 4th Henry VII., cap. 19, for keeping houses in repair, and for the tillage of the land, had been enforced on lands holden of the king, but neglected by other lords. It, therefore, enacted that the king shall have the moiety of the profits of lands converted from tillage to pasture, since the passing of the 4th Henry VII., until a proper house is built, and the land returned to tillage; and in default of the immediate lord taking the profits as under that act, the king might take the same. This act extended to the counties of Lincoln, Nottingham, Leicester, Warwick, Rutland, Northampton, Bedford, Buckingham, Oxford, Berkshire, Isle of Wight, Hertford, and Cambridge.

The simple fact was, that those who had formerly paid the rent of their land by service as soldiers were without the capital or means of paying rent in money; they were evicted and became vagrants. Henry VIII. took a short course with these vagrants, and it is asserted upon apparently good authority that in the course of his reign, thirty-six years, he hanged no less than 72,000 persons for vagrancy, or at the rate of 2000 per annum. The executions in the reign of his daughter, Queen Elizabeth, had fallen to from 300 to 400 per annum.

32 Henry VIII., cap. 1, gave powers of bequest with regard to land; as it explains the change it effected, I quote it:

"That all persons holding land in socage not having any lands holden by knight

service of the king in chief, be empowered to devise and dispose of all such socage lands, and in like case, persons holding socage lands of the king in chief, and also of others, and not having the lands holden by knight service, saving to the king, all his right, title, and interest for primer seizin, reliefs, fines for alienations, etc. Persons holding lands of the king by knight's service in chief were authorized to devise two third parts thereof, saving to the king wardship, primer seizin, of the third paid, and fines for alienation of the whole lands. Persons holding lands by knight's service in chief, and also other lands by knight's service, or otherwise, may in like manner devise two third parts thereof, saving to the king wardship of the third, and fines for alienation of the whole. Persons holding land of others than the king by knight's service, and also holding socage lands, may devise two third parts of the former and the whole of the latter, saving to the lord his wardship of the third part. Persons holding lands of the king by knight's service but not in chief, or so holding of the king and others, and also holding socage lands, may in like manner devise two thirds of the former and the whole of the latter, saving to the king the wardship of the third part, and also to the lords ; and the king or the other lords were empowered to seize the one third part in case of any deficiency."

The 34th and 35th Henry VIII., cap. 5, was passed to remove some doubts which had arisen as to the former statute ; it enacts :

"That the words estates of inheritance should only mean estates in fee-simple only, and empowers persons seized of any lands, etc., in fee-simple solely, or in copartnery (not having any lands holden of knight's service), to devise the whole, except corporations. Persons seized in fee-simple of land holden of the king by knight's service may give or devise two thirds thereof, and of his other lands, except corporation, such two thirds to be ascertained by the divisor or by commission out of the Court of Ward and Liveries. The king was empowered to take his third land descended to the heir in the first place, the devise in gift remaining good for the two thirds ; and if the land described were insufficient to answer such third, the deficiency should be made up out of the two thirds."

"The next attack," remarks Sir William Blackstone, vol. ii., p. 117, "which they suffered in order of time was by the statute 32 Henry VIII., c. 28, whereby certain leases made by tenants in tail, which do not tend to prejudice the issue, were allowed to be good in law and to bind the issue in tail. But they received a more violent blow the same session of Parliament by the construction put upon the statute of fines by the statute 32 Henry VIII., cap. 36, which declares a fine duly levied by tenant in tail to be a complete bar to him and his heirs and all other persons claiming under such entail. This was evidently agreeable to the intention of Henry VII., whose policy was (before common recovery had obtained their full strength and authority) to lay the road as open as possible to the alienation of landed property, in order to weaken the overgrown power of his nobles. But as they, from the opposite reasons, were not easily brought to consent to such a provision, it was therefore couched in his act under covert and obscure expressions ; and the judges, though willing to construe that statute as favorably as possible for the defeating of entailed estates, yet hesitated at giving fines so extensive a power by mere implication when the statute *de donis* had expressly declared that they should not be a bar to estates-tail. But the statute of Henry VIII., when the doctrine of alienation was better received, and the will of the prince more implicitly obeyed than before, avowed and established that intention."

Fitzherbert, one of the judges of the Common Pleas in the reign of Henry VIII., wrote a work on surveying and husbandry. It contains directions for draining, clearing, and inclosing a farm, and for enriching the soil and reducing it to tillage. Fallowing before wheat was practised, and when a field was exhausted by grain it was allowed to rest. Hollingshed estimated the usual return as 16 to 20 bushels of wheat per acre ; prices varied very greatly, and famine was of frequent recurrence. Leases began to be granted, but they were not effectual to protect the tenant from the entry of purchasers nor against the operation of fictitious recoveries.

In the succeeding reigns the efforts to encourage tillage and prevent the clearing of the farms were renewed, and among the enactments passed were the following :

5 Edward VI., cap. 5, for the better maintenance of tillage and increase of corn within the realm, enacts :

"That there should be, in the year 1553, as much land, or more, put wholly in tillage as had been at any time since the 1st Henry VIII., under a penalty of 5*s*. per acre to the king ; and in order to secure this, it appoints commissioners, who were

bound to ascertain by inquests what land was in tillage and had been converted from tillage into pasture. The commission issued precepts to the sheriffs, who summoned jurors, and the inquests were to be returned, certified, to the Court of Exchequer. Any prosecution for penalties should take place within three years, and the act continued for ten years."

2 and 3 Philip and Mary, cap. 2, recites the former acts of 4 Henry VII., cap. 19, etc., which it enforces. It enacts :

"That as some doubts had arisen as to the interpretation of the words twenty acres of land, the act should apply to houses with twenty acres of land, according to the measurement of the ancient statute ; and it appoints commissioners to inquire as to all houses pulled down and all land converted from pasture into tillage since the 4th Henry VII. The commissioners were to take security by recognizance from offenders, and to re-edify the houses and reconvert the land into tillage, and to assess the tenants for life toward the repairs. The amount expended under order of the commissioners was made recoverable against the estate, and the occupiers were made liable to their orders ; and they had power to commit persons refusing to give security to carry out the act."

2 and 3 Philip and Mary, cap. 3, was passed to provide for the increase of milch cattle, and it enacts :

"That one milch-cow shall be kept and calf reared for every sixty sheep and ten oxen during the following seven years."

The 2d Elizabeth, cap. 2, confirms the previously quoted acts of 4 Henry VII., cap. 19 ; 7 Henry VIII., cap. 1 ; 27 Henry VIII., cap. 22 ; 27 Henry VIII., cap. 18 ; and it enacts :

"That all farm-houses belonging to suppressed monasteries should be kept up, and that all lands which had been in tillage for four years successively at any time since the 20th Henry VIII., should be kept in tillage under a penalty of 10*s.* per acre, which was payable to the heir in reversion, or in case he did not levy it, to the Crown."

31 Elizabeth, cap. 7, went further ; and in order to provide allotments for the cottagers, many of whom were dispossessed from their land, it provided :

"For avoiding the great inconvenience which is found by experience to grow by the erecting and building of great numbers of cottages, which daily more and more increased in many parts of the realm, it was enacted that no person should build a cottage for habitation or dwelling, nor convert any building into a cottage, without assigning and laying thereto four acres of land, being his own freehold and inheritance, lying near the cottage, under a penalty of £10 ; and for upholding any such cottages, there was a penalty imposed of 40*s.* a month, exception being made as to any city, town, corporation, ancient borough, or market town ; and no person was permitted to allow more than one family to reside in each cottage, under a penalty of 10*s.* per month."

The 39th Elizabeth, cap. 2, was passed to enforce the observance of these conditions. It provides :

"That all lands which had been in tillage shall be restored thereto within three years, except in cases where they were worn out by too much tillage, in which case they might be grazed with sheep ; but in order to prevent the deterioriation of the land, it was enacted that the quantity of beeves or muttons sold off the land should not exceed that which was consumed in the mansion-house."

In these various enactments of the Tudor monarchs we may trace the anxious desire of these sovereigns to repair the mistake of Henry VII., and to prevent the depopulation of England. A similar mistake has been made in Ireland since 1846, under which the homes of the peasantry have been prostrated, the land thrown out of tillage, and the people driven from their native land. Mr. Froude has the following remarks upon this legislation :

"Statesmen (temp. Elizabeth) did not care for the accumulation of capital. They desired to see the physical well-being of all classes of the commonwealth maintained in the highest degree which the producing power of the country admitted. This was their object, and they were supported in it by a powerful and efficient majority of the nation. At one time Parliament interfered to protect employers against laborers, but it was equally determined that employers should not be allowed to abuse their opportunities ; and this directly appears from the 4th and 5th Elizabeth, by which, on the most trifling appearance of a diminution of the currency, it was declared that the laboring man could no longer live on the wages assigned to him by the Act of Henry VIII.; and a sliding scale was insti-

tuted, by which, for the future, wages should be adjusted to the price of food. The same conclusion may be gathered also indirectly fom the acts interfering imperiously with the rights of property wheie a disposition showed itself to exercise them selfishly.

"The city merchants, as I have said, were becoming landowners, and some of them attempted to apply their rules of trade to the management of landed estates. While wages were rated so high, *it answered better as a speculation to convert arable land into pasture, but the law immediately stepped in to prevent a proceeding which it regarded as petty treason to the state.* Self-protection is the first law of life, and the country, relying for its defence on an able-bodied population, evenly distributed, ready at any moment to be called into action, either against foreign invasion or civil disturbance, it could not permit the owners of land to pursue, for their own benefit, a course of action which threatened to weaken its garrisons. It is not often that we are able to test the wisdom of legislation by specific results so clearly as in the present instance. The first attempts of the kind which I have described were made in the Isle of Wight early in the reign of Henry VII. Lying so directly exposed to attacks by France, the Isle of Wight was a place which it was peculiarly important to keep in a state of defence, and the 4th Henry VII., cap. 16, was passed to prevent the depopulation of the Isle of Wight, occasioned by the system of large farms."

The city merchants alluded to by Froude seem to have remembered that from the times of Athelwolf, the possession of a certain quantity of land, with gatehouse, church, and kitchen, converted the ceorl (churl) into a thane.

It is difficult to estimate the effect which the Tudor policy had upon the landholding of England. Under the feudal system, the land was held in trust and burdened with the support of the soldiery. Henry VII., in order to weaken the power of the nobles, put an end to their maintaining independent soldiery. Thus landlords' incomes increased, though their material power was curtailed. It would not have been difficult at this time to have loaded these properties with annual payments equal to the cost of the soldiers which they were bound to maintain, or to have given each of them a farm under the Crown, and strict justice would have prevented the landowners from putting into their pockets those revenues which, according to the grants and patents of the Conqueror and his successors, were specially devoted to the maintenance of the army. Land was released from the conditions with which it was burdened when granted. This was not done by direct legislation but by its being the policy of the Crown to prevent "king-makers" arising from among the nobility. The dread of Warwick influenced Henry. He inaugurated a policy which transferred the support of the army from the lands, which should solely have borne it, to the general revenue of the country. Thus he relieved one class at the expense of the nation. Yet, when Henry was about to wage war on the Continent, he called all his subjects to accompany him, under pain of forfeiture of their lands; and he did not omit levying the accustomed feudal charge for knighting his eldest son and for marrying his eldest daughter. The acts to prevent the landholder from oppressing the occupier, and those for the encouragement of tillage, failed. The new idea of property in land, which then obtained, proved too powerful to be altered by legislation.

Another change in the system of landholding took place in these reigns. Lord Cromwell, who succeeded Cardinal Wolsey as minister to Henry VIII., had land in Kent, and he obtained the passing of an act (31 Henry VIII., cap. 2) which took his land and that of other owners therein named, out of the custom of gavelkind (gave-all-kind), which had existed in Kent from before the Norman Conquest, and enacted that they should descend according to common law in like manner as lands held by knight's service.

The suppression of the Religious Houses gave the Crown the control of a vast quantity of land. It had, with the consent of the Crown, been devoted to religion by former owners. The descendants of the donors were equitably entitled to the land, as it ceased to be applied to the trust for which it was given, but the power of the Crown was too great, and their claims were refused. Had these estates been applied

to purposes of religion or education they would have formed a valuable fund for the improvement of the people; but the land itself, as well as the portion of tithes belonging to the religious houses, was conferred upon favorites, and some of the wealthiest nobles of the present day trace their rise and importance to the rewards obtained by their ancestors out of the spoils of these charities.

The importance of the measures of the Tudors upon the system of land-holding can hardly be exaggerated. An impulse of self-defence led them to lessen the physical force of the oligarchy by relieving the land from the support of the army, and enabling them to convert to their own use the income previously applied to the defence of the realm. This was a bribe, but it brought its own punishment. The eviction of the working farmers, the demolition of their dwellings, the depopulation of the country, were evils of most serious magnitude; and the supplement of the measures which produced such deplorable results was found in the permanent establishment of a taxation for the SUPPORT of the POOR. Yet the nation reeled under the depletion produced by previous mistaken legislation, and all classes have been injured by the transfer of the support of the army from the land held by the nobles to the income of the people.

Side by side, with the measures passed, to prevent the Clearing of the Land, arose the system of POOR LAWS. Previous to the Reformation the poor were principally relieved at the religious houses. The destruction of small farms, and the eviction of such masses of the people, which commenced in the reign of Henry VII., overpowered the resources of these establishments; their suppression in the reigns of Henry VIII. and Elizabeth aggravated the evil. The indiscriminate and wholesale execution of the poor vagrants by the former monarch only partially removed the evil, and the statute-book is loaded with acts for the relief of the destitute poor. The first efforts were collections in the churches; but voluntary alms proving insufficient, the powers of the churchwardens were extended, and they were directed and authorized to assess the parishioners according to their means, and thus arose a system which, though benevolent in its object, is a slur upon our social arrangements. Land, the only source of food, is rightly charged with the support of the destitute. The necessity for such aid arose originally from their being evicted therefrom. The charge should fall exclusively upon the rent receivers, and in no case should the tiller of the soil have to pay this charge either directly or indirectly. It is continued by the inadequacy of wages, and the improvidence engendered by a social system which arose out of injustice, and produced its own penalty.

Legislation with regard to the poor commenced contemporaneous with the laws against the eviction of the small farmers. I have already recited some of the laws to preserve small holdings; I now pass to the acts meant to compel landholders to provide for those whom they had dispossessed. In 1530 the act 22 Henry VIII., cap. 12, was passed; it recites:

"Whereas in all places through the realm of England, vagabonds and beggars have of long time increased, and daily do increase, in great and excessive numbers *by the occasion of idleness, the mother and root of all vices*,* whereby hath insurged and sprung, and daily insurgeth and springeth, continual thefts, murders, and other heinous offences and great enormities, to the high displeasure of God, the inquietation and damage of the king and people, and to the marvellous disturbance of the commonweal of the realm."

It enacts that justices may give license to impotent persons to beg within certain limits, and, if found begging out of their limits, they shall be set in the stocks. Beggars without license to be whipped or set in the stocks. All persons able to labor, who shall beg or be vagrant, shall be whipped and sent to the place of their

* See 4 Henry VII., cap. 19, *ante*, p. 27, where the same expression occurs, showing that it was throwing the land out of tilth that occasioned pauperism.

birth. Parishes to be fined for neglect of the constables.

37 Henry VIII., cap. 23, continued this act to the end of the ensuing Parliament.

1 Edward VI., cap. 3, recites the increase of idle vagabonds, and enacts that all persons loitering or wandering shall be marked with a V, and adjudged a slave for two years, and afterward running away shall become a felon. Impotent persons were to be removed to the place where they had resided for three years, and allowed to beg. A weekly collection was to be made in the churches every Sunday and holiday after reading the gospel of the day, the amount to be applied to the relief of bedridden poor.

5 and 6 Edward VI., cap. 2, directs the parson, vicar, curate, and churchwardens, to appoint two collectors to distribute weekly to the poor. The people were exhorted by the clergy to contribute; and, if they refuse, then, upon the certificate of the parson, vicar, or curate, to the bishop of the diocese, he shall send for them and induce him or them to charitable ways.

2 and 3 Philip and Mary, cap. 5, re-enacts the former, and requires the collectors to account quarterly; and where the poor are too numerous for relief, they were licensed by a justice of the peace to beg.

5 Elizabeth, cap. 3, confirms and renews the former acts, and compels collectors to serve under a penalty of £10. Persons refusing to contribute their alms shall be exhorted, and, if they obstinately refuse, shall be bound by the bishop to appear at the next general quarter session, and they may be imprisoned if they refuse to be bound.

The 14th Elizabeth, cap. 5, requires the justices of the peace to register all aged and impotent poor born or for three years resident in the parish, and to settle them in convenient habitations, and ascertain the weekly charge, and assess the amount on the inhabitants, and yearly appoint collectors to receive and distribute the assessment, and also an overseer of the poor. This act was to continue for seven years.

The 18th Elizabeth, cap. 3, provides for the employment of the poor. Stores of wool, hemp, flax, iron, etc., to be provided in cities and towns, and the poor set to work. It empowered persons possessed of land in free socage to give or devise same for the maintenance of the poor.

The 39th Elizabeth, cap. 3, and the 43d Elizabeth, cap. 2, extended these acts, and made the assessment compulsory.

I shall ask you to compare the date of these several laws for the relief of the destitute poor with the dates of the enactments against evictions. You will find they run side by side.*

I have perhaps gone at too great length into detail; but I think I could not give a proper picture of the alteration in the system of landholding or its effects without tracing from the statute-book the black records of these important changes. The suppression of monasteries tended greatly to increase the sufferings of the poor, but I doubt if even these institutions could

* The following tables of the acts passed against eviction, and enacting the support of the poor, show that they were contemporaneous:

Against Evictions.

4	Henry VII.,	Cap.	19.
7	Henry VIII.,	"	1.
21	"		
24	"	"	14.
25	"	"	13.
27	"	"	22.
5	Edward VI.,	"	5.
2 and 3	Philip and Mary,	"	2.
"	"	"	3.
2	Elizabeth,	"	2.
31	"	"	7.
39	"	"	2.

Enacting Poor Laws.

22	Henry VIII.,	Cap.	12.
37	"	"	23.
1	Edward VI.,	"	3.
5 and 6	"	"	2.
2 and 4	Philip and Mary,	"	5.
5	Elizabeth,	"	3.
14	"	"	5.
18	"	"	3.
39	"	"	3.
43	"	"	2.

have met the enormous pressure which arose from the wholesale evictions of the people. The laws of Henry VII. and Henry VIII., enforcing the tillage of the land, preceded the suppression of religious houses, and the act of the latter monarch allowing the poor to beg was passed before any steps were taken to close the convents. That measure was no doubt injurious to the poor, but the main evil arose from other causes. The lands of these houses, when no longer applicable to the purpose for which they were given, should have reverted to the heirs of the donors, or have been applied to other religious or educational purposes. The bestowal of them upon favorites, to the detriment alike of the State, the Church, the Poor, and the Ignorant, was an abuse of great magnitude, the effect of which is still felt. The reigns of the Tudors are marked with three events affecting the land—viz. :

1st. Relieving it of the support of the army ;

2d. Burdening of it with the support of the poor ;

3d. Applying the monastic lands to private uses.

The abolition of retainers, while it relieved the land of the nobles from the principal charge thereon, did not entirely abolish knight's service. The monarch was entitled to the care of all minors, to *aids* on the marriage or knighthood of the eldest son, to *primer-seizin* or a year's rent upon the death of each tenant of the Crown. These fees were considerable, and were under the care of the Court of Ward and Liveries.

The artisan class had, however, grown in wealth, and they were greatly strengthened by the removal from France of large numbers of workmen in consequence of the revocation of the Edict of Nantes. These prosperous tradespeople became landowners by purchase, and thus tended to replace the *Liberi Homines*, or freemen, who had been destroyed under the wars of the nobles, which effaced the landmarks of English society. The liberated serfs attained the position of paid farm-laborers ; had the policy of Elizabeth, who enacted that each of their cottages should have an allotment of four acres of land, been carried out, it would have been most beneficial to the state.

The reign of this family embraced one hundred and eighteen years, during which the increase of the population was about twenty-five per cent. When Henry VII. ascended the throne in 1485 it was 4,000,000, and on the death of Queen Elizabeth in 1603 it had reached 5,000,000, the average increase being about 8000 per annum. The changes effected in the condition of the farmers' class left the mass of the people in a far worse state at the close than at the commencement of their rule.

VII. THE STUARTS.

The accession of the Stuarts to the throne of England took place under peculiar circumstances. The nation had just passed through two very serious struggles—one political, the other religious. The land which had been in the possession of religious communities, instead of being retained by the state for educational or religious purposes, had been given to favorites. A new class of ownerships had been created—the lay impropriators of tithes. The suppression of retainers converted land into a *quasi* property. The extension to land of the powers of bequest gave the possessors greater facilities for disposing thereof. It was relieved from the principal feudal burden, military service, but remained essentially feudal as far as tenure was concerned. Men were no longer furnished to the state as payment of the knight's fee ; they were cleared off the land, to make room for sheep and oxen, England being in that respect about two hundred years in advance of Ireland, though without the outlet of emigration. Vagrancy and its attendant evils led to the Poor Law.

James I. and his ministers tried to grapple with the altered circumstances, and strove to substitute an equitable Crown rent or money payment for the existing and variable claims

which were collected by the Court of Ward and Livery. The *knight's fee* then consisted of twelve ploughlands, a more modern name for "a hide of land." The class burdened with knight's service, or payments in lieu thereof, comprised 160 temporal and 26 spiritual lords, 800 barons, 600 knights, and 3000 esquires. The knight's fee was subject to *aids*, which were paid to the Crown upon the marriage of the king's son or daughter. Upon the death of the possessor, the Crown received as *primer-seizin* a year's rent. If the successor was an infant, the Crown under the name of *Wardship*, took the rents of the estates. If the ward was a female, a fine was levied if she did not accept the husband chosen by the Crown. Fines on alienation were also levied, and the estates, though sold, became escheated, and reverted to the Crown upon the failure of issue. These various fines kept alive the principle that the lands belonged to the Crown as representative of the nation; but, as they varied in amount, James I. proposed to compound with the tenants-in-fee, and to convert them into fixed annual payments. The nobles refused, and the scheme was abandoned.

In the succeeding reign, the attempt to stretch royal power beyond its due limits led to resistance by force, but it was no longer a mere war of nobles; their power had been destroyed by Henry VII. The Stuarts had to fight the people with a paid army, and the Commons, having the purse of the nation, opposed force to force. The contest eventuated in a military protectorship. Many of the principal tenants-in-fee fled the country to save their lives. Their lands were confiscated and given away; thus the Crown rights were weakened, and Charles II. was forced to recognize many of the titles given by Cromwell; he did not dare to face the convulsion which must follow an expulsion of the *novo homo* in possession of the estates of more ancient families; but legislation went further—it abolished all the remaining feudal charges. The Commons appear to have assented to this change, from a desire to lessen the private income of the Sovereign, and thus to make him more dependent upon Parliament. This was done by the 12th Charles II., cap. 24. It enacts:

"That the Court of Ward and Liveries, primer seizin, etc., and all fines for alienation, tenures by knight's service, and tenures *in capite*, be done away with and turned into fee and common socage, and discharged of homage, escuage, aids, and reliefs. All future tenures created by the king to be in free and common socage, reserving rents to the Crown and also fines on alienation. It enables fathers to dispose of their children's share during their minority, and gives the custody of the personal estate to the guardians of such child, and imposes in lieu of the revenues raised in the Court of Ward and Liveries, duties upon beer and ale."

The land was relieved of its legitimate charge, and a tax on beer and ale imposed instead! the landlords were relieved at the expense of the people.

The statute which accomplished this change is described by Blackstone as

"A greater acquisition to the civil property of this kingdom than even *Magna Charta* itself, since that only pruned the luxuriances that had grown out of military tenures, and thereby preserved them in vigor; but the statute of King Charles extirpated the whole, and demolished both root and branches."

The efforts of James II. to rule contrary to the wish of the nation, led to his expulsion from the throne, and showed that, in case of future disputes as to the succession, the army, like the Prætorian Guards of Rome, had the selection of the monarch. The Red and White Roses of the Plantagenets reappeared under the altered names of Whig and Tory; but it was proved that the decision of a leading soldier like the Duke of Marlborough would decide the army, and that it would govern the nation; fortunately the decision was a wise one, and was ratified by Parliament: thus *force* governed *law*, and the decision of the *army* influenced the *Senate*. William III. succeeded, *as an elected monarch*, under the Bill of Rights. This remarkable document contains no provision, secur-

ing the tenants-in-fee in their estates; and I have not met with any treatise dealing with the legal effects of the eviction of James II. All patents were covenants between the king and his heirs, and the patentees and their heirs. The expulsion of the sovereign virtually destroyed the title; and an elected king, who did not succeed *as heir*, was not bound by the patents of his predecessors, nor was William asked, by the Bill of Rights, to recognize any of the existing titles. This anomalous state of things was met in degree by the statute of prescriptions, but even this did not entirely cure the defect in the titles to the principal estates in the kingdom. The English tenants in decapitating one landlord and expelling another, appear to have destroyed their titles, and then endeavored to renew them by prescriptive right; but I shall not pursue this topic further, though it may have a very definite bearing upon the question of landholding.

It may not be uninteresting to allude rather briefly to the state of England at the close of the seventeenth century. Geoffrey King, who wrote in 1696, gives the first reliable statistics about the state of the country. He estimated the number of houses at 1,300,000, and the average at four to each house, making the population 5,318,000. He says there was but seven acres of land for each person, but that England was six times better peopled than the known world, and twice better than Europe. He calculated the total income at £43,500,000, of which the yearly rent of land was £10,000,000. The income was equal to £7, 18*s.* 0*d.* per head, and the expense £7, 11*s.* 4*d.*; the yearly increase, 6*s.* 8*d.* per head, or £1,800,000 per annum. He estimated the annual income of 160 temporal peers at £2800 per annum, 26 spiritual peers at £1300, of 800 baronets at £800, and of 600 knights at £650.

He estimated the area at 39,000,000 acres (recent surveys make it 37,319,-221). He estimated the arable land at 11,000,000 acres, and pasture and meadow at 10,000,000, a total of 21,-000,000. The area under all kinds of crops and permanent pasture was, in 1874, 26,686,098 acres; therefore about five and a half million acres have been reclaimed and added to the arable land. As the particulars of his estimate may prove interesting, I append them in a note.*

He places the rent of the corn land at

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* Geoffrey King thus classifies the land of England and Wales:

	Acres.	Value per Acre.	Rent.
Arable Land,	11,000,000	£0 5 10	£3.200,000
Pasture and Meadow,	10,000,000	0 9 0	4,500,000
Woods and Coppices,	3,000,000	0 5 0	750,000
Forests, Parks, and Covers,	3.000.000	0 3 6	550,000
Moors, Mountains, and Barren Lands,	10,000,000	0 1 0	500,000
Houses, Homesteads, Gardens, Orchards, Churches, and Churchyards,	1,000,000	The Land,	450,000
		The Buildings,	2,000,000
Rivers, Lakes, Meres, and Ponds,	500,000	0 2 0	50,000
Roadways and Waste Lands,	500,000		
	39,000,000	£0 6 0½	£12,000,000

He estimates the live stock thus:

		Value without the Skin.	
Beeves, Stirks, and Calves,	4,500,000	£2 0 0	£9,000,000
Sheep and Lambs,	11,000,000	0 8 0	4,400,000
Swine and Pigs,	2,000,000	0 16 0	1,600,000
Deer, Fawns, Goats and Kids,	. . .	. . .	247,900
			15,247,900
Horses,	1,200,000	2 0 0	3,000.000
Value of Skins,	. . .	. . .	2,400,000
			£20,647,900

about one third of the produce, and that of pasture land at rather more. The price of meat per lb. was: beef 1⅛*d.*; mutton, 2¼*d.*; pork, 3*d.*; venison, 6*d.*; hares, 7*d.*; rabbits, 6*d.* The weight of flesh-meat consumed was 398,000,000 lbs., it being 72 lbs. 6 oz. for each person, or 3⅙ oz. daily. I shall have occasion to contrast these figures with those lately published when I come to deal with the present; but a great difference has arisen from the alteration in price, which is owing to the increase in the quantity of the precious metals.

The reign of the last sovereign of this unfortunate race was distinguished by the first measures to *inclose the commons* and convert them into private property, with which I shall deal hereafter.

The changes effected in the land laws of England during the reigns of the Stuarts, a period of 111 years, were very important. The act of Charles II. which abolished the Court of Ward and Liveries, appeared to be an abandonment of the rights of the people, as asserted in the person of the Crown; and this alteration also seemed to give color of right to the claim which is set up of *property in land*, but the following law of Edward III. never was repealed:

> "*That the king is the universal lord and original proprietor of all land in his kingdom, and that no man doth or can possess any part of it but what has mediately or immediately been derived as a gift from him to be held on feodal service.*"

No lawyer will assert for any English subject a higher title than tenancy-in-fee, which bears the impress of *holding* and denies the assertion of *ownership*.

The power of the nobles, the tenants-in-fee, was strengthened by an act passed in the reign of William and Mary, which altered the relation of landlord and tenant. Previous thereto, the landlord had the power of distraint, but he merely held the goods he seized to compel the tenant to perform personal service. It would be impossible for a tenant to pay his rent if his stock or implements were sold off the land. As the Tudor policy of money payments extended, the greed for pelf led to an alteration in the law, and the act of William and Mary allowed the landlord to sell the goods he had distrained. The tenant remained in possession of the land without the means of tilling it, which was opposed to public policy. This power of distraint was, however, confined to holdings in which there were leases by which the tenant covenanted to allow the landlord to distrain his stock and goods in default of payment of rent. The legislation of the Stuarts was invariably favorable to the possessor of land and adverse to the rights of the people. The government during the closing reigns was oligarchical, so much so, that William III., annoyed at the restriction put upon his kingly power, threatened to resign the crown and retire to Holland; but the aristocracy were unwilling to relax their claims, and they secured by legislation the rights they appeared to have lost by the deposition of the sovereign.

The population had increased from 5,000,000 in 1603 to 5,750,000 in 1714, being an average increase of less than 7000 per annum.

VIII. THE HOUSE OF HANOVER.

The first sovereign of the House of Hanover ascended the throne not by

The annual produce he estimated as follows:

	Acres.	Rent.	Produce.
Grain,	10,000,000	£3,000,000	£8,275,000
Hemp, Flax, etc.,	1,000,000	200,000	2,000,000
Butter, Cheese, and Milk,			2,500,000
Wool,			2,000,000
Horses bred,			250,000
Flesh Meat,	29,000,000	6,800,000	3,500,000
Tallow and Hides,			600,000
Hay Consumed,			2,300,000
Timber,			1,000,000
Total,	39,000,000	£10,000,000	£22,275,000

right of descent but by election; the legitimate heir was set aside, and a distant branch of the family was chosen, and the succession fixed by act of Parliament; but it is held by jurists that every Parliament is sovereign and has the power of repealing any act of any former Parliament. The beneficial rule of some of the latter monarchs of this family has endeared them to the people, but the doctrine of reigning by divine right, the favorite idea of the Stuarts, is nullified, when the monarch ascends the throne by statute law and not by succession or descent.

The age of chivalry passed away when the Puritans defeated the Cavaliers. The establishment of standing armies and the creation of a national debt, went to show that *money*, not knighthood or knight's service, gave force to law. The possession of wealth and of rent gave back to their possessors even larger powers than those wrested from them by the first Tudor king. The maxim that "what was attached to the freehold belonged to the freehold," gave the landlords even greater powers than those held by the sword, and of which they were despoiled. Though nominally forbidden to take part in the election of the representatives of the Commons, yet they virtually had the power, the creation of freehold, the substance and material of electoral right; and consequently both Houses of Parliament were essentially *landlord*, and the laws, for the century which succeeded the ascension of George I., are marked with the assertion of landlord right which is tenant wrong.

Among the exhibitions of this influence is an act passed in the reign of George II., which extended the power of distraint for rent, and the right to sell the goods seized—to all tenancies. Previous legislation confined this privilege solely to cases in which there were leases, wherein the tenant, by written contract, gave the landlord power to seize in case of non-payment of rent, but there was no legal authority to sell until it was given by an act passed in the reign of William III. The act of George II. presumed that there was such a contract in all cases of parole letting or tenancy-at-will, and extended the landlord's powers to such tenancies. It is an anomaly to find that in the freest country in the world such an arbitrary power is confided to individuals, or that the landlord-creditor has the precedence over all other creditors, and can, by his own act, and without either trial or evidence, issue a warrant that has all the force of the solemn judgment of a court of law; and it certainly appears unjust to seize a crop, the seed for which is due to one man, and the manure to another, and apply it to pay the rent. But landlordism, intrusted with legislative power, took effectual means to preserve its own prerogative, and the form of law was used by parliaments, in which landlord influence was paramount, to pass enactments which were enforced by the whole power of the state, and sustained individual or class rights.

The effect of this measure was most unfortunate; it encouraged the letting of lands to tenants-at-will or tenants from year to year, who could not, under existing laws, obtain *the franchise* or power to vote—they were not *freemen*, they were little better than serfs. They were tillers of the soil, rent-payers who could be removed at the will of another. They were not even *freeholders*, and had no political power — no voice in the affairs of the nation. The landlords in Parliament gave themselves, individually by law, all the powers which a tenant gave them by contract, while they had no corresponding liability, and, therefore, it was their interest to refrain from giving leases, and to make their tenantry as dependent on them as if they were mere serfs. This law was especially unfortunate, and had a positive and very great effect upon the condition of the farming class and upon the nation, and people came to think that landlords could do as they liked with their land, and that the tenants must be creeping, humble, and servile.

An effort to remedy this evil was made in 1832, when the occupiers, if rented or rated at the small amount named, became voters. This gave the power to the holding, not to the man,

and the landlord could by simple eviction deprive the man of his vote ; hence the tenants-at-will were driven to the hustings like sheep—they could not, and dare not, refuse to vote as the landlord ordered.

The lords of the manor, with a landlord Parliament, asserted their claims to the commonages, and these lands belonging to the people, were gradually inclosed, and became the possession of individuals. The inclosing of commonages commenced in the reign of Queen Anne, and was continued in the reigns of all the sovereigns of the House of Hanover. The first inclosure act was passed in 1709 ; in the following thirty years the average number of inclosure bills was about three each year ; in the following fifty years there were nearly *forty* each year ; and in the forty years of the nineteenth century it was nearly *fifty* per annum.

The inclosures in each reign were as follows :

	Acts.	Acres.
Queen Anne, . . .	2	1,439
George I., . . .	16	17,660
George II., . . .	226	318,784
George III., . . .	3446	3,500,000
George IV., . . .	192	250,000
William IV., . . .	72	120,000
Total, . . .	3954	4,207,883

These lands belonged to the people, and might have been applied to relieve the poor. Had they been allotted in small farms, they might have been made the means of support of from 500,000 to 1,000,000 families, and they would have afforded employment and sustenance to all the poor, and thus rendered compulsory taxation under the poor-law system unnecessary ; but the landlords seized on them and made the tenantry pay the poor-rate.

The British Poor Law is a slur upon its boasted civilization. The unequal distribution of land and of wealth leads to great riches and great poverty. Intense light produces deep shade. Nowhere else but in wealthy England do God's creatures die of starvation, wanting food, while others are rich beyond comparison. The soil which affords sustenance for the people is rightly charged with the cost of feeding those who lack the necessaries of life, but the same object would be better achieved in a different way. Poor-rates are now a charge upon a man's entire estate, and it would be much better for society if land to an amount equivalent to the charge were taken from the estate and assigned to the poor. If a man is charged with £100 a year poor-rate, it would make no real difference to him, while it would make a vast difference to the poor to take land to that value, put the poor to work tilling it, allowing them to enjoy the produce. Any expense should be paid direct by the landlord, which would leave the charge upon the land, and exempt the improvements of the tenant, which represent his labor, free.

The evil has intensified in magnitude, and a permanent army of paupers numbering at the minimum 829,281 persons, but increasing at some periods to upward of 1,000,000, has to be provided for ; the cost, about £8,000,000 a year, is paid, not by landlords but by tenants, in addition to the various charities founded by benevolent persons.

There are two classes relieved under this system, and which ought to be differently dealt with—the sick and the young. Hospitals for the former and schools for the latter ought to take the place of the workhouse. It is difficult to fancy a worse place for educating the young than the workhouse, and it would tend to lessen the evil were the children of the poor trained and educated in separate establishments from those for the reception of paupers. Pauperism is the concomitant of large holdings of land and insecurity of tenure. The necessity of such a provision arose, as I have previously shown, from the wholesale eviction of large numbers of the occupiers of land ; and, as the means of supplying the need came from the LAND, the expense should, like tithes, have fallen exclusively upon land. The poor-rates are, however, also levied upon houses and buildings, which represent labor. The owner of land is the people, as represented by the Crown, and the charges thereon next in succes-

sion to the claims of the state are the CHURCH and the POOR.

The Continental wars at the close of the eighteenth and the commencement of the nineteenth century had some effect upon the system of tillage; they materially enhanced the price of agricultural produce—rents were raised, and the national debt was contracted, which remains a burden on the nation.

The most important change, however, arose from scientific and mechanical discoveries—the application of heat to the production of motive power. As long as water, which is a non-exhaustive source of motion, was used, the people were scattered over the land; or if segregation took place, it was in the neighborhood of running streams. The application of steam to the propulsion of machinery, and the discovery of engines capable of competing with the human hand, led to the substitution of machine-made fabrics for clothing, in place of homespun articles of domestic manufacture. This led to the employment of farm-laborers in procuring coals, to the removal of many from the rural into the urban districts, to the destruction of the principal employment of the family during the winter evenings, and consequently effected a great revolution in the social system. Many small freeholds were sold, the owners thinking they could more rapidly acquire wealth by using the money representing their occupancy, in trade. Thus the large estates became larger, and the smaller ones were absorbed, while the appearance of greater wealth from exchanging subterranean substances for money, or its representative, gave rise to ostentatious display. The rural population gradually diminished, while the civic population increased. The effect upon the system of landholding was triplicate. First, there was a diminution in the amount of labor applicable to the cultivation of land; second, there was a decrease in the amount of manure applied to the production of food; and lastly, there was an increase in the demand for land, as a source of investment, by those who, having made money in trade, sought that social position which follows the possession of broad acres. Thus the descendants of the feudal aristocracy were pushed aside by the modern plutocracy.

This state of things had a double effect. Food is the result of two essential ingredients — LAND and LABOR. The diminution in the amount of labor applied to the soil, consequent upon the removal of the laborers from the land, lessened the quantity of food; while the consumption of that food in cities and towns, and the waste of the fertile ingredients which should be restored to the soil, tended to exhaust the land, and led to vast importations of foreign and the manufacture of mineral manures. I shall not detain you by a discussion of this aspect of the question, which is of very great moment, consequent upon the removal of large numbers of people from rural to urban districts; but I may be excused in saying that agricultural chemistry shows that the soil—"perpetual man"—contains the ingredients needful to support human life, and feeding those animals meant for man's use. These ingredients are seized upon by the roots of plants and converted into aliment. If they are consumed where grown, and the refuse restored to the soil, its fertility is preserved; nay, more, the effect of tillage is to increase its productive power. It is impossible to exhaust land, no matter how heavy the crops that are grown, if the produce is, after consumption, restored to the soil. I have shown you how, in the reign of Queen Elizabeth, a man was not allowed to sell meat off his land unless he brought to, and consumed on it, the same weight of other meat. This was true agricultural and chemical economy. But when the people were removed from country to town, when the produce grown in the former was consumed in the latter, and the refuse which contained the elements of fertility was not restored to the soil, but swept away by the river, a process of exhaustion took place, which has been met in degree by the use of imported and artificial manures. The SEWAGE question is taken up mainly with reference to the health of towns, but it de-

serves consideration in another aspect—its influence upon the production of food in the nation.

An exhaustive process upon the fertility of the globe has been set on foot. The accumulations of vegetable mould in the primeval forests have been converted into grain, and sent to England, leaving permanent barrenness in what should be prolific plains; and the deposits of the Chincha and Ichaboe Islands have been imported in myriads of tons, to replace in our own land the resources of which it is bereft by the civic consumption of rural produce.

These conjoined operations were accelerated by the alteration in the British corn laws in 1846, which placed the English farmer, who tried to preserve his land in a state of fertility, in competition with foreign grain - growers, who, having access to boundless fields of virgin soil, grow grain year after year until, having exhausted the fertile element, they leave it in a barren condition, and resort to other parts. A competition under such circumstances resembles that of two men of equal income, one of whom appears wealthy by spending a portion of his capital, the other parsimonious by living within his means. Of course, the latter has to debar himself of many enjoyments. The British farmer has lessened the produce of grain, and consequently of meat; and the nation has become dependent upon foreigners for meat, cheese, and butter, as well as for bread.

This is hardly the place to discuss a question of agriculture, but scientific farmers know that there is a rotation of crops,* and that as one is diminished the others lessen. The quantity under tillage is a multiple of the area under grain. A diminution in corn is followed by a decrease of the extent under turnips and under clover; the former directly affects man, the latter the meat-affording animals. A decrease in the breadth under tillage means an addition to the pasture land, which in this climate only produces meat during the warm portions of the year. I must, however, not dwell upon this topic, but whatever leads to a diminution in the LABOR applied to the LAND lessens the production of food, and *dear meat* may only be the supplement to *cheap corn.*

I shall probably be met with the hackneyed cry, The question is entirely one of price. Each farmer and each landlord will ask himself, Does it pay to grow grain? and in reply to any such inquiry, I would refer to the annual returns. I find that in the five years, 1842 to 1846, wheat ranged from 50*s.* 2*d.* to 57*s.* 9*d.*; the average for the entire period being 54*s.* 10*d.* per quarter. In the five years from 1870 to 1874 it ranged from 46*s.* 10*d.* to 58*s.* 8*d.*, the average for the five years being 54*s.* 7*d.* per quarter. The reduction in price has only been 3*d.* per quarter, or less than one half per cent.

I venture to think that there are higher considerations than mere profit to individuals, and that, as the lands belong to the whole state as represented by the Crown, and as they are held in trust *to produce food for the people*, that trust should be enforced.

The average consumption of grain by each person is about a quarter (eight bushels) per annum. In 1841 the population of the United Kingdom was 27,036,450. The average import of foreign grain was about 3,000,000 quarters, therefore *twenty-four millions* were fed on the domestic produce. In 1871 the population was 31,513,412, and the average importation of grain 20,000,000 quarters; therefore only *eleven and a half millions* were supported by home produce. Here we are met with the startling fact that our own soil is not now supplying grain to even one half the number of people to whom it gave

* The agricultural returns of the United Kingdom show that 50½ per cent of the arable land was under pasture, 24 per cent under grain, 12 per cent under green crops and bare fallow, and 13 per cent under clover. The rotation would, therefore, be somewhat in this fashion: Nearly one fourth of the land in tillage is under a manured crop or fallow, one fourth under wheat, one fourth under clover, and one fourth under barley, oats, etc., the succession being, first year, the manured crop; next year, wheat; third year, clover; fourth, barley or oats; and so on.

bread in 1841. This is a serious aspect of the question, and one that should lead to examination, whether the development of the system of landholding, the absorptions of small farms and the creation of large ones, is really beneficial to the state, or tends to increase the supply of food. The area under grain in England in 1874 was 8,021,077. In 1696 it was 10,000,000 acres, the diminution having been 2,000,000 acres. The average yield would probably be *four quarters per acre*, and therefore the decrease amounted to the enormous quantity of *eight million quarters*, worth £25,000,000, which had to be imported from other countries, to fill up the void, and feed 8,000,000 of the population; and if a war took place, England may, like Rome, be starved into peace.

An idea prevails that a diminution in the extent under grain implies an increase in the production of meat. The best answer to that fallacy lies in the great increase in the price of meat. If the supply had increased the price would fall, but the converse has taken place. A comparison of the figures given by Geoffrey King, in the reign of William III., with those supplied by the Board of Trade in the reign of Queen Victoria, illustrates this phase of the landholding question, and shows whether the "enlightened policy" of the nineteenth century tends to encourage the fulfilment of the trust which applies to land — *the production of food.**

The former shows that in 1696 there were *ten million* acres under grain, the latter only *eight million* acres. Two million acres were added for cattle feeding. The former shows that the pasture land was *ten million acres*, and that green crops and clover were unknown. The latter that there were *twelve million acres* under pasture, and, in addition, that there were nearly *three million acres* of green crop and *three million acres* of clover. The addition to the cattle-feeding land was eight million acres; yet the number of cattle in 1696 was 4,500,000, and in 1874, 4,305,400. Of sheep, in 1696, there were 11,000,000, and in 1874, 19,889,758. The population had increased fourfold, and it is no marvel that meat is dear. It is the interest of agriculturists to *keep down the quantity and keep up the price.* The diminution in the area under corn was not met by a corresponding increase in live stock—in other words, the decrease of land under grain is not,

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* The land of England and Wales in 1696 and 1874 was classified as follows:

	1696. Acres.	1874. Acres.
Under grain,	10,000,000	8,021,077
Pastures and meadows,	10,000,000	12,071,791
Flax, hemp, and madder,	1,000,000	———
Green crops,	———	2,895,138
Bare fallow,	———	639,519
Clover,	———	2,983,733
Orchards,	1,000,000	148,526
Woods, coppices, etc.,	3,000,000	1,552,598
Forests, parks, and commons,	3,000,000	9,006,839
Moors, mountains, and bare land,	10,000,000	
Waste, water, and road,	1,000,000	
	39,000,000	37,319,221

The estimate of 1696 may be corrected by lessening the quantity of waste land, and thus bringing the total to correspond with the extent ascertained by actual survey, but it shows a decrease in the extent under grain of nearly two million acres, and an increase in the area applicable to cattle of nearly 8,000,000 acres; yet there is a decrease in the number of cattle, though an increase in sheep. The returns are as follows:

	1696.	1800.	1874.
Cattle,	4,500,000	2,852,428	4,305,440
Sheep,	11,000,000	26,148,000	19,859,758
Pigs,	2,000,000	(not given)	2,058,791

per se, followed by an increase of meat. If the area under grain were increased, it would be preceded by an increase in the growth of turnips, and followed by a greater growth of clover; and these cattle-feeding products would materially add to the meat supply.

A most important change in the system of landholding was effected by the spread of RAILWAYS. It was brought about by the influence of the trading as opposed to the landlord class. In their inception they did not appear likely to effect any great alteration in the land laws. The shareholders had no compulsory power of purchase, hence enormous sums were paid for the land required; but as the system extended, Parliament asserted the ownership of the nation, over land in the possession of the individual. Acting on the idea that no man was more than a tenant, the state took the land from the occupier, as well as the tenant-in-fee, and gave it, not at their own price, but an assessed value, to the partners in a railway who traded for their mutual benefit, yet as they offered to convey travellers and goods at a quicker rate than on the ordinary roads, the state enabled them to acquire land by compulsion. A general act, the Land Clauses Act, was passed in 1846, which gives privileges with regard to the acqusition of land to the promoters of such works as railways, docks, canals, etc. Numbers of acts are passed every session which assert the right of the state over the land, and transfer it from one man, or set of men, to another. It seems to me that the principle is clear, and rests upon the assertion of the state's ownership of the land; but it has often struck me to ask, Why is this application of state rights limited to land required for these objects? why not apply to the land at each side of the railway, the principle which governs that under the railway itself? I consider *the production of food* the primary trust upon the land, that rapid transit over it is a secondary object; and as all experience shows that the division of land into small estates leads to a more perfect system of tillage, I think it would be of vast importance to the entire nation if all tenants who were, say, five years in possession were made "promoters" under the Land Clauses Act, and thus be enabled to purchase the fee of their holdings in the same manner as a body of railway proprietors. It would be most useful to the state to increase the number of tenants-in-fee—to re-create the ancient freemen, the *Liberi Homines*—and I think it can be done without requiring the aid either of a new principle or new machinery, by simply placing the farmer-in-possession on the same footing as the railway shareholder. I give at foot the draft of a bill I prepared in 1866 for this object.*

The 55th William I. secured to free-

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* A BILL TO ENCOURAGE THE OUTLAY OF MONEY UPON LAND FOR AGRICULTURAL PURPOSES.

Whereas it is expedient to encourage the occupiers of land to expend money thereon, in building, drainage, and other similar improvements; and whereas the existing laws do not give the tenants or occupiers any sufficient security for such outlay: Be it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in Parliament assembled, and by the authority of the same:

1. That all outlay upon land for the purpose of rendering it more productive, and all outlay upon buildings for the accommodation of those engaged in tilling or working the same, or for domestic animals of any sort, be, and the same is hereby deemed to be, an outlay of a public nature.

2. That the clauses of "The Land Clauses Consolidation Act 1845," "with respect to the purchase of lands by agreement," and "with respect to the purchase and taking of lands otherwise than by agreement," and "with respect to the purchase money or compensation coming to parties having limited interests, or prevented from treating or not making title," shall be, and they are hereby incorporated with this act.

3. That every tenant or occupier who has for the past five years been in possession of any land, tenements, or hereditaments, shall be considered "a promoter of the undertaking within the meaning of the said recited act, and shall be entitled to purchase the lands which he has so occupied, 'either by agreement' 'or otherwise than by agreement,' as provided in the said recited act."

Then follow some details which it is unnecessary to recite here.

men the inheritance of their lands, and they were not able to sell them until the act *Quia Emptores* of Edward I. was passed. The tendency of persons to spend the representative value of their lands and sell them was checked by the Mosaic law, which did not allow any man to despoil his children of their inheritance. The possessor could only mortgage them until the year of jubilee —the fiftieth year. In Switzerland and Belgium, where the nobles did not entirely get rid of the freemen, the lands continued to be held in small estates. In Switzerland there are seventy-four proprietors for every hundred families, and in Belgium the average size of the estate is three and a half hectares—about eight acres. These small ownerships are not detrimental to the state. On the contrary, they tend to its security and well-being. I have treated on this subject in my work, "The Food Supplies of Western Europe." These small estates existed in England at the Norman Conquest, and their perpetual continuance was the object of the law of William I., to which I have referred. Their disappearance was due to the greed of the nobles during the reign of the Plantagenets, and they were not replaced by the Tudors, who neglected to restore the men-at-arms to the position they occupied under the laws of Edward the Confessor and William I.

The establishment of two estates in land; one the ownership, the other the use, may be traced to the payment of rent, to the Roman commonwealth, for the *ager publicus*. Under the feudal system the rent was of two classes—personal service or money; the latter was considered base tenure. The legislation of the Tudors abolished the payment of rent by personal service, and made all rent payable in money or in kind. The land had been burdened with the sole support of the army. It was then freed from this charge, and a tax was levied upon the community. Some writers have sought to define RENT as the difference between fertile lands and those that are so unproductive as barely to pay the cost of tillage. This far-fetched idea is contradicted by the circumstance that for centuries rent was paid by labor—the personal service of the vassal—and it is now part of the annual produce of the soil inasmuch as land will be unproductive without seed and labor, or being pastured by tame animals, the representative of labor in taming and tending them. Rent is usually the labor or the fruits of the labor of the occupant. In some cases it is income derived from the labors of others. A broad distinction exists between the rent of land, which is a portion of the fruits or its equivalent in money, and that of improvements and houses, which is an exchange of the labor of the occupant given as payment for that employed in effecting improvements or erecting houses. The latter described as messuages were valued in 1794 at *six millions* per annum; in 1814 they were nearly *fifteen millions*; now they are valued at *eighty millions*.* The increase represents a sum considerably more than double the national debt of Great Britain, and under the system of leases the improvements will pass from the industrial to the landlord class.

It seems to me to be a mistake in legislation to encourage a system by which these two funds merge into one, and that hands the income arising from the expenditure of the working classes over to the tenants-in-fee without an equivalent. This proceeds from a straining of the maxim that "what is attached to the freehold belongs to the freehold," and was made law when both Houses of Parliament were essentially landlord. That maxim is only partially true: corn is as much attached to the freehold as a tree; yet one is cut without hindrance and the other is prevented. Potatoes, turnips, and such

* A Parliamentary return gives the following information as to the value of lands and messuages in 1814 and 1874:

	1814-15.	1873-74.
Lands, . .	£34,330,463	£49,906,866
Messuages, .	14,895,130	80,726,502

The increase in the value of land is hardly equal to the reduction in the value of gold, while the increase in messuages shows the enormous expenditure of labor.

tubers, are only obtained by disturbing the freehold. This maxim was at one time so strained that it applied to fixtures, but recent legislation and modern discussions have limited the rights of the landlord class and been favorable to the occupier, and I look forward to such alterations in our laws as will secure to the man who expends his labor or earnings in improvements, an estate *in perpetuo* therein, as I think no length of user of that which is a man's own—his labor or earnings—should hand over his representative improvements to any other person. I agree with those writers who maintain that it is prejudicial to the state that the rent fund should be enjoyed by a comparatively small number of persons, and think it would be advantageous to distribute it, by increasing the number of tenants-in-fee. Natural laws forbid middlemen, who do nothing to make the land productive, and yet subsist upon the labor of the farmer, and receive as rent part of the produce of his toil. The land belongs to the state, and should only be subject to taxes, either by personal service, such as serving in the militia or yeomanry, or by money payments to the state.

Land does not represent *capital*, but the improvements upon it do. A man does not purchase land. He buys the right of possession. In any transfer of land there is no locking up of capital, because one man receives exactly the amount the other expends. The individual may lock up his funds, but the nation does not. Capital is not money. I quote a definition from a previous work of mine, "The Case of Ireland," p. 176:

"Capital stock properly signifies the means of subsistence for man, and for the animals subservient to his use while engaged in the process of production. The jurisconsults of former times expressed the idea by the words *res fungibiles*, by which they meant consumable commodities, or those things which are consumed in their use for the supply of man's animal wants, as contradistinguished from unconsumable commodities, which latter writers, by an extension of the term, in a figurative sense, have called *fixed* capital."

All the money in the Bank of England will not make a single four-pound loaf. Capital, as represented by consumable commodities, is the product of labor applied to land, or the natural fruits of the land itself. The land does not become either more or less productive by reason of the transfer from one person to another; it is the withdrawal of labor that affects its productiveness.

Wages are a portion of the value of the products of a joint combination of employer and employed. The former advances from time to time as wages to the latter, the estimated portion of the increase arising from their combined operations to which he may be entitled. This may be either in food or in money. The food of the world for one year is the yield at harvest; it is the *capital stock* upon which mankind exist while engaged in the operations for producing food, clothing, and other requisites for the use of mankind, until nature again replenishes this store. Money cannot produce food; it is useful in measuring the distribution of that which already exists.

The grants of the Crown were a fee or reward for service rendered; the donee became tenant-in-fee; being a reward, it was restricted to a man and his heirs-male or his heirs-general; in default of heirs-male or heirs-general, the land reverted to the Crown, which was the donor. A sale to third parties does not affect this phase of the question, inasmuch as it is a principle of British law that no man can convey to another a greater estate in land than that which he possesses himself; and if the seller only held the land as tenant-in-fee for *his own life* and that of *his* heirs, he could not give a purchaser that which belonged to the Crown, the *reversion* on default of heirs (see Statute *De Donis*, 13 Edward I., *ante*, p. 21). This right of the sovereign, or rather of the people, has not been asserted to the full extent. Many noble families have become extinct, yet the lands have not been claimed, as they should have been, for the nation.

I should not complete my review of the subject without referring to what are called the LAWS OF PRIMOGENI-

TURE. I fail to discover any such law. On the contrary, I find that the descent of most of the land of England is under the law of contract—by deed or bequest—and that it is only in case of intestacy that the courts intervene to give it to the next heir. This arises more from the construction the judges put upon the wishes of the deceased, than upon positive enactment. When a man who has the right of bequeathing his estate among his descendants does not exercise that power, it is considered that he wishes the estate to go undivided to the next heir. In America the converse takes place: a man can leave all his land to one; and, if he fails to do so, it is divided. The laws relating to contracts or settlements allow land to be settled by deed upon the children of a living person, but it is more frequently upon the grandchildren. They acquire the power of sale, which is by the contract denied to their parents. A man gives to his grandchild that which he denies to his son. This cumbrous process works disadvantageously, and it might very properly be altered by restricting the power of settlement or bequest to living persons, and not allowing it to extend to those who are unborn.

It is not a little curious to note how the ideas of mankind, after having been diverted for centuries, return to their original channels. The system of landholding in the most ancient races was *communal*. That word, and its derivative, *communism*, has latterly had a bad odor. Yet all the most important public works are communal. All joint-stock companies, whether for banking, trading, or extensive works, are communes. They hold property in common, and merge individual in general rights. The possession of land by communes or companies is gradually extending, and it is by no means improbable that the ideas which governed very remote times may, like the communal joint-stock system, be applied more extensively to landholding.

It may not be unwise to review the grounds that we have been going over, and to glance at the salient points. The ABORIGINAL inhabitants of this island enjoyed the same rights as those in other countries, of possessing themselves of land unowned and unoccupied. The ROMANS conquered, and claimed all the rights the natives possessed, and levied a tribute for the use of the lands. Upon the retirement of the Romans, after an occupancy of about six hundred years, the lands reverted to the aborigines, but they, being unable to defend themselves, invited the SAXONS, the JUTES, and the ANGLES, who reduced them to serfdom, and seized upon the land; they acted as if it belonged to the body of the conquerors, it was allotted to individuals by the *Folc-gemot* or assembly of the people, and a race of *Liberi Homines* or freemen arose, who paid no rent, but performed service to the state; during their sway of about six hundred years the institutions changed, and the monarch, as representing the people, claimed the right of granting the possession of land seized for treason by *boc* or charter. The NORMAN invasion found a large body of the Saxon landholders in armed opposition to William, and when they were defeated, he seized upon their land and gave it to his followers, and then arose the term *terra regis*, "the land of the king," instead of the term *folc-land*, "the land of the people;" but a large portion of the realm remained in the hands of the *Liberi Homines* or freemen. The Norman barons gave possession of part of their lands to their followers, hence arose the *vassals* who paid rent to their lord by personal service, while the *Freemen* held by service to the Crown. In the wars of the PLANTAGENETS the freemen seem to have disappeared, and vassalage was substituted, the principal vassals being freeholders. The descendants of the aborigines regained their freedom. The possession of land was only given for life, and it was preceded by homage to the Crown, or fealty to the lord, investiture following the ceremony. The TUDOR sovereigns abolished livery and retainers, but did not secure the rights of the men-at-arms or replace them in their position of freemen. The chief

lords converted the payment of rent by service into payment in money; this led to wholesale evictions, and necessitated the establishment of the Poor Laws. The STUARTS surrendered the remaining charges upon land; but on the death of one sovereign, and the expulsion of another, the validity of patents from the Crown became doubtful. The PRESENT system of landholding is the outcome of the Tudor ideas. But the Crown has never abandoned the claim asserted in the statute of Edward I., that all land belongs to the sovereign as representing the people, and that individuals *hold* but do not *own* it; and upon this sound and legal principle the state takes land from one and gives it to another, compensating for the loss arising from being dispossessed.

I have now concluded my brief sketch of the facts which seemed to me most important in tracing the history of LANDHOLDING IN ENGLAND, and laid before you not only the most vital changes, but also the principles which underlay them; and I shall have failed in conveying the ideas of my own mind if I have not shown you that at least from the Scandinavian or Anglo-Saxon invasion, the ownership of land rested either in the people, or the Crown as representing the people; that individual proprietorship of land is not only unknown, but repugnant to the principles of the British Constitution; that the largest estate a subject can have is tenancy-in-fee, and that it is a holding and not an owning of the soil; and I cannot conceal from you the conviction which has impressed my mind, after much study and some personal examination of the state of proprietary occupants on the Continent, that the best interests of the nation, both socially, morally, and materially, will be promoted by a very large increase in the number of tenants-in-fee; which can be attained by the extension of principles of legislation now in active operation. All that is necessary is to extend the provisions of the Land Clauses Act, which apply to railways and such objects, to tenants in possession; to make them "promoters" under that act; to treat their outlay for the improvement of the soil and the greater *production of food* as a public outlay; and thus to restore to England a class which corresponds with the Peasant Proprietors of the Continent—the Freemen or *Liberi Homines* of Anglo-Saxon times, whose rights were solemnly guaranteed by the 55th William I., and whose existence would be the glory of the country and the safeguard of its institutions.

Beacon Lights of Science

HISTORICAL SKETCH

OF THE

DISTRIBUTION OF LAND IN ENGLAND

PART FIRST

I.

ANGLO-SAXON AGRICULTURE.—GENEATS AND GEBURS.—VILLANI.

THE changes that take place in the terms on which land is held, and the manner in which it is cultivated, are usually so gradual that they escape the notice of contemporaries. The causes of such changes thus become at a subsequent period matters of conjecture, giving rise not unfrequently, as we shall have occasion to point out, to most extravagant theories.

The first period at which we obtain any detailed account of the agricultural condition of England is that which succeeded, at no great interval, the Norman Conquest. The admirable survey made by order of William I., the record of which is preserved in the two volumes known by the popular name of *Domesday Book*, stands unrivaled (so far as I am aware) by any memorial respecting the material and social condition of this or any other country.

Before adverting to the conclusions which may be drawn from the great survey, it will be convenient to refer shortly to the scanty information we possess respecting earlier times, so far as it throws light upon the terms and statements of *Domesday*.

In the *Rectitudines Singularum Personarum* (*Ancient Laws and Institutes of England*, 1840. Vol. i. 431), a short treatise in Saxon and Latin, of uncertain date, but which from internal evidence we may safely conclude was composed in Saxon times, we find described the duties of the various classes of owners and occupiers of land.

Thus the thegn, or landowner, is obliged to serve the king in war, and to assist in making or repairing fortified places and bridges. This is the *trinoda necessitas*, so often a subject of complaint with Anglo-Saxon proprietors.

The duties of the geneats are to till, to sow, and reap the land of their lord, to go on errands far and near for him, to provide a horse, to fell wood for his deer park, to perform

other servile works, and to make certain small payments in money or kind.

The gebur, when he enters on his "yard of land," is to be supplied with two oxen, one cow, and six sheep, and seven acres of his land are to be sown for him. After the first year he must perform the duties attached to his condition. In some places he must work two days in each week, in harvest (rendered in the Latin text Augustus) three days. He is to plow one acre a week from the time when plowing begins till Martinmas. He also makes small payments in money and kind. If he departs (dies), all that he has belongs to his lord.

These general rules were subject (as appears by the same document) to some variation, dependent on the custom of the district in which the lands were situate.

There can, I think, be no question that the cultivation of the soil, when the *Rectitudines* were written, was mainly carried on by the geneats and geburs. They were evidently not slaves whose duties depended absolutely on the will of their lord. Their work was defined by the general custom, as described in the *Rectitudines*, subject to variation by the local custom of the district. Of these two classes the geneats were legally unfree; and the geburs, by their poverty, must have been practically in a servile condition, even if not unfree according to law.

If we turn now to the Great Record, we shall, I think, find that the course of husbandry had suffered little alteration from the change in regard to the ownership of land which, in many cases, had taken place during the interval of twenty years between the Conquest and the completion of *Domesday*.

The properties mentioned in *Domesday* are generally styled *villæ* or *maneria*, and had usually, before the Conquest, been the property of Saxon nobles, or were then, and still remained, the property of ecclesiastics, or of the Crown; and almost invariably attached to the villa are a certain number of *villani*. Now the word *villanus* occurs in the Latin text of the *Rectitudines* as the equivalent of the Saxon-geneat. In *Domesday* it probably included the gebur also, the distinction between the two in the *Rectitudines* not being very apparent.

The *villani*, afterward called the *villeins* by the Norman lawyers, were men allowed, like the geburs of the *Rectitudines*, to occupy small allotments, or "yards," of land for the support of themselves and their families, and who, in return, were required to plow, sow, and reap the land which their lord kept in his own hands—his *demesne*, as it was called.

II.

AGRICULTURE AFTER THE CONQUEST. — VILLEINAGE. — COPYHOLDERS. — CONTINENTAL SERFS.

It appears from the authorities to which I have referred, that both before and after the Conquest, at least a large portion of the agricultural population of England, was organized in the same manner, as that which

prevailed over the greatest part of the Western European Continent, during the middle ages, and in some countries, as in Prussia, Poland and Hungary, almost to the present day; while in England, on the other hand, all traces of villeinage have disappeared for centuries.

The main cause which occasioned the discontinuance of villeinage in England, at a much earlier period than that at which it ceased to exist in foreign countries was probably economical.

The services due to the lord from the villein, peasant, bauer, or serf, as he was usually termed on the Continent, often a source of vexation to both parties, were, in England, at an early period, for the most part, commuted for an annual money payment; and so powerful was the influence of custom, that it came to be established law, that the villein, if he rendered his accustomed rent and other services, if any, in respect of his holding, could not be ejected from it, nor could his rent or services be increased. He obtained, by custom, fixity of rent and fixity of tenure.

A list was kept of these tenants on the estate and their holdings by the steward of the owner, and at every change of a tenant, the fact was notified at a court or assembly of tenants held under the presidency of the steward, and an entry on this list or roll became evidence of the right of the tenant to hold his land. A copy of the entry was given to him, and he was said to hold his land by copy of court-roll; but tolerably conclusive evidence of the original infirmity of his title, was preserved in his legal designation, which was, and still is, "tenant *at the will of the lord*, by copy of court-roll, according to the custom of the manor."

The disappearance of the class which in England corresponded to the peasantry of the Continent has been much deplored by some politicians. I will not stop to inquire whether it was a desirable state of things, that the agricultural proprietors should be sharply divided into two classes, having distinct customs, interests and opinions, as has been usually, if not invariably, the case, wherever peasant proprietors, properly so called, have existed. But I would remark that the disappearance of the English peasantry, "the divorce of the laborer from the soil," as it has been termed, is not due to oppression, but to prosperity. By the great fall in the value of silver, which commenced in the fifteenth century, the copyholder, who enjoyed by custom fixity of rent and tenure, became, in fact, a proprietor of his allotment, subject to some moderate burdens; and he therefore generally ceased to be a tiller of the soil. Cultivation came to be carried on universally by hired laborers, employed by copyholders as well as by freeholders. If injustice has been done in the course of this great change, it has certainly not been exercised by the owners of land on the peasantry, since a vast part of the best lands, to which the former were legally entitled, have become the property of the latter, without any equivalent being given by them, through the gradual operation of the causes to which I have alluded. Without revolution, and almost imperceptibly, landlordism was virtually abolished over at least one-fourth of the arable land of England. The bur-

dens and restrictions to which copyhold lands remained subject, render them, no doubt, somewhat less valuable than freeholds of the same extent, but the difference is not generally of great importance.

III.

ORIGIN OF LARGE PROPERTIES.—ESTATES OF ANGLO-SAXON NOBILITY.—EVIDENCE OF DOMESDAY.

It is a commonly received opinion, that the present distribution of land in England differs greatly from that which prevailed in ancient, and particularly in Saxon times; and that the change is due to the operation of the law of primogeniture or entail, or the practice of making settlements of land. I propose to consider in the first place, how far this opinion, that a great change in the distribution of land has occurred is well founded, before inquiring into the causes alleged to have produced it.

In order to arrive at a sound conclusion on the subject, we must extend the investigation into centuries long anterior to the Norman Conquest.

According to all historical accounts, the Saxon Conquest of England was effected by a body of men, about as insignificant in point of numbers, as the Spanish invaders of Mexico. A few long boats are said to have conveyed Hengist and his companions—conquerors of England. They were no doubt, re-enforced, and supported by a large immigration of their countrymen; but still after deducting those who fell in the struggle with the Romanized Britons, the residue must have formed a scanty band, when considered in connection with the extent of territory which lay at their disposal. They, however, were the ancestors of the kings and Saxon nobility of England. Is it to be supposed that these conquerors first ravaged the open country, and then began to cultivate it, in small properties, with their own hands? Is it not more probable, that the principal men among them took possession of the Roman villas, with which the country was studded, and cultivated the land like their immediate predecessors, by means of forced labor? I find no reason for holding, that the Saxon invaders of England differed greatly from the Germans as described by Tacitus—strenuous in war, slothful in peace. "Nec arare terram, aut expectare annonam, tam facile persuaseris, quam vocare hostes et vulnera mereri: pigrum quinimmo et iners videtur sudore adquirere quod possis sanguine parare."—*Germania*, cap. 14.

All conquerors and colonists bring with them their own laws and customs. Now, in Germany, the land was cultivated, according to the same testimony of Tacitus, by men who were not free, though not, like the Roman slaves, in a state of absolute bondage; the German serfs having separate dwellings and occupying portions of land, while rendering a return in kind to their lords. He says (after speaking of those who become slaves by staking their liberty in gambling), "Cæteris servis, non in nostrum morem, descriptis per familias, utuntur: suam quisque sedem, suos penates regit. Frumenti modum dominius, aut pecoris, aut vestis, ut colono injungit: et servi hactenus par-

ent. . . . Verberare servum ac vinculis et opere coercere rarum."—TACITUS, *Germ.* cap. 25.

Why should we suppose that a people so tenacious of ancient habits as the Germans, introduced into England a system of cultivation unknown in Germany? We find serfdom existing in England, soon after the Norman Conquest, under the name of villein age; we find serfs in Saxon times under the designation of geneats or geburs; we find serfdom forming part of the German agricultural system in the days of Tacitus. Is there not, at least, a strong probability that the first-mentioned custom was derived from the last? Would the German warriors become more inclined to follow the plow, when they had the larger part of England at their disposal, than they were in their native country?

What then was there to prevent the Anglo-Saxon invaders, few in numbers as they were, from appropriating large tracts of country and cultivating them, however imperfectly, by serfs brought from Germany, or drawn from the inhabitants of the conquered lands? Bondage in one form or other was, we know, rife among the Anglo-Saxons.

Again, the quantity of land held sufficient for an Anglo-Saxon family was called a hide. Now the average hide cannot be estimated at less than 200 acres—a quantity obviously greater than that which could be cultivated by the owner and his family alone. The work was, in all probability, done by geneat or gebur labor. There is no reason to suppose that the Anglo-Saxons were less inclined to employ forced labor, than the Dutch were a few years ago (if not at present) in the Transvaal.

But while the hide appears to have been the minimum allotment, we meet with constant allusions in Anglo-Saxon laws and documents, to proprietors of five, of twenty, and even a much greater number of hides.

There is therefore, strong reason for believing that in the earliest Saxon period, there were proprietors of very large estates; and, as soon as the light of history breaks upon us, it reveals their existence. Etheldreda, an Anglian princess, in the seventh century, gave, it is said, the Isle of Ely to the abbey which she established. The Ealdorman Edric, in the days of Ethelred the Unready, could turn the scale in the struggle for supremacy between the Danes and the English. The manors of Earl Godwin are said to have stretched almost continuously through the county of Sussex. *Domesday Book* shows that the Earls Morcar, Edwin and Tosti (the brother of Harold) had vast possessions. In Cambridgeshire "Œdiva Pulchra" held many manors at the Conquest. In Dorsetshire, as Mr. Eyton, in his admirable introduction to the *Domesday of the County*,* observes, Marlswayn was ubiquitous. The manor of Tewkesbury was held by Brictric and was estimated at ninety-five hides, not less probably than 20,000 acres. The Manor of Helston, in Cornwall, which belonged to Harold as Earl of the county, was of yet greater extent.

It is, therefore, I think, sufficiently obvious that vast estates existed in

* *Analysis of the Dorset Survey*, by the Rev. R. W. Eyton, 1877. See pp. 5*n*, 10.

England from the earliest to the latest Anglo-Saxon days.

Extensive as were these possessions, it is not to be supposed that their owners were wealthy, in the modern acceptation of the word. The rent of land at the date of Domesday is estimated by Mr. Eyton at a penny an acre, a hide at a pound of silver, about £2 10*s.* 0*d.* of our present money, per annum.

On the other hand, the instruments of agriculture were dear, when compared with the rent of land. In Magna Carta, Cap. 21 (1225), the hire "limited of old" of a cart with two horses is 10*d.* a day, of a cart with three horses 1*s.* 2*d.*

Taking these facts into consideration, and remembering that the whole burden of the military establishment, of repairing fortified places, bridges and roads, was thrown upon the land, while the means of communication were very imperfect, it is clear that few laymen, however extensive their manors might be, could have enjoyed a considerable surplus income, although they might command the necessaries of life in abundance—a condition in which many great landowners on the Continent still find themselves at the present day.

With the ecclesiastics the case was different. Their personal expenses were comparatively small, and when their possessions were considerable, they could devote large sums, not only to building stately monasteries and cathedrals, but also to increasing their revenues by bringing waste land into cultivation.

The lavish grants made to ecclesiastics may be explained, in part, by the fact that, in the hands of their donors, they were, through want of capital, comparatively worthless; and a landowner might, by means of a small sacrifice, become a great benefactor. Some persons appear to imagine that the early occupiers of land obtained, at once, a very valuable possession, forgetful that some of the best land in the world may, even at this day, be purchased in fee simple, for the cost of surveying it. But land is an insatiable devourer of capital. The amount annually expended on it may be small, but it becomes immense in the course of ages; and it is probable that few increments of value are better earned, than that which accrues to agricultural land in the course of many generations.

IV.

THE SOKE.—SOCAGE TENURE.

ALTHOUGH the properties mentioned in *Domesday* are generally considerable, and often very large, notices of smaller possessions, held by freemen, are not infrequent. The owners are usually said to be the men, *homines*, of some Saxon or Norman noble, and are termed socmanni, sokemen. The word soke at this time signified jurisdiction, and a landowner who, by prescription, or grant from the sovereign, was entitled to hold a court of justice, was said to have a soke. His men, that is the freemen who acknowledged that he was their lord—for he of whom another was man, was styled his lord—were legally bound to attend the Court of Justice held in the hall of the lord's residence, and, if not themselves parties, plaintiffs or de-

fendants, to decide on matters arising within the limits of the soke.

The existence of these private jurisdictions was a matter almost of necessity, since without them, remote districts, from the feebleness of the state judicial institutions, and the difficulties of communication, would have been left without effectual legal supervision. Free landowners, who did not belong to a soke, were obliged to attend the Court of the Hundred; the hundred being a division of the county, generally of considerable extent. Such owners were styled simply freemen, *liberi homines*, or *liberi tenentes;* but their position differed from that of the sokemen merely as regarded the tribunal which they were bound to attend, and their being or not being under the protection of a lord. Hence, when a new free tenure, the military, was introduced, and it became necessary to discriminate the new from the old free tenures, the term socage tenure seems to have been extended to the freemen who owed service to the hundred court, although a public court, and was no longer confined, as in *Domesday*, to those who attended the court of a private person. The socmen are frequently mentioned in *Domesday* as bound to furnish inward —that is, to perform the duty of a local guard or watch. They probably formed the rank and file of the Saxon armies.

It is also probable that the smaller sokemen and free tenants, cultivated their lands themselves; but, judging from the *Domesday* record, I think we must conclude, that the total extent of land in the hands of small free proprietors, was insignificant, when compared with that which was cultivated by means of serf labor.

The terms on which the sokemen held their lands, as appears by *Domesday*, were various. Some could alienate their land without the license of their lord; others were unable to do so. If they possessed the right of alienation, in some instances, upon alienation, the jurisdiction over the land, the soke, remained with the lord; in other cases the tenants were free to dispose not only of the land, but of the soke also.

This variety seems to indicate that the relation of lord and sokeman often had its origin in contract. The liberated serf also must frequently have passed into the ranks of the sokemen. The latter generally paid a rent to his lord in money or in kind, as well in return for the protection he could claim, as for the use of his land. There are still freehold lands held of the lords of some manors, at ancient rents of small amount—generally called quit-rents.

When we consider the extraordinary deference which the Anglo-Saxon laws paid to wealth, estimating not only the value of a man's life, but the value of his testimony also, by the number of his hides, it is not difficult to account for the readiness, with which small free proprietors commended themselves to a great noble or prelate, and became his sokemen, in order to obtain his advocacy.

V.

AGRICULTURAL COMMUNITIES.

NOTWITHSTANDING that the facts I have mentioned are well known and rest, for the most part, on unquestionable authority, there is, I think, a current opinion that, during Anglo-Saxon times, land in England was, generally speaking, in the hands of free peasant proprietors—men who cultivated the soil with their own hands, for their own profit and were not subject to any master.

This opinion has received confirmation from a work on the *Agricultural Communities of the Middle Ages in England*, by E. Nasse, a German writer of considerable learning. The author maintains that communities of free peasant proprietors prevailed in England during the Anglo-Saxon period.

The author has, however, fallen into some important errors with regard to facts, and the conclusions which he draws from facts are not always incontrovertible.

His theory is founded, in a great measure, on the continued existence of certain common rights in England up to recent times: the nature of these rights being recorded in the "Report of the Select Committee on Commons Inclosures appointed by the House of Commons in 1844," and the descriptions of Agriculture in the several counties of England published by the then Board of Agriculture, under the control of Sir John Sinclair, at the close of the last and commencement of the present century.

Thus he says at p. 3 of the translation made under the auspices of the Cobden Club:—

"The professional experts who were examined before the Committee in 1844 agreed in their information that, in many parts of the country, plots of arable land in the same township lay intermixed and uninclosed, so that the lands of a rural property consisted of narrow parcels lying scattered in a disconnected manner all over the extent of the village district (Dorfflur). These arable parcels were for the separate use of individual possessors from seed-time to harvest, after which they were open and common to all for pasturage. They were designated 'open commonable intermixed fields,' and also 'lammas lands,' because 'lammas' is the festival '*Petri ad vincula*' on the 1st of August—or, according to the old calendar by which the reckoning was then taken, the 13th of August—which was the period at which the common rights of pasture commenced."—(Nasse on the *Agricultural Community of the Middle Ages*, translated by Colonel H. A. Ouvry, p. 3.)

Now the period from "seed-time to harvest" never can have terminated in England, as a general rule, so early as the 13th of August. August is mentioned as harvest-time in ancient records (as in the *Rectitudines Singularum Personarum*, see above p. 2), and is still the harvest month in England. If the cattle had been turned upon the cultivated lands on the 13th of that month (as Nasse imagines they were), the destruction of the wheat- and other grain-crops must, in ordinary years, have been the consequence. Besides, in Anglo-Saxon times the error in the length of the Julian year had not occasioned (as Nasse seems to suppose) a difference of twelve days be-

tween the solar year and the calendar. If we take A.D. 750 as the mean year of the Saxon period, the difference would be only four days. So that the Saxon 1st of August would then correspond not with our present 13th, but our 5th of August—a date when the cutting of wheat- and other grain-crops has not commenced, in ordinary years through a great part of England. In point of fact, the lands subject to this custom described by Nasse were not arable, but *meadow;* and they were inclosed not from "seed-time to harvest," but until the second hay-crop had been mown. The lands known as Lammas Lands at the present day are, I believe, invariably meadow.

If any confirmation of the fact be wanting, it may be found in the circumstance, that the only probable derivation of Lammas is Late-Math, late mowing. Hence "Latter Lammas," a later math than Lammas, became proverbial, as an equivalent to the Greek Calends.

Then the hypothesis that the cultivators of intermixed patches of land were free proprietors to whom, as a community, the land belonged, seems to rest upon two circumstances—first, that they all cultivated the land according to the same course of husbandry; and secondly, that they were entitled in common to depasture their cattle upon the land, after the crop had been removed.

Now, where land is held in small portions, and cultivated by the plow, the course of husbandry cannot, it is obvious, conveniently vary from one plot to another. The Anglo-Saxon plow was a cumbrous and costly instrument. It was drawn by eight oxen. The ancient measures of land owe their origin to this plow. It is mentioned in Co. Lit. 5*a*, that a bovate or oxgang is as much land as an ox can cultivate, and a plow-land as much as one plow can cultivate; and it was said that eight oxgangs make a plow-land (see Co. Lit. 69 *a*).

Now a gebur, according to the *Rectitudines*, was to have his yard-land; and a yard, or *virgata terræ*, varied, according to Lord Coke (Co. Lit. 5*a*) from ten to twenty, twenty-five or thirty acres, on an average about one-fourth of the extent which a plow could cultivate in a year, and therefore about equal to two oxgangs. Hence the gebur could not afford to keep a plow of his own. Several, therefore, must unite in order to maintain a plow, and the gebur was, accordingly, to be supplied with two oxen, so that four geburs could have a plow among them, and employ it in cultivating the land which they held in severalty.

The fact that the land was thus cultivated in common by no means proves that it was owned in common. I can therefore see, in the circumstance of a common cultivation, no sufficient reason for holding that these intermixed fields were not, in numerous instances, the holdings of villeins which, in process of time, were converted into copyholds.

The second fact, that these intermixed fields were subject to a common right of pasture, after the crop had been removed, appears to be equally insufficient for the purpose of establishing Mr. Nasse's conclusion. Depasturing of cattle and sheep, upon small portions of uninclosed land, held by several occupiers, must be enjoyed, if at all, by them in common;

and the exigencies of cultivation by a common plow forbade inclosures. It was for the general benefit that the stubble and other pasturage should not be wasted; and the fact of a common enjoyment by no means proves that the land itself was common property.

VI.

MR. SEEBOHM.

THE preceding chapters, as well as nearly all the subsequent parts of this book, were written before Mr. Seebohm's work on *Village Communities* and the *English Manor* appeared, and I congratulate myself on the fact, that the opinions I have expressed in the foregoing chapters are verified by Mr. Seebohm's accurate and laborious researches. He has, besides, thrown much new light on the economy of the English Manor in the centuries succeeding the Conquest.

He has traced with minute and extended inquiry the mode in which the arable land of England was then cultivated—shown that the villeins plowed the land in parallel strips a furlong in length, with a space or balk between adjacent strips—that the strips belonging to one villein, and forming with their appurtenances his virgate or yard of land, were scattered over the open fields,—that they were held not in common but separately, were indivisible, and descended from father to son by a species of customary entail.

I do not find, however, that Mr. Seebohm has attempted to answer the question, why the land was cultivated in these strips. The practice can scarcely have arisen through any requirement of tenure. The strips generally contained half an acre. Why was not the virgate of the peasant divided into allotments, say of ten acres each, situate in each of the three great fields, supposing the land to be cultivated on the three field system?

I venture to suggest that the answer may be found in a custom, traces of which may still be observed in Cambridgeshire, and which prevailed, I believe, in other parts of the country.

The land, by skillful management of the plow, was thrown into ridges rising gradually from the sides to the middle, and having deep furrows between the ridges. The traces of these ridges are still called "high backs."

Now the land was brought into this form, as it is supposed on very probable grounds, with a view to drainage, at a period when tile drainage did not exist. Such distance as might be found by experience most suitable for this purpose would, of course, be left between the deep furrows.

The term acre was probably applied to as much land as the Saxon team of eight oxen could plow in a day, and this was found to be two high backs of a furlong in length. This block of land, therefore, became the normal acre. The width of the one strip, including the furrow was about eleven yards, of the two, twenty-two yards, one-tenth of a furlong.

Mr. Eyton has pointed out that the acre was a lineal, as well as a superficial measure, and equal to four poles or twenty-two yards, the width of an

acre when its sides were, according to usual custom, a furlong in length.

This remark may throw some further light on Edward the Confessor's dream, of which Mr. Seebohm has given an interesting account and explanation.

The division of the land into strips would also, no doubt, be convenient in determining the amount of labor due from each ox.

VII.

THE FIRST TAXATION OF LAND.—THE HIDE.

I HAVE already mentioned that the hide of land appears to have been the quantity held sufficient to support a freeman and his family. *Familia* in Bede is rendered *Hida*.* An estate consisting of a hide must have comprised a residence for the owner and the buildings required for the cultivation of the land. It is also clear, from numerous authorities, that a hide contained as much arable as a plow could conveniently cultivate in a year, the Saxons being familiar with the greatest of all the inventions which have been made in agriculture, the application of animal labor to the tillage of the soil. The hide contained also a small quantity of meadow, to provide hay for the oxen of the plow, and it comprised sufficient pasture for the cattle and sheep, which seem always to have formed an important adjunct in English husbandry. *Pastura ad pecuniam villæ*—pasture for the animals of the villa or manor—is the unfailing accompaniment of the arable land or *terra* registered in *Domesday*. There was also, in many cases, *pannage*, or feeding for the swine in the oak woods: the pastures and pannage by no means necessarily adjoining the arable.

The extent of the hide probably varied, in some degree, from one part of the country to another. Mr. Eyton, after a very carefully examination, estimates the average hide in the county of Dorset at 240 acres. Now the virgate, or yard land, contained on an average about twenty-four acres, and was estimated, as I have mentioned, to be as much land as two oxen could plow in a year. The eight oxen of the Saxon plow would therefore suffice for about ninety-six acres. We may suppose, then, that the hide was originally divided, not very unequally, into arable and pasture, the latter tending to predominate. If an estate consisted of many hides, the same proportion of arable to pasture was probably preserved.

We may describe the original hide as an allotment containing arable for one plow, with the appropriate quantity of pasture and meadow.

The first taxation of land in England took place under Ethelred about the year 994, and the land was assessed by the hide. The reason for adopting this system is obvious. The assessors could readily ascertain how many plows were employed in cultivating each estate, and they appear to have usually assessed it accordingly.

It would be unnecessary in most instances to take the pasture into account, because its value might be assumed to be much less than that of the plow land, besides being generally proportionate to it in extent. If

* *Bed. Hist. Ecc.* 3, 24; 4, 13, 16, 19.

the estate did not contain an exact number of hides, the fractions were estimated in virgates and in acres; the virgate, no doubt, like the hide, comprising, not merely the arable, but the appurtenant right of pasture also. There were, as I have mentioned, four virgates of arable to the plow land, each virgate contributing two oxen to the plow. So there were to the hide four complete virgates, comprising arable land and rights of pasture. It is mentioned in the *Rectitudines* that the gebur was provided with six sheep and a cow as well as two oxen.

It was usual for the owner of land to hold a portion—generally about one-half—in hand, or *in dominio*, the remainder being occupied by the villeins, and cottagers with gardens and orchards. As a villein generally occupied a yard of land, we may conclude that there would be regularly two villeins to each hide of land. In such a case, each villein would contribute his two oxen to the plow, while the owner would provide the remaining four.

Some confusion has arisen from the hide being occasionally spoken of as equivalent to the plow-land—a mode of expression which was, I have no doubt, adopted, in consequence of the plow-land being the more valuable part of the hide, and the rest of the hide being regarded merely as an accessory to the plow-land or *carucata*.

Domesday gives the number of hides at which each property was assessed at the death of King Edward the Confessor, and at the date of the survey. It gives also the number of carucates or plow-lands, and these often exceed in number the number of hides. It would appear that the extent of land under the plow at the date of the original valuation had been subsequently increased; and the remark is sometimes added that one or two more carucates could be made.

After a hide had been taken as the unit of taxation, it came to signify, a property which was rated at the value of an average hide; and, accordingly, as Mr. Eyton has shown, the assessment, in many instances, was not based entirely on the extent of the land assessed, but that advantages or disadvantages of situation were also taken into account. A hide at the date of the Domesday survey meant, therefore, land assessed at the value of an average plow-land with its appurtenances of pasture, etc.

VIII.

SAXON LAW OF SUCCESSION TO LAND.

THERE is not, as far as I am aware, any distinct authority respecting the law of succession to land of free tenure among the Anglo-Saxons, in case of intestacy.

It has been conjectured that the custom of Gavelkind, which still subsists in a large part of Kent, was once general throughout the kingdom.

The 71st and 79th laws of Cnut* are sometimes quoted in support of this opinion. Now the 71st law merely directs that the "aeht" shall be divided. This word signifies cattle and swine. That it does not include land appears from the 78th law, which provides that he who flees from the enemy shall forfeit land and aehtan.

* *Ancient Laws and Institutes of England*, edited by Thorpe, vol. i. pp. 412, 420.

It is true that the 79th law directs that, "if a man fall before his lord," then the heirs shall "shift" to the land and aehtan; but the loose and general terms in which the law is expressed would be satisfied, by holding that the aeht are to be divided among the heirs of the movables, the next of kin, the land passing to the heir of the land, whoever he or they might be.

Neither is the theory, that equal succession among sons was the general rule, easily reconcilable with the fact that, in many towns and manors, the youngest son succeeded to the exclusion of his brothers. This custom still exists in a country inhabited by Saxons, in the northern part of Germany, Westphalia. I have before me a project of a law for regulating this course of descent. The custom was besides emphatically termed Borough English, showing that it must have existed in England before the Norman Conquest.

Again, on the vast manor of West Derby, the country between the Ribble and the Mersey (comprising many small manors) which belonged to Edward the Confessor, there were many free tenants, and the customs according to which they held their lands are recorded in *Domesday*. It is said, "Si quis terram patris mortui habere volebat XL. solidos relevabat: qui nolebat et terram et omnem pecuniam patris mortui rex habebat," *Domesday*, vol. ii., 269 b.—"If any one wished to have the land of his deceased father he paid 40*s*. relief," but there is no mention of more than one son succeeding. The holdings were apparently indivisible.

There can be little doubt that the manor, both of the Norman and Saxon days, was not simply a house where the landowner resided, or might reside, but a homestead as well, with the buildings necessary for storing agricultural produce.

The same remark will apply to the owner of a single hide of some 240 acres.

The villein also must have had accommodation for his two beasts of the plow and provisions during the winter, as well as a house or cottage for residence.

Each of these holdings, the manor, the hide, and the virgate, was an agricultural unit, which could not be actually divided without considerable difficulty.

At the present day, the owner of an estate will not readily divide a farm of ordinary extent, as he will hesitate, even if it be too large for a single tenant, in view of the expense which must be incurred in providing another farm-house and other farm-buildings. Now the ancient manor could not be divided without even greater difficulty than a modern farm, and the succession of several children, however equitable, would in numerous instances be highly inconvenient. The difficulty of actually dividing the land, might, it is true, be avoided by a sale and division of the proceeds: but in the times we are considering, few persons would have saved money enough to purchase any considerable property. In the absence of any other plausible theory to account for the prevalence in Kent of the custom which gave the land to all the sons equally, perhaps I may be permitted to conjecture that it may have proceeded from the superior wealth of this county, produced by the stream of foreign commerce

which passed through it—from purchasers of land being readily found, and actual division therefore generally unnecessary.

I am disposed to think, therefore, that in Saxon times, actual division was the exception rather than the rule—that if there were sons, one would generally succeed to the exclusion of the others; the choice of the successor depending, partly on fitness to perform the duties attached to the land, partly on the will of the superior lord: and this opinion is, I think, confirmed, by the most ancient exposition of the English law of succession which we possess, and which is found in the treatise of Glanville; since from his statement it appears, that the rule of descent of non-military lands was, in his time, dependent on ancient custom.*

IX.

EFFECT OF THE NORMAN CONQUEST ON THE DISTRIBUTION OF LAND.

THE statements contained in *Domesday Book* do not, I think, lead us to believe, that the Norman Conquest occasioned any very material effect on the magnitude of landed estates in England. The grants made to the immediate vassals of the Crown were, it is true, in many instances very extensive, but probably did not comprise more manors than were held by the Earls or Ealdormen and other great landowners previously to the battle of Hastings. Mr. Furley in his interesting and learned work on the Weald of Kent, vol. i., p. 233, points out that before the Conquest, there were in that county eleven immediate tenants of the Crown, and after the Conquest there remained the same number, notwithstanding the substitution of Normans for Saxons in the lay fees.

But whether the Norman tenants *in capite* held greater possessions than the Saxon magnates or not, there can be little doubt that the burdens imposed on the great estates were increased after the Conquest.

To insure the safety of the kingdom, for which such scant and unsystematic provision was made by the weak Saxon executive, castles were erected at important strategical points, such as Rochester, Tonbridge, Reigate, Bramber, Clare, etc., as well as on the borders toward Scotland and Wales; castles which became the residences and were probably built at the expense of the great feudal tenants, aided by forced labor; and were garrisoned by their retainers.

Not only was the defense of the kingdom strengthened, and its possession assured, by the erection of fortresses, but the grants made by the Crown were burdened by an obligation on the grantee to furnish, when called upon, a certain number of knights—that is, of armed horsemen, with sufficient attendants and provisions for forty days, during which they were bound to serve. According to the number of knights for whose service the grant was made, it was said to consist of so many knights' fees, and to be held by knight-service.

Those who received grants comprising many manors, retained some of the principal in their own hands, while the rest were granted by them

* Glanville, vii. 3.

to their followers, or remained in possession of the Saxon owners. These grants also were generally subject to the services of knights, proportionate in number to the magnitude of the grant. Some manors were estimated at several knights' fees, some at one knight's fee, and some at a portion of a fee. The Saxon proprietor who retained his land would probably not raise objections to the change of tenure as regarded military service, the principal difference between new and old being that he now held his property on condition of yielding such service to a subject, instead of directly to the state as formerly.

The burdens on landed property independent of military service were also increased. If the land descended to an infant heir, the lord was entitled to the profits during the minority of his tenant, while providing for his maintenance and education, and subject to the right of the widow to one-third of the land for her life. And the lord was also held entitled to dispose of the hand of his ward, whether male or female, in marriage, and to receive any amount which the relations of the other party to the match were willing to pay, in order to secure it. If the ward married without the lord's consent, the lord might obtain, out of the ward's property, the value of the marriage—the amount which it was estimated might have been secured by the lord as the price of his consent.

It seems probable, that these fruits of the feudal tenure were grasped with a strict and vigorous hand from the greater vassals alone. At least the great vassals do not appear to have considered, that the burdens to which they were subjected, received sufficient compensation, through their corresponding rights against those who held of themselves by military service. The establishment of the Court of Wards and Liveries, at the Reformation, must have rendered the collection of the feudal dues of the Crown, from the tenants *in capite*, more certain and rigorous than before.

We may therefore, I think, conclude that the feudal system, as it existed in England, did not favor the growth of the great estates, although the effect of the heavy burdens to which they were regularly subject, may have been, in some cases, compensated through the escheats and forfeitures by which they were occasionally augmented.

In some of the larger manors, there were probably tenants who held of the lord by military service—but this second sub-infeudation was, I think, rare. The socmen, though, it may be, reduced in numbers, remained as tenants of the manor; they were, of course, still free, and still held by some certain service or payments in money or kind, and by the obligation or service of attending the manor court, at stated intervals. These courts do not seem to have been materially interfered with at the Conquest. The possession of such a court continued to be held in estimation, as affording an accession of dignity, as well as a source of profit. And an estate, on which a court could not be held, either through want of free tenants, or absence of prescriptive right, was not considered worthy to be dignified with the name of Manor. In order that an estate might be entitled to the appellation, it must have "sac and soc," words which clearly indicate the Saxon origin of the jurisdiction. The

court, however, obtained a Norman name—that of Court Baron—the court of the lord's men or free tenants.

I am not aware of any reason for supposing that the condition of the peasant class, the actual tillers of the soil, was affected in any sensible degree, by the introduction of feudalism. That system moved above their heads. To intrust serfs with arms was no more a part of the Norman, than of the Saxon constitution.

Among the current errors of political writers and speakers respecting the ancient tenures of land, there is none more common than to represent serfage as a feudal institution; although serfage has notoriously existed in Russia, Egypt, and other countries where feudalism was never established; and although, in countries which became feudal, the introduction of feudalism had been preceded for centuries by the custom of serfage. Serfage was, in fact, a purely agricultural, and feudalism a purely military institution.

X.

NORMAN LAW OF SUCCESSION.

WHATEVER may have been the general law of the country on the subject of succession to land in Saxon times, the rule that the eldest son should succeed to land held by military service, had speedily been settled after the Norman Conquest.

During at least the first century after the Conquest, feudalism in England was a reality. The vassal followed his lord in war. The relation between the two was so intimate, that it could not be dissolved without the consent of both. It originated in the act of homage, constituting a contract, by which the one expressly became the man of the other, of "life and limb and worldly honor;" and which carried with it an implied obligation, on the part of the lord, to protect his man. Hence the vassal could not alienate the land, which was the reward and retainer for his personal services, and enabled him to perform them, without his lord's approval.

The vassal might, however, make a sub-infeudation of part, at least, of his land, and the sub-vassal did not become the vassal of the superior lord; he did homage not to the superior lord, but to the vassal, by whom the land was granted to him. It was a maxim of feudal law, "*vassallus mei vassalli non est meus vassallus.*"

As the vassal could not transfer his land to another, without his lord's consent, so neither could the lord transfer his vassal's services to another, without the consent of the vassal.

It is not surprising that, when the relation between lord and vassal was thus strictly regulated, the right of giving lands by will, which was certainly permitted, as regards some freehold lands, by Saxon law, should have been lost with respect to land held by knight service. The vassal could not be permitted to replace his own services by those of a stranger who might, possibly, be a personal enemy of the lord; and the reciprocal attachment of lord and vassal would also tend to give the descendants of the vassal an incontestable title to succession.

These considerations do not entirely explain the fact that, if the vas-

sal left several sons, he was succeeded by the eldest alone.

That primogeniture was not a necessary consequence of feudalism, we find from one of the earliest treatises on feudal law, the first of the *Libri feudorum* (Titles I. and VIII.) generally annexed to the *Corpus Juris Civilis*, which expressly provides that, on the death of a vassal, the feud shall be divided equally among his sons.

With regard to the origin of primogeniture in England, it should not be forgotten that, as England received the feudal institutions from the Normans, so the Normans had previously adopted them in imitation of the French; who had established feudalism, throughout the greater part of France, in the latter half of the ninth century, not long before the permanent settlement of Normandy under Rollo. Now in France primogeniture has prevailed in the succession of feudal grants, and it is probable therefore, that in the history of that country there are to be found the main causes from which the custom proceeded, and it appears to have been adopted with other feudal institutions by the Normans from the French, and by the English after the Norman invasion, as a part of the body of laws which they accepted almost in its entirety.* In like manner, at rather a later period, Scotland voluntarily embraced feudalism in imitation of England, and also established the rule of primogeniture, and with slight modifications, the other English rules of succession to land.

The inconveniences always attending an actual division of the land would be enhanced, when it was held as a retainer for military services, because the services also would have to be apportioned; and we may conjecture that these difficulties assisted in establishing the custom, which gave to one son the land of his father; and although the eldest might be by no means the fittest to fulfil the duties of a vassal, yet the advantage of having a fixed rule, the probability that when the father died in youth or middle age, the eldest son would be most capable of bearing arms, and the prestige which has always attended primogeniture seem to have been sufficient to recommend that rule in England, as in Normandy and in France, which favored the eldest son, with respect to land held by knight service.

Two centuries after the Conquest we find the law of primogeniture applied to freehold lands, as well those held by socage as by military tenure, with scarcely any exception beyond the bounds of Kent, and certain boroughs, in which equal division and succession of the youngest prevailed respectively. The latter tenure also remained, as regarded the lands of villeins, in many manors, particularly in those of Sussex. Although, however, the actual division of land and services must have always been attended with difficulty, especially in early times, this inconvenience did not prevent, in England, the succession of daughters equally. The succession of females probably formed no part of the most ancient form of feudalism, but was introduced when

* We find that according to the *Etablissements de l'Echiquier de Normandie* (Paris, 1839), p. 9, the eldest son succeeded to the "fief of the hauberk" to the exclusion of his brothers—but the date of this rule is uncertain.

the fee was ceasing to be a retainer, and becoming simply the property of the vassal, subject to certain financial rights of his lord; while at this time, the death of a vassal leaving male issue being an event much more usual, than the death of a vassal leaving only several daughters, the succession of the eldest son had been too firmly established, by custom, to be altered by considerations of equity, when the rule with regard to daughters was settled.

It appears, I think, from these considerations, that the introduction of the feudal system must have had a tendency to preserve large estates, by discouraging alienation *inter vivos*, forbidding alienation by will, and, in some instances, giving to one son lands which, by custom, might have been divisible among several.

Much interesting information on the subject of primogeniture may be found in two essays by C. S. Kenny and P. M. Laurence, Cambridge, 1878, which divided the Yorke prize.

XI.

STRICT ENTAILS—THE STATUTE "DE DONIS CONDITIONALIBUS."

No very remarkable change was made in laws directly affecting land in England, during the two centuries immediately succeeding the Norman Conquest. Magna Carta defined and regulated, without materially altering, the feudal tenure, and promised to freeman, without distinction, the protection of the law against arbitrary proceedings by the Crown. Nor were the villeins passed over with complete neglect; a clause, the 20th chapter of John's charter, provided that if the villein were amerced, his wainage should be saved. The Provisions of Merton, twenty years later than Magna Carta, empowered the owners of manors to appropriate a portion of their waste lands, provided that enough pasture was left for the use of their freehold tenants, but the statute is silent respecting the villeins, though now rising into copyholders.

Great changes however, were in course of preparation. During the long reign of Henry III. the country, on the whole, was prosperous, and increased in wealth. Notwithstanding the loud complaints respecting the exactions of Rome, stately cathedrals of exquisite beauty arose throughout England; and, in her social condition, a new order of men was in course of formation, destined to become a power in the state. Since the seat of the great court for determining private suits, Common Pleas had been rendered stationary by Magna Carta, and had been established in the hall of the Palace at Westminster, many practitioners in that court had become learned in the customs of the realm, and, to a certain extent, acquainted with the laws of Rome. The *servientes ad legem* began to rival in credit the *servientes ad arma*. The tendency to place greater reliance upon law, and to favor those who were engaged in administering it, became manifest in England, and, we may add, about the same time, in France also.

It was in the year 1285, the 13th of Edward I. that the famous statute *De Donis Conditionalibus*, which gave to all owners of freehold land in Eng-

land, the power of strictly entailing it, was passed. It was by no means a solitary enactment like Magna Carta, or the Provisions of Merton, but formed part of the great body of remedial laws passed in the reign of Edward I. which obtained for himself the not wholly inappropriate designation of the English Justinian. No one, I think, can peruse this body of legislation, without being convinced that it was the work of men well versed in the laws as they then existed :—not the result of a sudden effort, but of continuous labor and mature deliberation, and that these laws had for their authors the learned sergeants of Westminster Hall.

There is a class of writers on law, especially on laws relating to land, who attribute various legislative acts to profound political designs, now of the nobles, now of the sovereign , and accordingly allege that the statute *De Donis* was the work of the nobility, intent on increasing the power of their order. But even without recalling the just maxim of Napoleon, that in politics the present alone is regarded, the notion that the law of entail was framed by the peers, with such a political purpose as I have mentioned, is singularly wanting in probability. The barons had not only been discredited, by the failure of their attempt to govern the country, by means of a ministry or committee selected by themselves from their own order, but their power had been crushed, for the time, by Prince Edward at Evesham, where their great military and political leader Simon de Montfort was slain. On the demise of Henry III. seven years afterward Prince Edward, a cautious man, felt his power so assured, that he did not hasten to England in order to take possession of the Crown, but spent two years in Italy and France, on his homeward journey from the Holy Land. After his return, and before the thirteenth year of his reign, when the statute *De Donis* was passed, he had subdued Llewellyn, and permanently annexed North Wales to the English Crown. Yet it was by this monarch and at this time according to the opinion I have mentioned, that the statute *De Donis* was passed at the instance of the nobility, in order to depress the power of the Crown , and we are asked to believe that the King, a man of wide experience and undoubted sagacity, was outwitted or overawed by an illiterate and disheartened body of barons.

If we look at the preamble of the statute, and the preamble of a statute is generally the best key to the intention of its authors, we shall see it stated that their object was to prevent what must, I think, be admitted to have been a grievance.

Suppose that a man, on the marriage of his daughter, gave a portion of his land to her husband and the heirs of his body by the wife. Then if the wife had issue, the husband might as the law stood before the statute was passed, alienate the land leaving the issue unprovided for.

If no alienation took place, the land on the death of the donee would descend to the issue of the marriage like an ordinary estate in fee simple. But, if the donee died without leaving issue, or if, after his decease, his is-

sue failed, and the land had not been alienated, the donor or his heir would have the land again.

If, on the other hand, after issue born the donee alienated the land, he, as we have seen, disinherited his heirs, and also deprived the donor of his chance of reversion. This as the statute says, "to the giver seemeth hard," and it therefore enacted that, for the future, the will of the giver should be observed according to the form of the gift, and that they, to whom the land was given, should have no power to alienate it. It seems to me that the hardship thus referred to in the preamble of the statute *De Donis*, was sufficiently real to account for its enactment, without attributing any deep political designs to its authors.

XII.

EFFECTS OF STRICT ENTAILS.

THE evils arising from strict entails, vividly depicted by modern writers, appear to have escaped the observation of contemporaries. They do not allege that agriculture retrograded, or that the condition of the rural population deteriorated, under the operation of the statute *De Donis*.

It was during the period in which the statute was in full force, that, in the great forest of the Weald (according to Mr. Furley, the historian of the Weald of Kent) extensive clearings were made, and an industrious agricultural population took the place of the herds of swine which, from the most remote ages, had been the principal inhabitants.

Serfdom was rapidly disappearing before the advance of wealth and prosperity. The laborers began to claim freedom as a right, and strove, not always without success, to break the antiquated links, which still bound some of their number to the soil.

With reference to the general state of England in the fourteenth century, during the whole of which the statute *De Donis* remained in almost entirely unimpaired force, Lord Macaulay says:—

"Every yeoman from Kent to Northumberland valued himself as one of a race born to victory and dominion, and looked down with scorn on the nation before which his ancestors had trembled. . . . France had no infantry that could face the English bows and bills. . . Nor were the arts of peace neglected by our fathers during this stirring period. While France was wasted by war, until she at length found in her own desolation a miserable defense against invaders, the English gathered in their harvests, adorned their cities, pleaded, traded, and studied in security."—Macaulay's *History of England*, i. p. 18.

The effects of the statute *De Donis* upon the distribution of land, have, I think, been greatly exaggerated. That very large estates existed in England long before the statute was passed has, in the preceding pages, been abundantly demonstrated. Its effects in preventing division have been dwelt upon, while its operation in checking accumulation has been almost wholly overlooked. The main causes of accumulation in ancient, as

in modern times will be found in the marriage of heirs with heiresses, and the investment in land of fortunes amassed by commerce: the mere landowner, whether his estate was entailed or not, being rarely in a condition to become a purchaser.

Now the statute in many instances opposed an effectual bar to accumulation by either of these modes. If land on being entailed were given, as it often, perhaps generally, was given, to a man and the heirs male of his body, it could not pass, so long as a male descendant existed, to any female, and so long therefore, the union by marriage of such an estate with another also entailed on male issue became, while such issue survived, impossible. Just as two kingdoms, in which the Salic Law prevails, can never become consolidated by marriage. In the same way the rich citizen of London, of Hull, or Bristol, bent upon purchasing land enough for the founder of a county family, must often have been checked in the attempt, by coming upon some Naboth's vineyard, protected from annexation by the statute *De Donis*.

For the origin of large estate we must therefore, as has already been shown, look to a period long anterior to this statute.

That the statute did produce evils and inconveniences cannot be doubted, since, otherwise, the judges of the Common Pleas would not have sanctioned the transparent collusion, by which the heir in tail was deprived of his legal right. What these evils and inconveniences were, we may learn from Lord Coke, whose statements rest upon recorded facts, and not like the assertions of many modern writers, on preconceived opinions.

Lord Coke observes, "When all estates were fee simple, then were purchasers sure of their purchases, farmers of their leases, creditors of their debts, the kings and lords had their escheats, forfeitures, ward-ships and other profits of their seignories: and for this and other like cases, by the wisdom of the Common Law, all estates of inheritance were fee simple; and what contentions and mischiefs have crept into the quiet of the law by these fettered inheritances, daily experience teaches us."—*Co. Lit.* 19*b*.

The danger to purchasers with which Lord Coke heads his indictment against entails, appears to have arisen in manner such as this. The descent even of an unentailed estate from father to son, for some generations, was, in his day, of no rare occurrence. The purchaser of an estate which had so descended, might believe that he was buying a fee simple, while in fact, an ancient deed entailing the land in the course of descent, which had already taken place, had been executed and forgotten. On the existence of the deed being discovered the heir in tail of the vendor might insist, that in compliance with the statute, the will of the donors "according to the form of the gift," should be observed, and the purchaser would be without remedy, except perhaps under a clause of "warranty." Creditors by securities binding the heir might be defeated in the same manner, and the Crown and other lords might be disappointed, in rare cases, of forfeiture and escheats for treason or felony.

That these were the real evils which arose from the statute, and that it did

not produce the pernicious consequences either to the nobility, the esquires or the other freeholders of England which are frequently attributed to it, we have thus given reason to believe by the testimony of Lord Coke and Lord Macaulay.

Scotland had no statute corresponding to our statute *De Donis*, but attempts were made in that country to establish strict entails by clauses of "irritancy and resolution," purporting to make void alienation, but the validity of such clauses had by no means been admitted before the act of 1685, c. 22, which expressly recognizes their authority, and the absolute right of heirs to succeed according to the disposition of the entailer, *Erskine Inst.*, Book iii. Tit. viii. 25, and this law with no very important modifications remained in force until 1848, when by 11 and 12 Vic., c. 36, § 1, tenant in tail in possession was empowered to acquire the fee simple, if born after the deed of entail was executed, at his own discretion, or if born before the execution, with the consent of the next heir of entail.

It is worthy of note, that the period during which the law permitted the establishment of strict entails in Scotland, coincides with that during which Scottish agriculture underwent the greatest improvements.

XIII.

RELAXATION OF STRICT ENTAILS—COMMON RECOVERIES.

I HAVE already stated that the statute *De Donis* remained in nearly unimpaired force during the fourteenth century. Even if the owner of entailed land sold it, with a warranty that he held in fee simple, his heir in tail might claim the land by force of the entail, notwithstanding that the obligation of the warranty would, according to the ordinary rules of law, by descending upon him, preclude him from asserting his right. This was the case of a lineal warranty; but if the warranty were collateral, if the warranty did not, and could not, descend from or through the ancestor from whom the entailed land descended, then the heir in tail was barred.

The cases in which a collateral warranty existed must, however, have been rare, and owners of entailed lands, with the view of obtaining complete control over them, had recourse to this expedient. The owner instructed a friend to bring an action against himself, in due form, in the Court of Common Pleas, seeking that the right to the land might be adjudged to the complainant. Simply to have allowed judgment to go by default, a mere *cessio in jure*, would not have bound the heir of the owner. The owner therefore alleged that some other person had warranted the title of the land to him (the owner), and that person was admitted to defend the action in place of the owner, according to the usual course of law, as the person on whom the loss would ultimately fall, if the plaintiff succeeded in his suit. At the hearing the alleged warrantor made default, and judgment was given that the plaintiff should recover the land in dispute, and the original defendant should have an equivalent out of the lands of the warrantor.

If the defendant in the collusive

action died, and his heir brought his action founded on the gift in tail, he was met by the objection, that his ancestor had received in equivalent for the land entailed, which equivalent must have descended to the present claimant, as heir to his ancestor.

It is most probable that this decision first took place in a hostile suit, in which the heir in tail was really in possession of the equivalent; and that some astute lawyer, seeing that the court assumed, without proof, that the heir had inherited the equivalent for which his ancestor had obtained judgment, perceived that a door was open for escaping from the trammels of an entail, by means of a pretended warranty and judgment thereupon.

Taltarum's Case, decided by the Court of Common Pleas, in the 12 Ed. IV., 1472, is considered to have established the efficiency of such a proceeding in barring an estate tail against the heir. The language of the pleadings,* however, leads me to believe that the experiment was not a novel one, and that the defendant, claiming under the entail, relied on some facts which distinguished his case from the simple one I have described, rather than on the fact of the recovery being feigned and collusive.

As, however, this latter defense was raised by the pleadings, the judgment in favor of the plaintiff showed that the defense was untenable, and thus established the validity of a recovery of entailed land, where the ancestor of the plaintiff had also obtained a judgment for recovery of an equivalent against a warrantor, notwithstanding that the whole proceeding was notoriously feigned and collusive. It is probable that the Court was influenced, among other considerations, by the fear of shaking titles, which depended on admitting the validity of such recoveries.

The Court was also in all probability willing to favor a proceeding for converting an estate tail into an estate in fee simple, for the sake of diminishing the evils which were attendant on the former, and were afterward pointed out by Lord Coke, as I have already mentioned.

A purchaser for a valuable consideration is said to be a favorite in a Court of Equity: he is in fact a favorite in every Court of Justice. That a man, who has given convincing proof of his good faith by paying his money, in order to obtain some stipulated advantage, has a strong claim to be protected in his purchases is unquestionable, and every court would lean in his favor, when the contest lies between him and a person claiming under an ancient gift, of which the purchaser has had no notice.

I do not, however, discover any ground, for attributing to the judges of the Common Pleas, the opinions expressed by modern writers, with regard to the injurious effects of entails on the cultivation of the soil, and the well-being of the people.

* See Digby's *History of the Law of Real Property*, p. 220, for a translation of the pleadings.

XIV.

HENRY VII. AND HIS NOBLES—THE STATUTE OF FINES.

THE Statute of Fines, 4 Henry VII., c. 24 (1487), was made about fifteen years after Taltarum's case had established the right of the tenant in possession of entailed land to dispose of it absolutely.

This statute has afforded occasion of comment to those who discover deep political designs in the authors of every change in the law relating to land.

They allege that Henry VII., being a politic and sagacious prince, obtained the enactment with the view of depressing the power of his nobility; although the objections to such a theory are neither few nor inconsiderable.

The first objection is that the statute was really not the work of Henry VII. or his advisers, but of his predecessor Richard III., a prince whose hands were too full of pressing business, during his short reign, to leave him leisure for plans which could ripen, if at all, only in the distant future. The statute of Henry VII. differs in no essential particular from that of 1 Richard III., c. 7. The statute of Henry VII. merely relaxes the provisions for ensuring the publicity of a fine contained in the earlier statute.

There is another objection scarcely less fatal than the last to the assumption of a deep political design in the framers of the statute, that the design, if it existed, was so clumsily carried into effect by the words of the statute, that it became necessary about fifty years afterward to pass another statute, the 32 Henry VIII., c. 36 (1540), to declare that the 4 Henry VII. applied to entailed estates at all. The 4th of Henry VII. was a general statute intended to restore (with modifications) the ancient rule of law, which made a fine or compromise of a suit concerning land in the King's Court, a bar to the suit of any one who did not claim the land comprised in the fine, within a certain period after the fine taking place. There was a saving clause in the statute of Henry VII., and most persons now reading it would, I think, conclude that the right of an heir in tail was within the saving clause, and therefore not intended to be affected by the general enactment.

There is also the third objection, that the law had already admitted the right of the tenant in tail in possession to acquire an absolute right to his land, by means of a common recovery, and further, that the common recovery was more effectual than the fine, because the former barred not merely the issue in tail, but all subsequent estates also, including that of the reversioner; while the Statute of Fines, 4 Henry VII., even after it had been explained by the statute of Henry VIII., barred the issue only, and left claimants whose estates were to take effect, after failure of issue of the tenant in tail, to assert their rights whenever they might accrue. It is true that a fine might be resorted to by tenant in tail in remainder, while a recovery could be effectively suffered by tenant in tail in possession only.

XV.

STRICT SETTLEMENTS.

THE decision of the Court of Common Pleas in the year 1472, established, as I have pointed out, that any person entitled to the possession of entailed land could become, at his pleasure, the absolute owner, by means of a friendly suit. The decision applied no less to the lands of peers than to those of commoners. Indeed, notwithstanding the rooted popular belief that estates of peers are, in some manner, connected with their titles, in order that their dignity may be maintained, the law has recognized no such distinction. Where, however, the reversion of landed property after the extinction of issue on whom the land was entailed, belonged to the Crown, the entail could not be barred by a common recovery, 34 and 35 Hen. VIII. c. 20, s. 2. Estates so circumstanced were and are not numerous; and as to the great mass of landed property in England, the power of strictly entailing it, conferred by the Statute de Donis, ceased in the fifteenth century, and has never since been revived. A few estates given for eminent public services, such as Woodstock and Strathfieldsaye, have, it is true, been strictly entailed, but this has been effected by special Acts of Parliament, in contravention of the general law of the land.

Soon after strict entails had thus been virtually abolished, the practice of settling lands, for the limited period which the rules of law permitted, was introduced. The owner of an estate desirous, for example, of making provision, on his son's marriage, for the son and his family, instead of granting the land to the son and the heirs male of the son's body, would give it to the son for his life only, in order to obviate the possibility of the son obtaining the power, through a recovery, of alienating the land absolutely. And the donor would provide by the settlement that, after the son's decease, the land should go to the son's eldest son and the heirs of his body. And in case of failure of the eldest son's issue, that the land should pass to the second son and the heirs of his body, with similar provisions for other sons according to seniority, or in any other order, and with any omissions which the settler might think proper to make. The security obtained by such a settlement that the land would long remain in the same family, fell far short of that which could be gained before the validity of recoveries to bar an estate tail had been established, for if the son to whom the first estate in tail had been given (generally, of course, the eldest) attained twenty-one, then with the consent of his father, or of his own authority supposing the father to have died, a recovery might be suffered, the estate sold, and the other subsequent interests given by the settlement entirely defeated. As a son is usually born within three or four years after a marriage, a settlement on marriage generally becomes liable to be set aside within some five-and-twenty years after its execution. In the rare case of the eldest son marrying and dying in infancy, and leaving an infant heir, the liability would, no doubt, be deferred till that heir attained twenty-one. Marriage settlements of land have remained subject to the liabilities I have mentioned ever since their in-

troduction, and so remain at the present day.

We sometimes hear it said that the "law of settlement" should be abolished, as if there were some law in existence which favored settlements of land. No such law can, however, be pointed out, although there are rules of law, by which the power of making settlements is restrained within the narrow limits which I have mentioned, and which will be more fully stated below.

It cannot have been long after the liability of estates tail to alienation had been established, when settlements, nearly in the form I have explained and now in use, were introduced. The settlement, the provisions of which were the subject of litigation in Chudleigh's case (1 Co. Rep. 113) was made in the 3d and 4th Ph. and Mary (1556), and contained limitations of the nature I have explained, and there is no reason for holding that this was by any means the first settlement of the kind. A little research would, I believe, bring earlier instances to light. Settlements of land such as I have described, strict settlements as they are called, possessed manifest advantages over the grants of estates tail which they had superseded. No provision for younger children was compatible with the estate tail, unless we admit that the right of a widow to dower, the right, that is, to one-third of the land for her life, frequently, no doubt, applied to their support, could be so considered. In addition to provision for younger children a settlement can be moulded entirely at the pleasure of the settler; it may prefer a younger son to an elder, a daughter to a son, it may give to younger children any part or the whole of the estate. In short, the law, in accordance with the genius of the English people, leaves the settler absolutely unfettered with regard to the disposition of his property; restraining him only by forbidding provisions, which would give an interest in the property to an unborn person, if that person would not necessarily take the interest during the life of a person in existence at the time of the settlement, or within a period of twenty-one years and a few months from the death of such person. This is "the rule against perpetuities" to which the Courts have strictly adhered, and which applies equally to land and to personal property. The ordinary strict settlement of land, as will be seen from the example I have given, by no means takes advantage of the utmost limits of the law.

XVI.

EFFECT OF STRICT SETTLEMENTS OF LAND—MR. THOROLD ROGERS.

In a valuable work on agriculture and prices in the middle ages, the following impassioned and eloquent passage occurs:—"No English laborer in his most sanguine dreams has the vista of occupying, still less of possessing, land. He cannot rise in his calling. He cannot cherish any ambition, and he is, in consequence, dull and brutish, reckless and stupid.

"We owe the fact that the great English nation is tenant at will to a few thousand landowners to that device of evil times, a strict settlement. We are informed that the machinery

which has gradually changed the whole character of the rural population of England, was invented by the subtlety of two lawyers of the Restoration, Palmer and Bridgman. As there have been men whose genius has bestowed lasting benefits on mankind, so there have been, from time to time, exhibitions of perverse intellectual activity, whose malignant influence has inflicted permanent evils. It may be that the mischief is too widespread for remedial measures. But no Englishman who has the courage to forecast the destinies of his country can doubt that its greatest danger lies in the present alienation of the people from the soil, and in the future exodus of a discontented peasantry." *

Although well accustomed to the somewhat exaggerated terms which often characterize attacks on the English law of real property, I had considerable difficulty in discovering the particular mischief floating in the mind of the author, against which the above pathetic passage was directed.

It is well known that strict settlements of land were, as I have shown above, introduced more than a century before the Restoration, and could not, therefore, have been, as supposed by the writer, the invention of lawyers of that period; and as the evil results which moved his indignation manifested themselves, according to his statement, only through the malignant influence of such lawyers, it cannot be supposed that strict settlements produced these evils. As to the mode in which strict settlements prevented the laborer from obtaining land (the effect which the author attributes to them), he is entirely silent. He simply assumes the fact. Does he wish it to be understood that the laborer could not obtain land, because there was no land in the market in consequence of the introduction of settlements? But settlements still exist, and yet it is notorious that abundance of land is always to be purchased, at a price which does not exceed what may be called the natural level, the price of Government securities yielding the same annual income. Nor can it, I believe, be shown that it was formerly more difficult to purchase land than it is at present. The delusion that "the English nation is tenant at will to a few thousand landowners" was dispelled by Lord Derby's *Domesday Book*, showing that their number is about a million.

The key to the passage I have quoted will, I think, be found in the second volume of Blackstone's *Commentaries*, p. 165, in Kerr, third edition.

Speaking of strict settlements of land in the form which they first assumed, Blackstone says: "In these cases, therefore, it was necessary to have trustees appointed to preserve the contingent remainders" (the estates granted to the first and other sons in the example I have given), "in whom there was vested an estate in remainder for the life of the tenant for life, to commence when his estate determined. If, therefore, his estate for life determined otherwise than by his death, the estate of the trustees for the term of his natural life took effect, and became a particular estate in possession, sufficient to support the remainders depending in contingency. This method is said to have been in-

* *History of Agriculture and Prices in England*, by James E. Thorold Rogers, M.A. Oxford, vol. i. p. 693.

vented by Sir Orlando Bridgman, Sir Geoffrey Palmer, and other eminent counsel, who betook themselves to conveyancing during the time of the civil wars, in order to secure in family settlements a provision for the future children of an intended marriage, who, before, were usually left to the mercy of a particular tenant for life; and when, after the Restoration, those gentlemen came to fill the first offices of the law, they supported their invention within reasonable and proper bounds, and introduced it into general use."

It appears, therefore, that Bridgman and Palmer merely introduced a clause into some strict settlements, making them somewhat more strict than they otherwise would have been, and that these perversely intellectual lawyers were far removed from being the inventors of strict settlements.

I propose to consider in the next chapter whether the invention of trustees to preserve contingent remainders can have produced the disastrous effects attributed to the perverse ingenuity of Palmer and Bridgman by Professor Rogers.

XVII.

TRUSTEES TO PRESERVE CONTINGENT REMAINDERS.

EVERY one conversant with the working of settlements is aware, that the introduction of trustees to preserve contingent remainders can have had any effect in rare and exceptional instances only. But the vast importance attached by so able and learned a writer as Mr. Rogers to the change in the practice of conveyances, which took place at the Restoration, makes it desirable, that the nature of this change and the extent of its operation should be clearly and explicitly stated.

When land was given to one for life, with remainder after his decease to his sons and their issue successively in the usual form, the interests given to the sons were, previously to the birth of a son, said to be contingent, because they could have no immediate effect, in consequence of there then being no one to take them. In such circumstances it was possible, that the father, who had the life interest, might acquire, by purchase or descent, the absolute reversionary right to the land, or reversion in fee simple, as it is termed, expectant on the determination or failure of the intermediate interests given to his children and the heirs of their bodies. In such a case, if no son had been born or was living, there would be no actual or vested interest, no interest which had an existing owner, intervening between the life interest given by the settlement and the ultimate reversion afterward acquired by the owner of the life interest. And it is a rule of law, adopted with a view to simplification, that if the same person has two interests in the same land, one to commence when the other terminates, and the second in time is of a nature as high as the first or superior to it, then the two will coalesce, the first being merged or drowned in the second, the commencement of which will of course be accelerated. The unborn children of a marriage, upon the celebration of which a strict settlement of land had been made, were therefore liable to

be deprived of the benefit intended for them, if no issue entitled under the settlement were in existence, and the husband, the tenant for life, acquired the ultimate property, the reversion or remainder in fee of the land, when the life estate would be merged in the fee; and although a child might afterward come into existence, who would have been entitled to an intermediate interest under the settlement if no merger had taken place, the law would not undo, on his account, what it had already done, but would treat the interest of the child as non-existent. This is the main, if not the only chance of a settled estate becoming alienable, which is guarded against by the invention of Palmer and Bridgman.

Now in the first place the cases would be few in which the husband could acquire, before there was a son issue of the marriage, the remainder expectant on the determination of the provision for his children and their descendants; and the cases must have been fewer still in which an English gentleman, while any hope of issue remained, would take advantage of a legal technicality, for the sake of depriving his own progeny of the benefits provided for them by a solemn compact to which he had, as was usually the case, been himself a party, or under which, if not a party to it, he had taken a substantial benefit.

But not only did these difficulties stand in the way of defeating a strict settlement, but the danger of its being thus set aside might be guarded against, even before the days of Bridgman and Palmer, by placing the property in the hands of trustees. To suppose, therefore, that the introduction of a device to prevent contingent remainders from the danger of being thus defeated—a danger which, as we have seen, could exist in rare instances only—produced the deterioration in the position of the English laborer alleged to have taken place by Mr. Rogers, appears to me a conclusion for which even a show of probability is entirely wanting; and that if the English laborer has indeed, since the Restoration, as Professor Rogers asserts, become "brutish, reckless, and stupid,"—an assertion, however, which I venture to controvert—the cause must be sought elsewhere than in the invention of strict settlements of land, or of trustees to preserve contingent remainders.

XVIII.

POWERS OF SALE.

THE invention of trustees to preserve contingent remainders was followed by the introduction into settlements of provisions, which enabled trustees to sell the estate (subject generally to the consent of the tenant for life), and to invest the moneys arising from the sale in the purchase of other lands, to be settled with limitations the same as those with which the estate sold had been settled. Such powers were found convenient, especially where some circumstance had occurred rendering a settled estate less eligible for residence, or had increased its value as a site for building. These powers, however, occasionally favored accumulation. Before they were employed, the settlement of an estate offered a barrier, for some time at least, against its annexation to a

neighboring property, although, of course, not so durable a barrier as a strict entail. If settled estates could be sold under a power, a rich neighbor, by a tempting offer, might induce the trustees to sell, with the view of investing the purchase-money in another property producing perhaps a larger income.

The legislature has by various statutes, and particularly by Lord Cairns's Act (Settled Lands Act, 1882), 45 and 46 Vic. c. 38, much increased the facility for selling settled estates. The tenant for life can now himself, without the consent of trustees, absolutely dispose of the property, with the exception of the principal mansion and its demesne, which cannot be sold without the consent of the trustees of the settlement, or order of the court. It is provided that the moneys to arise from a sale of settled land shall be paid into court, or to the trustees of the settlement, and invested in land, government stock, or other securities in which trustees are authorized to invest moneys, or railway debentures, upon the trusts and provisions of the settlement.

Provision is made for the application of capital moneys arising from the sale of part of the settled lands in improvements sanctioned by the Land Commissioners; and the tenant for life is empowered to grant agricultural leases for twenty-one years, mining leases for sixty, and building leases for ninety-nine years.

An objection often urged against settlements of land, that a settled estate cannot be dealt with advantageously, through the interest of the possessor being limited in duration, appears to be entirely removed by these provisions, and it is difficult to see how they could be extended, without abolishing settlements of land altogether, and forbidding landowners to exercise the right of being prudent and making provision for their families—a right which is conceded to all other classes of society.

XIX.

INCLOSURE OF WASTE LANDS.—MR. JOHN WALTER—FORMATION OF A PEASANT PROPRIETARY.

A NOT inconsiderable alteration in the distribution of land in England took place at the end of the last and commencement of the present century, through the operation of inclosures. Under the sanction of Parliament, waste lands were divided among those who had rights of common over them, in proportion to the estimated value of those rights, and the area of cultivated land was thus considerably increased.

Some interesting statistics respecting inclosures are given in a pamphlet entitled "*A Letter to the Electors of Berkshire*, by John Walter, Esq., 1839," from which it appears that, while the average number of Inclosure Acts from 1783 to 1793 was about thirty annually, the annual average rose to ninety from 1793 to the close of the war in 1815.

The inclosure of waste lands does not appear to have produced the improvement in the condition of the agricultural laborers which some economists expected as the consequence of the measure. On the contrary, as Mr. Walter states on the authority of

Parliamentary Returns, the amounts annually expended on the relief of the poor rose from about two millions sterling in 1793, to four millions in 1803, and more than six millions at the end of the war in 1815.

The conclusion drawn by Mr. Walter from these statistics, that the inclosure of waste lands was injurious to the poorer commoners, is confirmed by the instance of at least one proposed inclosure, that of Bucklebury, by figures which show that a cottager benefited from uninclosed common land, in the article of fuel, to the value of 2*l.* 12*s.* annually, and in pasturage of a cow and other advantages, to the amount of more than 8*l.* a year, while the value of the allotment, which he was to receive in exchange, amounted to 2*l.* per annum only. It is not surprising that, with these facts before them, the House of Commons threw out the Bucklebury Inclosure Bill.

It is, however, plain that a large part of the increase in the amount expended on the poor is attributable to the same cause as that which occasioned the increase in inclosures, namely, the advance in the price of wheat which took place during the war. The poor-rates were swelled because wheaten bread entered largely into the consumption of the poor, and the high price of wheat stimulated inclosure, because when wheat was at from 50*s.* to 100*s.* and upward a quarter, it could be cultivated with profit even on inferior lands.

It may well be doubted, however, whether this conversion of pasturage into tillage has been of permanent advantage to the country, and whether, independently of the interests of the poor, it would not have been well that the wastes should have remained in their original condition of pasture land.

One of the disadvantages attending inclosures was, according to Mr. Walter, that the recipients of small allotments were sometimes obliged to sell them, in order to meet their quotas of the expense attendant on procuring the Act. And this brings us in face of the great difficulty which besets small proprietors of land. Bad seasons inevitably come, when the produce is insufficient for the maintenance of the owner. He is compelled to seek an advance on the security of his land, and obtains it, not infrequently, on exorbitant terms. Favorable seasons seldom enable him to do more than pay the interest on the debt he has contracted; and one, two, or three successive bad harvests may produce foreclosure and ruin. The same cry comes from the Ganges and the Nile; the ryot and the fellah are in the grasp of the usurer. Legislation may mitigate, but cannot extirpate, the evil: for it lies in the very nature of things. Even the French peasantry, economical as they are and inured to hardship, suffer grievously from the same cause: its effects in their case being, no doubt, exaggerated by the law of succession, which tends to the perpetual subdivision of the land, and throws ever-increasing difficulties in the way of profitable cultivation. Meanwhile, agriculture in France shows little, if any, sign of improvement, there is no emigration, and yet the population, if not diminishing, is almost stationary.

The difficulties, which beset schemes for the establishment of permanent peasant proprietors, render it

desirable to consider attentively those measures which have been found, in practice, beneficial to the agricultural laborers.

Experience has shown that small allotments, let at moderate rents, can be cultivated by agricultural laborers with advantage to themselves, and without interfering materially with their ordinary vocation. If this system were generally adopted, and in exceptionally bad years, attended with a reduction or remission of rent, the condition of the laborer would be raised, and the owner or farmer of the land would probably find, that the sacrifices, which he might occasionally be called upon to make, would be compensated, by a reduction of poor rates, and an improvement in the moral qualities of his laborers.

This plan might be supplemented on considerable estates, by the formation of small farms, for the occupation of the laborers who showed most intelligence and energy in the cultivation of their allotments. Their rise in the social scale might be slow, but it would probably be more lasting than the sudden elevation of a laborer converted, without previous preparation, into a proprietor, who would be exposed to the strong temptation of mortgaging or selling his land.

PART SECOND.

I.

AMENDMENT OF LAW OF PRIMOGENITURE.

It will be evident, I think, from the preceding statements, that the English "Land Laws" are not justly chargeable with the faults usually urged against them by advanced politicians, whose opinions upon the subject appear to be grounded, for the most part, on hasty assumptions. It cannot however be denied, that, in two respects at least, the English system of land tenure loudly demands amendment.

The Law of Primogeniture, although it operates but rarely, contravenes, in many instances, the wish of an intestate. The owner of a landed estate is, no doubt, usually desirous that it shall continue in his name and family. This may be condemned as a weakness by philosophers; but, like the desire of posthumous fame, it is frequently attended with beneficial results. Now, the owner, although opposed to the sale or division of his real estate, would, for the most part, deprecate no less strongly than sale or division, the exclusion of all members of his family except an eldest son, from any interest in his freehold property. In old times the widow could not be deprived of her dower, a life interest in one-third of the lands, held in fee-simple or fee-tail, of her husband, without her own consent, and the cumbrous procedure in the Court

of Common Pleas called a fine; but as this state of the law was found inconvenient, in case it became desirable to sell the land during the joint lives of the husband and wife, conveyancers introduced a provision into purchase deeds, which had the effect of depriving the wife of her right to dower out of the purchased land; and they appear to have continued a similar practice, although the Dower Act of 1834 rendered it wholly unnecessary, because the sale of the land by the husband was, by virtue of the Act, sufficient to displace the right of the wife; and thus the provision which the law made for the widow, and which, of course, often became a temporary provision for younger children also, was needlessly swept away. So that, on an intestacy taking place, the eldest son generally excludes, not only the other children, but the widow also, from all interest whatever in the freehold property of his father, if the father has been the purchaser; although if he has inherited it, only the younger children are entirely excluded.

The present state of things is, therefore, even more objectionable than that which existed under the feudal law, when, as I have before mentioned, the third part of the land, which the widow enjoyed for her life, often must have afforded some support for younger children, as well as for herself.

It has often been pointed out as an excellence of the Statute for the Distribution of Intestates' Estates, that it makes for an intestate such a disposition of his personal property, as, in ordinary cases, a reasonable man would make for himself. Does it transcend the wisdom of Parliament to do the like with regard to freehold property? Why should it not preserve the right of the eldest son to take the land as heir to his father, and, at the same time, charge the land with a sum of money to be divisible, like the personal estate of the father, between the widow and the younger children or their issue, the proportion of the amount so distributable to the value of the land, varying according to the number of claimants? Such a law would give the eldest son a fair opportunity of retaining the land, without doing manifest injustice to other members of the family. It would remove a palpable grievance, with as little alteration as possible in the existing law, while avoiding the risk of encountering the evils which result from the constant subdivision of land.

II.

PROPOSED SYSTEM OF REGISTRATION.

There is another improvement in our land system which is much more urgently required than the amendment of the Law of Primogeniture. I refer to the establishment of Registers of deeds and wills relating to land.

The efforts of the legislature in this direction have been singularly unsuccessful—more unsuccessful, perhaps, than its other attempts to improve the laws relating to land.

Registers were established in the earlier part of the last century for Yorkshire and Middlesex, and two Acts for introducing a General Register have been passed in the present reign. The earlier attempts pro-

duced but slight advantage through doing too little, the later still slighter through endeavoring to do too much.

It is essential to a good system of registration that an intending purchaser or mortgagee should be able to ascertain, from an inspection of the register, what documents there are in existence which affect the title to the land. Now Lord Hardwick decided * that a purchaser of land in Middlesex, having notice of a document affecting the land, was bound by it, although the document had not been registered according to the Middlesex Register Act; and a purchaser was thus rendered liable to be deprived of his purchase, through forgetfulness or some slight inadvertence on the part of himself or his agent. Lord Hardwick has been blamed for this decision, which went far to destroy the utility of the registers of Middlesex and Yorkshire.† The censure was, however, undeserved, as the decision was in accordance with the intention of the Act, as disclosed by the preamble.

As these Acts are acknowledged to be defective in allowing a purchaser to be affected by an unregistered document, I suggest that the defect should be removed, and an efficient system of registration made general throughout England.

I venture to propose that any one in possession of land, for a freehold estate, or leasehold estate of twenty-one years or upward, should be entitled to have the land entered on the Register, upon paying the expense of surveying the boundaries, by an official surveyor; that the boundaries should be marked on a copy of the ordnance map, so that by inspection, it might at once be ascertained whether a property had been registered or not.

When land had thus been registered, no purchaser or mortgagee should be affected by any dealing with the land, subsequent to the registration, which did not appear on the register, and further, every one dealing with the land should be considered as having notice of all that appeared on the register, whether he took the trouble of inspecting it or not.

For the purpose of registration a book might be appropriated to each registered property, so that by turning to that book, it might at once be known, with certainty, who had obtained any right in the property since the registration took place.

A claim as heir should be entered on the register, and after a certain period from the death of the owner, a *bonâ fide* purchaser, from one whose claim as heir has been so entered on the register, should not be affected by the claim of any person as heir or as devisee not registered previously to the purchase.

A will affecting the land should be entered on the register, and after a certain period from the decease of the testator, a *bonâ fide* purchaser from a devisee under such will, should not be affected by any will or claim as heir not previously registered.

The registration of any document or claim would not give to the document or claim itself any greater validity than it possessed before registration; the registration would simply prevent the validity of the document or claim (supposing a purchase or

* In Le Neve *v.* Le Neve, Amb. 436.

† The Yorkshire Acts have been amended by 47 & 48 Vict. c. 54.

mortgage to have taken place on the faith of it) from being affected by documents or claims not previously registered, or by subsequent transactions.

If a registered property were divided, a new book referring to the old one should be appropriated to each portion. If several registered properties were consolidated, only one new book would be required for the whole, the new one referring to the books relating to the separate properties.

The map on which the registered properties were delineated would form the key and index to the volumes of registration; each property would receive a number, and this number would constitute a sufficient description of the property in conveyances, mortgages, etc.

It seems to me clear, that after the lapse of a few years, through the operation of the Statute of Limitations, an indefeasible title would be obtained under such a system of registration, without the expense and danger of an official investigation of titles, and that equitable rights would, as well as legal rights, be perfectly protected.

In order to preserve the facilities which land owners now enjoy, of creating a security by the deposit of title-deeds, I would propose that any one, who appears by the register to be entitled to an interest in the land, should, on application, be furnished with a certificate that he appears by the register to be entitled to such interest, and the fact of the certificate being granted should be entered on the register. After this, any one dealing with the same interest should be held bound by any right secured by the deposit of the certificate. It would, therefore, in order to deal safely with the interest, be necessary that the certificate should be produced and handed over to a purchaser or mortgagee, or entered on the register as surrendered.

In the subsequent chapters will be found a short examination of the two modern Registration Acts.

III.

MODERN REGISTRATION ACTS.

25 & 26 *Vict.* c. 53.

As regards the two modern attempts to establish a system of registration, it appears to have been the principal object of the first, the 25 & 26 Vict. c. 53 (1862), that the owner of land should be enabled to obtain an absolutely indefeasible title to his property. Now desirable as is this object, it is one which cannot be attained without a minute investigation into the actual title. In order not to commit injustice by destroying the right of an absent and, it may be, an unknown person, it is absolutely necessary to ascertain that the applicant, who requires the grant of an indefeasible title, is the true and sole owner; and this cannot be effected without a rigid examination of documents, and public advertisements limiting a time for adverse claimants to come in—precautions which necessarily occasion considerable delay and expense. Owners, therefore, who feel satisfied with their titles, as practically, if not theoretically, sufficient, have been unwill-

ing to apply, at this cost, for an indefeasible title; while in cases where some doubts existed respecting the perfection of the title, the owner has been fearful of submitting it to the strict preliminary scrutiny. Hence the Act had little practical value, except in cases where a considerable property was to be disposed of by dividing it into numerous lots. In such a case registration under this Act might effect a saving of expense besides giving an indefeasible title to the purchasers.

Criticism would, however, be wasted on the provisions of this Statute, since the registration under it was closed (after a trial of thirteen years) by the 38 & 39 Vict. c. 87, the Registration Act at present in force.

IV.

THE PRESENT GENERAL REGISTRATION ACT.

THE objections which I pointed out, as having been fatal to the usefulness of the former Act, apply also to the present (the Land Transfer Act, 1875, 38 & 39 Vict. c. 87), viz., the expense and possible danger which must be incurred in order to obtain registration. An indisputable title, subject or not subject to specified qualifications, cannot be granted without the rigid investigation requisite to prove that there exist no valid latent claims.

Nor is it clear that the advantages to be derived from the possession of an indisputable title under the Act are such as to counterbalance these objections.

The object of the Act appears to be the assimilation, as far as practicable, of the method of conveying land to that which is in force for transferring Government stock.

If stock is entered in the books kept by the Bank of England in the name of one or more persons, the stock becomes, at law, the absolute property of those persons or person, so far as the books convey information. You are not allowed to enter in these books the name of a person as having merely a limited interest, for example an interest for life, in a sum of stock.

So under the present Land Act (putting leaseholds out of the question), a person can be registered as owner of an absolute estate or fee-simple only. If a life interest is to be conferred, it must be given by way of trust; the person registered as owner in fee must execute an instrument declaring that he holds the land in trust for the person designated, for his life—the Act not making any provision for the registration of trusts.

As the Bank of England will not take notice of any trust of stock, the new register, like the Bank books, is a register of absolute owners. The Act, however, permits the registration of money charges on registered land.

Hitherto a provision (say for infant children) out of land, has been considered more secure than a provision out of stock. The latter is at the mercy of a trustee. The purchaser of stock from a trustee, in whose name the stock stands, is safe, in the absence of notice of the trust, and the person beneficially entitled has no remedy except against the trustee personally.

A trust estate in land could not without difficulty be defeated by a sale, because a purchaser of the land would,

almost necessarily, have notice of the trust—the trustee in establishing his own title would disclose the trust also. Even if the land were vested in trustees for sale, the almost necessary notoriety of the sale of unregistered land affords practical protection to the beneficial owner.

As regards land registered under this Act the case will be different. The person who is registered owner can convey the land discharged of all trusts, except registered money charges by a transaction no more notorious than a transfer of Government stock.

It is true that the Act provides for the entry of "cautions" on the register, and when a caution has been entered, the land is not to be dealt with, until notice of the intended transfer has been given personally, or by post, to the cautioners—a proceeding analogous to placing a distringas on stock at the Bank of England. But, although the notice is not duly given, the sale is still absolute—and in many instances beneficial owners, especially if they are infants, will omit to enter a caution.

It is, perhaps, unnecessary to remark that the security at present enjoyed by partial owners of land as, for example, tenants for life, entitled at law will be much diminished if the land is registered under this Act, because the interest of such an owner will be necessarily converted into an equitable interest.

Nor is this all; by the 41st Section if a person registered as sole owner of freehold land (or the survivor of several registered owners) dies, the land which he held will not pass to his heir, or to his personal representatives, but to a person nominated by the Registrar, at his discretion, regard being had to the rights of persons interested in the land. So that if the deceased was the beneficial owner, his heir, widow, or the devisees under his will, may find their interests in the land at the mercy of a person, whom neither they nor the deceased had any potential voice in selecting, and who may defeat their rights by a sale and transfer on the register to a purchaser, whether that person had or had not notice of the trusts. (See Section 30.)

It may well be asked with what view are these provisions with regard to Registration introduced? They will clearly have the effect of rendering less secure the interests of many persons in landed property, supposing the land to be registered under the Act. What then are the countervailing advantages which the authors of the Act expect that it will confer?

I have heard it stated by a high authority that the late Mr. Cobden declared, after having attained free trade in corn, that the next most important object was, in his opinion, to establish free trade in land. I do not feel sure as to the meaning which he attached to this expression, but I presume that "establishing free trade in land" means providing for its purchase and sale in the same manner as Government and other stocks and securities are purchased and sold in the market.

The authors of the Act under consideration appear to have had this object in view. The persons in whose names land is registered are to be the absolute owners (not owners for life or in remainder), in the same sense that proprietors of Government stock are absolute owners. The directors

of the Bank of England, who have charge of the national stocks, as well as of their own, refuse to take notice of trusts—the Registrar of land is to do the same. The cautions which may be entered on the register are apparently devised in imitation of the distringas which may be placed upon Government stocks.

To a landowner engaged in commercial speculations, it may be advantageous to register his land under the Act. The registration might render it more easy for him to raise money on the security of his estate, or to sell it with despatch, on an emergency. He might, perhaps, have his land quoted like so much stock, and make it a subject of speculation in the market. If many estates were thus offered for public sale, there might be called into existence a body of land-brokers and land-jobbers, who would benefit by land speculations; but I see no reason to suppose that, by such transactions, the cultivation of the soil would be improved. How could free trade in land produce effects at all analogous to the results of free trade in corn? Suppose that Bowood or Belvoir was registered by their proprietor, and thereby rendered more marketable, would a purchaser for a rise of one-eighth per cent. be likely to lay out capital in improving land which he intended to retain as his property only, it may be, till next settling day, or until he closed his speculation? Would he make a drain, or plant a tree—

> "Seris
> Umbram factura nepotibus?"

If it was not the object of the Act to encourage speculation in land, by assimilating land to Government stock, it is difficult to understand why the assimilation was attempted at all. Merely to facilitate *bonâ fide* investments in land, desirable as such an object is in itself, would not justify the introduction of a system of registration which diminishes the security of equitable interests, and prevents the creation of many legal estates which can be created in non-registered lands.

I will conclude this chapter by quoting an instance of the mode in which the antiquated system of land tenure, favoring the continuance of land in the same family for several generations, not unfrequently worked. The following statement is extracted from the *Times* of the 6th March, 1882, and relates to the Swinton estate in the North Riding of Yorkshire:—

"The rental is very considerable, amounting to over 12,000*l.*, exclusive of the mansion, the park, and the grouse-shooting; yet relatively the superficial area is much in excess of the rent-roll.

. . . . . .

"The bounds of Swinton are almost identical with those of the famous old manor of Mashamshire. Besides the thriving little market town of Masham, they include, either entirely or in part, several parishes, with sundry villages. And Mashamshire recalls a long train of historical associations, going back to Saxon times. It was owned at the Conquest by Earl Edwin, twin brother of Morcar, grandson of the great Leofric of Mercia and the Lady Godiva, and brother-in-law of the unfortunate Harold. The Conqueror confiscated it for the benefit of his nephew, the Earl of Bretagne and

Richmond. In the reign of the first Edward it had passed to the Scropes, who were ennobled as Lords Scrope of Masham; and from the Scropes it came by marriage to the old Yorkshire family of the Danbys, whose descendants held it down to the present day.

. . . . . .

"Swinton is emphatically an 'old' property, as one of the people with whom I conversed on the estate remarked very suggestively. He meant that for generations it had been the pride of its owners; that they had lavished their money freely on it; and, indeed, everywhere you see signs that nothing has been stinted either in ornamental outlay or for remunerative improvements. The Danbys seem always to have resided at home, spending a large and unencumbered income in their parishes; they have been liberal landlords to an industrious tenantry, and I believe that in the last fifty years the rents have hardly been altered. Considering the rugged character of the country, there was ample scope for extending cultivation.

"Swinton may be supposed to have taken its name from the wild swine that, in the olden time, found inaccessible retreats in its woods and swampy wastes, and in the recesses of the precipitous ravines that everywhere intersect them.

"The father of the late Mr. Danby was a famous improver; so much so, that Arthur Young was induced to pay Swinton a visit on his 'Northern Tour.' Young, who was much gratified by what he saw, remarks that 'Mr. Danby possessed several thousands of contiguous acres, which did not yield him a tenth part as many farthings a year.' Those barren acres, where they have not been reclaimed, are now let to the sheep farmers; while as well-stocked grouse shootings, they, of course, have a value which was not dreamed of in 1768. That Mr. Danby's son, during his long occupation, seems to have improved almost as indefatigably as his father: he made many excellent roads, and built sundry substantial bridges, while he showed his admirable taste by judiciously beautifying the home domains."

The Danbys were clearly not traders in land. Is there any reason to believe that, had they been such, the lands of Masham would have been better cultivated, the plantations more extensive, or the inhabitants more prosperous and contented than they have become under the old system of land tenure?

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Beacon Lights of Science

MONEY

AND

THE MECHANISM OF EXCHANGE

By W. STANLEY JEVONS, M.A., F.R.S.

PROFESSOR OF LOGIC AND POLITICAL ECONOMY IN THE OWENS COLLEGE, MANCHESTER

IN TWO PARTS—PART ONE.

PREFACE.

In preparing this volume, I have attempted to write a descriptive essay on the past and present monetary systems of the world, the materials employed to make money, the regulations under which the coins are struck and issued, the natural laws which govern their circulation, the several modes in which they may be replaced by the use of paper documents, and finally, the method in which the use of money is immensely economized by the cheque and clearing system now being extended and perfected.

This is not a book upon the currency question, as that question is so often discussed in England. I have only a little to say about the Bank Charter Act, and upon that, and other mysteries of the money market, I refer my readers to the admirable essay of Mr. Bagehot on "Lombard Street," to which this book may perhaps serve as an introduction.

There is much to be learnt about money before entering upon those abstruse questions, which barely admit of decided answers. In studying a language, we begin with the grammar before we try to read or write. In mathematics, we practice ourselves in simple arithmetic before we proceed to the subtleties of algebra and the differential calculus. But it is the grave misfortune of the moral and political sciences, as well shown by Mr. Herbert Spencer, in his "Study of Sociology," that they are continually discussed by those who have never labored at the elementary grammar or the simple arithmetic of the subject. Hence the extraordinary schemes and fallacies every now and then put forth.

Currency is to the science of economy what the squaring of the circle is to geometry, or perpetual motion to mechanics. If there were a writer on Currency possessing some of the humor and learning of the late Professor De Morgan, he could easily produce a Budget of Currency Paradoxes more than rivaling De Morgan's Circle-Squaring Paradoxes. There are men who spend their time and fortunes in endeavoring to convince a dull world that poverty can be abolished by the issue of printed bits of paper. I know one gentleman who holds that exchequer bills are the panacea for the evils of humanity. Other philanthropists wish to make us all rich by coining the national debt, or coining the lands of the country, or coining everything. Another class of persons have long been indignant that, in this stage of free trade, the Mint price of gold should still remain

arbitrarily fixed by statute. A member of Parliament lately discovered a new grievance, and made his reputation by agitating against the oppressive restrictions on the coinage of silver at the Mint. No wonder so many people are paupers when there is a deficiency of shillings and sixpences, and when the amount merely of the rates and taxes paid in a year exceeds the whole sum of money circulating in the kingdom.

The subject of money as a whole is a very extensive one, and the literature of it would fill a very great library. Many changes are now taking place in the currencies of the world, and important inquiries have been lately instituted concerning the best mode of constituting the circulating medium. The information on the subject stored up in evidence given before Government Commissions, in reports of International Conferences, or in researches and writings of private individuals, is quite appalling in extent. It has been my purpose to extract from this mass of literature just such facts as seem to be generally interesting and useful in enabling the public to come to some conclusion upon many currency questions which press for solution. Shall we count in pounds, or dollars, or francs, or marks? Shall we have gold or silver, or gold *and* silver, as the measure of value? Shall we employ a paper currency or a metallic one? How long shall we in England allow our gold coinage to degenerate in weight? Shall we recoin it at the expense of the State or of the unlucky individuals who happen to hold light sovereigns?

In America the questions are still more important and pressing, involving the return to specie payments, the future regulation of the paper currency, its partial replacement by coin, and the exact size and character of the American dollar, regarded in relation to international currency. Germany is in the midst of a great, and probably a sound and successful, reorganization of the currency, both metallic and paper. In France the great debate upon the double *versus* the single standard is hardly yet terminated, and active measures are being taken to place the paper issues on a convertible basis. Among the other countries of Europe—Italy, Austria, Holland, Belgium, Switzerland, the Scandinavian kingdoms and Russia—there is hardly one which is not at present reforming its currency, or has lately done so, or is discussing the proper method of attempting the task. As regards all such changes, we should remember that in the present we are ever molding the future, and that a world-wide system of international money, though it may seem impracticable at the moment, is an object at which all those should aim who wish to leave the world better than they found it.

I wish to acknowledge the assistance which I have derived from the works of Mr. Seyd, especially his treatise on "Bullion and the Foreign Exchanges," from Professor Sumner's "History of the American Currency," M. Chevalier's work "La Monnaie," M. Wolowski's various important publications upon money, and many valuable articles in the *Journal des Economistes*. I must express my thanks to many bankers and gentlemen for information and assistance kindly rendered to me, especially to Mr. John Mills, Mr. T. R. Wilkinson, Mr. Roberts, the chemist of the Royal Mint, and Mr. E. Helm.

I should also like to take this opportunity of thanking those gentlemen who have from time to time sent me documents and publications bearing upon the subject of money, which have proved very valuable. I may mention especially a series of reports and documents concerning the American Mint and currency received through the kindness of the Director of the Mint, and of Mr. Walker and Mr. E. Dubois.

I am much indebted to Mr. W. H. Brewer, M.A., for carefully reading the whole of the proofs, and to Professor T. E. Cliffe Leslie, Mr. R. H. Inglis Palgrave, and Mr. Frederick Hendriks, for examining particular portions.

CHAPTER I.

BARTER

Some years since, Mademoiselle Zélie, a singer of the Théâtre Lyrique at Paris, made a professional tour round the world, and gave a concert in the Society Islands. In exchange for an air from *Norma* and a few other songs, she was to receive a third part of the receipts. When counted, her share was found to consist of three pigs, twenty-three turkeys, forty-four chickens, five thousand cocoanuts, besides considerable quantities of bananas, lemons and oranges. At the Halle in Paris, as the prima donna remarks in her lively letter, printed by M. Wolowski, this amount of live stock and vegetables might have brought four thousand francs, which would have been good remuneration for five songs. In the Society Islands, however, pieces of money were very scarce; and as Mademoiselle could not consume any considerable portion of the receipts herself, it became necessary in the meantime to feed the pigs and poultry with the fruit.

When Mr. Wallace was traveling in the Malay Archipelago, he seems to have suffered rather from the scarcity than the superabundance of provisions. In his most interesting account of his travels, he tells us that in some of the islands, where there was no proper currency, he could not procure

supplies for dinner without a special bargain, and much chaffering upon each occasion. If the vendor of fish or other coveted eatables did not meet with the sort of exchange desired, he would pass on, and Mr. Wallace and his party had to go without their dinner. It therefore became very desirable to keep on hand a supply of articles, such as knives, pieces of cloth, arrack, or sago cakes, to multiply the chance that one or other article would suit the itinerant merchant.

In modern civilized society, the inconveniences of the primitive method of exchange are wholly unknown, and might almost seem to be imaginary. Accustomed from our earliest years to the use of money, we are unconscious of the inestimable benefits which it confers upon us; and only when we recur to altogether different states of society can we realize the difficulties which arise in its absence. It is even surprising to be reminded that barter is actually the sole method of commerce among many uncivilized races. There is something absurdly incongruous in the fact that a joint-stock company, called "The African Barter Company, Limited," exists in London, which carries on its transactions upon the West Coast of Africa, entirely by bartering European manufactures for palm oil, gold dust, ivory, cotton, coffee, gum, and other raw produce.

The earliest form of exchange must have consisted in giving what was not wanted directly for that which was wanted. This simple traffic we call *barter* or *truck*, the French *troc*, and distinguish it from sale and purchase in which one of the articles exchanged is intended to be held only for a short time, until it is parted with in a second act of exchange. The object which thus temporarily intervenes in sale and purchase is money. At first sight it might seem that the use of money only doubles the trouble, by making two exchanges necessary where one was sufficient; but a slight analysis of the difficulties inherent in simple barter shows that the balance of trouble lies quite in the opposite direction. Only by such an analysis can we become aware that money performs not merely one service to us, but several different services, each indispensable. Modern society could not exist in its present complex form without the means which money constitutes of valuing, distributing, and contracting for commodities of various kinds.

WANT OF COINCIDENCE IN BARTER.

The first difficulty in barter is to find two persons whose disposable possessions mutually suit each other's wants. There may be many people wanting, and many possessing those things wanted; but to allow of an act of barter, there must be a double coincidence, which will rarely happen. A hunter having returned from a successful chase has plenty of game, and may want arms and ammunition to renew the chase. But those who have arms may happen to be well supplied with game, so that no direct exchange is possible. In civilized society the owner of a house may find it unsuitable, and may have his eye upon another house exactly fitted to his needs. But even if the owner of this second house wishes to part with it at all, it is exceedingly unlikely that he will exactly reciprocate the feelings of the first owner, and wish to barter houses. Sellers and purchasers can only be made to fit by the use of some commodity, some *marchandise banale*, as the French call it, which all are willing to receive for a time, so that what is obtained by sale in one case, may be used in purchase in another. This common commodity is called a *medium of exchange*, because it forms a third or immediate term in all acts of commerce.

Within the last few years a curious attempt has been made to revive the practice of barter by the circulation of advertisements. *The Exchange and Mart* is a newspaper which devotes itself to making known all the odd property which its advertisers are willing to give for some coveted article. One person has some old coins and a bicycle, and wants to barter them for a good concertina. A young lady desires to possess "Middlemarch," and offers a variety of old songs, of which she has become tired. Judging from the size and circulation of the paper, and the way in which its scheme has been imitated by some other weekly papers, we must assume that the offers are sometimes accepted, and that the printing press can bring about, in some degree, the double coincidence necessary to an act of bartar.

WANT OF A MEASURE OF VALUE.

A second difficulty arises in barter. At what rate is any exchange to be made? If a certain quantity of beef be given for a certain quantity of corn, and in like manner corn be exchanged for cheese, and cheese for eggs, and eggs for flax, and so on, still the question will arise—How much beef for how much flax, or how much of any one commodity for a given quantity of another? In a state of barter the price-current list would be a most complicated document, for each commodity would have to be quoted in terms of every other commodity, or else complicated rule-of-three sums would become necessary. Between one hundred articles there must exist no less than four thousand nine hundred and fifty possible ratios of exchange, and all these ratios must be carefully adjusted so as to be consistent with each other, else the acute trader will be able to profit by buying from some and selling to others.

All such trouble is avoided if any one commodity be chosen, and its ratio of exchange with each other commodity be quoted. Knowing how much corn is to be bought for a pound of silver, and also how much flax for the same quantity of silver, we

learn without further trouble how much corn exchanges for so much flax. The chosen commodity becomes *a common denominator* or *common measure of value*, in terms of which we estimate the values of all other goods, so that their values become capable of the most easy comparison.

WANT OF MEANS OF SUBDIVISION.

A third but it may be a minor inconvenience of barter arises from the impossibility of dividing many kinds of goods. A store of corn, a bag of gold dust, a carcase of meat, may be portioned out, and more or less may be given in exchange for what is wanted. But the tailor, as we are reminded in several treatises on political economy, may have a coat ready to exchange, but it much exceeds in value the bread which he wishes to get from the baker, or the meat from the butcher. He cannot cut the coat up without destroying the value of his handiwork. It is obvious that he needs some medium of exchange, into which he can temporarily convert the coat, so that he may give a part of its value for bread, and other parts for meat, fuel, and daily necessaries, retaining perhaps a portion for future use Further illustration is needless; for it is obvious that we need a means of dividing and distributing value according to our varying requirements.

In the present day barter still goes on in some cases, even in the most advanced commercial countries, but only when its inconveniences are not experienced. Domestic servants receive part of their wages in board and lodging; the farm laborer may partially receive payment in cider, or barley, or the use of a piece of land. It has always been usual for the miller to be paid by a portion of the corn which he grinds. The *truck* or barter system, by which workmen took their wages in kind, has hardly yet been extinguished in some parts of England. Pieces of land are occasionally exchanged by adjoining landowners; but all these are comparatively trifling cases. In almost all acts of exchange money now intervenes in one way or other, and even when it does not pass from hand to hand, it serves as the measure by which the amounts given and received are estimated. Commerce begins with barter, and in a certain sense it returns to barter; but the last form of barter, as we shall see, is very different from the first form. By far the greater part of commercial payments are made at the present day in England apparently without the aid of metallic money; but they are readily adjusted, because money acts as the common denominator, and what is bought in one direction is balanced off against what is sold in another direction.

CHAPTER II.

EXCHANGE.

Money is the measure and standard of value and the medium of exchange, yet it is not necessary that I should enter upon more than a very brief discussion concerning the nature of value, and the advantage of exchange. Every one must allow that the exchange of commodities depends upon the obvious principle that each of our wants taken separately requires a limited quantity of some article to produce satisfaction. Hence as each want becomes fully satiated, our desire, as Senior so well remarked, is for variety, that is, for the satisfaction of some other want. The man who is supplied daily with three pounds of bread, will not desire more bread; but he will have a strong inclination for beef, and tea, and alcohol. If he happen to meet with a person who has plenty of beef but no bread, each will give that which is less desired for that which is more desired. Exchange has been called *the barter of the superfluous for the necessary.*

It is impossible, indeed, to decide exactly how much bread, or beef, or tea, or how many coats and hats a person needs. There is no precise limit to our desires, and we can only say, that as we have a larger supply of a substance, the urgency of our need for more is in some proportion weakened. A cup of water in the desert, or upon the field of battle, may save life, and become infinitely useful. Two or three pints per day for each person are needful for drinking and cooking purposes. A gallon or two per day are highly requisite for cleanliness; but we soon reach a point at which further supplies of water are of very minor importance. A modern town population is found to be satisfied with about twenty-five gallons per head per day for all purposes, and a further supply would possess little utility. Water, indeed, may be the reverse of useful, as in the case of a flood, or a damp house, or a wet mine.

UTILITY AND VALUE ARE NOT INTRINSIC.

It is only, then, when supplied in moderate quantities, and at the right time, that a thing can be said to be useful. Utility is not a quality *intrinsic* in a substance, for if it were, additional quantities of the same substance would always be desired, however much we previously possessed. We must not confuse the usefulness of a thing with the physical qualities upon which the usefulness depends. Utility and value are only accidents of a thing arising from the fact that some one wants it, and the degree of the utility and the amouut of resulting value will depend upon the extent to which the desire for it has been previously gratified.

Regarding utility, then, as constantly varying in degree, and as variable even for each

different portion of commodity, it is not difficult to see that we exchange those parts of our stock which have a low degree of utility to us, for articles which, being of low utility to others, are much desired by us. This exchange is continued up to the point at which the next portion given would be equally useful to us with that received, so that there is no gain of uti ity; there would be a loss in carrying the exchange further. Upon these considerations it is easy to construct a theory of the nature of exchange and value, which has been explained in my book,* called "The Theory of Political Economy." It is there shown that the well-known laws of supply and demand follow from this view of utility, and thus yield a verification of the theory. Since the publication of the work named, M. Léon Walras, the ingenious professor of political economy at Lausanne, has independently arrived at the same theory of exchange, † a remarkable confirmation of its truth.

VALUE EXPRESSES RATIO OF EXCHANGE.

We must now fix our attention upon the fact that, in every act of exchange, a definite quantity of one substance is exchanged for a definite quantity of another. The things bartered may be most various in character, and may be variously measured. We may give a weight of silver for a length of rope, or a superficial extent of carpet, or a number of gallons of wine, or a certain horse-power of force, or conveyance over a certain distance. The quantities to be measured may be expressed in terms of space, time, mass, force, energy, heat, or any other physical units. Yet each exchange will consist in giving so many units of one thing for so many units of another, each measured in its appropriate way.

Every act of exchange thus presents itself to us in the form of *a ratio between two numbers*. The word *value* is commonly used, and if, at current rates, one ton of copper exchanges for ten tons of bar iron, it is usual to say that the value of copper is ten times that of the iron, weight for weight. For our purpose, at least, this use of the word value is only an indirect mode of expressing a ratio. When we say that gold is more valuable than silver, we mean that, as commonly exchanged, the weight of silver exceeds that of the gold given for it. If the value of gold rises compared with that of silver, then still more silver is given for the same quantity of gold. But value like utility is no intrinsic quality of a thing; it is an extrinsic accident or relation. We should never speak of the value of a thing at all without having in our minds the other thing in regard to which it is valued. The very same substance may rise and fall in value at the same time. If, in exchange for a given weight of gold, I can get more silver, but less copper, than I used to do, the value of gold has risen with respect to silver, but fallen with respect to copper. It is evident that an intrinsic property of a thing cannot both increase and decrease at the same time; therefore value must be a mere relation or accident of a thing as regards other things and the persons needing them.

CHAPTER III.

THE FUNCTIONS OF MONEY.

We have seen that three inconveniences attach to the practice of simple barter, namely, the improbability of coincidence between persons wanting and persons possessing; the complexity of exchanges, which are not made in terms of one single substance; and the need of some means of dividing and distributing valuable articles. Money remedies these inconveniences, and thereby performs two distinct functions of high importance, acting as—

(1) A medium of exchange.

(2) A common measure of value.

In its first form money is simply any commodity esteemed by all persons, any article of food, clothing, or ornament which any person will readily receive, and which, therefore, every person desires to have by him in greater or less quantity, in order that he may have the means of procuring necessaries of life at any time. Although many commodities may be capable of performing this function of a medium more or less perfectly, some one article will usually be selected, as money *par excellence*, by custom or the force of circumstances. This article will then begin to be used as a measure of value. Being accustomed to exchange things frequently for sums of money, people learn the value of other articles in terms of money, so that all exchanges will most readily be calculated and adjusted by comparison of the money values of the things exchanged.

A STANDARD OF VALUE.

A third function of money soon develops itself. Commerce cannot advance far before people begin to borrow and lend, and debts of various origin are contracted. It is in some cases usual, indeed, to restore the very same article which was borrowed, and in almost every case it would be possible to pay back in the same kind of commodity. If corn be borrowed, corn might be paid back, with interest in corn; but the lender will often not wish to have things returned to him at an uncertain time, when he does not much need them, or when their value is unusually low. A borrower, too, may need several different kinds of articles, which he is not likely

* "The Theory of Political Economy," 8vo. 1871. (Macmillan).

† Walras, Éléments d'Économie politique pure. Lausanne, Paris. (Guillaumin), 1874.

to obtain from one person; hence arises the convenience of borrowing and lending in one generally recognized commodity, of which the value varies little. Every person making a contract by which he will receive something at a future day, will prefer to secure the receipt of a commodity likely to be as valuable then as now. This commodity will usually be the current money, and it will thus come to perform the function of a *standard of value* We must not suppose that the substance serving as a standard of value is really invariable in value, but merely that it is chosen as that measure by which the value of future payments is to be regulated. Bearing in mind that value is only the ratio of quantities exchanged, it is certain that no substance permanently bears exactly the same value relatively to another commodity; but it will, of course, be desirable to select as the standard of value that which appears likely to continue to exchange for many other commodities in nearly unchanged ratios.

A STORE OF VALUE.

It is worthy of inquiry whether money does not also serve a fourth distinct purpose —that of embodying value in a convenient form for conveyance to distant places. Money, when acting as a medium of exchange, circulates backward and forward near the same spot, and may sometimes return to the same hands again and again. It subdivides and distributes property, and *lubricates* the action of exchange. But at times a person needs to condense his property into the smallest compass, so that he may hoard it away for a time, or carry it with him on a long journey, or transmit it to a friend in a distant country. Something which is very valuable, although of little bulk and weight, and which will be recognized as very valuable in every part of the world, is necessary for this purpose. The current money of a country is perhaps more likely to fulfill these conditions than anything else, although diamonds and other precious stones, and articles of exceptional beauty and rarity, might occasionally be employed

The use of esteemed articles as a store or medium for conveying value may in some cases precede their employment as currency. Mr. Gladstone states that in the Homeric poems gold is mentioned as being hoarded and treasured up, and as being occasionally used in the payment of services, before it became the common measure of value, oxen being then used for the latter purpose. Historically speaking, such a generally esteemed substance as gold seems to have served, firstly, as a commodity valuable for ornamental purposes; secondly, as stored wealth; thirdly, as a medium of exchange; and, lastly, as a measure of value.

SEPARATION OF FUNCTIONS.

It is in the highest degree important that the reader should discriminate carefully and constantly between the four functions which money fulfills, at least in modern societies. We are so accustomed to use the one same substance in all the four different ways, that they tend to become confused together in thought. We come to regard as almost necessary that union of functions which is, at the most, a matter of convenience, and may not always be desirable. We might certainly employ one substance as a medium of exchange, a second as a measure of value, a third as a standard of value, and a fourth as a store of value. In buying and selling we might transfer portions of gold; in expressing and calculating prices we might speak in terms of silver; when we wanted to make long leases we might define the rent in terms of wheat, and when we wished to carry our riches away we might condense it into the form of precious stones. This use of different commodities for each of the functions of money has in fact been partially carried out. In Queen Elizabeth's reign silver was the common measure of value; gold was employed in large payments in quantities depending upon its current value in silver, while corn was required by the Act 18th Elizabeth, c. VI. (1576), to be the standard of value in drawing the leases of certain college lands.

There is evident convenience in selecting, if possible, one single substance which can serve all the functions of money. It will save trouble if we can pay in the same money in which the prices of things are calculated. As few people have the time or patience to investigate closely the history of prices, they will probably assume that the money in which they make all minor and temporary bargains, is also the best standard in which to register debts and contracts extending over many years. A great mass of payments too are invariably fixed by law, such as tolls, fees, and tariffs of charges; many other payments are fixed by custom. Accordingly, even if the medium of exchange varied considerably in value, people would go on making their payments in terms of it, as if there had been no variation, some gaining at the expense of others.

One of our chief tasks in this book will be to consider the various materials which have been employed as money, or have been, or may be, suggested for the purpose. It must be our endeavor, if possible, to discover some substance which will in the highest degree combine the characters requisite for all the different functions of money, but we must bear in mind that a partition of these functions among different substances is practicable. We will first proceed to a brief review of the very various ways in which the need of currency has been supplied from the earliest ages, and we will afterward analyze the physical qualities and circumstances which render the substances employed more or less

suited to the purpose to which they were applied. We may thus arrive at some decision as to the exact nature of the commodity which is best adapted to meet our needs in the present day.

CHAPTER IV.

EARLY HISTORY OF MONEY.

Living in civilized communities, and accustomed to the use of coined metallic money, we learn to identify money with gold and silver; hence spring hurtful and insidious fallacies. It is always useful, therefore, to be reminded of the truth, so well stated by Turgot, that every kind of merchandise has the two properties of measuring value and transferring value. It is entirely a question of degree what commodities will in any given state of society form the most convenient currency, and this truth will be best impressed upon us by a brief consideration of the very numerous things which have at one time or other been employed as money. Though there are many numismatists and many political economists, the natural history of money is almost a virgin subject, upon which I should like to dilate; but the narrow limits of my space forbid me from attempting more than a brief sketch of the many interesting facts which may be collected.

CURRENCY IN THE HUNTING STATE.

Perhaps the most rudimentary state of industry is that in which subsistence is gained by hunting wild animals. The proceeds of the chase would, in such a state, be the property of most generally recognized value. The meat of the animals captured would, indeed, be too perishable in nature to be hoarded or often exchanged; but it is otherwise with the skins, which, being preserved and valued for clothing, became one of the earliest materials of currency. Accordingly, there is abundant evidence that furs or skins were employed as money in many ancient nations. They serve this purpose to the present day in some parts of the world.

In the book of Job (ii. 4) we read, "Skin for skin, yea, all that a man hath will he give for his life;" a statement clearly implying that skins were taken as the representative of value among the ancient Oriental nations. Etymological research shows that the same may be said of the northern nations from the earliest times. In the Esthonian language the word *rûha* generally signifies money, but its equivalent in the kindred Lappish tongue has not yet altogether lost the original meaning of skin or fur. Leather money is said to have circulated in Russia as late as the reign of Peter the Great, and it is worthy of notice, that classical writers have recorded traditions to the effect that the earliest currency used at Rome, Lacedæmon, and Carthage, was formed of leather.

We need not go back, however, to such early times to study the use of rude currencies. In the traffic of the Hudson Bay Company with the North American Indians, furs, in spite of their differences of quality and size, long formed the medium of exchange. It is very instructive, and corroborative of the previous evidence to find that, even after the use of coin had become common among the Indians the skin was still commonly used as the money of account. Thus Whymper says,* "a gun, nominally worth about forty shillings, brought twenty 'skins.' This term is the old one employed by the company. One skin (beaver) is supposed to be worth two shillings, and it represents two marten, and so on. You heard a great deal about 'skins' at Fort Yukon, as the workmen were also charged for clothing, etc., in this way."

CURRENCY IN THE PASTORAL STATE.

In the next higher stage of civilization, the pastoral state, sheep and cattle naturally form the most valuable and negotiable kind of property. They are easily transferable, convey themselves about, and can be kept for many years, so that they readily perform some of the functions of money.

We have abundance of evidence, traditional, written, and etymological, to show this. In the Homeric poems oxen are distinctly and repeatedly mentioned as the commodity in terms of which other objects are valued. The arms of Diomed are stated to be worth nine oxen, and are compared with those of Glaucos, worth one hundred. The tripod, the first prize for wrestlers in the twenty-third Iliad, was valued at twelve oxen, and a woman captive, skilled in industry, at four.† It is peculiarly interesting to find oxen thus used as the common measure of value, because from other passages it is probable, as already mentioned, that the precious metals, though as yet uncoined, were used as a store of value, and occasionally as a medium of exchange. The several functions of money were thus clearly performed by different commodities at this early period.

In several languages the name for money is identical with that of some kind of cattle or domesticated animal. It is generally allowed that *pecunia*, the Latin word for money, is derived from *pecus*, cattle. From the Agamemnon of Æschylus we learn that the figure of an ox was the sign first impressed upon coins, and the same is said to have been the case with the earliest issues of the Roman *As*. Numismatic researches fail to bear out these traditions, which were probably invented to explain the connection between the name of the coin and the animal.

* "Travels in Alaska," etc., by F. Whymper, page 225

† Gladstone, "Juventus Mundi," page 534.

A corresponding connection between these notions may be detected in much more modern languages. Our common expression for the payment of a sum of money is *fee*, which is nothing but the Anglo-Saxon *feoh*, meaning alike money and cattle, a word cognate with the German *vieh*, which still bears only the original meaning of cattle. As I am informed by my friend, Professor Theodores, the same connection of ideas is manifested in the Greek word for property, *ktema*, which means alike possession, flock, or cattle, and is referred by Grimm to an original verb *keto* or *ketuo*, to feed cattle. It is even supposed by Grimm that the same root reappears in the Teutonic and Scandinavian languages, in the Gothic, *skatts*, the modern High German, *schatz*, the Anglo-Saxon, *scât*, or *sceat*, the ancient Norsk *skat*, all meaning wealth, property, treasure, tax, or tribute, especially in the shape of cattle. This theory is confirmed by the fact that the Frisian equivalent, *sket*, has retained the original meaning of cattle to the present day. In the Norsk, Anglo-Saxon, and English, *scat* or *scot* has been specialized to denote tax or tribute.

In the ancient German codes of law, fines and penalties are actually defined in terms of live-stock. In the Zend Avesta, as Professor Theodores further informs me, the scale of rewards to be paid to physicians is carefully stated, and in every case the fee consists in some sort of cattle. The fifth and sixth lectures in Sir H. S. Maine's most interesting work on "The Early History of Institutions," are full of curious information showing the importance of live-stock in a primitive state of society. Being counted *by the head*, the kine was called *capitale*, whence the economical term *capital*, the law term *chattel*, and our common name *cattle*.

In countries where slaves form one of the most common and valuable possessions, it is quite natural that they should serve as the medium of exchange like cattle. Pausanias mentions their use in this way, and in Central Africa and some other places where slavery still flourishes, they are the medium of exchange along with cattle and ivory tusks. According to Earl's account of New Guinea, there is in that island a large traffic in slaves, and a slave forms the unit of value. Even in England slaves are believed to have been exchanged at one time in the manner of money.

ARTICLES OF ORNAMENT AS CURRENCY.

A passion for personal adornment is one of the most primitive and powerful instincts of the human race, and as articles used for such purposes would be durable, universally esteemed, and easily transferable, it is natural that they should be circulated as money. The wampumpeag of the North American Indians is a case in point, as it certainly served as jewelry. It consisted of beads made of the ends of black and white shells, rubbed down and polished, and then strung into belts or necklaces, which were valued according to their length, and also according to their color and luster, a foot of black peag being worth two feet of white peag. It was so well established as currency among the natives that the Court of Massachusetts ordered in 1649, that it should be received in the payment of debts among settlers to the amount of forty shillings. It is curious to learn, too, that just as European misers hoard up gold and silver coins, the richer Indian chiefs secrete piles of wampum beads, having no better means of investing their superfluous wealth.

Exactly analagous to this North American currency, is that of the cowry shells, which, under one name or another—chamgos, zimbis, bouges, porcelanes, etc.—have long been used in the East Indies as small money. In British India, Siam, the West Coast of Africa, and elsewhere on the tropical coasts, they are still used as small change, being collected on the shores of the Maldive and Laccadive Islands, and exported for the purpose. Their value varies somewhat, according to the abundance of the yield, but in India the current rate used to be about 5,000 shells for one rupee, at which rate each shell is worth about the two-hundredth part of a penny Among our interesting fellow-subjects, the Fijians, whale's teeth served in the place of cowries, and white teeth were exchanged for red teeth somewhat in the ratio of shillings to sovereigns.

Among other articles of ornament or of special value used as currency, may be mentioned yellow amber, engraved stones, such as the Egyptian scarabæi, and tusks of ivory.

CURRENCY IN THE AGRICULTURAL STATE.

Many vegetable productions are at least as well suited for circulation as some of the articles which have been mentioned. It is not surprising to find, then, that among a people supporting themselves by agriculture, the more durable products were thus used. Corn has been the medium of exchange in remote parts of Europe from the time of the ancient Greeks to the present day. In Norway corn is even deposited in banks, and lent and borrowed. What wheat, barley, and oats are to Europe, such is maize in parts of Central America, especially Mexico, where it formerly circulated. In many of the countries surrounding the Mediterranean, olive oil is one of the commonest articles of produce and consumption; being, moreover, pretty uniform in quality, durable, and easily divisible, it has long served as currency in the Ionian Islands, Mytilene, some towns of Asia Minor, and elsewhere in the Levant.

Just as cowries circulate in the East Indies, so cacao nuts, in Central America and Yucatan, form a perfectly recognized and prob-

ably an ancient fractional money. Travelers have published many distinct statements as to their value, but it is impossible to reconcile these statements without supposing great changes of value either in the nuts or in the coins with which they are compared. In 1521, at Caracas, about thirty cacao nuts were worth one penny English, whereas recently ten beans would go to a penny, according to Squier's statements. In the European countries, where almonds are commonly grown, they have circulated to some extent like the cacao nuts, but are variable in value according to the success of the harvest.

It is not only, however, as a minor currency that vegetable products have been used in modern times. In the American settlements and the West India Islands, in former days, specie used to become inconveniently scarce, and the legislators fell back upon the device of obliging creditors to receive payment in produce at stated rates. In 1618, the Governor of the Plantations of Virginia ordered that tobacco should be received at the rate of three shillings for the pound weight, under the penalty of three years' hard labor. We are told that, when the Virginia Company imported young women as wives for the settlers, the price per head was one hundred pounds of tobacco, subsequently raised to one hundred and fifty. As late as 1732, the legislature of Maryland made tobacco and Indian corn legal tenders; and in 1641 there were similar laws concerning corn in Massachusetts. The governments of some of the West India Islands seem to have made attempts to imitate these peculiar currency laws, and it was provided that the successful plaintiff in a lawsuit should be obliged to accept various kinds of raw produce, such as sugar, rum, molasses, ginger, indigo, or tobacco.* Such endeavors to establish a kind of multiple currency will be found to possess considerable interest for us in a later chapter.

The perishable nature of most kinds of animal food prevents them from being much used as money; but eggs are said to have circulated in the Alpine villages of Switzerland, and dried codfish have certainly acted as currency in the colony of Newfoundland.

MANUFACTURED AND MISCELLANEOUS ARTICLES AS CURRENCY.

The enumeration of articles which have served as money may already seem long enough for the purposes in view. I will, therefore, only add briefly that a great number of manufactured commodities have been used as a medium of exchange in various times and places. Such are the pieces of cotton cloth, called *Guinea pieces*, used for traffic upon the banks of the Senegal, or the somewhat similar pieces circulated in Abyssinia, the Soulou Archipelago, Sumatra, Mexico, Peru, Siberia, and among the Veddahs. It is less easy to understand the origin of the curious straw money which circulated until 1694 in the Portuguese possessions in Angola, and which consisted of small mats, called libongos, woven out of rice straw, and worth about one and a-half pennies each. These mats must have had, at least originally, some purpose apart from their use as currency, and were perhaps analogous to the fine woven mats so much valued by the Samoans, and also treated by them as a medium of exchange.

Salt has been circulated not only in Abyssinia, but in Sumatra, Mexico, and elsewhere. Cubes of benzoin gum or beeswax in Sumatra, red feathers in the Islands of the Pacific Ocean, cubes of tea in Tartary, iron shovels or hoes among the Malagasy, are other peculiar forms of currency. The remarks of Adam Smith concerning the use of hand-made nails as money in some Scotch villages will be remembered by many readers, and need not be repeated. M. Chevalier has adduced an exactly corresponding case from one of the French coalfields.

Were space available it would be interesting to discuss the not improbable suggestion of Boucher de Perthes, that, perhaps, after all, the finely worked stone implements now so frequently discovered were among the earliest mediums of exchange. Some of them are certainly made of jade, nephrite, or other hard stones, only found in distant countries, so that an active traffic in such implements must have existed in times of which we have no records whatever.

There are some obscure allusions in classical authors to a wooden money circulating among the Byzantines, and to a wooden talent used at Antioch and Alexandria, but in the absence of fuller information as to their nature, it is impossible to do more than mention them.

CHAPTER V.

QUALITIES OF THE MATERIAL OF MONEY.

Many recent writers, such as Huskisson, MacCulloch, James Mill, Garnier, Chevalier, and Walras, have satisfactorily described the qualities which should be possessed by the material of money. Earlier writers seem, however, to have understood the subject almost as well. Harris explained these qualities with remarkable clearness in his "Essay upon Money and Coins," published in 1757, a work which appeared before the "Wealth of Nations," yet gave an exposition of the principles of money which can hardly be improved at the present day. Eighty years before, however, Rice Vaughan, in his excel-

* See a scarce tract, entitled "Two Letters to Mr. Wood on the Coin and Currency in the Leeward Islands," p. 34. London, 1740.

lent little "Treatise of Money," had written a brief but satisfactory statement of the qualities requisite in money. We even find that William Stafford, the author of that remarkable dialogue of the Elizabethan age (1581), called "A Brief Conceipte of English Policy," showed perfect insight into the subject. Of all writers, M. Chevalier, however, probably gives the most accurate and full account of the properties which money should possess, and I shall in many points follow his views.

The prevailing defect in the treatment of the subject is the failure to observe that money requires different properties as regards different functions. To decide upon the best material for money is thus a problem of great complexity, because we must take into account at once the relative importance of the several functions of money, the degree in which money is employed for each function, and the importance of each of the physical qualities of the substance with respect to each function. In a simple state of industry money is chiefly required to pass about between buyers and sellers. It should, then, be conveniently portable, divisible into pieces of various size, so that any sum may readily be made up, and easily distinguishable by its appearance, or by the design impressed upon it. When money, however, comes to serve, as it will at some future time, almost exclusively as a measure and standard of value, the system of exchange being one of perfected barter, such properties become a matter of comparative indifference, and stability of value, joined perhaps to portability, is the most important quality. Before venturing, however, to discuss such complex questions, we must proceed to a preliminary discussion of the properties in question, which may thus perhaps be enumerated in the order of their importance:—

1. Utility and value.
2. Portability.
3. Indestructibility.
4. Homogeneity.
5. Divisibility.
6. Stability of value.
7. Cognizability.

I.—UTILITY AND VALUE.

Since money has to be exchanged for valuable goods, it should itself possess value, and it must therefore have utility as the basis of value. Money, when once in full currency, is only received in order to be passed on, so that if all people could be induced to take worthless bits of material at a fixed rate of valuation, it might seem that money does not really require to have substantial value. Something like this does frequently happen in the history of currencies, and apparently valueless shells, bits of leather, or scraps of paper, are actually received in exchange for costly commodities. This strange phenomenon is, however, in most cases capable of easy explanation, and if we were acquainted with the history of every kind of money the like explanation would no doubt be possible in other cases. The essential point is that people should be induced to receive money, and pass it on freely at steady ratios of exchange for other objects; but there must always be some sufficient reason first inducing people to accept the money. The force of habit, convention, or legal enactment may do much to maintain money in circulation when once it is afloat, but it is doubtful whether the most powerful government could oblige its subjects to accept and circulate as money a worthless substance which they had no other motive for receiving.

Certainly, in the early stages of society, the use of money was not based on legal regulations, so that the utility of the substance for other purposes must have been the prior condition of its employment as money. Thus the singular *peag* currency, or *wampumpeag*, which was found in circulation among the North American Indians by the early explorers, was esteemed for the purpose of adornment, as already mentioned, (Chapter IV). The cowry shells so widely used as a small currency in the East, are valued for ornamental purposes on the West Coast of Africa, and were in all probability employed as ornaments before they were employed as money. All the other articles mentioned in Chapter IV., such as oxen, corn, skins, tobacco, salt, cacao nuts, etc., which have performed the functions of money in one place or other, possessed independent utility and value. If there are any apparent exceptions at all to this rule, they would doubtless admit of explanation by fuller knowledge. We may, therefore, agree with Storch when he says:—"It is impossible that a substance which has no direct value should be introduced as money, however suitable it may be in other respects for this use."

When once a substance is widely employed as money, it is conceivable that its utility will come to depend mainly upon the services which it thus confers upon the community. Gold, for instance, is far more important as material of money than in the production of plate, jewelry, watches, gold-leaf, etc. A substance originally used for many purposes may eventually serve only as money, and yet, by the demand for currency and the force of habit, may maintain its value. The cowry circulation of the Indian coasts is probably a case in point. The importance of habit, personal or hereditary, is at least as great in monetary science as it is, according to Mr. Herbert Spencer, in moral and sociological phenomena generally.

There is, however, no reason to suppose that the value of gold and silver is at present due solely to their conventional use as money. These metals are endowed with such singularly useful properties that, if we could only get them in sufficient abundance, they would supplant all the other metals in the manufacture of household utensils, ornaments, fittings of all kinds, and an infinite multitude

of small articles, which are now made of brass, copper, bronze, pewter, German silver, or other inferior metals and alloys.

In order that money may perform some of its functions efficiently, especially those of a medium of exchange and a store of value, to be carried about, it is important that it should be made of a substance valued highly in all parts of the world and, if possible, almost equally esteemed by all peoples There is reason to think that gold and silver have been admired and valued by all tribes which have been lucky enough to procure them. The beautiful luster of these metals must have drawn attention and excited admiration as much in the earliest as in the present times.

2.—PORTABILITY.

The material of money must not only be valuable, but the value must be so related to the weight and bulk of the material, that the money shall not be inconveniently heavy on the one hand, nor inconveniently minute on the other. There was a tradition in Greece that Lycurgus obliged the Lacedæmonians to use iron money, in order that its weight might deter them from overmuch trading. However this may be, it is certain that iron money could not be used in cash payments at the present day, since a penny would weigh about a pound, and instead of a five-pound note, we should have to deliver a ton of iron. During the last century copper was actually used as the chief medium of exchange in Sweden; and merchants had to take a wheelbarrow with them when they went to receive payments in copper dalers. Many of the substances used as currency in former times must have been sadly wanting in portability. Oxen and sheep, indeed, would transport themselves on their own legs; but corn, skins, oil, nuts, almonds, etc., though in several respects forming fair currency, would be intolerably bulky, and troublesome to transfer.

The portability of money is an important quality not merely because it enables the owner to carry small sums in the pocket without trouble, but because large sums can be transferred from place to place, or from continent to continent, at little cost. The result is to secure an approximate uniformity in the value of money in all parts of the world. A substance which is very heavy and bulky in proportion to value, like corn or coal, may be very scarce in one place and over abundant in another; yet the supply and demand cannot be equalized without great expense in carriage. The cost of conveying gold or silver from London to Paris, including insurance, is only about four-tenths of one per cent.; and between the most distant parts of the world it does not exceed from two to three per cent.

Substances may be too valuable as well as too cheap, so that for ordinary transactions it would be necessary to call in the aid of the microscope and the chemical balance. Diamonds, apart from other objections, would be far too valuable for small transactions. The value of such stones is said to vary as the square of the weight, so that we cannot institute any exact comparison with metals of which the value is simply proportional to the weight. But taking a one-carat diamond (four grains) as worth fifteen pounds, we find it is, weight for weight, four hundred and sixty times as valuable as gold. There are several rare metals, such as iridium and osmium, which would likewise be far too valuable to circulate. Even gold and silver are too costly for small currency. A silver penny now weighs seven and one-fourth grains, and a gold penny would weigh only half a grain. The pretty octagonal quarter-dollar tokens circulated in California are the smallest gold coins I have seen, weighing less than four grains each, and are so thin that they can almost be blown away.

3.—INDESTRUCTIBILITY.

If it is to be passed about in trade, and kept in reserve, money must not be subject to easy deterioration or loss. It must not evaporate like alcohol, nor putrefy like animal substances, nor decay like wood, nor rust like iron. Destructible articles, such as eggs, dried codfish, cattle, or oil, have certainly been used as currency; but what is treated as money one day must soon afterward be eaten up. Thus a large stock of such perishable commodities cannot be kept on hand, and their value must be very variable. The several kinds of corn are less subject to this objection, since, when well dried at first, they suffer no appreciable deterioration for several years.

4.—HOMOGENEITY.

All portions or specimens of the substance used as money should be *homogeneous*, that is, of the same quality, so that equal weights will have exactly the same value. In order that we may correctly count in terms of any unit, the units must be equal and similar, so that twice two will always make four. If we were to count in precious stones, it would seldom happen that four stones would be just twice as valuable as two stones. Even the precious metals, as found in the native state, are not perfectly homogeneous, being mixed together in almost all proportions; but this produces little inconvenience, because the assayer readily determines the quantity of each pure metal present in any ingot. In the processes of refining and coining, the metals are afterward reduced to almost exactly uniform degrees of fineness, so that equal weights are then of exactly equal value.

5.—DIVISIBILITY.

Closely connected with the last property is that of divisibility. Every material is, in-

deed, mechanically divisible, almost without limit. The hardest gems can be broken, and steel can be cut by harder steel. But the material of money should be not merely capable of division, but the aggregate value of the mass after division should be almost exactly the same as before division. If we cut up a skin or fur, the pieces will, as a general rule, be far less valuable than the whole skin or fur, except for a special intended purpose; and the same is the case with timber, stone, and most other materials in which reunion is impossible. But portions of metals can be melted together again whenever it is desirable, and the cost of doing this, including the metal lost, is in the case of precious metals very inconsiderable, varying from one-fourth to one-half penny per ounce. Thus, approximately speaking, the value of any piece of gold or silver is simply proportional to the weight of fine metal which it contains.

6.—STABILITY OF VALUE.

It is evidently desirable that the currency should not be subject to fluctuations of value. The ratios in which money exchanges for other commodities should be maintained as nearly as possible invariable on the average. This would be a matter of comparatively minor importance were money used only as a measure of values at any one moment, and as a medium of exchange. If all prices were altered in like proportion as soon as money varied in value, no one would lose or gain, except as regards the coin which he happened to have in his pocket, safe, or bank balance. But, practically speaking, as we have seen, people do employ money as a standard of value for long contracts; and they often maintain payments at the same invariable rate, by custom or law, even when the real value of the payment is much altered. Hence every change in the value of money does some injury to society.

It might be plausibly said, indeed, that the debtor gains as much as the creditor loses, or *vice versa*, so that on the whole the community is as rich as before; but this is not really true. A mathematical analysis of the subject shows that to take any sum of money from one and give it to another will, on the average of cases, injure the loser more than it benefits the receiver. A person with an income of one hundred pounds a year would suffer more by losing ten pounds than he would gain by an addition of ten pounds, because the degree of utility of money to him is considerably higher at ninety pounds than it is at one hundred and ten. On the same principle, all gaming, betting, pure speculation, or other accidental modes of transferring property involve, on the average, a dead loss of utility. The whole incitement to industry and commerce and the accumulation of capital depends upon the expectation of enjoyment thence arising, and every variation of the currency tends in some degree to frustrate such expectation and to lessen the motives for exertion.

7.—COGNIZABILITY.

By this name we may denote the capability of a substance for being easily recognized and distinguished from all other substances. As a medium of exchange, money has to be continually handed about, and it will occasion great trouble if every person receiving currency has to scrutinize, weigh, and test it. If it requires any skill to discriminate good money from bad, poor ignorant people are sure to be imposed upon. Hence the medium of exchange should have certain distinct marks which nobody can mistake. Precious stones, even if in other respects good as money, could not be so used, because only a skilled lapidary can surely distinguish between true and imitation gems.

Under cognizability we may properly include what has been aptly called *impressibility*, namely, the capability of a substance to receive such an impression, seal, or design, as shall establish its charactor as current money of certain value. We might more simply say, that the material of money should be *coinable*, so that a portion, being once issued according to proper regulations with the impress of the State, may be known to all as good and legal currency, equal in weight, size, and value to all similarly marked currency. We shall afterward consider more minutely what is involved in the manufacture of a good coin.

CHAPTER VI.

THE METALS AS MONEY.

It need not be pointed out in detail that, though the numerous commodities mentioned in Chapter IV. possess, in a greater or less degree, the qualities essential to the material of money, they cannot for a moment compare in this respect with many of the metals. Some of the metals seem to be marked out by nature as most fit of all substances for employment as money, at least when acting as a medium of exchange and a store of value. Accordingly, we find that gold, silver, copper, tin, lead, and iron have been more or less extensively in circulation in all historical ages. So closely have silver and copper become associated in people's minds with their use as money, that we find their names adapted as the names of money. In Greek, *arguros* means equally silver, silver coin, and money generally; in Latin, *aes* is copper, bronze, or brass, and also money and wages; in French, *argent* is both silver and money. The same association of meanings could be pointed out in many other languages including our own. Though our pence are

now made of bronze, we still speak of them as *coppers*.

With the exception of iron, the principal metals are peculiarly indestructible, and undergo little or no deterioration when hoarded up or handed about. Each kind of metal is approximately homogeneous, piece differing from piece in nothing but weight, the differences of fineness being ascertained and allowed for in the case of gold and silver. The metals are also perfectly divisible, either by the chisel or the crucible, and yet a second melting will always reunite the pieces again with little cost or loss of material. Most of them possess the properties of cognizability and impressibility in the highest degree. Each metal has its characteristic color, density, and hardness, so that it is easy for a person with very slight experience to distinguish one metal from another. Their malleability enables us to roll, cut, and hammer them into any required form, and to impress a permanent design by means of dies. With the exception of porcelain coins, which have been used in Siam, I am not aware that coins have ever been made of any substance except metal.

In respect to steadiness of value the metals are probably less satisfactory, regarded as a standard of value, than many other commodities, such as corn. From the earliest ages metals must have been most highly valued, as we may learn from the way in which they are esteemed by savages in the present day. But their value has suffered and is suffering an almost continuous decline, owing to the progress of industry, and the discovery of new mechanical and chemical means for their extraction. Even the order of their values becomes changed. According to Mr. Gladstone, iron was, in the Homeric age, much more valued than *chalkos*, or copper, which latter was then the most common and useful metal. Lead was little known or valued, but gold, silver, and tin held the same places at the head of the list, which they hold at the present day.

IRON.

Proceeding to consider briefly each of the more important metals, the statements of Aristotle, Pollux, and other writers prove that iron was extensively employed as money in early times. Not a single specimen of such money is now known to exist, but this is easily accounted for by the rapidity with which the metal rusts. In the absence of specimens, we do not know the form and size of the money, but it is probable that it consisted of small bars, ingots, or spikes, somewhat similar to the small bars of iron which are still used in trading with the natives of Central Africa. Iron money is still, or was not long since, used in Japan for small values; but its issue from the mint has been discontinued.

The use of pure iron coins in civilized countries at the present day is out of the question, both because of the cheapness of the metal, and because the coins would soon lose the sharpness of their impressions by rusting, and become dirty and easily counterfeited. But it is quite possible that iron or steel might still be alloyed with other metals for the coining of pence.

LEAD.

Lead has often been used as currency, and is occasionally so mentioned by the ancient Greek and Latin poets. In 1635 leaden bullets were used for change at the rate of a farthing a piece in Massachusetts. At the present day lead is still current in Burmah, being passed by weight for small payments. The extreme softness of the metal obviously renders it quite unfit for coining in the pure state. It is one of the components of pewter, which has frequently been coined.

TIN.

Tin has also been employed as money at various times. Dionysius of Syracuse issued the earliest tin coinage of which anything is certainly known; but as tin was in early times procured from Cornwall, it can hardly be doubted that the first British currency was composed of tin. In innumerable cabinets may be found series of tin coins issued by the Roman emperors; the kings of England also often coined tin. In 1680 tin farthings were struck by Charles II., a stud of copper being inserted in the middle of the coin to render counterfeiting more difficult. Tin halfpence and farthings were also issued in considerable quantities in the reign of William and Mary (1690 to 1691). Tin coins were formerly employed among the Javanese, Mexicans, and many other peoples, and the metal is said to be still current by weight in the Straits of Malacca.

Tin would be in many respects admirably suited for making pence, possessing a fine white color, perfect freedom from corrosion, and a much higher value than copper. Unfortunately, its softness and tendency to bend and break when pure are insuperable obstacles to its employment as money.

COPPER.

This metal is in many respects well suited for coining. It does not suffer from exposure to dry air, possesses a fine distinct red color, and takes a good impression from the dies, which impression it retains better than the majority of other metals. Accordingly, we find that it has been continually employed as currency, either alone or in subordination to gold and silver. The earliest Hebrew coins were composed chiefly of copper, and the metallic currency of Rome consisted of the impure copper, called *aes*, until B. C. 269, when silver was first coined. In later times copper has not only been generally used for coins of minor value, but, in

Russia and in Sweden, a hundred years ago, it formed the principal mass of the currency. Its low value now stands in the way of its use. A penny, if made so as to contain metal equivalent to its nominal value, would weigh eight hundred and seventy grains, or more than an ounce and three-quarters troy. Its value is also subject to considerable fluctuations. Moreover, it is unlikely that copper in a pure state will be coined for the future, since bronze is now known to be so much more suitable for coinage.

SILVER.

I need hardly say that silver is distinguished by its exquisite white luster, which is not rivalled by that of any other pure metal. Certain alloys, indeed, such as speculum metal, or Britannia metal, have been made of almost equal luster, but they are either brittle, or so soft as not to give the metallic ring of silver. When much exposed to the air silver tarnishes by the formation of a black film of silver sulphide; but this forms no obstacle to its use as currency, since the film is always very thin, and its peculiar black color even assists in distinguishing the pure metal from the counterfeit. When suitably alloyed, silver is sufficiently hard to stand much wear, and next after gold it is the most malleable and impressible of all the metals.

A coin or other object made of silver may be known by the following marks—(1) a fine pure white luster, where newly rubbed or scraped; (2) a blackish tint where the surface has long been exposed to the air; (3) a moderate specific gravity; (4) a good metallic ring when thrown down; (5) considerable hardness; (6) strong nitric acid dissolves silver, and the solution turns black if exposed to light.

Silver has been coined, it need hardly be said, in all ages since the first invention of the art, and its value relatively to gold and copper fits it for taking the middle place in a monetary system. Its value too remains very stable for periods of fifty or a hundred years, because a vast stock of the metal is kept in the form of plate, watches, jewelry, and ornaments of various kinds, in addition to money, so that a variation in the supply for a few years cannot make any appreciable change in the total stock. Productive silver mines exist in almost all parts of the world; and wherever lead is produced, a small but steady yield of silver is obtained from it by the Pattinson method of extraction.

GOLD.

Silver is beautiful, yet gold is even more beautiful, and presents indeed a combination of useful and striking properties quite without parallel among known substances. To a rich and brilliant yellow color, which can only be adequately described as golden, it joins astonishing malleability and a very high specific gravity, exceeded only by that of platinum and a few of the rarest or almost unknown metals. We can usually ascertain whether a coin consists of gold or not, by looking for three characteristic marks: (1) the brilliant yellow color; (2) the high specific gravity; (3) the metallic ring of the coin when thrown down, which will prove the absence of lead or platinum in the interior of the coin.

If there remain any doubt about a metal being gold, we have only to appeal to its solubility. Gold is remarkable for its freedom from corrosion or solution, being quite unaffected and untarnished after exposure of any length of time to dry, or moist, or impure air, and being also insoluble in all the simple acids. Strong nitric acid will rapidly attack any colored counterfeit metal, but will not touch standard gold, or will, at the most, feebly dissolve the copper and silver alloyed with it.

In almost all respects gold is perfectly suited for coining. When quite pure, indeed, it is almost as soft as tin, but when alloyed with one-tenth or one-twelfth part of copper. becomes sufficiently hard to resist wear and tear, and to give a good metallic ring; yet it remains perfectly malleable and takes a fine impression. Its melting point is moderately high, and yet there is no perceptible oxidization or volatilization of the metal at the highest temperature which can be produced in a furnace. Thus old coin and fragments of the metal can be melted into bullion at a very slight loss, and at a cost of not more than one half-penny per ounce troy, or little more than one-twentieth of one per cent.

PLATINUM.

This is one of those comparatively rare metals which have been known only in recent times. Its extremely high melting-point, and low affinity for oxygen, render it one of the most indestructible of all substances, whilst its white color, joined to its excessively high specific gravity, are marks which cannot be mistaken. As it seemed in these respects well suited for currency, the Russian government, which owns the principal platinum mines in the Ural Mountains, commenced to coin it in 1828, into pieces intended to have the values of twelve, six, and three roubles. Several objections to this use of the metal soon presented themselves. The appearance of platinum being inferior to that of silver or gold, it is seldom or never employed for purposes of ornament, and its only extensive use is in the construction of chemical apparatus. Hence there is no large stock of the metal kept on hand, and the localities where it is found being few, the supply is incapable of being much increased, so that any variation of demand is sure to cause a great change in its value. Moreover, the cost of making the coins was very great, owing to the extreme difficulty of melting platinum, and the worn

coins could not be withdrawn and recoined without much additional cost. Platinum being thus found to be quite unfitted for currency, the scheme was abandoned in 1845, and the existing coins withdrawn from circulation.

Great improvements having been lately made in the modes of working platinum, it was proposed by M. de Jacobi, the representative of Russia at the International Monetary Conference held at Paris, in 1867, that platinum should be employed for the coinage of five-franc pieces. It is not likely that such a suggestion will be adopted.

NICKEL.

This metal was formerly regarded as the bane of the metallurgist, but has recently assumed an important place in manufacturing industry, and even in monetary science. It is used only in alloy with other metals, and for the purposes of coinage it is usual to melt up one part of nickel with three of copper. Some of the coins of Belgium, and the one-cent pieces of the United States have been made of this material and seem to be very convenient. In 1869 and 1870–1, pence and halfpence, to the value of £3,000, were executed in the same alloy, at the English mint for the colony of Jamaica. These are some of the most beautiful coins which have ever been issued from Tower Hill, and are in most respects admirably suited for circulation. But they were unfortunately made much too large and heavy; not only were they thus rendered less convenient, but when, in 1873, the Deputy Master of the Mint was requested to supply a further quantity of the same coins, he found that the price of nickel had risen very much, so that the materials for the coinage alone would cost more than the nominal value of the coins to be produced. This rise in prices was due partly to the small number of nickel mines yet worked, and partly to the great demand for the metal occasioned by the German government, which has chosen the same alloy for the ten and five-pfennig pieces of its new monetary system. These coins, which are now being issued, are of a convenient size, rather less than a shilling and sixpence respectively, and appear to be in every way admirably suited to their purpose. The German empire will soon possess the best instead of the worst fractional currency in the world. The variableness in the price of nickel, which is at present a cause of embarrassment, may after a time become less serious, when the stock in use and the annual produce become larger.

OTHER METALS.

The metals yet mentioned are but a small number of those now known by chemists to exist, and it would be unwise to assume as certain that money must always be made in the future of the same materials as in the past. It is just conceivable, on the one hand, that in the course of time some metal still more valuable than gold may be introduced. Roughly speaking, the order in which the metals have hitherto acted, as the principal medium of exchange, is (1) copper, (2) silver, (3) gold; as a general decline in the values of the metals took place, the more valuable replaced the less valuable, and the more portable gold is now rapidly taking the place of silver. Some still more valuable metal, such as the scarce and intractable iridium or osmium, or the remarkable metal palladium, might possibly take the place of gold. This, however, is barely more than a matter of scientific fancy.

On the other hand, many metals exist which might be produced more cheaply than silver, such as aluminium or manganese. It may be well worthy of inquiry whether in such metals may not be found the best solution of the fractional currency difficulty, to be afterward more fully discussed (Chapter XI).

ALLOYS OF METALS.

At one time or another an immense number of different alloys or mixtures of metals have been coined. It would be strictly correct to say, indeed, that metals have seldom been issued except in the state of alloy. Even gold and silver, as usually coined, are either alloyed with each other or with copper. The latter metal, too, has generally been employed in union with other metals. The Roman *as* consisted, not of pure copper, but of the mixed metal *aes*, an alloy of copper and tin, partially resembling the bronze which has quite recently been introduced for small money in France, England, and other countries. Brass was largely coined by some of the Roman emperors. In many cases, no doubt, the early metallurgists in smelting an ore obtained a natural alloy of all the metals contained therein, and being unable to separate them, were obliged to use the mixture. Thus we may explain the curious metal containing from sixty to seventy parts of copper, twenty to twenty-five of zinc, five to eleven of silver, with small quantities of gold, lead, and tin, which was employed to make the *stycas*, or small money, of the early kings of Northumbria.

Monarchs or States in difficulty have often coined the metal which they could most easily obtain. The Irish money issued by James II. was said to have been coined from a mixture of old guns, broken bells, waste copper, brass, and pewter, old kitchen furniture; and in fact any refuse metal which his officers could lay their hands upon He attempted to make pewter crowns circulate for the value of silver ones.

CHAPTER VII.

COINS.

It is clear that the metals far surpass all other substances in suitability for the purpose of circulation, and it is almost equally clear that certain metals surpass all the other metals in this respect. Of gold and silver especially we may say, with Turgot, that, by the nature of things, they are constituted the universal money independently of all convention and law. Even if the art of coining had never been invented, gold and silver would probably have formed the currency of the world; but we have now to consider how, by shaping weighed pieces of these metals into coins, we can make use of their valuable properties to the greatest advantage.

The primitive mode of circulating the metals, indeed, was simply that of buying and selling them against other commodities, the weights or portions being rudely estimated. Some of the earliest specimens of money consist of the *aes rude*, or rough, shapeless lumps of native copper employed as money by the ancient Etruscans. In the Museum of the Archiginnasio at Bologna may be seen the skeleton of an Etruscan, half embedded in earth, with the piece of rough copper yet within the grasp of the bony hand, placed there to meet the demands of Charon. Pliny, moreover, tells us that, before the time of Servius Tullius, copper was circulated in the rude state. Afterward copper, brass, or iron were, it is probable, employed in the form of small bars or spikes, and the name of the Greek unit of value, *drachma*, is supposed to have been derived from the fact that six of these metal spikes could be grasped in the hand, each piece being called an *obolus*. Such is supposed to have been the first system of money which was passed purely by *tale*, or number of pieces.

Gold is most readily obtained from alluvial deposits, and then has the form of grains or dust. Hence this is the primitive form of gold money. The ancient Peruvians enclosed the gold dust for the sake of security in quills, and thus passed it about more conveniently.

At the gold diggings of California, Australia, or New Zealand, gold dust is to the present day sold directly against other goods by the aid of scales. The art of melting gold and silver and fashioning them by the hammer into various shapes was early invented. Even in the present day, the poor Hindoo, who has saved up a few rupees, employs a silversmith to melt them up and beat them into a simple bracelet, which he wears in the double character of an ornament and a hoard of wealth.

Similarly, the ancient Goths and Celts were accustomed to fashion gold into thick wires, which they rolled up into spiral rings and probably wore upon their fingers until the metal was wanted for trading purposes. There can be little doubt that this ring money, of which abundant specimens have been found in various parts of Europe and Asia, formed the first approximation to a coinage. In some cases the rings may have been intentionally made of equal weight; for Cæsar speaks of the Britons as having iron rings, adjusted to a certain weight, to serve as money. In other cases the rings, or amulets, were bought and sold by aid of the balance; and in certain Egyptian paintings men are represented as in the act of weighing rings. It is probable that the necessity for frequent weighings was avoided by making up sealed bags containing a certain weight of rings, and such perhaps are the bags of silver given by Naaman to Gehazi in the Second Book of Kings (v. 23). Ring money is said to be still current in Nubia.

Gold and silver have been fashioned into various other forms to serve as money. Thus the Siamese money consists of very small ingots or bars bent double in a peculiar manner. In Pondicherry and elsewhere gold is circulated in the form of small grains or buttons.

THE INVENTION OF COINING.

The date of the invention of coining can be assigned with some degree of probability. Coined money was clearly unknown in the Homeric times, and it was known in the time of Lycurgus. We might therefore assume, with various authorities, that it was invented in the mean time, or about 900 B.C. There is a tradition, moreover, that Pheidon, King of Argos, first struck silver money in the island of Ægina about 895 B. C., and the tradition is supported by the existence of small stamped ingots of silver which have been found in Ægina. Later inquiries, however, lead to the conclusion that Pheidon lived in the middle of the eighth century B.C., and Grote has shown good reasons for believing that what he did accomplish was done in Argos, and not in Ægina.

The mode in which the invention happened is sufficiently evident. Seals were familiarly employed in very early times, as we learn from the Egyptian paintings or the stamped bricks of Nineveh. Being employed to signify possession, or to ratify contracts, they came to indicate authority. When a ruler first undertook to certify the weights of pieces of metal, he naturally employed his seal to make the fact known, just as, at Goldsmiths Hall, a small punch is used to certify the fineness of plate. In the earliest forms of coinage there were no attempts at so fashioning the metal that its weight could not be altered without destroying the stamp or design. The earliest coins struck, both in Lydia and in the Peloponnesus, were stamped on one side only. The Persian money, called the *larin*, consists of a round silver wire, about six centimeters long, bent

in two, and stamped on one part which is flattened for the purpose. It is probably a relic of ring money. The present circulation of China is composed to a considerable extent of the so-called Sycee silver, which consists of small shoe-shaped ingots, assayed and stamped, according to some accounts, by the government.

WHAT IS A COIN?

Although in rings, or stamped ingots, we have an approximation to what we call coin, it is plain that we must do something more to make convenient money. The stamp must be so impressed as to certify, not only the fineness and the original weight, but also the absence of any subsequent alteration. To coin metal, as we now understand the art, is to form it into flat pieces of a circular, oval, square, hexagonal, octagonal, or other regular outline, and then to impress designs from engraved dies upon both sides, and sometimes upon the edges. Not only is it very costly and difficult to counterfeit coins well executed in this manner, but the integrity of the design assures us that no owner of the coin has tampered with it. Even the amount of ordinary wear and tear, which the coin has suffered, may be rudely inferred from the sharpness or partial effacement of the designs, and the roundness of the edges. "Pieces of money," says M. Chevalier, "are ingots of which the weight and the fineness are certified." There is nothing in this definition to distinguish coins from Sycee silver, or from the ordinary stamped bars and ingots of bullion. I should prefer, therefore, to say, *coins are ingots of which the weight and fineness are certified by the integrity of designs impressed upon the surfaces of the metal.*

VARIOUS FORMS OF COINS.

From time to time coins have been manufactured in very many forms, although circular coins vastly predominate in number. Among the innumerable issues of the German States may be found octagonal and hexagonal coins. A singular square coin, with a circular impress in the center, was issued from Salzburg by Rudbert in 1513. Siege-pieces have been issued in England and elsewhere in the form of squares, lozenges, etc. Some of the most extraordinary specimens of money ever used are the large plates of pure copper which circulated in Sweden in the eighteenth century. These were about three-eights of an inch in thickness, and varied in size, the half-daler being three and a-half inches square, and the two daler piece as much as seven and a-half inches square, and three and a-half pounds in weight. As the whole surface could not be covered with a design, a circular impress was struck near to each corner, and one in the center, so as to render alteration as difficult as possible.

Among Oriental nations the shapes of coins are still more curious. In Japan, the principal part of the circulation consists of silver *itzibus*, which are oblong, flat pieces of silver, covered on both sides with designs and legends, the characters being partly in relief and partly incised. The smaller silver coins have a similar form. Among the minor Japanese coins are found large oval, molded pieces of copper or mixed metal, each with a square hole in the center. The Chinese *cash* are well known to be round disks of a kind of brass, with a square hole in the center to allow of their being strung together. The coins of Formosa are similar, except that they are much larger and thicker. All the copper and base metal coins of China, Japan, and Formosa are distinguished by a broad flat rim, and they have characters in relief upon a sunk ground, somewhat in the manner of Boulton and Watt's copper pence. They are manufactured by molding the metal, and then filing the protuberant parts smooth. Such coins stand wear, and preserve their design better than European coins, but they are easily counterfeited.

The most singular of all coins are the scimitar-shaped pieces formerly circulated in Persia.

THE BEST FORM FOR COINS.

It is a matter of considerable importance to devise the best possible form for coins, and the best mode of striking them. The use of money creates, as it were, an artificial crime of false coining, and so great is the temptation to engage in this illicit art that no penalty is sufficient to repress it, as the experience of two thousand years sufficiently proves. Thousands of persons have suffered death, and all the penalties of treason have been enforced without effect. Ruding is then unquestionably right in saying, that our efforts should be directed not so much to the punishment of the crime, as to its prevention by improvements in the art of coining. We must strike our coins so perfectly that successful imitation or alteration shall be out of the question.

There are four principal objects at which we should aim in deciding upon the exact design for a coin.

1. To prevent counterfeiting.
2. To prevent the fraudulent removal of metal from the coin.
3. To reduce the loss of metal by legitimate wear and tear.
4. To make the coin an artistic and historical monument of the State issuing it, and the people using it.

For the prevention of counterfeiting, our principal resource is to render the mechanical execution of the piece as perfect as possible, and to strike it in a way which can only be accomplished with the aid of elaborate machinery. When all coins are made by casting, the false coiner could work almost as skillfully as the moneyer. Hence, in the Roman empire, it was difficult to distinguish

between true and false coin. Hammered money was a great improvement on molded money, and milled money on hammered money. The introduction of the steam coining press by Boulton and Watt was the next great improvement; and the knee-joint press of Ulhorn and Thonnelier, now used in nearly all mints, except that on Tower Hill, forms the last advance in the mechanism for striking coin.

The utmost attention ought to be paid to the perfect execution of the milling, legend, or other design, impressed upon the edge of modern coins. This serves at once to prevent clipping or tampering with the coin, and to baffle the skill of the counterfeiter. The coins of ancieut nations were issued with rough, unstamped edges, and the first coin marked with a legend on the edge was a silver coin of Charles IX. of France, issued in the year 1573. The English coinage was first grained or marked on the edge in 1658 or 1662, when the use of the mill and screw was finally established in the mint. All the larger coins now issued from the English, and, indeed, from most other mints, bear a milled or serrated edge, produced by ridges on the internal surface of the collar which holds the coin when being struck between the two dies. These collars are difficult to make, and useless when made except in the coinage-press, and the counterfeiter cannot imitate the milling by hand work, it being almost impossible to use a file with sufficient regularity.

The French five-franc pieces bear a legend on the edge in raised letters, the words being "Dieu protége la France." Such raised letters are quite beyond the art of the counterfeiter. The English crown has a legend, "Decus et Tutamen," and the year of the reign in incised letters, which could obviously be imitated by the use of punches. The new German gold coins are issued with smooth edges, the ten-mark piece having only a few slight incised marks, and the twenty mark piece bearing the legend, "Gott mit uns," in faint letters; this is surely a far less satisfactory protection than the milled edge adopted in most other mints. It may be worthy of inquiry, whether the milled edge might not be combined with a legend or other design in relief, so as to render imitation still more difficult. One or two centuries ago, silver coins used to have a kind of ornamental beading on the edge. Elaborate patterns, produced by machinery with perfect regularity, and altogether incapable of imitation by hand, might now be substituted.

COINS AS WORKS OF ART.

I have in the previous section considered the best form of a coin as regards the prevention of counterfeiting. The falsification of coins, the loss which they undergo by abrasion, and the best means of avoiding these evils will be treated in Chapter XIII. Of the use of coins as artistic medals it would not be appropriate to speak at any length. I must however remark that many of the coins still issued from the English mint are monuments of bad taste. It is difficult to imagine poorer designs than those upon the shilling and sixpence, descending from a time when art in many branches was at its apogee in England. As our architecture and art manufactures of many kinds are regenerated by the efforts of private persons, is it too much to hope that a government department will follow? The florin is indeed an immense advance upon the shilling, being in some respects a reversion to the style of old English money. A very beautiful pattern crown piece was produced in 1847, in a somewhat similar style, but never issued. Mr. Lowe, when Master of the Mint, gave us back the old George and Dragon sovereign, which is much superior to the shield and wreaths. I think, however, that the time has come for a general improvement in our coins.

HISTORICAL COINS.

Some states have utilized their coins as monuments of important events, such as conquests, jubilees, the accession of monarchs, etc. The German states, especially Prussia, have struck a long series of beautiful coins down to the Krönung's Thaler of 1861, and the Sieges Thaler of 1871. Some of these coins are at once treasured up in cabinets in the manner of medals. If it is possible to conceive literature destroyed, and modern cities and their monuments in ruins and decay, such medallic coins would become the most durable memorials, and the history of the kings of Prussia would be traced out by future numismatists as that of the great dynasties of Bactria has lately been recovered.

In 1842 M. Anténor Joly brought before the French legislative chambers a scheme for a system of historical money, and he renewed his proposal in 1852. M. Ernest Dumas has also suggested the issue of twenty-centime bronze pieces, which should serve either as money or as historical medals. Such schemes have not been carried out in France, and in England no coins of the sort have been struck. Except the mere expense of a new set of dies, I see no objection to the issue of historical money.

THE ROYAL ATTRIBUTE OF COINING.

Every civilized community requires a supply of well-executed coins, and there arises the question, How shall this money be provided? The coins of each denomination must contain exactly equal weights of fine metal, and must bear an impress proving that they do so. Can we trust to the ordinary competition of manufacturers and traders to keep up a sufficient supply of such coins, just as they supply buttons, or pins and needles? Or must we establish a government department, under strict legislative control, to secure good coinage?

As almost every opinion finds some advocate, there are not wanting a few who believe that coinage should be left to the free action of competition. Mr. Herbert Spencer especially, in his "Social Statics," advanced the doctrine that, as we trust the grocer to furnish us with pounds of tea, and the baker to send us loaves of bread, so we might trust Heaton and Sons, or some of the other enterprising firms of Birmingham, to supply us with sovereigns and shillings at their own risk and profit. He held that just as people go by preference to the grocer who sells good tea, and to the baker whose loaves are sound and of full weight, so the honest and successful coiner would gain possession of the market, and his money would drive out inferior productions.

Though I must always deeply respect the opinions of so profound a thinker as Mr. Spencer, I hold that in this instance he has pushed a general principle into an exceptional case, where it quite fails. He has overlooked the important law of Gresham (to be explained in the next chapter), that better money cannot drive out worse. In matters of currency self-interest acts in the opposite direction to what it does in other affairs, as will be explained, and if coining were left free, those who sold light coins at reduced prices would drive the best trade.

This conclusion is amply confirmed by experience; for at many times and places coins have been issued by private manufacturers, and always with the result of debasing the currency. For a long time the copper currency of England consisted mainly of tradesmen's tokens, which were issued very light in weight and excessive in number. In Mr. Smiles's "Lives of Boulton and Watt" (page 391), there is printed an interesting letter, in which Mr. Boulton complains that in his journeys he received on an average at the toll-gates two counterfeit pennies for one true one. The lower class of manufacturers, he says, purchased copper coin to the nominal value of thirty-six shillings for twenty shillings in silver, and distributed it to their work-people in wages, so as to make a considerable profit. The multitude of these depreciated pieces in circulation was so great, that the magistrates and inhabitants of Stockport held a public meeting, and resolved to take no halfpence in future but those of the Anglesey Company, which were of full weight. This shows, if proof were needed, that the separate action of self-interest was inoperative in keeping bad coin out of circulation, and it is not to be supposed that the public meeting could have had any sufficient effect. In China the current small money called *cash* or *le*, is commonly manufactured by private coiners, and the consequence is that the size, quality, and value of the coins have fallen very much.

In my opinion there is nothing less fit to be left to the action of competition than money. In constitutional law the right of coining has always been held to be one of the peculiar prerogatives of the Crown, and it is a maxim of the civil law, that *monetandi jus principum ossibus inhæret.* To the executive government and its scientific advisers, who have minutely inquired into the intricacies of the subject of currency and coinage, the matter had better be left. It should as far as possible be removed from the sphere of party struggles or public opinion, and confided to the decision of experts. No doubt, in times past, kings have been the most notorious false coiners and depreciators of the currency, but there is no danger of the like being done in modern times. The danger lies quite in the opposite direction, that popular governments will not venture upon the most obvious and necessary improvement of the monetary system without obtaining a concurrence of popular opinion in its favor, while the people, influenced by habit, and with little knowledge of the subject, will never be able to agree upon the best scheme.

CHAPTER VIII.

THE PRINCIPLES OF CIRCULATION.

Before proceeding to consider the actual monetary systems adopted by modern or ancient nations, it is desirable to dwell for a short time upon the different meanings which may be attributed to the word *money*, and upon the natural principles which govern the use and circulation of coins. We must, in the first place, distinguish three things which, in the practical working of a currency system, are often separate, namely, the actual coins employed, the numbers by which they are expressed, and the relation of those numbers to the assumed unit of value. We must further distinguish coins according as their values depend upon the metal they contain, the metal for which they can be exchanged, or the other coins for which they are the legal equivalent.

THE STANDARD UNIT OF VALUE

It is essential, in the first place, to decide clearly what we mean by a *standard unit of value.* This must consist of a fixed quantity of some concrete substance, defined by reference to the units of weight or space. Value may seem to some people to be a purely mental phenomenon, and a pound would then have to be defined, as Lord Castlereagh asserted, by a *sense of value.* But we might as well define a yard by a sense of length, or a grain by a sense of weight. Just as every quantity in physical science is defined by reference to some concrete standard specimen, so if we are to measure and express value at all, we must fix upon definite quan-

tities of one or more definite and unchangeable commodities for the purpose.

The expression, *standard unit of value*, will indeed be almost inevitably misunderstood as implying the existence of something of fixed value. As we have seen, however, (Chapter I.), value merely expresses the essentially variable ratio in which two commodities exchange, so that there is no reason to suppose that any substance does for two days together retain the same value. All that a standard of value means is, that some uniform unchangeable substance is chosen, in terms of which all ratios of exchange may be expressed and calculated, without any regard whatever to the feelings or mental phenomena which the commodities produce in men. For reasons already stated, one or the other of the metals, gold, silver, or copper, has usually been considered most suitable for constituting the standard substance.

The absolute weight or magnitude of the unit of money is a matter of little or no importance, provided that all people agree upon the same unit, and that it be permanently and exactly defined, and afterward adhered to. Before the English yard was fixed, it would not have mattered whether it was a few inches longer or shorter; it does not matter, indeed, whether the inch, the foot, the furlong, or the mile is the unit, provided that one of them is definitely fixed, and the others referred to it by known ratios. So, it is really indifferent whether we regard the pound troy of standard gold, or the ounce, or the fixed number of grains in the sovereign as our standard. It is only requisite that every contract expressed in money shall enable us to ascertain exactly how much standard gold is due from one person to another.

M. Chevalier and some other continental economists have argued elaborately in favor of a universal standard unit of value, coinciding with the metric system of weights. They wish the unit of value to be ten grains of gold exactly, and seem to think that there is some magical efficacy in the correspondence of money and weights. This correspondence might perhaps be a slight convenience to those bullion dealers who have to calculate the metallic value of coins before melting or exporting them, or to those mint officials who have to adjust and test the weights of coins; to all other persons it would be a matter of complete indifference. Those who use coins in ordinary business need never inquire how much metal they contain. Probably not one person in ten thousand in this kingdom knows, or need know, that a sovereign should contain 123.27447 grains of standard gold. Besides, if we agree to accept a precise metrical quantity of one metal as our standard, the weights of the coins composed of other metals will be complicated fractional amounts, to be determined with reference to the accidental market value of the metals.

All we can say, then, is that the standard unit of value is some entirely arbitrary weight of the standard metal, the exact amount of which, being a matter of indifference on general grounds, should be fixed as seems most convenient in reference to the habits of nations or other accidental circumstances.

COIN, MONEY OF ACCOUNT, AND UNIT OF VALUE.

It is desirable to distinguish clearly between three things which, although definitely related to each other, need not be identical. The unit of value, or standard weight of the selected metal, is not necessarily made into a coin. It may be a quantity too great or too small for coining. All that is requisite is that the current coins shall be multiples or submultiples of the unit, or easily expressible in terms of the unit. Nor is it even requisite that the numbers in which we express value should be numbers of coins, or numbers of units of value. The *money of account*, as it is called, may differ both from the current money and the standard money. This is well illustrated in the Anglo-Saxon system of currency. The unit of value was the Saxon pound of standard silver, which was far too large to be coined. The only coins issued in any considerable quantity by the Anglo-Saxon kings, were silver pennies and a few halfpennies; yet the usual money of account was the shilling, which, after varying from four to five pence, was fixed by William I. at twelve pence, as it has ever since continued. No coin called a shilling was issued before the reign of Henry VII. Though the shilling has survived, other moneys of account have been forgotten, as, for instance, the *mancus*, which was equal to thirty pennies, or six shillings of five pence each. The *mark*, the *ora*, and the *thrimsa* were other moneys of account used by the Anglo-Saxons.

In our present English system the three moneys happen to coincide, which is doubtless a matter of some convenience. The sovereign is at once the principal coin, the unit of value, and the money of account in all the larger transactions, although in the expression of smaller sums the shilling is yet preferred. In France at the present time the money of account and the unit of value is the franc in gold; but as this weighs only 0.3226 grams, or about five grains, it is coined only in five, ten, and twenty-franc gold pieces, with subsidiary silver coins. In Russia, before the time of Peter the Great, the rouble was an imaginary money of account, consisting of one hundred copper copecks.

When Montesquieu affirmed that the negroes on the West Coast of Africa had a purely ideal sign of value called a *macute*, he misunderstood the nature of money of account. The macute served with the negroes as the name for a definite, though probably

a variable, number of cowry shells, the number being at one time 2,000. The macute has also been coined in silver pieces of eight, six, and four macutes, struck by the Portuguese for use in their colonies, the macute being worth about two and three-fourth pennies.

When the currency of a country undergoes a change, the units of coinage, account and value are likely to become separated. Sometimes a new system of accounts is applied to an old coinage, as in Norway at the present time. The Stockholm government is endeavoring to introduce the Swedish decimal system of currency, and some merchants are said already to keep their accounts in kroner and öre, although the money in circulation consists almost wholly of the old skillings and the paper specie-dalers. On the other hand, the coinage is sometimes changed, and yet the old method of account retained, especially as regards foreign transactions. Thus the rates of foreign exchange between the United States and England were, until last year, quoted in terms of a dollar valued at four shillings and sixpence, in accordance with a law of 1789. This rate seems to have been the traditional par of exchange of the Mexican dollar, and it was still retained even when the American dollar had been coined so as to be worth only 49·316 English pence.

There are two causes which have often led to a difference between coinage and money of account. The coins may, by legitimate abrasion, or by fraudulent clipping and sweating, become much reduced below their proper weights, yet an *agio*, or allowance, being made for the average depreciation, the old standard of value and money of account may be retained, as was the case in Amsterdam, Hamburg, and other towns. When a depreciated currency is issued in a country, the money of account may either change with it or remain as before; and it is an exceedingly difficult, if not insoluble, problem to decide whether, in particular periods of English history, prices were expressed in the new depreciated or the old good money. Professor J. E. T. Rogers has pointed out, in his admirable "History of Agriculture and Prices in England," printed by the Clarendon Press (vol. i., p. 175), that, in the fourteenth century, the coinage, though apparently passed by tale, was often weighed. In the ancient college accounts which he has investigated, he finds charges entered both for the cost of scales to make the weighings, and for the deficiency of weight of the coins.

In many countries, even at the present day, the circulating medium consists not of any one simple and well-connected series of coins, but of a miscellaneous collection of coins of various sizes and values, imported from foreign states. In such cases the money of account must necessarily differ from the mass of the coins, of which the value is usually estimated by a tariff expressed in terms of the money of account. In the German states, a few years ago, French and English gold was freely accepted in this manner. In Canada there was in former years an intricate confusion of monetary systems. Many species of foreign coins, chiefly varieties of the dollar, were in circulation. There were also two separate moneys of account, namely, the Halifax Currency Pound, divided into twenty shillings of twenty pence each, and defined by the fact that sixty such pence were equal to one dollar; and, secondly, the Halifax Sterling Currency. The latter is still employed to express the foreign exchanges. The present monetary unit of Canada is the dollar, and the currency consists of bank-notes, with silver coins of 50, 25, 20, 10, and 5 cents; but English sovereigns and half sovereigns are also in circulation.

STANDARD AND TOKEN MONEY.

We must distinguish between coins according as they serve for *standard money* or for *token money*. A standard coin is one of which the value in exchange depends solely upon the value of the material contained in it. The stamp serves as a mere indication and guarantee of the quantity of fine metal. We may treat such coins as bullion, and melt them up or export them to countries where they are not legally current; yet the value of the metal, being independent of legislation, will everywhere be recognized.

Token coins, on the contrary, are defined in value by the fact that they can, by force of law or custom, be exchanged in a certain fixed ratio for standard coins. The metal contained in a token coin has of course a certain value; but it may be less than the legal value in almost any degree. In our English silver coinage the difference is from 9 to 12 per cent., according to the market price of silver; in our bronze coinage the difference is 75 per cent. The metal contained in the French bronze coins is in like manner equal in value to little more than one-quarter of the current value. In many cases the difference has been far greater; as, for instance, in some of the old kreutzer pieces lately current in the German states. Woods's halfpence, which at one time created so much discontent in Ireland, or the small money previously issued by James II. in Ireland, are extreme instances of depreciated token money.

METALLIC AND NOMINAL VALUES OF COIN.

It has been usual to call the value of the metal contained in a coin the *intrinsic value* of the coin; but this use of the word *intrinsic* is likely to give rise to fallacious notions concerning the nature of value; which is never an intrinsic property, or existence, but merely a circumstance, or external relation (see Chapter II.). To avoid any chance of ambiguity, I shall substitute the expression, *me-*

tallic value, and I shall distinguish this from the *nominal*, *customary*, or *legal value*, at which a coin actually does, or is by law required to, exchange for other coins.

There are two ways in which the metallic value of a coin may be reduced below its nominal value, namely, by reducing either the weight or the fineness of the metal. English silver coin is still maintained at the "ancient right standard" of 11 oz. 2 dwts. in the troy pound, which has existed from time immemorial. By the Act of 1816 the silver coins which had previously been, in theory at least, standard money, were reduced in weight by 6 per cent., and thus rendered token money, which they still continue to be. In France and other countries belonging to the Monetary Convention, the smaller silver coins of two francs, one franc, and fifty centimes, have been converted into tokens by reducing the fineness of the silver from 900 to 835 parts in 1000. It does not seem to be a matter of any importance which mode is adopted; but the English mode, so long as it does not render the coins inconveniently small, is perhaps slightly the better, because some persons can satisfy themselves as to the weight of a coin, but none are able to test its fineness, unless they are professional assayers.

It need hardly be stated that coins which circulate by law in one country as tokens may be accepted in other countries at their metallic value.

LEGAL TENDER.

Money must further be distinguished according as it is or is not *legal tender*, or has or has not what the French call *cours forcé*. By legal tender is denoted such money as a creditor is obliged to receive in requital of a debt expressed in terms of money of the realm. One great object of legislation is to prevent uncertainty in the interpretation of contracts, and accordingly the Coinage Act defines precisely what will constitute a legal offer of payment on the part of a debtor, as regards a money debt. If a debtor tender to his creditor the amount of a debt due in legal tender money, and it be refused, the creditor may indeed apply for it or sue for it afterward, but the costs of the action will be thrown upon him.

But there seems to be no legal necessity that exchanges or contracts shall be made in money of the realm. At common law, contracts for the direct barter of two commodities, or for purchase and sale in terms of any kind of money, will be valid, provided it is clear what the terms of the contract mean. Accordingly, the sixth section of the Coinage Act (33 Vict. c. 10), while enacting that every contract, sale, payment, bill, note, transaction, or matter relating to money, shall be made or done according to the coins which are current and legal tender in pursuance of this Act, yet adds, "unless the same be made, executed, entered in, done or had, according to the currency of some British possession or some foreign state."

If I understand the matter aright, then, every person is at liberty to buy, sell, or exchange in terms of any money or commodity whatsoever which he prefers; and the fact that certain coins, up to certain limits, are legal tender, only means that the state provides a definite medium of exchange, and defines precisely what that is. The Act requires that *English money* shall be the money issued by the mint in accordance with the terms of the Act. Of course it remains quite open to a creditor to receive payment in coins which are not legal tender, if he like to do so, and I presume there would be nothing to prevent him entering into a contract to that effect. If a man contracted to sell goods to the extent of £100, and to receive payment in bronze pence and halfpence, it would no doubt be a valid contract, although no single quantity of pence exceeding twelve pence is a legal tender.

The exact meaning of the term, legal tender, may of course vary from country to country, and the above remarks apply only to countries under the English law.

THE FORCE OF HABIT IN THE CIRCULATION OF MONEY.

No one can possibly understand many social phenomena unless he constantly bears in mind the force of habit and social convention. This is strikingly true in our subject of money. Over and over again in the course of history, powerful rulers have endeavored to put new coins into circulation or to withdraw old ones; but the instincts of self-interest or habit in the people have been too strong for laws and penalties. Though in particular instances it may be difficult to explain occurrences which happen in the circulation of coins, yet a close analysis of the character of those who handle money, and their motives for holding it or paying it away, will throw much light upon the subject.

We must notice, in the first place, that the great mass of the population who hold coins have no theories, or general information whatever, upon the subject of money. They are guided entirely by popular report and tradition. The sole question with them on receiving a coin is whether similar coins have been readily accepted by other people. Thus in the remote parts of Norway at the present time, the old paper daler notes are preferred to the beautiful new twenty-kroner gold pieces. By far the greater number of the people possess no means of learning the metallic, or even the legal value, of an unfamiliar coin. Few people have scales and weights suitable for weighing a coin, and no one but an assayer or analytical chemist can decide upon its fineness. Many a traveler who has carried good new coin into a country where it happened to be strange, has had to suffer

a loss in paying it away. When our bronze pence were quite a novelty, I happened to take some with me into a remote part of North Wales, and they were rejected.

People in general accept coin simply on the ground of its familiar appearance. So entirely is this the case among very ignorant populations, that it has often been found desirable to maintain unchanged the impress on successive issues of coins. In many cases coins have been struck for this purpose with the date of a long past year, or even the effigy of a dead sovereign. The Maria Theresa dollar is still coined by the Austrian mint, with exactly the same design and date as when first issued in 1780, because it is the favorite coin in some of the states of North Africa, and various parts of the Levant. The British Government, when undertaking the Abyssinian expedition, procured a large stock of these coins for paying the natives. In the same way Mexican dollars are usually worth rather more than silver bullion, because of their easy currency in the East.

To the supremacy of habit, and the absence of means of estimating the real value of coin, is obviously due the depreciation which currencies have undergone. False coiners and kings alike find that, if they can only make new coins look and feel exactly like old coins, the people will accept depreciated money without question.

The annals of coinage, in this and all other countries, are little more than a monotonous repetition of depreciated issues both public and private, varied by occasional meritorious, but often unsuccessful, efforts, to restore the standard of the currency. A curious instance of successive attempts to beguile a people is found in certain Roman denarii of the Consular times. False coiners having issued plated denarii among the subject Germans, the people appeared to have notched them with files to test their genuineness. The Germans having thus become accustomed to see genuine *notched* coins, the Roman government found it desirable to issue new coins notched in a similar manner. But the forgers were not to be beaten. They issued plated denarii with the notches all complete, apparently displaying good metal within; and notched false coins of this kind exist to the present day in numismatic cabinets.

GRESHAM'S LAW.

Though the public generally do not discriminate between coins and coins, provided there is an apparent similarity, a small class of money-changers, bullion-dealers, bankers, or goldsmiths make it their business to be acquainted with such differences, and know how to derive a profit from them. These are the people who frequently *uncoin* money, either by melting it, or by exporting it to countries where it is sooner or later melted. Some coins are sunk in the sea or lost, and some are carried abroad by emigrants and travelers who do not look closely to the metallic value of the money. But by far the greatest part of the standard coinage is removed from circulation by people who know that they shall gain by choosing for this purpose the new heavy coins most recently issued from the mint. Hence arises the practice, extensively carried on in the present day in England, of *picking and culling*, or, as another technical expression is, *garbling* the coinage, devoting the good new coins to the melting-pot, and passing the old worn coins into circulation again on every suitable opportunity.

From these considerations we readily learn the truth and importance of a general law or principle concerning the circulation of money, which Mr. Macleod has very appropriately named the Law or Theorem of Gresham, after Sir Thomas Gresham, who clearly perceived its truth three centuries ago. This law, briefly expressed, is that *bad money drives out good money*, but that *good money cannot drive out bad money*. At first sight there may seem to be something paradoxical in the fact, that when beautiful new coins of full weight are issued from the mint, the people still continue to circulate, in preference, the old depreciated ones. Many well intentioned efforts to reform a currency have thus been frustrated, to the great cost of states, and the perplexity of statesmen who had not studied the principles of monetary science.

In all other matters everybody is led by self-interest to choose the better and reject the worse; but in the case of money, it would seem as if they paradoxically retain the worse and get rid of the better. The explanation is very simple. The people, as a general rule, do not reject the better, but pass from hand to hand indifferently the heavy and the light coins, because their only use for the coin is as a medium of exchange. It is those who are going to melt, export, hoard, or dissolve the coins of the realm, or convert them into jewelry and gold leaf, who carefully select for their purposes the new heavy coins.

Gresham's law alone furnishes a sufficient refutation of Mr. Herbert Spencer's doctrine, already noticed (Chapter VII), that money ought to be provided by private manufacturers. People who want furniture, or books, or clothes, may be trusted to select the best which they can afford, because they are going to keep and use these articles; but with money it is just the opposite. Money is made to go. They want coin, not to keep it in their own pockets, but to pass it off into their neighbors' pockets; and the worse the money which they can get their neighbors to accept, the greater the profit to themselves. Thus there is a natural tendency to the depreciation of the metallic currency, which can only be prevented by the constant supervision of the state.

From Gresham's law we may infer the necessity of two precautions in the regulation

of the currency. In the first place, the standard coins, as issued from the mint, should be as nearly as possible of the standard weight, otherwise the difference will form a profit for the bullion broker and exporter. In the second place, adequate measures must be taken for withdrawing from circulation all coins which are worn below the least legal weight, otherwise they will continue to circulate as token coins for an indefinite length of time. All commerce consists in the exchange of commodities of equal value, and the principal money should consist of pieces of metal so nearly equal in metallic contents, that all persons, including bullion dealers, bankers, and other professed dealers in money, will indifferently substitute one coin for another. But it is obvious that these remarks do not apply to coins intended to serve as tokens, since the current value of tokens exceeds their metallic value, and every one who uses them otherwise than in ordinary circulation will lose the difference. Hence the weight of a token coin is comparatively a matter of indifference, so long as people will receive it, and the deficiency of weight is not too great a temptation to the false coiner.

In England at the present day the force of habit, and the absence of means of discrimination, lead to the depreciation of our gold standard coinage by abrasion. Only while a sovereign exceeds 122·5 grains in weight is it legally a sovereign; but people go on paying and receiving indifferently, in ordinary trade, sovereigns of which the metallic values differ two pence or four pence, and sometimes six pence or eight pence. Every standard coin thus tends to degenerate into a token coin, and such a coin can only be withdrawn from circulation by the state.

EXTENSION OF GRESHAM'S LAW.

Gresham's remarks concerning the inability of good money to drive out bad money, only referred to moneys of one kind of metal, but the same principle applies to the relations of all kinds of money, in the same circulation. Gold compared with silver, or silver with copper, or paper compared with gold, are subject to the same law that the relatively cheaper medium of exchange will be retained in circulation and the relatively dearer will disappear. The most extreme instance which has ever occurred was in the case of the Japanese currency. At the time of the treaty of 1858, between Great Britain, the United States, and Japan, which partially opened up the last country to European traders, a very curious system of currency existed in Japan. The most valuable Japanese coin was the kobang, consisting of a thin oval disk of gold about two inches long, and one and one-fourth inches wide, weighing two hundred grains, and ornamented in a very primitive manner. It was passing current in the towns of Japan for four silver itzebus, but was worth in English money about eighteen shillings, five pence, whereas the silver itzebu was equal only to about one shilling, four pence. Thus the Japanese were estimating their gold money at only about one-third of its value, as estimated according to the relative values of the metals in other parts of the world. The earliest European traders enjoyed a rare opportunity for making profit. By buying up the kobangs at the native rating they trebled their money, until the natives, perceiving what was being done, withdrew from circulation the remainder of the gold. A complete reform of the Japanese currency is now being carried out, the English mint at Hong Kong having been purchased by the Japanese government.

What happened in an extreme degree in Japan has often happened in England and other European countries, in a less degree. If the ratio of gold and silver in the coinage, as legally current, differs only one or two per cent. from the commercial ratio, it may become profitable to export the one metal rather than the other, and in this way, as we shall see, the main part of the currency of France was changed from silver into gold between 1849 and 1869. In fact the character of the coinage of most nations has been determined in a similar manner, and England and the United States were thus led to adopt a principal gold currency. There is every reason to believe that in ancient Rome, both in the time of the Republic and of the Empire, great difficulties were encountered in regulating the currency of silver alongside of copper, and the perplexity became worse when gold coin was introduced.

CHAPTER IX.

SYSTEMS OF METALLIC MONEY.

We are now in a position to analyse the construction of the various systems of metallic money which have existed, or do exist, or which might be conceived to exist. The systems actually brought into operation are more numerous than is commonly supposed, and I have nowhere met with an adequate classification of them. M. Courcelle-Seneuil, indeed, has satisfactorily described some of the principal systems, and MM. Chevalier, Garnier, and other writers, both Continental and English, have given other brief classifications. But we must now take a comprehensive view of the possible ways in which two, three, or more metals may be employed in the construction of a more or less useful monetary system.

There seem to be five distinct modes in which a government may deal with metallic money.

1. It may confine itself to providing a system of weights and measures, and may then

allow the precious metals to be passed about from hand to hand, like other commodities, in terms of the national weights and measures, and in the form which individuals find to be the most convenient. This we may call the system of *currency by weight.*

2. To save the trouble of frequent weighing, and the uncertainty of fineness of the metal, it may coin one or more metals into pieces of certain specified weights and fineness, and may afterward allow the public to make their contracts and sales in one or other kind of coin, as they deem expedient. This may be described as the system of *unrestricted currency by tale.*

3. To prevent misunderstanding, the government, while emitting various coins in various metals, may ordain that all contracts expressed in money of the realm shall, in the absence of express provision to the contrary, be taken to mean money of one kind of metal, specially named, while other coin shall be left to circulate at varying market rates compared with this principal kind of coinage. This is *the single legal tender system.*

4. The government may emit coins of two or more kinds of metal, and enact that money contracts may be discharged in one or other kind, at certain rates fixed by law. This is the *multiple legal tender system.*

5. While maintaining one kind of coin as the principal legal tender, in which all large money contracts must be fulfilled, coins of other kinds of metal may be ordered to be received in limited quantities, as equivalent to the principal coin. For this the name *composite legal tender system* may be proposed.

CURRENCY BY WEIGHT.

The order in which I have enumerated the principal systems of metallic money, is not only the logical order, but it is the historical order in which the systems have, for the most part been introduced. There is overwhelming evidence to prove that simple currency by weight is the primitive system. Before the invention of the balance, lumps and grains were no doubt exchanged according to a rude estimation of their bulk or weight; but afterward the balance became a necessary instrument in all important transactions. In the Old Testament we find several statements clearly implying that the ancient Hebrews used to pass money by weight. In Genesis (xxiii. 16) Abraham is represented as weighing out to Ephron "four hundred shekels of silver, current money with the merchant," but the silver in question is believed to have consisted of rough lumps or rings not to be considered coin. In the Book of Job (xxviii. 15) we are told that "wisdom cannot be gotten for gold, neither shall silver be weighed for the price thereof."

Aristotle, in his Politics (Book I., chap. ix), gives an interesting account of his views of the origin of money, and distinctly tells us that the metals were first passed simply by weight or size, and Pliny makes a similar assertion. That it was so, we may infer from the remarkable fact that, even when no use was made of it, the custom of bringing a pair of scales survived as a legal formality in the sale of slaves at Rome.

There can be little doubt that every system of coinage was originally identical with a system of weights, the unit of value being the unit of weight of some selected metal. The English pound sterling was certainly the Saxon pound of standard silver, which was too large to be made into a single coin, but was divided into two hundred and forty silver pennies, each equal to a *pennyweight.* In the English and Scotch *pounds*, and the French *livre*, we have the vestiges of a uniform international system of money and weights, the establishment of which is attributed to Charlemagne, but which unfortunately became differentiated and destroyed by the various depreciations of the coinage in one country or another. Most of the other principal units of value were originally units of weight, such as the shekel, the talent, the as, the stater, the libra, the mark, the franc, the lira.

In the Old Testament the notion of money is expressed three times by the Hebrew word kesitah, which is translated in certain old versions into words meaning *lamb.* This might seem to be an additional proof of the former use of cattle as a medium of exchange; but I am informed by my learned friend, Professor Theodores, that this translation probably arises from an accidental blunder, and that the original meaning of the word kesitah, was that of a "certain weight," or "an exact quantity." The corresponding word in the Arabic, kist, is said to denote a pair of scales.

Currency by weight still exists among considerable portions of the human race. In the Burman empire, for instance, three kinds of metal are current, namely, lead, silver, and gold, and all payments are made by the balance, the unit of weight for silver being the tical. In the Chinese empire and Cochin China, there is indeed a legal tender currency of *cash* or *sapeks* but gold and silver are usually dealt in by weight, the unit being the tael. A very interesting account of Chinese money, by M. le Comte Rochechouart, will be found in the *Journal des Economistes* for 1869 (vol. xv., page 103). According to this writer, both gold and silver are treated simply as merchandise, and there is not even a recognized stamp, or government guarantee of the fineness of the metal. The traveler must carry these metals with him, as a sufficient quantity of strings of *cash* would require a wagon for their conveyance. Yet in exchanging silver or gold he is sure to suffer great losses, both from the falsity of balances and weights, and the uncertain fineness of the metal. In buying a tael of gold the traveler may have to give eighteen taels

of silver; but in selling it he will often not obtain more than fourteen taels.

Whatever be the inconveniences of the method, currency by weight is yet the natural and necessary system to which people revert whenever the abrasion of coins, the intermixture of currencies, the fall of a state, or other causes, destroy the public confidence in a more highly organized system. Though the silver penny among the Anglo-Saxons was supposed to correspond with a *pennyweight*, there was a practice of giving *compensatio ad pensum*, which really amounted to taking the coins by weight, to allow for abrasion and inaccurate or false coinage. The *as* was at first equal in weight to a Roman pound, but it was rapidly lessened, so that at the epoch of the First Punic War, it did not exceed two ounces, and by the time of the Second Punic War it had sunk to one ounce. The Roman people had naturally reverted to weighing the metal, and the *aes grave* was money reckoned by weight instead of by *tale*.

In the present day, currency by weight is far more extensively practiced than might be supposed, because, in many parts of the world, the currency consists of a miscellaneous assortment of old gold, silver, and even copper coins, which have been brought thither from other countries, and have been variously worn, clipped, or depreciated. In such countries, the only means of avoiding loss and fraud is to weigh each coin, and the impress passes for little more than an indication of the fineness of the metals. In all large international transactions, again, currency by weight is the sole method. The regulations of a state concerning its legal tender, have no validity beyond its own frontiers; and as all coins are subject to more or less wear and uncertainty of weight, they are received only for the actual weight of metal they are estimated to contain. The coin of well-conducted foreign mints is bought and sold by weight without melting; but the coin of minor states, which have occasionally depreciated their money, is melted up and treated simply as bullion.

UNRESTRICTED CURRENCY BY TALE.

The simplest way for a state to manage its money, might seem to be to revert to the primitive notion of a coin, and issue pieces of gold, silver, and copper, certified to be equal to units of weight, leaving all persons free to make contracts or sales in terms of any of these metals. These pieces of certified metal would then be so many commodities thrown into the markets and allowed to take their natural relative values.

Such appears to have been the system intended to be established by the French Revolutionary Government in terms of the abortive law of Thermidor, an III. Disks of ten grams each were to be struck in gold, silver, and copper, and then put in circulation, without any attempt to regulate their currency. If I understand his meaning correctly, M. Garnier has recently brought forward a somewhat similar scheme, proposing to make the gram of gold at nine-tenths the unit of value, and to coin pieces of one, two, five, eight, or ten grams concurrently with standard silver pieces, which are in France already multiples of the gram. M. Chevalier's proposed system of international money partially at least, involves the same notion for he considers that the principal currency should consist of decagrams of gold But, as Mr. Bagehot has well remarked, there is no object whatever, as regards the greater mass of the population, in having coins simply related to the system of weights, because most people never need take any account of the weight at all. They need only know how many copper coins are equal to one silver coin, and how many silver to one gold coin. Now, if we carry out M. Chevalier's scheme consistently and fully, and make all the coins multiples of the gram, we shall oblige all people to be constantly working complex arithmetical sums. No one could give exactly correct change without calculating how many silver ten-gram pieces are, at the market price of silver, equal to one gold ten-gram piece. The necessity for calculation occasions needless loss of time and trouble, and a factitious gain is sure to accrue to the expert and unscrupulous at the expense of the poor and ignorant.

Owing to these obvious objections no government has ever, I believe, carried into practice a system of money of the kind described. Nevertheless, currencies approximating to it in nature have come to exist in many parts of the world by the intermixture of coinages of different states. There are many half-civilized nations which have no national coinage, but employ the coins which happen to reach them in the course of trade. On the West Coast of Africa the Spanish dollar is the best known coin, but Danish, French or Dutch coins also circulate. In several of the South American States the currency is in a state of complete confusion, consisting of a mixture of American eagles, gold doubloons, silver dollars, English sovereigns, piastres, etc., together sometimes with several different issues of coinage of the South American States variously depreciated. Even in the British possessions we find the same state of things. In the British West Indian Islands, American, Mexican, Spanish, and other dollars, circulate concurrently with English money; but it should be added that in most cases the Spanish dollar is treated as the standard of value, and other coins are quoted in terms of it

In Eastern countries there is a similar intermixture of coinage. In Singapore the Indian rupee mingles with Spanish and Mexican dollars. Persia has a rude coinage of its own, so uncertain in weight that it has to

be dealt in by the balance, but Russian, Turkish, and Austrian gold coins circulate by tale. Some of the best-regulated nations have allowed, or even promoted, the currency of various foreign coins. In Germany, French and English gold coins used to be accepted, according to a well-recognized tariff. The circulation of English, French, Spanish, Mexican, and other gold coins in the United States was legalised by an Act of June 28th, 1834, repealed by an Act of February 21st, 1857, which however allows certain foreign coins to be received at government offices.

In England we have for many generations enjoyed a very pure currency, so that we are unconscious of the inconveniences arising from a confusion of coins of different values. But in the early part of this century Spanish dollars were put into circulation for a time in England.

In former centuries the mixture of coinages was far more common than at present. No country had a currency free from strange coins. It is impossible to open an old book on commerce without finding long tables of coins which the merchant might expect to meet with; and the business of money-changing was a lucrative and common one.

It will be understood, that only so long as coins are known by the fresh sharp appearance of the impression to be of full weight, and are accepted according to tariff, does the system of currency by tale of number exist. The silver dollar, being a large coin, is subject to comparatively little abrasion, so that people learn to receive dollars of various species at certain well-established rates. Thus the dollar has practically been for several centuries the international money of the tropical countries. But so soon as coins bear evidence of wear or ill-treatment, they must be circulated by weight, and we revert to a more primitive system.

M. Feer-Herzog has described, as the system of *parallel standards*, that in which a state issues coins in two or more metals, and then allows them to circulate by tale at ratios varying according to the market values of the metals. He cites, as recent examples, the rixdaler in silver, employed as the internal money of Sweden in combination with the ducat in gold, serving as international money. The government of India, again, has on several occasions tried to introduce a parallel standard of gold alongside of the single silver legal tender now existing there. Gold mohurs have long been more or less in circulation in India, and are supposed to form at present about one-tenth part of the coinage. They are of exactly the same weight and fineness as the silver rupee, and are usually valued at from fifteen to fifteen and two-third rupees. It seems probable, however, that what M. Feer-Herzog calls the system of parallel standards will coincide according to circumstances, either with that which I have described as the system of unrestricted currency by tale, or that of a single legal tender, with an additional commercial money of varying value. The Indian currency must certainly be classed under the latter head. There cannot in fact be two different parallel standards used both at the same time; and though it is not uncommon for a state to coin moneys in two metals, and leave its subjects to pay in one or other at will, yet one of the two is generally recognized as the standard of value.

SINGLE LEGAL TENDER SYSTEM.

The system of currency naturally adopted by the first coiners of money was that of a single legal tender. Coins of one kind of metal, or even a single series of coins of uniform weight, were at first thought sufficient. Iron in small bars was the single legal tender in Lacedæmon, and possibly in some other early states. *Aes* was undoubtedly the legal tender among the Romans for a length of time. In China the sole measure of value and legal tender to the present day consists of brass *cash* or *sapeks*, strung together in lots of a thousand each. In England silver was the only metal coined from the time of Egbert to that of Edward III., with the doubtful exception of a very few small pieces of gold. Silver was the sole legal tender and measure of value, and few coins except silver pennies were issued. In Russia and Sweden, during part of last century, copper was the sole legal tender.

A single metal currency has the great advantages of simplicity and certainty. Every one knows exactly what he is to pay or receive, and when the coins are of one size or of a few sizes, simply related to each other, like the early English coins, no one is subject to loss by errors of calculation. But there is the obvious disadvantage that, according as the metal chosen is cheap or dear, large or small transactions will be troublesome to effect. To pay a few hundred pounds in Swedish copper plates, or Chinese strings of *cash*, a cart would be required for conveyance, and the counting of *cash* is almost impracticable. A silver coinage again does not admit of coins sufficiently small for minor transactions. It is difficult to understand how retail trade was carried on when the silver penny weighed twenty-two-and-a-half grains, and the precious metals were far more precious than at present. The penny was, indeed, cut up into half pence and farthings, *i. e.*, *four things;* but even the farthing must have been equal in purchasing power to our three-penny or four-penny piece. The mass of the currency appears to have consisted of silver pennies.

Accordingly it is found that, if a government issue coins only of a single metal, the people will introduce and circulate coins of other metals for their own convenience. In Anglo-Saxon times, gold byzants from By-

zantium were used in England, and the gold coins of Florence, thence called florins, were much esteemed both here and in other parts of Europe. In later centuries, too, in the absence of a legitimate copper coinage, tradesmen's tokens came into general circulation.

MULTIPLE LEGAL TENDER SYSTEM.

Out of a single legal tender naturally grew up systems of a double or even multiple legal tender. The Plantagenet Kings of England, for instance, finding that though they coined only silver, the people made use of gold, eventually began to issue gold coins, and fixed the rates at which they should be exchanged for silver coins. In the absence of any special regulations to the contrary, this constituted a double tender system. As, after a time, the ratio of values of the metals would fail to coincide with that involved in the relative weights of the coins, it became requisite to fix by royal proclamation a new value for one metal in terms of the other. From 1257 to 1664, the gold and silver currency of England was thus regulated, no coins of copper or any inferior metal being then issued. From 1664 to 1717, proclamations were made upon the subject, and the value of the guinea was allowed to vary in terms of the shilling. At one time it rose nearly to thirty shillings, owing partly to the decreased value of silver, but chiefly to the clipped and worn state of the silver money. During this interval, then, the country had a single silver standard.

In the early part of the last century, a great deal of discussion took place upon the unsatisfactory state of the silver currency, and Sir Isaac Newton, the Master of the Mint, was requested to report upon the best measures to be adopted. In 1717 he made a celebrated report, recommending that the government should revert to the practice of fixing the price of the guinea, and he suggested twenty-one shillings as the best rate. His advice being accepted, the guinea has ever since been valued at twenty-one shillings. Then there was again a double standard in England, any one being at liberty to pay in either kind of coin. In practice, however, it is almost impossible that the commercial value of the metals should coincide with the legal ratio. At the rate adopted by Sir Isaac Newton, gold was overvalued by rather more than one and a-half per cent.; to that extent it was more valuable as currency than as metal. Therefore, in accordance with the Law of Gresham, and the principles laid down in Chapter VIII., the the full weight silver coin was withdrawn or exported, and gold became the practical measure of value, which it has ever since continued to be.

In every other part of the world, where attempts have been made to combine two metals as concurrent standards of value, similar results have followed. In Massachusetts, in 1762, gold was made a legal tender, as well as silver, at the rate of two pence halfpenny per grain; but being overvalued as much as five per cent., the silver coinage rapidly disappeared from circulation. Various laws were passed to remedy this inconvenient state of things, but without success so long as this valuation of gold was maintained.

In these and many other cases which might be quoted, a government had attempted to combine a circulation of gold with that of silver, without being aware of all the principles involved in the experiment. It was hardly, perhaps, till the time of the French Revolution that the double standard system was consciously selected as the best method. Since the celebrated law, known as "La loi du 7 Germinal, an XI.," was adopted by the Revolutionary Government, the system has become identified with the policy of the French economists. The history of the origin of this law was almost unknown, until M. Wolowski described it in a series of valuable articles published in the *Journal des Économistes* for 1869.

As early as 1790 Mirabeau presented to the National Assembly a celebrated memoir on monetary doctrines, in which, amid a curious mixture of true and false views, he decided in favor of silver as the principal money, on the ground of the greater abundance of silver compared with gold. He proposed to make silver the *constitutional money*, that is, the legal tender, and to employ gold and copper as *additional signs* of value. These ideas were only so far carried out that the franc was defined first as ten grams of silver by the decree of the 1st August, 1793, and was afterward definitely fixed at five grams by the law of the 28th Thermidor, an III. The old gold pieces of twenty four and forty-eight livres continued to circulate, while the ten-gram gold pieces ordered by the decree to be struck were not really issued.

In the year IX. Gaudin proposed that the ratio of fifteen and a-half to one should be adopted in fixing the weight of the gold coins relatively to the silver ones. Thus, while the franc was defined as consisting of five grams of silver nine-tenths fine, the twenty-franc gold piece was to contain 6·451 grams of gold of equal fineness. He seems to have thought that this ratio was sufficiently near to that of the market to allow the coins to circulate side by side for a long time, and in case of a change, he thought that the gold pieces could be melted and reissued at a different weight. After a great amount of discussion, in which Berenger, Lebreton, Daru, and Bosc took the most prominent parts, the proposals of Gaudin were carried out, but not precisely on the ground indicated by him. It appears to have been thought unwise either to demonetize gold altogether, which would have seriously diminished the circulating medium, or to leave the value of the

gold coins uncertain, which would give rise to disputes.

The ratio adopted by the legislators of the Revolution happened to overvalue silver in some degree, and hence the currency of France came to consist principally of the heavy five-francs pieces, or écus. Not until the Californian and Australian discoveries caused gold to be the cheaper money in which to make payments, did this heavy silver money gradually disappear. The action of the double standard system will be further considered in Chapter XII.

COMPOSITE LEGAL TENDER.

We have seen that with a single metal currency there is inconvenience in making small or large payments, according as the metal chosen is dear or cheap. If two or more series of full-weight coins be issued in different metal, and allowed to vary in relation to each other, the difficulty of circulation intervenes. If they both be made legal tenders at a fixed ratio, the currency will tend to become composed alternately of one or the other metal, and money-changers will make a profit out of the conversion.

There yet remains another possible system, in which coins of one metal are adopted as the standard of value and principal legal tender, and subordinate token coins of other metals are furnished for the purpose of subdivision, being recognized as legal tender only for small amounts. The values of these token coins now depend upon that of the standard coins for which they are legally exchangeable, and care is taken to make their weights such that the metallic value will always be less than the legal value. No profit can ever be made by melting such coins, or removing them from the country, and their ratio of exchange with the principal coins is always a simple ratio fixed by law.

The composite legal tender rises naturally out of the double standard system; for, as we have seen, if, under the latter system, gold be overvalued at the legal rate, all full-weight silver coins will be withdrawn and exported by degrees, so that there will remain practically a token currency of light silver. Lord Liverpool, having in his thorough investigation of the subject of metallic money observed the superior convenience of the composite legal tender to the double legal tender, advocated its adoption in England in the most conclusive manner. His arguments will be found in his admirable "Treatise on the Coins of the Realm in a Letter to the King" (Oxford, 1805), and his recommendations, as carried into effect in 1816, are the foundation of our present monetary system.

A composite system of currency has frequently existed in one country or another without being specially designed or recognized. It comes into existence whenever coins of gold and silver are current at rates fixed by law or custom, but the silver coins are reduced by abrasion or clipping below the corresponding weight. From the year 1717, when the guinea was fixed at twenty-one shillings, until the present system was instituted in 1816, the English currency was based theoretically upon the double standard system. Practically, however, the silver coins were so scarce and worn that they served but as tokens. The tradesmen's copper tokens, too, being always of light weight, and exchangeable by custom for a certain proportion of silver coins, formed the third term in the series. But Lord Liverpool appears to have been the first to apprehend and explain the principles on which such a composite system worked, and there can be no doubt that the system, as he expounded it, is the best adapted for supplying a convenient and economical currency.

Most of the leading nations have now adopted the composite legal tender in a more or less complete form. France, Belgium, Switzerland, and Italy still adhere to the double standard in theory, but have reduced all coins of less value than five francs to the footing of token money, by reducing the fineness of the silver from 900 parts to 835 parts in 1000, or by seven and one-fourth per cent., and by limiting the amount for which they are legal tender. The copper money of France had previously been restricted as a legal tender to sums below five francs in any one payment. In the United States, when metallic currency was generally employed, the double standard system existed in theory, but was reduced to a composite standard by the excessive overvaluing of the gold money. Moreover, by a law of 21st of February, 1853, the smaller silver coins were reduced in weight and made legal tender only for sums not exceeding five dollars. The silver three-cent pieces, and the several copper, bronze, or nickel coins, issued from the United States mints, were also token money with various limits as regards legal tender.

The new German monetary system is perfectly organized as a composite legal tender.

CHAPTER X.

THE ENGLISH SYSTEM OF METALLIC CURRENCY.

I now come to describe in more detail the system of metallic currency which has existed in England for more than half a century, and which seems to be the best of all as regards the principles on which coins of three different metals are combined into a composite legal tender. The legal regulations under which the English coinage is issued and circulated, can be ascertained with ease and certainty, thanks to the Act of Parliament (33 Victoria, ch. 10), which Mr. Lowe caused to be passed to simplify and consolidate the statutes on the subject.

ENGLISH GOLD COIN.

The English sovereign is the principal legal tender and the standard of value. It is defined as consisting of 123·27447 grains (7·98805 grams) of English standard gold, composed of eleven parts of fine gold, and one part of alloy, chiefly copper. The sovereign ought, therefore, in theory, to contain 113·00160 grains, or 7·32238 grams, of pure gold. But as it is evidently impossible to make coins of any precise weight, or to maintain them of that weight when in circulation, the weight stated is only that standard weight to which the mint workmen should aim to attain as closely as possible, both in each individual piece, and in the average.

From the weight of the sovereign we deduce the mint price of gold. For if we divide the number of grains in the sovereign into the number of grains—namely, 480—in the troy ounce, we ascertain exactly how many sovereigns and portions of a sovereign the mint ought to return for each ounce delivered in. This we find to be 3 89375, which is equivalent to £3 17*s*. 10½*d*. It comes to exactly the same thing to say in terms of the old mint indentures, that twenty-pounds' weight troy of gold are to be coined into 934 sovereigns, and one half-sovereign. I have heard of people who protested against the government fixing the price at which gold should be bought and sold by the mint, and who yet allowed that the sovereign must have some fixed weight. But the fixed price is convertible with the fixed weight, and *vice versa*. Either follows from the other.

In practice the weight of a coin is always a matter of limits, and there must be limits both for the weight as sent out and that at which it can legally remain in circulation. The *remedy* is the technical name for the allowance made to the mint-master for imperfection of workmanship, and is defined by the Act as two-tenths of a grain (0·01296 gram). Thus the mint cannot legally issue a sovereign weighing less than 123·074 grains, or more than 123·474 grains. Since the fineness of the gold, again, can never be adjusted exactly to the standard of eleven parts in twelve, or 916·66 in a 1000, a remedy of two parts in 1000 is allowed in this respect. It is understood that the English mint succeeds in working well within the remedy both of weight and fineness

Every sovereign issued from the mint in accordance with these regulations, and bearing the impress authorized by the Queen, is legal tender, and must be accepted by a creditor in discharge of a debt to that amount, provided that it has not been reduced by wear or ill-treatment below the weight of 122·50 grains (7·93787 grams). If a sovereign of less than this *least current weight* be tendered to any person, he is presumed by the law to detect the deficiency, and is bound to cut or deface the coin, and return it to the tenderer, who must bear the loss. If the coin so defaced should prove not to be below the limit, then the defacer has to receive it and bear the loss arising from his mistake. Any justice of the peace may decide disputes arising concerning light sovereigns in a summary manner.

The only other gold coin actually issued is the half-sovereign, of which the standard weight and remedy are exactly half those of the sovereign, the remedy in fineness the same as in the sovereign, and the least current weight 61·1250 grains (3·96083 grams). The Coinage Act also legalizes the issue of two and five-pound gold pieces, the weights and remedies in weight being corresponding multiples of those of the sovereign. Coins of the value of five and two guineas were struck by most of the English monarchs from the time of Charles II. to that of George III. Patterns of five and two-pound pieces have been prepared under Queen Victoria; but gold coins of this size have not been issued in the present reign, nor is it desirable, for reasons stated in Chapter XIII, that they should be issued.

ENGLISH SILVER COIN.

The further subdivision of the pound is effected by token coins of silver and bronze, which are made of such weights that there is no danger of their metallic values rising above the metallic value of the gold coins for which they are legally equivalent. Previous to the year 1816, the troy pound of standard silver, containing 925 parts of fine silver and seventy-five parts of alloy in 1000, was coined into sixty-two shillings, so that each shilling would contain 92·90 grains of standard metal. Under these regulations gold was rated as 15·21 times as valuable as silver. As silver, however, may sometimes become more valuable relatively to gold, Lord Liverpool very wisely recommended in his letter to the king, that the weight of the shilling should be reduced. By the Act 56 Geo. III. ch. 68, it was ordered that the troy pound of silver should be coined into sixty-six shillings, a reduction of weight of about six per cent. The new Coinage Act maintains the chief provisions of that of 1816, so that the English shilling now has the weight of 87·27272 grains of standard silver (5·65518 grams), and the weights of all the other silver coins are exactly corresponding multiples or submultiples of this. The mint remedy in weight for the shilling is a little more than the third part of a grain, and in simple proportion for the other coins. The remedy in fineness is in all cases four parts in one thousand. The denominations of coins authorized are nine in number, namely, the crown, half-crown, florin, shilling, sixpence, groat, or fourpenny piece, threepence, twopence, and penny. All, except the crown, are coined in greater or less quantity, but

the fourpence, twopence, and penny, are now only struck in very small quantities, as Maundy money, which, after being distributed by the Queen annually in alms, appears to find its way into numismatic cabinets or to be melted down.

All such coins are legally current, irrespective of their weights, so long as they are not called in by proclamation, or so worn and defaced that the impress of the mint cannot be recognized. The coin in circulation is actually reduced in weight by abrasion to a considerable amount, often one-fourth or one-third of its original weight. Moreover, the fall in the value of silver relatively to gold reduces the metallic worth of the coins, so that no one can export them to foreign countries, or melt them for sale as bullion, without losing from ten to thirty per cent. of their nominal value.

It would obviously be a cause of grievance if a person could be obliged to receive unlimited amounts of this token money in discharge of a debt. Merchants might often have thousands of pounds worth of such coins thrown upon their hands, the full value of which could only be realized by gradually putting it into circulation again. It was therefore provided by the Acts of 1816 and 1870, that silver coin shall be a legal tender only to the amount of forty shillings in any one payment. This limit was chosen apparently because the two-pound piece was in 1816 regarded as the largest coin then in circulation, or likely to be issued.

ENGLISH BRONZE COINAGE.

The final subdivision of the pound is effected by bronze pence, halfpence, and farthings, of which the weights when issued should be respectively 145·833, 87·500 and 43·750 grains. They are composed of an alloy of ninety-five parts by weight of copper, four parts of tin, and one part of zinc, being exactly the same kind of bronze as was previously employed by the French mints. The remedy in weight is one-fifth of one per cent., and as the coins are token money there is no least current weight. As the reasons against allowing them to be a legal tender for large sums are stronger than in the case of silver coin, it is enacted that bronze coins shall be a legal tender only to an aggregate amount of one shilling.

If a copper penny were now made to contain metal equivalent in value to the two hundred and fortieth part of a sovereign, its weight would be eight hundred and seventy-one grains, at the present market price of copper (£75 per ton). Thus the fractional coinage has been reduced in weight nearly to one-sixth part of what it would be as standard copper coin. The bronze of which the pence are made is worth, according to Mr. Seyd, ten pence per troy pound, so that the metallic values of the coins are almost exactly one-fourth part of their nominal values. A considerable profit therefore accrues upon the coinage of bronze, amounting up to the end of 1871 to about £270,000; but the reduction of weight is altogether an advantage, and is probably not carried as far as it might properly be done.

DEFICIENCY OF WEIGHT OF THE ENGLISH GOLD COIN.

It is the theory of the present English monetary law, as we have seen (Chapter X.), that every person weighs a sovereign tendered to him, and assures himself, before accepting it, that it does not weigh less than 122·5 grains. In former days, it was not uncommon for people to carry pocket-scales for weighing guineas, and such scales may still be occasionally seen in old curiosity shops. But we know that the practice is entirely given up, and that even the largest receivers of coin, such as the banks and railway companies, and even the tax-offices, post-offices, etc., do not pay the least regard to the law. Only the Bank of England, its branches, and a few government offices, weigh gold coin in England. The result is that a large part of the gold coinage is worn below the least current weight, and all persons of experience avoid paying old sovereigns to the Bank of England. Only ignorant and unlucky persons, or else large banks and companies which cannot otherwise get rid of light coin, suffer loss. The quantity of light gold coin withdrawn by the bank did not for many years exceed half a million a year; during the last few years it has varied from £700,000 to £950,000. As the average amount of gold coined annually is four or five millions, and the coins melted or exported are for the most part new and of full weight, it follows necessarily, that the currency is becoming more and more deficient in weight.

In 1869, I ascertained, by a careful and extensive inquiry, that thirty-one and a-half per cent. of the sovereigns and nearly one-half of the ten-shilling pieces were then below the legal limit. The reader who has attended to the remarks on Gresham's Law (Chapter VIII.), will see that no amount of coinage of new gold will drive out of circulation these depreciated old coins, because those who export, or melt, or otherwise treat the coins as bullion, will take care to operate upon good new ones.

Great injustice arises in some cases from this defective state of the gold currency. I have heard of one case in which an inexperienced person, after receiving several hundred pounds in gold from a bullion dealer in the city of London, took them straight to the Bank of England for deposit. Most of the sovereigns were there found to be light, and a prodigious charge was made upon the unfortunate depositor. The dealer in bullion had evidently paid him the residuum of a mass of coins, from which he had picked the heavy ones. In a still worse case lately

reported to me, a man presented a post-office order at St. Martins-le-Grand, and carried the sovereigns received to the stamp-office at Somerset House, where the coins were weighed, and some of them found to be deficient. Here was a man, so to say, defrauded between two government offices.

It should be stated that the government made, in July, 1870, a slight effort to promote the withdrawal of light gold by engaging to receive it through the Bank of England at the full price of £3 17*s.* 9*d.* per ounce by weight, the price previously paid by the bank having been only £3 17*s.* 6½*d.*, owing to the old sovereigns being a little below the standard in fineness. A certain increase in the amounts withdrawn has no doubt followed this measure; but the loss by deficiency in weight is still thrown upon the public, and as long as this is the case the withdrawal of light gold will continue inadequate to maintain the coinage at its standard weight.

WITHDRAWAL OF LIGHT GOLD COIN.

Some steps must soon be taken to remedy the increasing deficiency of weight of the gold coinage described above. The withdrawal may no doubt be effected in several ways. One method would be for the Queen to issue a proclamation calling in and prohibiting the circulation of all gold coins more than twenty or twenty-five years old, as it is mostly the older coins which are deficient in weight. Another method would be to oblige all revenue officers, postmasters, and others, under the control of government, to weigh all sovereigns presented to them. If necessary, the bankers of the kingdom generally might be obliged to weigh coin. But it is obvious that great trouble and inconvenience would arise from such measures. The progress of the post-office savings bank would be imperiled if every depositor of a pound were liable to be charged two per cent. for lightness. Considerable excitement and trouble followed the issue of the last proclamation of June, 1842, calling in light gold. To make the last holder of a coin pay for the whole cost of its circulation during thirty or forty years past, leads in many cases to gross injustice. The present law tends to throw the loss upon the poor, who have usually only one or two sovereigns at a time to pay, whereas rich people, having many, can avoid paying light gold at offices where it will be weighed.

I hold that the only thorough remedy is for the government to bear the loss occasioned by the wear of the gold, as it already bears that of the silver currency. The Bank of England should be authorized to receive all sovereigns *showing no marks of intentional damage or unfair treatment* at their full nominal value on behalf of the mint, which should re-coin the light ones at the public expense. No one would then have any reason for keeping the light gold away from the bank; the currency would soon be purged of the illegally light coins, and would thenceforth be kept up strictly to the standard weight; all loss of time and trouble would be saved to individuals, a consideration which we should not lose sight of; and, lastly, no injustice would be done, as at present, to the last holder of a light sovereign.

In opposition to such a proposal it is usually urged, that encouragement would be given to the criminal practice of sweating or otherwise diminishing the weight of the currency. I answer that, on the contrary, it is the present state of things which gives the best opportunity for illegal practices, because it renders the population perfectly accustomed to handling old and worn coins. No one now actually refuses any gold money in retail business, so that the sweater, if he exists at all, has all the opportunities he can desire. I have met with sovereigns deficient to the extent of four to five grains, or eight pence to ten pence, but they nevertheless circulate. If under a better system the gold currency consisted entirely of full-weight, fresh coins, with sharp, new, perfect impressions, attention would quickly be drawn to any coin which appeared to be worn or ill-treated in any degree. As the currency, too, would be constantly passing through the automaton weighing-machines of the Bank of England, without previously undergoing the operation of garbling by bullion brokers, sweated coins, if they existed at all, would soon be detected; whereas, according to the present system, the bank authorities have no opportunity of examining the whole coinage. It is the present state of things, then, which gives the best opportunity for tampering with the currency, though there is no evidence to show that fraudulent practices are carried on to any appreciable extent. Under the proposed new system, such practices would be rendered almost impossible.

SUPPLY OF GOLD COIN.

It is the theory of the English monetary law that every individual is entitled to take gold to the mint and have it coined gratuitously, all the expenses being borne by the public revenues. It is intended that the coin shall be rendered identical in value with an equal quantity of gold bullion, so that it shall, in short, be so much *certified bullion*, and shall be reconvertible into ingots without loss. Though this theory is simple and sound in some respects, it is not perfectly carried into practice. The mint never engages to deliver coin in immediate exchange for gold sent for coining, so that there is a loss of interest during the uncertain interval of coinage. If, instead of sending gold directly to the mint, the owner pursues the customary mode of selling it to the Bank of England, he receives, according to the Bank

Charter Act of 1844, only three pounds, seventeen shillings, ninepence per ounce, instead of the full mint price of three pounds, seventeen shillings, ten and one-half pence. Moreover, it has been pointed out by Mr. E. Seyd, that, as the bank used to conduct their bullion business, there was a series of small charges or profits made for weighing, melting, assaying, the turn of the scale, the difference of the assay reports, etc., which amounted on the whole, including the above charge of one and one-half pence per ounce for demurrage, to 0·2828 per cent. on the value of the gold. The bank has since made some small improvements in the mode of conducting the business, but it may still be considered that the cost of converting gold bullion into sovereigns is about one-fourth per cent.

Though every person whatever has the right, under the Coinage Act, of taking gold to the mint and having it coined free of charge and in order of priority without undue preference, no one ever does use the privilege, except the Bank of England. During an inquiry into the Bank Act in 1857, Mr. Twells stated that he had once sent £10,000 to the mint, and was afterward surprised to find his firm of Spooner and Co. mentioned in a parliamentary paper as the only private firm that had ever done such a thing. The directors of the Bank of England have naturally acquired the monopoly of transactions with the mint, because they have to keep large stocks both of coin and bullion to meet the demands of the Issue Department and of their customers, including directly or indirectly, the whole of the bankers of the United Kingdom. They can convert portions of their bullion into coin without any loss of interest or cost, whenever they find the stock of coin running down. They feel the monetary pulse of the whole community, and they have all the requisite appliances for the custody, assay, or exact weighing of bullion. Even those persons who need to possess large sums of gold often employ the bank to weigh, pack, and warehouse it, and the bank is always willing to do the work for fixed low charges. Hence it is most natural and convenient that the bank should act as the agent of the mint. Though the bank makes a certain profit out of the business, it is hardly earned at the cost of the public, but rather comes out of the economy with which the work is managed. It could in no way improve the currency of the country if every one who owned a few ounces of gold were to run with it to the mint, throwing upon the country the cost of melting and assaying insignificant ingots, and complicating the accounts and transactions of the mint.

SUPPLY OF SILVER COIN.

On account of the absurd misapprehensions recently existing as to the scarcity of silver money, and the supposed right of private individuals to demand the coinage of silver, it may be well to describe exactly how the supply of silver coin is legally regulated and practically carried out. There is no law, statute, or common, which gives any private person, company, or institution, the right to take silver to the mint, and demand coin in exchange. Thus it is left in the hands of the Treasury and the mint to issue so much and such denominations of silver coins as they may think needful for the public service. This state of the law is perfectly right; because, as the silver coins are tokens, they cannot be got rid of by melting or exportation at their nominal values. If individuals were free to demand as much silver coin as they liked, a surplus might be thrown into circulation in years of brisk trade, which in a subsequent year of depressed trade would lie upon people's hands.

Practically speaking, the mint is guided in the supply of silver coin by the Bank of England, not because this bank has by law any special powers, privileges, or duties in the matter, but because, in acting as the bank of banks, and the bank of government departments, it has the best opportunities of judging when more coin is wanted. Not only do all the London bankers draw silver coin from the Bank of England when they need it, but the same is done directly or indirectly by all the other bankers in the kingdom. A deficiency of silver coin in any county is shown by the stock of the local bankers running down. They replenish their stocks either from the nearest branch of the Bank of England or from their London agents, who again draw from the Bank of England. At other times or places the bankers tend to accumulate a surplus of silver coin. Some banks in a large town may happen to have accounts with many shopkeepers, butchers, brewers, cattle-dealers, or dealers of one kind or another, who deposit silver coin in large quantities. Other banks may be largely drawn upon by manufacturers for the payment of wages, and may suffer from a deficiency of silver coin. It is a common practice, therefore, for bankers in any locality to assist each other by buying or selling superfluous silver coin as the case may require. If a superfluity of coin, however, cannot be got rid of in this way, it may be returned to the Bank of England or one of its branches. This bank indeed is in no way bound to provide or receive large sums in silver, and it therefore usually makes a small charge of about five shillings per hundred pounds to cover the trouble and risk. In consideration of this charge the bank bears the cost of transmission by railway, examines the coin for the detection of base pieces and the withdrawal of worn coin—which latter it sends to the mint for recoinage, and acts in general as the agent of the mint.

Having the business so much in its hands, it is obvious that the department of the bank which manages the receipt and issue of silver coin can judge accurately when a fresh supply of coin is wanted. Before the stock runs too low notice is given to the mint, and money is usually advanced to the Master that he may purchase silver bullion for coinage. Under this system it is almost impossible for a deficiency of currency to arise without becoming known to the mint, and if, two or three years ago, the supply could not be made equal to the sudden demand, it was because the mint was not supplied by government with machinery adequate to the growing wants of the country. The existing system, in short, seems to be as nearly perfect as can be desired, provided that the mint be rebuilt and organized in such a manner as to enable it to meet any demand which the fluctuations of trade may occasion.

THE ROYAL MINT.

While treating of the English system of metallic money, it is impossible to avoid expressing the wish that the House of Commons and the government will no longer delay a complete reconstruction of the Royal Mint. The mint factories, as they now stand, were very creditable to the generation which erected them ; but it is needless to say that in the last fifty or seventy years we have immensely advanced, both in the art of constructing machinery and in our ideas of the arrangement and economy of manufactories. What should we think of a Cotton Spinning Company, which should propose to use a mill and machinery originally constructed by Arkwright, or to drive a mill by engines turned out of the Soho works in the time of Boulton and Watt? Yet the nation still depends for its coinage upon the presses actually erected by Boulton and Watt, although much more convenient coining presses have since been invented and employed in foreign and colonial mints.

The present mint workshops are quite inadequate for meeting the demands which may be throne upon them by the increasing industry and wealth of the United Kingdom, not to speak of the British Empire. A few years ago it was impossible to turn out silver coin as quickly as it was required when trade was brisk, and, while one metal is being coined, there are no means of meeting the demand for other kinds of coin. As to the bronze coinage, it has generally to be obtained from Birmingham presses, and bronze blanks have also to be purchased at times. Even silver blanks have been obtained from Birmingham. The British mint ought to represent the skill and wealth of the British nation, and no petty considerations should be allowed to postpone so necessary a reform.

Nothing short of a complete reconstruction of the mint workshops will meet the requirements of the case. If this is to be done, much convenience and economy will arise from abandoning the large and valuable site upon Tower Hill, and erecting an entirely new mint in a more accessible position. The opinions of Mr. E. Seyd upon this subject are worthy of much attention.

CHAPTER XI.

FRACTIONAL CURRENCY

One monetary question which can hardly be said to be satisfactorily solved as yet, is that of selecting the best possible material for coins of small value, called in English *pence*, in French *monnaie d'appoint*. The fractional coins should be equal in value to about a tenth part of the silver ones, coin for coin, but it unfortunately happens that there is no suitable metal of which the value is now one-tenth part of that of silver. In the time of the Romans, gold was about ten times as valuable as silver, and silver about ten times as valuable as copper, so that there would then have been no difficulty in constructing a perfect decimal system of money.

To throw light upon this subject; I have drawn out the following table, in which are shown the weights of the principal commercial metals which are of equal values at present. The numbers in such a table must of course be subject to perpetual fluctuations, according to the changes in the market prices of the metals. In some cases, too, it is difficult to find any accurate quotations at all, and the price often depends greatly on the manufactured state of the metal. Gold and silver are taken as of standard fineness, and gold forms the unit.

EQUIVALENT WEIGHTS OF THE PRINCIPAL METALS.

Gold . .	1	Tin . .	942
Platinum . .	3½	Copper .	1,696
Aluminium .	7	Lead . .	6,360
Silver . .	16	Bar Iron .	15,900
Nickel . .	71	Pig Iron .	50,880

It may be worthy of notice that when we thus draw out what may be called the *commercial equivalents* of the metals, they are found to form a series very rudely approximating to a geometrical series with the common ratio three. Silver, however, is an exception. There is, too, one term missing between nickel and tin, and as tin is not a coinable metal, there is a wide interval between nickel and copper, and a still wider one between silver and copper. At present silver is almost exactly one hundred times as valuable as copper; hence copper pence must either contain in metallic value but a fraction of the nominal value, or else they must be very heavy and bulky. When a new copper coinage was issued in England from the mint of Boulton and Watt in 1797, the coins were

made nearly of standard weight, at the rate of an ounce avoirdupois for each penny. There was a double inconvenience in this. Sixteen pence actually weighed a pound avoirdupois, at which rate the people would now be carrying three times as great a weight in their pockets as with our bronze currency. Moreover, the price of copper having risen, Boulton's pence became more valuable as metal than as coins, and were used as material in spite of their beautiful execution.

The first and most obvious course was to reduce the weight of the penny, making it purely a token coin. The old pennies of Victoria weighed about 290 grains each, instead of about 433 grains, as in the coinage of Boulton and Watt, a reduction of about one-third part. The bronze penny has been still further reduced, and ought to weigh 145·8 grains.

There are two inconveniences which may arise from too great and sudden a reduction in the weight of token currency. There is a risk of the population rejecting the new coins as fraudulently light. This was the case with the new copper five and ten-centime pieces, struck in France in 1794 by the Revolutionary Government, at the rate of one gram for each centime, which was half the previous rate. The government was obliged to call in the light coin and issue it again at the old weight, and only in the time of Napoleon III. could coins of one gram per centime be put into circulation. The people, then, must be educated to receive very light tokens, and the reduction must be made by moderate steps.

In the second place, if the metal is easily coined or manipulated like copper, if it fails to retain a very good impression, and if there is a considerable margin for profit, the temptation to false coiners might become strong. I am not aware that this has ever happened in regard to the English copper coinage, but counterfeit sous used to be manufactured on a large scale in the Faubourg Saint Antoine, in Paris, almost under the eyes of the government.

At the best, too, pure copper makes indifferent coin, being deficient in hardness, so that it soon becomes disfigured; it has a disagreeable odor which it communicates to the fingers; and when exposed to damp air it becomes covered with verdigris, which is both unsightly and poisonous I proceed to consider the various ways in which it has been attempted to substitute for copper coin some more convenient currency.

BILLON COIN.

Pennies and twopenny pieces, if now made of standard silver, like the Maundy money, would be two small and light for use, weighing respectively, seven and one-fourth and fourteen and one-half grains. Even the threepenny pieces, now so abundant in England, and weighing 21·8 grains each, are inconveniently small. In England, for a very long time, no silver has been coined of less fineness than the old standard of 925 parts in 1000. In many continental countries the smaller currency has been made of a very low alloy of silver and copper called *billon*. Such coins were at one time current, to a certain extent, in France, the metal containing only one part of silver in five of alloy, but they have long been recalled. In Norway the small currency now consists partly of half-skilling and one-skilling pieces in copper, the skilling being nearly equal in value to an English halfpenny, but principally of two, three, and four-skilling pieces, composed of billon, containing, according to an analysis performed for me at the Owens' College chemical laboratory, one part of silver and three of copper. These billon pieces are very convenient in size, and, being for the most part newly issued, are clean and neat. Billon is still being coined in Austria.

It is in the states now forming the German empire that billon coins have been most extensively used, especially in pieces of three, four, and six kreutzers, the so-called *scheidemunze* now being recalled. This consists of silver alloyed with three, four, or more times its weight of copper. Before such base silver is passed through the coining press, it is usual to dissolve the copper from the surface of the blank pieces of metal, so as to produce a film of pure white silver upon the surface. This operation, called *coloring*, gives a fine bright appearance to the coins when new, and they are easily put into circulation. But after a little time the silver film is worn off, and the coins assume a very patchy aspect. Billon coinage seems to have, too, an extraordinary power of accumulating a layer of dirt of a very disagreeable character, with which all travelers in Germany in past years must be well acquainted. Moreover, it offers great facilities to the counterfeiter, and for several sufficient reasons cannot be recommended for adoption.

COMPOSITE COIN.

It is said that Saint Louis, the great King of France, finding much want of small money to pay his soldiers, caused little pieces of silver wire, weighing nine and eighteen grains, to be fixed on pieces of stamped leather, and circulated for one- and two-dime pieces. The silver gave the value and the leather served as a case or handle to preserve the small bit of metal from being lost. In recent times, composite coins, having a center piece of silver and a rim of copper, were constructed on similar principles. A model penny of this kind has an agreeable appearance and a convenient size, but seems to be subject to several objections. The cost of coinage would be considerable; the coins could hardly be made so perfect that the center would not come out sometimes; the contact of dissimilar metals would set up

electro-chemical action, and the copper would be corroded; and, lastly, it would be difficult to detect counterfeit silver pieces inserted by the forger. Composite coins of a similar character were struck in France under Napoleon I., about the year 1810, but were never circulated. Pennies formed of a copper center with a brass rim have been employed in England, and tin pence, halfpence, or farthings, with a copper plug inserted near the center, were long used, and are plentiful in numismatic cabinets.

BRONZE COIN.

It was known, even in prehistoric times that a small quantity of tin communicated hardness to copper, and the ancient nations were familiar with the use of bronze thus manufactured. The French Revolutionary Government melted up the bells of the churches seized by them, and the *sous de cloche*, as they were called, made from the bell metal, were superior to coins of pure copper. Yet curiously enough no modern government thought of employing a well-chosen bronze for small money, until the government of the late Emperor of the French undertook the recoinage of the old sous in 1852. This recoinage was carried out with great success.

Between the years 1853 and 1867 coins to the nominal value of about two millions sterling, consisting of 800 millions of pieces, and weighing eleven millions of kilograms (10,826 tons) were struck, in addition to a subsequent issue of about two hundred millions of pieces. The experiment was in almost every way successful. The ten and five-centime pieces now circulating in France are models of good minting, with a low but sharp and clear impression. They were readily accepted by the people, although only weighing as much as the sous rejected in the time of the Revolution, namely, one gram per centime, and they are wearing well.

The bronze used consists of ninety-five parts of copper, four of tin, and one of zinc. It is much harder than copper, yet so tough and impressible that it takes a fine impression from the dies, and retains it for a long time. It cannot be struck except by a press of some power, and thus counterfeiting is rendered almost impossible. It can hardly be said to corrode by exposure to air or damp, and merely acquires a natural *patina*, or thin dark film of copper oxide, which throws the worn part of the design into relief, and increases the beauty of the coin.

Bronze has since been coined by the governments of England, the United States, Italy, and Sweden, and it seems probable that it will entirely take the place of copper. The German Government is now using bronze for the one-pfennig pieces.

ENGLISH BRONZE COIN.

The old copper coinage of the United Kingdom was replaced from ten to fifteen years ago, by a much more convenient and elegant series of pence, half-pence, and farthings, struck in exactly the same kind of bronze as the French centime pieces. The English coins, though far from being so well executed as the French ones, are clean, and likely to wear well. The only great objection which can be raised to them, is that they are still of considerable size and weight, although less than the old copper coins. As all the latter are now withdrawn, and few of the new ones can yet be lost or destroyed, we know very accurately the amount of the English fractional currency. The whole amount issued in the years 1861 to 1873 is as follows:—

	Weight in tons.	Number of pieces.	Nominal value in pounds sterling.
Pennies .	1,585	170,419,000	£710,082
Halfpennies .	918	164,505,000	342,719
Farthings .	149	53,594,000	55,826
	2,652	388,518,000	1,108,627

Including a small amount issued before 1861, the whole value of the bronze coin put into circulation up to the end of 1873 was £1,143,633. It is remarkable that the quantity of small coins used in England is much less than in France, where at least 1000 millions of pieces, chiefly of ten and five centimes, are in use. Thus while the English, Scotch, and Irish seem to be sufficiently supplied with eight and a-half pence per head, the French employ on the average one franc sixty centimes, (fifteen pence), the Belgians, two francs twenty-six centimes (twenty-one and a-half pence), and the Italians as much as three francs ten centimes (twenty-nine and a-half pence).

WEIGHT OF THE CURRENCY.

It is curious that the weights of the several kinds of currency vary inversely as their nominal values; thus, taking the paper circulation of the United Kingdom at forty millions, the gold roughly at one hundred millions, the silver at fifteen millions, and the bronze as above, I find the weights to be approximately as follows:—

Paper currency . . .	16 tons.
Gold "	786 "
Silver "	1670 "
Bronze "	2652 "
	5124 tons.

It is impossible to give a satisfactory reason why the least valuable part of the currency should be so much the most weighty. A tendency thus arises for the pence to accumulate upon the hands of retail traders, especially publicans, omnibus proprietors, and newspaper publishers. At one time the London brewers had such large quantities of bronze coins thrown upon their hands from the pub-

lic-houses which they own, that the mint had eventually to arrange to buy it from them, instead of coining more. In large towns, arrangements have to be made for getting rid of the accumulating pence with the least trouble and loss; the coin is transferred weekly to mills and factories, where it is used in paying wages. Bankers refuse to have anything to do with bronze coin beyond the amount of a shilling, for which it is legal tender, and it is usual for persons to object to receive more than twopence or threepence of change in pence.

It is worthy of inquiry whether this tendency of the fractional currency to stagnation would not be remedied by the substitution of a much lighter and more elegant currency of nickel, or of some alloy yet to be invented. In France, it is found that the bronze coinage circulates much more freely than the old copper and bell metal sous, which tended to accumulate in certain localities. Our bronze pence are much better than the old copper pence, but it does not follow that we have in any degree approximated to perfection. Coins of about half the weight of those in circulation would be much more convenient.

NICKEL, MANGANESE, ALUMINIUM, AND OTHER METALS AND ALLOYS.

The employment of nickel in the manufacture of small money has already been referred to (Chapter VI.), and if the conditions of supply and demand of this metal were more steady we should perhaps want nothing better. The alloy of nickel and copper generally used is hard and difficult to coin, but it takes a fine impression which it will probably require long wear to efface. Nickel coinage is thus very unlikely to be counterfeited, and its peculiar nondescript color renders it easily distinguishable from silver or gold money. The progress of metallurgy, however, is making us acquainted with several new metals and many new alloys, and it is quite likely that some new material for fractional money will eventually be found. Dr. Percy, having regard to the rising price of nickel, suggests that manganese should be employed instead, as it gives alloys of similar character, and can be procured in greater quantities.

Dr. Clemens Winkler strongly recommends aluminium as suited for monetary purposes. Trial pieces, marked "¼ real, 1872," have been struck, and one of them may be seen in the Monetary Museum at the Paris mint. This metal has a characteristic bluish white color, but its great advantage is its low specific gravity. The trial piece in question, of which a specimen was furnished to me by Mr. Roberts, the chemist of the English mint, is two centimeters, 0·79 inch, in diameter, a little wider than a sixpence and much thicker, and yet weighs only one gram, or fifteen and a-half grains. Were our pence and halfpennies as light and convenient as this coin, we could carry many of them in the pocket without discomfort. The chief difficulty in adopting such a new metal would arise from the uncertain price at which it can be produced. It is unknown, too, how it would wear. Even if pure aluminium were found to be unsuitable for coining, some of its remarkable alloys might be employed instead. Mr. Graham, the late Master of the Mint, had a series of trial pieces of one to ten cents struck in the so-called "aluminium bronze."

I may suggest that one of the best possible materials for small money would be steel-provided it could be prevented from rusting. Steel coins would be difficult to strike, but when once struck could be hardened, so as to be almost indestructible. The cheapness of the material would allow of their production on a large scale at small cost, while they could not possibly be imitated by the false coiners with any profit. Hence it would be needless to pay any attention to the metallic value of the coins, which might be struck of the most convenient sizes, probably those of the sixpence and shilling. Now it has been pointed out by Sir John Herschel (Physical Geography, reprinted from the "Encyclopædia Britannica," § 320, p. 289), that steel appears to be protected from rusting by being alloyed with a small quantity of nickel; this at least is the effect in the case of meteoric iron. It is much to be desired that such an alloy should be fairly tried. I am informed by Mr. Roberts, that silver also alloys well with iron or steel, and that such mixtures have been proposed for coining purposes. An alloy of silver, copper, and zinc has already, indeed, been fully tested in Switzerland, where it is used for twenty, ten, and five-centime pieces. These coins are convenient in size, but have a poor yellowish white appearance. They have not been adopted, so far as I know, by any other country; and there seems to be no use in putting silver into them, as it would probably be easy to produce a similarly colored alloy without silver.

It is a misfortune of what may be called the science of monetary technology, that its study is almost of necessity confined to the few officers employed in government mints. Hence we can hardly expect the same advances to be made in the production of money as in other branches of manufacture, where there is wide and free competition. Moreover, it is very difficult to get an opportunity of testing any new kind of coin; in a large currency, like that of the United Kingdom, it is almost impossible to execute experiments. But it may be suggested that the English mint, in supplying coins for some of the smaller British colonies and possessions, enjoys an admirable opportunity for testing new proposals. This need not involve any cost to such colonies, as the English government, in striking a few hundred or thousands of pounds worth of small coin

for a colony, might readily engage to withdraw them at its own cost if found unsuitable after a certain number of years.

CHAPTER XII.

THE BATTLE OF THE STANDARDS.

Ever since the great discoveries of gold in California and Australia began to disturb the value of that metal relatively to silver and to other commodities, it has been a continual subject of discussion what standard of value should be ultimately adopted. There have been partisans of the now antiquated silver standard, of the double standard, and of the gold standard. Having in England long possessed a gold standard, we have been only in a secondary degree concerned in such discussions, upon which quite a library of works has been written by distinguished French, Belgian, German, Swiss, Italian, and Dutch economists. The changes actually effected in the currencies of Europe since 1849 are of the most extensive character. Some nations have more than once changed their policy. Holland, anticipating a great fall in the value of gold, adopted silver as the single standard of value in 1850. This change had to be effected at considerable pecuniary loss, and it is understood that Holland is again exposed to the trouble and expense of having to admit a gold standard, either as a sole legal tender, like Germany, or else concurrently with a restricted silver coinage, like Belgium and the other monetary allies of France.

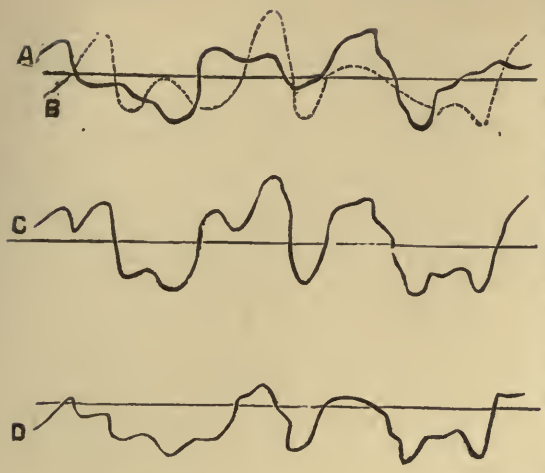
From the time of Locke to that of Lord Liverpool, the comparative advantages of gold and silver, as the principal measure of value, were a frequent subject of discussion among English political writers. Locke and most of the earlier English economists upheld silver. Lord Liverpool definitely decided English policy in favor of gold, and the tendency of opinion is now strongly in the same direction. Several countries have recently changed from silver to gold, and since the single example of Holland no nation has passed from gold to silver. Even Austria, which is still supposed to represent the silver standard, has taken a step toward a change by coining ten and twenty-franc pieces in gold, the inscriptions ten francs and twenty francs now appearing, as well as four gulden and eight gulden, on the new gold coins of the Austro-Hungarian empire.

THE DOUBLE STANDARD.

The single silver standard having been practically abandoned as regards the currencies of Europe, the battle has more recently been waged between the partisans of the double standard, represented in the currencies of France and the Monetary Convention of Western Europe, and those who uphold a gold standard combined with subsidiary coinages of silver and small money, somewhat in the manner of the English system. The advantages of the double standard have been most ably advocated by MM. Wolowski, Courcelle-Seneuil, Seyd, Léon, Prince-Smith, and others, while MM. Chevalier, De Parieu, Hendriks, Frère Orban, Levasseur, Feer-Herzog, and Juglar, have been some of the leading upholders of the gold standard. The literature of the subject is very extensive and to most readers dreary in the extreme, but I will try to give a tolerably concise statement of the principal arguments.

In the first place, I have no doubt whatever that M. Wolowski is theoretically quite correct in what he says about the compensatory action of the double standard system. English writers seem completely to have misunderstood the question, asserting that the system exposes us to the extreme fluctuations of both metals. No doubt, when gold and silver are both legal tenders to unlimited amounts, there will be a tendency to pay in that metal which is overrated in the legal ratio of fifteen and a-half to one. Only when the price of standard silver is exactly five shillings and thirteen-sixteenths of a penny per ounce is it a matter of indifference in France whether a debt be paid in gold or silver, and this exact price has only been quoted a few times in the London market in the last thirty years. Accordingly, it has been urged that the double standard is not really a double one, but only an *alternative gold and silver standard.* When silver is lower in price than five shillings thirteen-sixteenths of a penny per ounce, silver becomes the standard; when silver rises above this price, gold takes its place as the real measure of value.

So far, the English economists are no doubt correct; but, in the first place, it does not follow that the prices of commodities follow the extreme fluctuations of value of both metals, as many writers have inconsiderately declared. Prices only depend upon the course of the metal which happens to have sunk in value below the legal ratio of fifteen and a-half to one. Now, if in the accompanying figure we represent by the line A the variation of the value of gold, as estimated in terms of some third commodity, say copper, and by the line B the corresponding variations of the value of silver; then, superposing these curves, the line C would be the curve expressing the *extreme* fluctuations of both metals. Now, the standard of value always follows the metal which *falls* in value; hence the curve D really shows the course of variation of the standard of value. This line undergoes more frequent undulations than either of the curves of gold or silver, but the fluctuations do not proceed to so great an extent, a point of much greater importance,



COMPENSATORY ACTION.

Nor is this the whole error of the English writers. A little reflection must show that MM. Wolowski and Courcelle-Seneuil are quite correct in urging that a *compensatory* or, as I should prefer to call it, *equilibratory action* goes on under the French currency law, and tends to maintain both gold and silver more steady in value than they would otherwise be. If silver becomes more valuable than in the ratio of one to fifteen and one-half compared with gold, there arises at once a tendency to import gold into any country possessing the double standard, so that it may be coined there, and exchanged for a legally equivalent weight of silver coin, to be exported again. This is no matter of theory only, the process having gone on in France until the principal currency, which was mainly composed of silver in 1849, was in 1860 almost wholly of gold. France absorbed the cheapened metal in vast quantities and emitted the dearer metal, which must have had the effect of preventing gold from falling and silver from rising so much in value as they would otherwise have done. It is obvious that, if gold rose in value compared with silver, the action would be reversed; gold would be absorbed and silver liberated. At any moment the standard of value is doubtless one metal or the other, and not both; yet the fact that there is an alternation tends to make each vary muchless than it would otherwise do. It cannot prevent both metals from falling or rising in value compared with other commodities, but it can throw variations of supply and demand over a larger area, instead of leaving each metal to be affected merely by its own accidents.

Imagine two reservoirs of water, each subject to independent variations of supply and demand. In the absence of any connecting pipe the level of the water in each reservoir will be subject to its own fluctuations only. But if we open a connection, the water in both will assume a certain mean level, and the effects of any excessive supply or demand will be distributed over the whole area of both reservoirs. The mass of the metals, gold and silver, circulating in Western Europe in late years, is exactly represented by the water in these reservoirs, and the connecting pipe is the law of the 7th Germinal, an XI, which enables one metal to take the place of the other as an unlimited legal tender.

DEMONETIZATION OF SILVER.

M. Wolowski has earnestly warned Europe against the danger of abrogating the law of the double standard, and demonetizing silver. Germany, in adopting a gold standard, is causing a considerable demand for gold, and at the same time throwing many millions of silver coins upon the market. Austria, Denmark Sweden, and Norway are likely to follow her example. If other countries were to insist upon suddenly having a gold money, it is evident that gold would tend to rise in value compared with silver, which might be largely depreciated. If France, Italy, Belgium and other countries now possessing theoretically the double standard were to allow the free action of their monetary laws, the depreciated silver would flow in and replace the appreciated gold, so that the change of values would be moderated M. Wolowski asserts that if this compensatory action be suspended, and the demonetization of silver be extended, there must ensue a disastrous rise in the value of gold, thus rendered the sole standard of value. All debts private and public will be legally due in this metal, and all burdens will be greatly increased.

Within the last year or two the predictions of M. Wolowski may seem to have been verified in some degree. The price of standard silver, which was at one time 62½*d.* per ounce, has already fallen as low as 57¾*d.* while the demonetization of silver in Germany is only partially accomplished. The whole effect of the great discoveries of gold was only to raise the price from about 59¾*d.* to a maximum of 62½*d.*, while the double standard system freely worked; but since its action has been, as we shall see, suspended, the minting operations of a single government can affect the price in a greater degree.

Agreeing that M. Wolowski is entirely correct in an abstract point of view, and is justified to some extent by the course of events, I must adhere to the opinion which I expressed

at his request in 1868, and which was partially published in his volume, "L'Or et l'Argent" (p. 62).

The question seems to be entirely one of degree, and in the absence of precise information is quite indeterminate. If all the nations of the globe were suddenly and simultaneously to demonetize silver, and require gold money, a revolution in the value of gold would be inevitable. But M. Wolowski seems to forget that the nations of Europe constitute only a small part of the population of the world. The hundreds of millions who inhabit India and China, and other parts of the eastern and tropical regions, employ a silver currency, and there is not the least fear that they will make any sudden change in their habits. The English government has repeatedly tried to introduce a gold currency into our Indian possessions, but has always failed, and the gold coins now circulating there are supposed not to exceed one-tenth part of the metallic currency. Although the pouring out of forty or fifty millions sterling of silver from Germany may for some years depress the price of the metal, it can be gradually absorbed without difficulty by the eastern nations, which have for two or three thousand years received a continual stream of the precious metals from Europe. If other nations should one after another demonetize silver, yet the East may be found quite able to absorb all that is thrust upon it, provided that this be not done too rapidly.

As regards the gold required to replace silver, it does not seem to be evident that there will be any scarcity. The adoption of the gold standard does not necessarily involve the coining of much gold, for some countries may, like Norway, or Italy, or Scotland, have a principal currency almost entirely composed of paper. In other countries, such as France and Germany, the check and clearing system, which we shall shortly consider, may be gradually introduced, and may economize to a great extent the use of the metallic currency. The current supply of gold from the mines is still very large, and we cannot be sure that it will not be increased by fresh discoveries in New Guinea, South Africa, North and South America, and elsewhere.

In short, then, the amount of supply and amount of demand of both the precious metals depend upon a number of accidents, changes, or legislative decisions, which cannot be in any way predicted. The price of silver has fallen in consequence of the German currency reforms, but it is by no means certain that it will fall further than it has already done. That any great rise will really happen in the purchasing power of gold is wholly a matter of speculation. We cannot do more than make random guesses on the subject, and, as a mere guess, I should say that it is not likely to rise. Gold has since 1851 been falling in value, and an increased demand for gold is not likely to do more than slacken, or at the most arrest, the progress of depreciation.

DISADVANTAGES OF THE DOUBLE STANDARD.

While the need for maintaining the system of the double standard is a matter of speculation, the inconveniences of the system are beyond doubt. So long, indeed, as its operation resulted in substituting a beautiful coinage of napoleons, half-napoleons, and five-franc pieces in gold for the old heavy silver écus, there was no complaint, and the French people admired the action of their compensatory system. But when, a year or two ago, it became evident that the heavy silver currency was coming back again, and that the gold coin was likely to form the circulating medium of other nations, the matter assumed a different aspect. The French, in short, have been educated to the use of gold, and they are not likely to wish for the return of a currency fifteen and one-half times as heavy and cumbrous. Moreover, the change involves a loss to the community in general, who receive their debts in a metal of lessened value; and a part of the benefit is reaped by bullion-brokers, money-changers, and bankers, for whom a factitious trade in gold and silver money is created by the law of the 7th Germinal, an XI. The statesmen of the countries still maintaining the double standard must have reflected that other nations showed no tendency whatever to adopt the same system. Thus, if France were to continue to act as a great compensatory currency pendulum, she would bear the cost and inconvenience, while other nations would reap equally with herself the advantage of the increased steadiness of value of the precious metals. The founders of the Monetary Convention and the advocates of International Currency never intended to sacrifice themselves to this extent for the benefit of the world. Accordingly they have in effect abandoned the double standard.

When the renewed tendency to coin silver five-franc pieces in large quantities first became apparent, the French government at once suspended the coinage. Subsequently an agreement has been made from year to year between France, Switzerland, Belgium, and Italy, that each country shall coin only a fixed quantity of silver écus proportional to its population. An agreement to the same effect had before existed as regards the silver token currency of two-franc and smaller pieces; but the coinage of écus, which were in theory standard coins and legal tender for unlimited amounts, had been left unrestricted. The result of the limitation of coinage now imposed is to destroy the action of the double standard system. Silver being coined only in limited quantities cannot replace and drive out the gold, and the five-franc pieces, although worth more than five single franc pieces, are worth less than the fourth part of

a napoleon or twenty-franc piece in gold. Although, so far as I understand, they remain a legal tender for unlimited amounts, they cannot be had in unlimited quantities, and are thus practically reduced to the rank of token coins. By the least possible legislative change, the French and other governments of the Monetary Convention have thus practically abandoned the double standard, and have adopted one which is hardly distinguishable from the composite legal tender of England and Germany. Ever since 1810 copper or bronze money had only been legal tender in France to the amount of four francs ninety-nine centimes, and since the fineness of the smaller silver currency was lowered, this money also was restricted as a legal tender to the amount of fifty francs for any one payment between individuals, or to the amount of one hundred francs for any payment to the public treasuries. The silver ecu forms the single link by which France holds to the double standard, and this link is half severed.

It is remarkable that the changes thus effected in the money of Western Europe are almost the same as those by which the United States had previously abandoned the double standard. Until the year 1853 the silver dollar of the United States mint was a standard coin of unrestricted legal tender, concurrently with the gold coinage of eagles and their fractions. The legal ratio of silver to gold in weight indeed, was sixteen to one, instead of fifteen and one-half to one as in France. More silver being thus required to make a legal payment in America than elsewhere, gold was naturally preferred for this purpose, and the silver was sent abroad. To remedy this state of things the government of Washington, in 1853, reduced the half-dollar and smaller silver pieces to the condition of token coins, and though the single silver dollar pieces remained of standard weight, they were coined in very small quantities and were practically suppressed. The predominance of an inconvertible paper currency suspended the question of metallic money for a time. The Coinage Act of the United States Congress came into operation on 1st April, 1873, and constituted the gold one-dollar piece the sole unit of value, whilst it restricted the legal tender of the new silver trade dollar, and of the half-dollar and its subdivisions, to an amount not exceeding five dollars in any one payment. Thus the double standard previously existing in theory was finally abolished, and the United States was added to the list of nations adopting the single gold standard.

THE MONETARY SYSTEMS OF THE WORLD.

On reviewing the changes which have recently taken place in the currencies of the principal nations, we notice an unmistakable tendency to the adoption of gold as the measure of value, and the sole principal medium of exchange. This system is now adopted throughout Great Britain and Ireland, the Australian colonies, and New Zealand, the African colonies, and many of the minor possessions of the British empire. It has existed for some time in Portugal, Turkey, Egypt, and in several of the South American States, such as Chili and Brazil. It has been established by recent legislation in the German empire, and also in the Scandinavian kingdoms of Denmark, Norway, and Sweden, where a gold currency, and principal legal tender, of twenty-kroner pieces, is now being issued. Even Japan has imitated European nations, and introduced a gold coinage of twenty, ten, five, two, and one-yen pieces, the *yen* being only three per mille less than the American gold dollar. The new fractional money of Japan is to consist of fifty, twenty, ten, and five-sen pieces in silver, the *sen* corresponding to a cent, and forming a token money at the fineness of eight parts in ten.

The double standard is still theoretically maintained in France, Italy, Belgium, Switzerland. Spain, Greece, and Roumania have also in recent years reformed their currencies in imitation of the French system, and must, I suppose, be considered as having a double standard. In the New World, Peru, Ecuador, and New Grenada, profess to have the same system.

A few years ago a very considerable part of Europe might have been classed as retaining the ancient system of a single silver standard, with gold coins circulating, if at all, at varying rates, as commercial money. The whole of Germany, north and south, together with Austria, the Scandinavian kingdoms, and Russia, belonged to this group. Owing to the changes already mentioned, only Austria and Russia now clearly represent the silver standard in Europe, and even Austria has begun, since 1870, to coin gold pieces of eight and four florins, the same in weight and fineness as the French gold twenty- and ten-franc pieces. By an imperial decree, dated Vienna, 12th July, 1873, it is ordered that the French, Belgian, Italian, and Swiss gold pieces of twenty, ten, and five francs shall be internationally accepted in the Austro-Hungarian empire in the ratio of eight gold florins to twenty francs of gold coin of the other nations. Nevertheless the silver standard practically prevails over a large part of the world. The vast populations of India and China, Cochin China, the East Indian Islands, portions of Africa and the West Indies, Central America and Mexico, have a currency mainly consisting of silver coins, either rupees as in India, sycee bars as in China, or silver dollars as in many other places.

The gold standard has thus made great progress, and it will probably continue to progress. When the United States return to specie payments, they will certainly adopt gold, and Canada, whose currency can hardly

be classed at all at present, must do the same. The Latin nations, having once abandoned the double standard in practice, are not likely to return to it, and Austria must follow. An extensive monetary change is hardly to be expected in Russia, although it is very remarkable that in the province of Finland, a part of the empire highly distinguished for intelligence and good education, Russia has positively admitted the franc system and its decimal subdivisions, the Finnish marc or quarter-rouble having the precise silver weight and value of the franc, lira, and peseta. A great step toward a future international coinage is thus effected. Like changes are impossible among the poor, ignorant, conservative nations of India, China, and the tropics generally. Hence, we arrive, as it seems to me, at a broad, deep distinction. The highly civilized and advancing nations of Western Europe and North America, including also the rising states of Australasia, and some of the better second-rate states, such as Egypt, Brazil, and Japan, will all have the gold standard. The silver standard, on the other hand, will probably long be maintained throughout the Russian Empire, and most parts of the vast continent of Asia; also in some parts of Africa, and possibly in Mexico. Excluding, however, these minor and doubtful cases, Asia and Russia seem likely to uphold silver against the rest of the world adopting gold. In such a result there seems to be nothing to regret.

CHAPTER XIII.

TECHNICAL MATTERS RELATING TO COINAGE.

In this chapter I propose to consider several minor points relating to the construction and regulation of metallic currency. Although the first principles of money are simple, it is surprising how many little details have to be considered before we can attain the maximum of convenience. We have already discussed the selection of metals to be employed, the modes in which they may be combined into a system, the regulations as to issue, etc. In this and the following chapters we still have to consider the character of the alloy which is best adapted for coining; the most convenient sizes for coins; the method of counting large numbers of coins; the cost at which the currency is maintained; the advantages and disadvantages of international currency of money; the difficulty of selecting a single standard unit: the best series of multiples and submultiples of the unit. At the most, I cannot in this work attempt to give more than a slight sketch of the complicated questions of detail which have to be considered before making any change in the currency.

THE ALLOY IN COINS.

Although we commonly speak of money as consisting of gold or silver, the coins actually used contain alloys either of silver or copper, or of gold and copper, or of gold, silver, and copper. Money struck in nearly pure gold has indeed been issued both in early and recent times, and among such gold coins may be mentioned the ancient bezant, the recent Austrian ducat, containing 986 parts of gold in 1000, the six-ducat piece of Naples, containing 996 parts, or the Tuscan sequin, which is said to be almost pure gold, namely 999 parts in 1000. Pure gold and silver are, however, soft metals, so that even if they were found naturally in the pure state, it would be desirable to add copper, which communicates hardness and reduces very much the abrasion of the coins. The proportion of copper to be adopted has been a matter of frequent discussion, and is determined partly on historical, partly on scientific grounds.

The exact alloy employed in England appears to have been decided by the system of weights used. Silver was weighed by the troy pound of twelve ounces, of which eleven ounces two pennyweights were to be pure silver, and eighteen pennyweights copper. This proportion, which even in 1357, was called the "old right standard of England," has, in spite of temporary depreciations, been maintained to the present day, and corresponds to the proportion of 925 parts in 1000. Gold having been weighed by the ancient and curious system of *carat* weights, said to be derived from the seeds of an Abyssinian plant, the unit weight of gold was twenty-four carats, of which twenty-two were to be of pure gold and two of alloy. This ratio, which has existed for many centuries, is decimally expressed by 916·66 parts in 1000.

The degrees of fineness employed in one country or another at different times are infinitely various. Silver has been coined of only 200 or even 150 parts in 1000, and gold of 750 or 700 parts; and coins exist of almost every fineness from these limits up to nearly pure metal. The only standards of fineness which it is needful to discuss in the present day are those of 900 and 835 which are proposed for general adoption in international money. A few years ago, indeed, the Berlin government contemplated the adoption of a standard German crown, consisting of ten grams of pure gold and one gram of alloy, which would give a fineness of ten-elevenths or 909 09. This scheme had no apparent advantages, and was fortunately abandoned in favor of the present German coinage, which is, both as regards gold and silver, of the fineness of 900 parts in 1000. This simple decimal proportion was adopted by the French in the time of the Revolution; it has been extended over the

countries belonging to the Monetary Convention of 1865, and over Spain, Greece, and other countries which have more or less imitated the French system. It was long ago adopted by the United States, and has been recently introduced into the gold currency of the Scandinavian kingdoms. The German government, having now decided to accept it, the simple decimal fineness is established in all the more advanced countries, excepting England and some of her colonies, and a few nations, such as Russia, Portugal, and Turkey, which have imitated the English currency and coined gold at 916·66.

In a chemical and mechanical point of view the exact degree of fineness is not a matter of importance. The difference between eleven-twelfths and nine-tenths is only one-sixtieth, and though the often-quoted experiments of Hatchett were said to show that our standard was slightly better than that of the French, the difference is so slight and questionable as to afford no ground for preference. The late Master of the Mint, Professor Graham, was quite willing to accept the standard of 900, both for gold and silver, and there are really no reasons, except prejudice and traditional usage, why we should not do so as soon as we make any change at all. Uniformity in the practice of nations is desirable in this and many other points, and the French economists lay great stress upon this question of fineness. It appears to me, however, that the exact degree of fineness is altogether a matter of secondary importance. If we were now to make our sovereign nine-tenths fine, we should have to raise its weight from 123·274 grains to 125·557 grains, and the mixture of old and new coins would entirely frustrate the method of counting gold money by the scales adopted in all banks. We must certainly, therefore, postpone a change of fineness in gold until we make a more considerable monetary reform. I see no reason, on the other hand, why the mint should not at once be authorized to coin silver of the decimal fineness of nine-tenths. This would merely involve an imperceptible increase in the thickness of the coins, which would, in the case of the smaller ones, be advantageous.

The fineness of 835 parts in 1000 was adopted by France, as already stated (Chapter VIII.), in order to reduce the two-franc and smaller pieces to the rank of tokens, without making any change in their weight and appearance. There is no special objection to this alloy, which is perfectly coinable and of good color; but it is not likely that it will be adopted by the English government instead of the present fineness of 925 parts in 1000 of our silver coinage, and does not need further discussion. It may be added that, in former years, the alloy contained in gold coins consisted in part of silver, which is always present in greater or less quantity in native gold wherever it is found. The yellow appearance of guineas, and also of many Australian sovereigns, was due to this silver alloy; but all such silvery gold coins are rapidly withdrawn now by gold refiners, who can profitably separate the silver. The very remarkable invention of Mr. F. B. Miller, of the new Melbourne mint, enables this separation to be effected with great ease, and at small cost, almost on the gold fields. It is only requisite to melt the silvery gold, and pass a current of chlorine gas into it, to obtain the silver in the state of chloride, which is readily separated from the gold and reduced to the metallic state. It is a further advantage of this simple process that all gold so treated is freed from accidental impurities, and rendered perfectly malleable and fit for coining. One of the great difficulties of mint masters, the brittleness of gold, has thus been entirely overcome. A full description of the process, as employed at the English, Australian, American, Norwegian, and other mints will be found in the First Annual Report of the Deputy Master of the English Mint (p. 93), and in the Second Report (p. 33), or in the specification as printed by the Patent Office.

THE SIZE OF COINS.

There appear to be pretty well defined limits of size within which we should confine ourselves in the striking of money. Coins must not be so small that they can be easily lost, or can with difficulty be picked up. The rule seems to be that the coin should cover the whole area of contact between the points of the thumb and first finger; and though, of course, this area will differ with men, women, and children, we should err rather in excess than defect. On this ground I should condemn the English threepenny silver piece as too small, and, on the same ground, the Swedish ten-öre piece, the American one dollar gold piece, the former Papal one-scudo piece, must be pronounced inconveniently small. The French five-franc gold piece of the latter type, the English fourpenny piece, the Canadian five-cent piece, or the new silver piece of twenty pfennigs, now being introduced into the German empire, must be considered the smallest coins to be tolerated. The thickness of the coins, however, must be taken into account as well as the diameter. The moneys issued from the United States mint are thicker than usual, and though this tends to give some of the coins a clumsy appearance, yet they seem to me all the more convenient to use. The French have gone to the opposite extreme, the five-franc gold piece being very thin, and having a diameter of nearly seventeen millimeters, while the American dollar, which is more valuable, has a diameter of little more than thirteen millimeters. The maximum size of coins has probably been determined chiefly with regard to the practical difficulty of coining. The largest coin which

has been very widely circulated is perhaps the Maria Theresa dollar, measuring 1·6 inches, or forty-one millimeters, in diameter; the other most common species of dollar are somewhat smaller, such as the Spanish dollar of 1858, measuring thirty-seven millimeters; the American dollar, 1846, the Spanish dollar, 1870, the Mexican dollar, 1872, measuring from thirty-seven to thirty-eight meters. The average diameter of the dollars which I have examined is thirty-eight and one-half millimeters, or almost exactly an inch and a-half. In their larger gold coins the Americans maintain unusual thickness. Thus the double eagle, though in value equal to more than four pounds, has a diameter of only thirty-four millimeters, or one and one-third inches. The beautiful four-ducat piece of Austria has a larger diameter than the double eagle, though it contains less than half the quantity of fine gold.

THE WEAR OF COIN.

Some attention must be given to the abrasion which coins suffer in use. In the case of gold coins the loss of metal thus occasioned is of importance, and leads, as we have seen (Chapter X.), to a gradual depreciation of the currency. As coins pass frequently from hand to hand, the amount of metal abraded will be nearly the same as regards each coin of the same type, and each year of circulation. The loss will be proportional to length of wear. Now the English law allows a sovereign to be legal tender so long as it weighs 122·5 grains, or more; and the difference between this and the full standard weight, or 0·774 grain, represents the margin allowed for abrasion. Now, from experiments described in a paper read to the London Statistical Society in November, 1868, ("Journal of the Statistical Society," Dec. 1868, vol. xxxi. p. 426), I estimated the average wear of a sovereign for each year of circulation at 0·043 grain (0·00276 gram). It would follow that a sovereign cannot in general circulate more than about eighteen years without becoming illegitimately light. This length of time, then, would constitute what may be called the *legal life* of a sovereign. It has since been shown by Dr. Farr, that certain considerations overlooked in my calculations would reduce this estimate of the legal life to fifteen years. Mr. Seyd, on the other hand, thinks that twenty years might be adopted as the legal age of the sovereign.

When we compare the currencies of different countries, it becomes evident that the rate of abrasion will depend partly upon the rapidity and constancy of circulation, partly upon the size and character of the coins. According to the inquiries of M. Feer-Herzog in Switzerland, the average loss of the twenty-franc piece amounts to two hundred millionths of the full weight in each year, while with the ten and five-franc gold pieces, the corresponding amounts are 430 and 620 millionths. My own weighings of English gold show that the sovereign loses about 350 millionths in each year of wear, and the half-sovereign no less than 1120 millionths, or more than one-tenth per cent. per annum, As the English coins are heavier than the napoleon and half-napoleon, they should suffer less loss in proportion. M. Feer-Herzog attributes the excessive loss manifested by English money to the softer character of the English alloy of eleven-twelfths. This cause may contribute something to the effect observed, but it is probable that the greater rapidity of the circulation in England is the main ground on which so great a difference can be explained.

The rate of wear of a coin depends greatly, it will be seen, upon its size. A large coin, like an English crown, a French silver écu, or an American double eagle, suffers comparatively little wear, because the surface increases much less rapidly in proportion than the contents of the coin. The slight degree of abrasion of the various silver dollars may be one cause of their popularity in the East. Smaller silver money loses much more. Thus, according to experiments made at the mint in 1833, the loss per cent. per annum on half-crowns is about 2*s.* 6*d.*, on shillings 4*s.*, and on sixpences 7*s.* 6*d.*, or decimally ·125, ·200, and ·375 per cent. respectively. This loss becomes considerable in the course of years, as may readily be seen in the case of worn sixpences. The average loss of weight of the old silver coins melted at the mint, seems to be about 16½ per cent., but this loss is more than covered by the profit upon the issue of new silver coin. Experiments were made at the mint in 1798 upon the weight of English silver coins then in circulation. It was found that the deficiency amounted in crowns to 3·31 per cent., and in half-crowns, shillings, and sixpences, respectively, to 9·90, 24·60, and 38·28, per cent. In the recent withdrawal of the old silver money of South Germany, it was found to have lost on the average about one-fifth part of its weight.

To reduce the loss arising from the wear of gold coin, it might seem to be desirable to issue large gold pieces. The Americans used to have a great circulation of eagles and double eagles, the latter especially being very handsome medal-like pieces. In former days many large gold coins, such as the carlino, dobraon, doubloon, quadruple pistole, and the double ryder were current. A serious objection, however, to such coins as a double eagle, one-hundred franc-piece, or five-pound piece, is that they can readily be falsified. Small holes can be drilled through them, and then concealed by hammering. The application of the file, the sweating-bag, or cylinder, or of chemical reagents, would probably be safer with large than with small coins. In some cases a double eagle has been completely sawn into two flat discs, which were afterward neatly soldered to-

gether again with a plate of platinum between to give the requisite weight. It might have been thought that the labor and skill required to effect such falsification would have been better remunerated in some honest employment; but, according to the reports of the Director of the United States Mint, there is evidence to show that the practice is profitable. It is proposed to prevent this falsification by reducing the thickness of the double eagle, and also making it somewhat dish shaped; but it would be better to abandon the issue of such large gold money, as has long been done in England and France. Experience shows that sovereigns, napoleons, half-eagles, and gold coins of the same size are not fraudulently treated, nor are silver coins ever debased in the way described.

In order to diminish the abrasion of coins as far as possible, the design and legend should be executed with the least possible relief consistent with perfect definition, and the head of the monarch, or other personage, should not protrude. In this and most other respects the sharply defined flat design upon the English florin is much superior to the high rounded ornaments of the old crown, half-crown, and shilling. The French mints seem to be very successful in the execution of dies, all the coins, gold, silver, and bronze, struck by them having flat, yet admirably executed devices. Perhaps the most beautiful recent coin which I have seen is the new twenty-franc gold piece struck during 1874 for Hungary, the engraving of the die being excellent. The new Scandinavian gold pieces of five specie dollars, or twenty kroner, are also well executed.

METHODS OF COUNTING COINS.

To count large quantities of coin by tale, piece after piece, is not only a tedious operation, but very uncertain as regards accuracy. Several methods have been devised to facilitate the operation. In mints, the Bank of England, and other establishments, where vast quantities of coin are treated, *counting boards* are used. Similar boards have indeed, been used from time immemorial in some parts of India by money-changers and tradesmen. These consist of simple flat trays, with several hundred depressions regularly arranged, and of such a size that one coin will exactly fit into each depression. Handfuls of uniform coins are thrown on to the board, and shaken over it, until most of the holes are filled; the remaining holes are then filled up one after another by hand. The number contained upon the board is then known with infallible accuracy, and at the same time it is very easy to examine the coins, and detect any counterfeit, defective, or foreign pieces. By the use of such boards, bags of equal numbers of any coinage are readily made up with great certainty.

In English banks it is requisite to count out considerable sums in gold coin with rapidity for the payment of checks over the counter, or to verify the number of sovereigns paid in on deposit. For this purpose balances are employed, with weights prepared so as to be equivalent to 5, 10, 20, 30, 50, 100, 200, and 300 sovereigns. Any sum which is a multiple of five sovereigns can thus be rapidly, and almost infallibly, weighed out in a few seconds, provided that the coins are not too old and worn. An error of a sovereign is sometimes possible in a large sum, on account of deficiency of weight. In the case of half-sovereigns, this process is seldom to be depended upon, owing to the very considerable lightness of the coins. This uncertainty in weighing is one of several serious inconveniences which arise from the defective state of our gold coinage.

Half-sovereigns, however, and in fact all coins which are approximately equal to each other on the average, can be rapidly counted on the balance by the ingenious *method of duplication*. Any convenient number, for instance, fifty coins, being counted into one scale, an equal number may be made to balance them, without counting, in the other scale. The two equal lots being united, one hundred more coins may be made to counterbalance them, and by a second union we get two hundred coins. We may repeat this duplication, if the balance will bear the weight, and afterward, using one lot of coins as the fixed weight, may go on counting out lot after lot equal to it in weight and number.

When neither balance nor counting board is available, coins may be counted out into little piles of ten, fifteen, or twenty. Placing these piles alongside each other on a flat board, it is easy to detect any inequality of height by the unassisted eye, or by a straight edge laid along the top. A mistake in counting will thus be generally made manifest.

COST OF THE METALLIC CURRENCY

Calculations of some interest may be made as to the cost which falls upon the public in one way or another, owing to the use of metallic money. Speaking first of the subordinate coins of silver and bronze, the government make a profit by their manufacture, owing to the reduced weight at which they are issued as tokens. Standard silver can usually be bought by the mint for five shillings per standard ounce, It is issued to the public at the rate of five shillings, six pence per ounce, so that the government receives a seignorage of at least nine per cent. on the nominal value of the coin issued. The average coinage of silver at the English mint during the last ten years has been £546,580, upon which the seignorage would be about £49,200 per annum. On the other hand, the mint has to buy back worn silver coinage at its nominal value, and in recoining such money there is a loss, which, on the average of the last ten years (1864–73) has been £16,700, leaving a net annual profit of £32,

500, no account being taken of the cost of the mint establishment. At present the price of silver is not above four shillings ten pence per ounce, so that the seignorage is about twelve per cent., and the profit on coining silver proportionately greater.

We may look at this matter in another way, by regarding the seignorage as so much money funded to bear interest, to meet the cost of withdrawing the coin, when worn out, say thirty years subsequently. Now a pound bearing three and one-fourth per cent. compound interest, becomes in thirty years 2·61 pounds, so that the nine per cent. of seignorage will have multiplied to 23·5 per cent. But the actual deficiency of weight of the silver coin withdrawn is, on the average, only sixteen and one-half per cent., so that, without taking into account the considerable number of coins which must be lost, exported, melted, hoarded, sunk in the sea, or otherwise finally withdrawn from circulation, there is a profit on the issue of the silver coin under the present regulations.

In the issue of bronze money there has been, as before stated, a profit of £270,000, against which must be set off the possible, but uncertain cost of recoining a light token currency at some future time.

The cost of the currency is made up of four principal items: the loss of interest upon the capital invested in the money, the loss by the abrasion of gold coins, the expenses of the mint, and lastly the casual loss of coins. The last item is of wholly unknown amount; the other items may be estimated as follows. We may, roughly speaking, assume the gold currency of the kingdom to consist of 84,000,000 of sovereigns and 32,000,000 of half-sovereigns, the total value being 100,000,000 sterling. The sovereigns lose annually on the average 0·043 grain each, giving an annual loss of about £30,000; the half-sovereigns lose 0·069 grain each, producing a loss of £18,000. The loss of interest, however, is a far more serious matter. The whole value of the metals employed in the currency is, roughly speaking, as follows:—

Gold coin in circulation . . .	100,000,000
Bullion in the Bank of England	15,000.000
Silver coin	15,000,000
Bronze coin	1,125,000
Total	131,125,000

The interest on this sum at three and a-half per cent. is no less than £4,262,000.

The cost of the mint establishment is about £42,000 annually. The following statement, then, shows the aggregate cost of the metalllic currency so far as it can be estimated:

Loss of interest	£4,262,000
Wear of coin	48,000
Mint establishment	42,000
	£4,352,000

From this amount ought to be subtracted the profit which the mint makes out of the seignorage upon silver and bronze coins; but we may set off this profit against the wholly unknown amount which the public loses by the accidental dropping of coins.

Beacon Lights of Science

MONEY

AND

THE MECHANISM OF EXCHANGE.

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IN TWO PARTS—PART TWO.

CHAPTER XIV.

INTERNATIONAL MONEY.

In a book upon money written in the present day, reference must certainly be made to the scheme put forward, and even the steps accomplished, toward a world-wide system of International Money. Much time will no doubt pass before such a notion is realized, and the recent retrograde action of the German government tends to retard so great an achievement of advancing civilization. Yet in all our changes and discussions of monetary matters we ought to bear in mind the eventual introduction of a uniform monetary system. We may surely look for a gradual amelioration in the relations of nations, though wars cannot yet be avoided. We have international copyright, extradition of criminals, maritime codes of signals, postal conventions, treaties for lessening the horrors of war. Nations have long since ceased to be isolated bodies, wishing evil to all their neighbors; and as free trade becomes everywhere predominant, and communication by means of railway, steamboat, telegraph, post, and newspaper, continually increases, we may look for the time when all people will seek to break down, as far as possible, the barriers between one family and another of the human race.

I will first of all state the advantages which may be expected to accrue from an international system of metallic money, and will then describe in succession the corresponding possible disadvantages, the progress which has already been made toward the simplification of monetary systems, the principal schemes set forth, and their comparative merits and demerits.

ADVANTAGES OF INTERNATIONL MONEY.

Short-sighted people have objected to all schemes of international money, that the object in view, if ever realized, would only save trouble to the comparatively few people who travel from nation to nation. This is the least of all the benefits which the uniformity of money would confer. I am disposed to put in the first place the immense good which would arise from facility in understanding all statements of accounts, prices, and statistics, when expressed in terms of a uniform measure of value. To the statistician it is almost intolerable to meet with tables of information, variously expressed in francs, pounds,

dollars, thalers, meters, yards, ells, hundredweights, kilograms. The labor of statistical inquiry is sufficiently great without the preliminary labor of reducing great masses of figures to a common unit. To the merchant, or man of business, the variety of moneys and measures is equally perplexing. In many places the value of the currency is not certainly known, and only those who happen to have a special knowledge of a locality, and the money and measures there employed, can venture to trade with it. The difference of monetary systems, again, renders calculations relating to the foreign exchanges very complex, so that profit falls to those who have acquired skill in calculations of the kind.

In the second place, the actual adjustment of the foreign exchanges would be rendered more prompt and perfect when the coin of one country could be transferred directly into the circulation of another country. One result of international currency would be that the precious metals would be held more in the form of coin. At the present time, what is coined by one country has often to be melted up and recoined by another, although to some extent the principal kinds of coin, English sovereigns, American eagles, French napoleons, Mexican dollars, are held by banks and bought and sold. With a single system of coins, all stocks of gold and silver would, as a general rule, be kept in the coined state, ready to go into circulation at any moment. Some small savings would accrue from the less amount of mintage required, though this is a very secondary matter. One of more importance is the lessened opportunities of profit which there would be for bullion brokers and others, who trade upon the difficulties of conducting the bullion traffic in the present state of things. Nor is the saving of trouble and loss to travelers a matter of indifference. As international communication increases, the number of travelers will increase, and we ought to break down as far as possible, all factitious difficulties.

One benefit of international money which has been insufficiently noticed, is the improvement which its adoption would probably effect in the currencies of minor and half-civilized states. In many parts of the world there is still a mixture of coins of various and uncertain value; and as long as the principal nations coin money on totally different systems, the coins will circulate elsewhere and make confusion. Already for a long time the practically international currency of the Mexican dollar has been a matter of great convenience; and where it is the unit of value, merchants know on what basis they are making contracts. Now, if all the leading nations combined to issue coins of one uniform series of weight and sizes, these would by degrees form the currencies of non-coining states, and would effect a reform in the most remote parts of the world.

DISADVANTAGES OF INTERNATIONAL MONEY.

There are, no doubt, certain evils which might possibly arise from the circulation of money between nation and nation. One government, for instance, might coin money slightly inferior to the proper standard, and such money, once introduced, would, in virtue of Gresham's law, be difficult to dislodge. The French mint has been in fault in this respect. French gold coin, when carefully assayed, is found to have a fineness of 898 or 899 parts in 1000, instead of 900 parts. There is, indeed, a mint remedy of two parts, so that the coin was legally issued; yet the mint authorities have taken advantage of this remedy in an improper way. On the average, the coins issued by any mint ought to have almost the exact standard fineness, and the divergence allowed under the name of remedy is only intended to cover accidental faults of workmanship in particular coins, and not in intentional average divergence from the standard.

It is hardly to be supposed that a state issuing money under international obligations would wish to make a profit of one or two parts in a thousand in this way. To secure uniformity, it would be desirable for the assayers and officers of different mints to meet and agree upon a common standard process, and uniform trial plates. Experience does not show that one nation need distrust the faithfulness of another in matters of coining. We do not look upon Spain and Mexico as models of financial integrity, yet so faithfully used the mints of those countries to maintain the standard of weight and fineness in the issue of silver dollars, that these coins have for a hundred years past been received by tale almost without question in most parts of the world, and were at one time made current in England. The possibility of international currency is proved by the fact that, without any international treaties, the coins of several nations are recognized as a legal tender elsewhere. This is the case with English sovereigns, not only in the British colonies and possessions, but also in Portugal, Egypt, Brazil, and probably elsewhere. The napoleon has circulated freely in most parts of Europe. The ducat of Holland has also been a highly esteemed coin; and of the wide circulation of several species of dollars I have frequently spoken.

CONFLICT OF MONETARY SYSTEMS.

The chief difficulty in establishing an international money, arises from the fact that there are several great nations, the French, English, Americans, and Germans, each with its own system of money, which, from motives worthy and unworthy, it is unwilling to give up. There is no overpowering advantage which marks out any one of these systems on its own merits as distinctly the best. There is accordingly a balance of power

which produces a dead lock. Each of the three first-named nations has much to say in favor of its own system. The French system, founded on the franc, is an eminently perfect decimal coinage, and has the prestige of being recognized as international money in Belgium, Switzerland, and Italy, besides being adopted with international currency as regards gold in Austria, and without it as regards silver in Spain, Greece, and some minor states.

The English may very properly urge that, though the subdivision of the pound is not to be recommended, the pound sterling is itself an excellent unit of value. It is the largest existing monetary unit, and on a gold basis, so that it seems to be peculiarly suitable for the growing wealth of nations. Though recognized only in a small corner of Europe, namely, Portugal, we must remember that Europe is rapidly ceasing to be the exclusive centre of trade and civilization. In the Australian, Polynesian, and African colonies are growing states which will make their might felt ere long, and they adhere to the pound. The world-wide extension of British commerce and British shipping makes the sovereign known in all the ports of the world.

On their part, however, the Americans might have much to say in favor of the dollar. It is decimally divided, and, as we shall see, in the most convenient manner. It corresponds to the coins which have for two or three centuries been most widely circulated and treated as units of account, so that there is much weight of experience in its favor. But, above all, it is firmly adopted as the money of a nation, which, as far as human wisdom can penetrate the future, is destined to be the most numerous, rich, and powerful in the world. That nation, which has arisen from the best stock of England, has absorbed much of the best blood of other European nations, and has inherited the richest continent in the world, must have an importance in coming times of which even Americans are barely conscious.

INTERNATIONAL MONETARY NEGOTIATIONS.

It is quite impossible that I should in this brief work give any sufficient sketch of the long series of discussions, meetings, congresses, associations, negotiations, and conventions which resulted in the actual establishment of an international money among the nations of western continental Europe. I must refer the reader, desirous of more information, to the excellent pamphlet of the eminent actuary, Mr. Frederick Hendriks, which first made the subject well known in England. It is called "Decimal Coi age; a Plan for its immediate Extension in England in connection with the International Coinage of France and other Countries." and was privately printed in 1866. Mr. Seyd's "Treatise on Bullion and the Foreign Exchanges" may also be consulted, and the *Journal des Economistes* is full of information on the subject.

The International Association for obtaining a Uniform Decimal System of Measures, Weights, and Coins, was founded in Paris in 1855, and the English branch carried on active operations. In 1858 the United States made proposals towards the assimilation of currencies. In 1860 and 1863 important international congresses were held at London and Berlin, and, at the latter one especially, important resolutions were adopted which we shall have to consider. It was, however, the close contiguity of the countries, Belgium, France, Switzerland, and Italy, and the fact that French gold, and even silver coin, could not be prevented from passing the frontiers, which forced the question forward, and led, in December, 1865, to an actual Convention for International Currency.

The report of the Congress of 1863 concerning currency is a highly important document. It points out the superior convenience of a gold standard, with a subsidiary coinage of silver and bronze; advocates uniform fineness of nine parts in ten for all standard coins; suggests a definition of weight of coins, on the metric system; and, finally, propounds a scheme by which the existing monetary units could be brought into simple relations with each other.

In 1870, a short time previous to the declaration of war with Germany, France summoned a fresh Imperial Commission, presided over by the Minister of Commerce and the Minister President of the Council of State (M. de Parieu), to take evidence from all sides on the various questions connected with the standard and its bearing upon international coinage. No less than thirty-seven witnesses were examined, and the results of the inquiry, printed by the French government in two very large volumes in 1872, show that the majority of the witnesses and of the Commissioners were decidedly in favor of a single gold standard.

Owing to a purely accidental coincidence, the principal monetary units already closely approximate to simple multiples of the franc. The following table shows the present relative values of these units and the multiples to which it is proposed to make them exactly conform:

	Present value in francs	Proposed value in frs.
Franc	1	1
Florin (Austrian, silver)	2·47	2½
Dollar (American, gold)	5·18	5
Pound sterling . . .	25·22	25

It is only requisite to raise the florin 1·21 per cent., and to lower the dollar and pound sterling respectively 3·5 and 0·88 per cent., to establish very simple ratios between them. Thus, without any appreciable change of monetary systems, it would be possible to reduce statements from one mode of expression

into another; moreover, the coins might themselves have international currency, the pound sterling serving as a twenty-five franc piece in France, and as a five-dollar piece in America, the American gold dollar reciprocally circulating as an écu in France, and a four-shilling piece in England.

The congress abstained from recommending any one unit for universal adoption, but urged that every nation, not possessing one of the four units named, should select that which should please them best. Had this scheme been accepted by all nations in an intelligent and liberal spirit, we should ere now have probably seen our way clearly to the selection of the best unit. Since 1865, unfortunately, both the German empire and the Scandinavian kingdoms have made alterations not in accordance with these principles. A great assimilation of moneys has taken place, but it is in the direction of groups of national, rather than of international currencies, although as has been demonstrated by Mr. Hendriks in several articles in the *Economist*, the new coins have many fresh and important points of contact and of agreement with the metrical and decimal systems, so that some real progress has actually been accomplished.

DECIMALIZATION OF ENGLISH MONEY.

Since Lord Wrottesley in 1824 proposed in parliament to adopt a decimal subdivision of the pound sterling, an immense amount of discussion has taken place upon various schemes for a new arrangement of our money. The advantages of several plans are so nearly balanced, and the difficulty of carrying any one into effect is so great, that no practical result has yet been achieved by half a century of debate. The two principal schemes, which perhaps need alone be noticed now, are the *Pound and Mil* scheme, and the *Penny and Ten-franc* scheme.

The former of these schemes reposes upon the fact that the farthing is nearly the thousandth part of the pound. Since 960 farthings make a pound, it would only be necessary to alter the farthing four per cent. to obtain the lowest decimal multiple, to be called the *mil*. The penny would be five mils, like the French halfpenny or five centimes; as some have supposed, a new coin, in value 2·4 pence, would have to be introduced as the hundredth part of the pound; but this is unnecessary, and the florin would be one hundred mils, and the half-sovereign five hundred mils. The great advantage of this method is, that it retains the pound as the principal unit, together with several other familiar coins. Against it has been urged (1) the supposed fact that it excludes the most familiar of all coins, the shilling and sixpence, and (2) that the mil is somewhat too small a submultiple to begin with. This is, however, not necessarily the case. The shilling might remain, as coin of circulation, of the same weight, fineness, and value as at present, but would be translated, as coin of account, into fifty mils instead of forty-eight farthings, and the sixpence into twenty-five mils instead of twenty-four farthings. This subdivision is not more complex than the one successfully, and in the almost parallel forms of fifty and twenty *pfennige*, *centimes*, *lire*, *ore*, etc., pieces, carried out in the new coinages of Germany, Scandinavia, or of the monetary allies of France. As to the mil being too small for a submultiple, it seems to be overlooked that it is two and one-half times as large as the initial submultiple of the French system, and two and one-twenty-fifth times as large as that of the new German system.

The second scheme was suggested by the late Professor Graham, and by Mr. Rivers Wilson, in their Report upon the Proceedings of the International Monetary Conference of 1867. It is founded upon the fact that the ten-franc piece is within three-fourths of a penny of eight shillings, and only differs four per cent. from one hundred pence. Thus it would only be requisite to introduce a gold piece of ten francs, temporarily serving as a token for eight shillings, to obtain a link with the French system. The subsequent reduction of the penny by four per cent., and the replacement of the shilling by a franc or ten-penny-piece, would give us a truly decimal system. A great advantage of this proposal is, that it retains, almost unaltered, so familiar a coin as the penny, and makes it, as it is for the most part at present, the lowest money of account. It is, moreover, in close accordance with the French monetary system. The main difficulty is that it involves the abandonment of the pound, which becomes two and a-half of the new unit; and that, of all our present coins, only the florin, penny, and halfpenny, would fall in conveniently. To convert sums of money from pounds sterling into the new currency, it would be requisite to multiply by the factor two and a-half, which would be regarded by most people as a very troublesome process.

When the decimalization of English money was first proposed, the notion of international money had never been seriously entertained, and hardly indeed conceived. So much progress has now been made, that it is impossible to consider the one reform without reference to the other. The difficulty of making any change whatever is so great, that it would not be worth while to achieve a partial reform.

THE FUTURE AMERICAN DOLLAR.

The most easy and important step which can now be taken toward an international money, consists in the assimilation of the American dollar to the five-franc piece. A great opportunity arises from the fact that the currency of the United States is now a variable paper currency. Considering the

enormous fluctuations of value which have been experienced in the last ten years, it would be altogether needless scrupulosity to bring it back to the old standard, to the last degree of exactness. Every change of value of the currency, whether it be a fall or a rise, s so far injurious. Now the American dollar consists of 25 8 grains of gold, valued in English money at 49·316 pence. When gold is at one hundred and eleven the paper dollar will be at a discount of ten per cent., and will therefore be worth 44·384 pence, whereas the French dollar, or five-franc gold piece, weighs 24·89 grains, and is worth 47·58 pence. It would be obviously desirable, therefore, to make the new metallic dollar exactly of the same weight as the French one, and to commence specie payments when the greenback currency shall have risen to par with this coin. As regards all contracts made in paper, all current prices and charges, this change would involve no breach of faith whatever; it would in fact imply less change and breach of contracts than if the paper currency were reduced sufficiently to come to par with the old dollar.

The reduction of weight of the dollar would indeed lead to a repudiation of all gold contracts, including all bonds of the United States, railway companies, and other bodies payable in coin, unless provision were made to alter the terms of such contracts. This difficulty, however, could be overcome by simply enacting that each 103½ of the new dollars shall be received and paid as equivalent to 100 of the old ones.

There is little doubt that the adhesion of the American Government to the proposals of the Congress of 1863, would give the holding turn to the metric system of weights, measures, and moneys. It is quite likely that it might render the dollar the future universal unit. The fact that the dollar is already the monetary unit of many parts of the world, gives it large odds. In becoming assimilated to the French ecu, American gold would be capable of circulation in Europe, or wherever the French napoleon has hitherto been accepted. It may seem unpatriotic in an Englishman to advocate a change which may lead to the defeat of the pound sterling, but I look upon any one scheme of unification as better than none. Whatever may be the ultimate results, I desire to see assimilation between the French and American systems adopted as soon as possible. For reasons subsequently stated, I consider the dollar so good a unit that it would be mere national prejudice to oppose it, were there a fair chance of its general adoption. Even if it were not generally adopted, it would be a great step in advance if Great Britain, America, and France, were to agree to coin gold money identical in weight and fineness, which might circulate indifferently as sovereigns, five-dollar pieces, and twenty-five franc pieces.

GERMAN MONETARY REFORM.

The new monetary system of the German Empire, is introducing a good money where all was before confusion. In a few years it will hardly be comprehensible to Germans that they had so long endured a state of the currency in which two, or even three or four, inconsistent series of coins were mingled without any method. In many respects, the new system is all that could be desired. In place of the antiquated silver standard, gold is selected as the measure of value, the sole principal money, and unlimited legal tender. The unit of account is the mark, consisting of 6·1465 grains of gold of the fineness of 9 parts in 10. Its value is, therefore, about 11¾*d.* The principal coin will be the twenty-mark piece, weighing 122·92 grains, or 7 964954 grams, and containing 7·168459 grams of pure gold. There is also a ten-mark piece of exactly half the weight.

The subordinate coins of silver and nickel-copper, are issued on the footing of the composite tender, or English system, being tokens. The seignorage to be levied on the German silver coins, will be 11·111 per cent., exceeding the amounts subtracted from the English and French silver money, which are about 9 and 7·784 per cent. respectively.

It cannot be too much regretted by all friends of progress, that, in deciding upon the weight of the new mark piece, the German Government should have studiously avoided assimilation to the French system. The sovereign contains 7·3224 grams of pure gold, the twenty-five-franc piece when coined, will contain 7·2581, and the twenty-mark piece has been made to contain 7·1685. The only ground on which this precise weight could have been justified, is that three marks are approximately equal to one thaler. But so various was the coinage of the German States, that the field was open to the adoption of any system; and it is impossible to suppose that in so great a reform a difference of 1¼ per cent. would have been an insuperable obstacle to the adoption of international coinage.

SYSTEMS OF FRACTIONAL MONEY.

A unit of value having been chosen, there are three competing methods according to which it might be subdivided, the *binary*, *duodecimal*, and *decimal*. The first system is carried out most perfectly in our avoirdupois weights, in which sixteen ounces make a pound; but it is also freely employed in our monetary system, the sovereign being divided into half-sovereigns, crowns, and half-crowns, the shilling into sixpences and three-penny pieces; and the penny into halfpence and farthings. At the same time, the duodecimal method is represented in our money by the division of the shilling into twelve pence, of which the third part is still in circulation as the groat, or fourpenny piece now being withdrawn.

Each system of subdivision has its own advantages, and there must always exist a kind of natural competition between them. They have thus competed from the earliest times. In ancient Italy the duodecimal system predominated to the south of the Apennines, while the decimal division was in use to the northward. In Sicily the two methods were confused together. China has had a purely decimal system from an unknown epoch in antiquity. In England duodecimal and binary divisions have existed from very early times. It will be readily allowed that the binary system is most simple and natural, involving as it does the least possible factor above unity. The duodecimal system also has marked advantages, because it allows of division into several aliquot parts, involving the factor 2 twice over, and the next higher factor 3 once. Thus the shilling is divisible exactly into two sixpences, three fourpences, four threepences, and six twopences.

The decimal system is far less simple, and in some ways less convenient. Ten admits of only two factors superior to unity, namely, 2 and 5, and 5 is a more complex prime factor than appears in either of the previous methods. But the system has the supreme advantage of exactly falling in with our decimal system of numeration and calculation. Although probably not the best method which might have been selected, had selection been open to us, decimal numeration is firmly fixed among the institutions of the human race, as an hereditary habit, derived from the early practice of counting on the fingers. We have no choice but to accept the inevitable, and as all our arithmetical processes are conducted on the decimal method there is an overwhelming advantage, as education and the use of writing advance, in making all our weights, measures, and coins comformable to the same system.

A perfectly and purely decimal system, indeed, would admit only the decimal multiples and submultiples, thus :—1000, 100, 10, 1, 0·1, 0·01, 0·001. But it is so troublesome to have to count out as many as ten coins, before coming to the next higher unit, that the rigor of the decimal divisions has always been relaxed. In the French system, the half and the double of each multiple are allowed to be represented by intermediate coins, the series being 1, 2, 5, 10, 20, 50, 100, 200, 500, etc. The American coinage is less simple and symmetrical, since it admits the half and quarter eagle, half and quarter dollar, the ten and five cent pieces, and also a three-cent piece. I am inclined to prefer the French method, and to think that the American mint has issued too many denominations of coins.

FINAL SELECTION OF THE UNIT OF INTERNATIONAL MONEY.

I will conclude this chapter by some remarks on the reasons which should guide us in selecting the monetary unit to be finally established as the basis of a future universal money.

I attribute very little weight to arguments concerning the absolute amount of the rival units. It is said that as the wealth of nations increases, and the value of gold at the same time sinks, we need a large unit. The pound is recommended on this ground as clearly superior to the franc. If we count in francs our figures will be twenty-five times as large as in pounds sterling. It seems to be forgotten that the same unit can never suit the extremely different sums which we have to express, so that we must use multiples or submultiples of the actual unit. Just as we use inches, feet, yards, furlongs, miles, or diameters of the earth's orbit, according to the magnitudes to be measured, so we vary the unit with money. If we are discussing a workman's weekly wages, we count in shillings ; if we speak of a clerk's yearly salary, we speak of pounds ; if the fortune of a merchant or banker is in question, we take notice only of thousands of pounds ; in matters relating to the revenue of the kingdom or the national debt, we give our exclusive attention to millions of pounds. The Portuguese unit of account, called the *rei*, is worth only about the nineteenth part of an English penny, and is probably the smallest unit in the world. Practically, however, the milreis, or thousand reis, worth 53 1-3*d.*, becomes the unit. In the same way Indian merchants speak of lacs and crores of rupees. The French estimate their national debt in milliards of francs. No doubt it is puzzling to Englishmen to interpret exactly the meaning of a milliard of francs, but, to those accustomed to count in francs it is no more difficult than a million of pounds. Exactly the same considerations apply to units of weight; thus, though the French use so small an ultimate unit as one gram, or 15·43 grains, yet according to the magnitudes of the objects to be weighed, they use smaller or larger units, centigrams or milligrams on the one side, or decagrams and kilograms on the other. The absolute amount then of the ultimate unit seems to me to be entirely a matter of indifference in this point of view.

As regards the subdivision of the unit there are considerations of more importance. The subdivision ought of course to be decimal, and it ought to be so contrived that the lowest submultiple shall correspond to the smallest sum which is thought worthy of being recorded in mercantile transactions. Now the franc is divided into 100 centimes, so that the centime has a value of less than the tenth of a penny. Though bronze pieces of one and two centimes were coined to the amount of about five per cent. of the whole bronze currency, it is found that they hardly circulate. Even if they were used in the smallest retail transactions at bakers' shops, they would not be entered in account books.

Thus the lowest entry which a French accountant makes is five centimes, and the next lowest ten centimes, corresponding to our penny. A needless complexity is thus introduced into small accounts. It is indeed so inconvenient to have to call the smallest coin in general use *cinq centimes* that it is still common to speak of it as a *sou*, in spite of the ninety years during which the decimal system has existed in France. The Portuguese rei is so small a unit that it is not represented by any coin at all. It nevertheless has a place in Portuguese mercantile accounts, and thus needlessly adds a figure to all pecuniary statements.

In England the smallest coin in actual use is the farthing, but in accounts little notice is taken of farthings or halfpennies, so that the penny is the lowest money of account. The post-office, in the regulations of the savings bank business, refuses to recognize any coin less than the penny. But the penny is inconveniently related to the pound, the hundredth part of which is 2·4*d.*, and the thousandth part about a farthing. Thus the decimal system applied to our pound would oblige us to record as the lowest money of account an inconveniently small coin, namely, the *mil.* In this respect, indeed, the pound and mill scheme is superior to the franc and centime system. Thus 12*s.* 6*d.* may be expressed as 625 mils; but in French money (at twenty-five francs to the pound) it would become 15·625. Taking the ten-franc piece as the principal unit, it would become 1·56 units, or 156 metrical pennies. In many cases it would require less figures to express a sum in pennies than in mils or centimes.

The American system is unexceptionable in this respect. The dollar is divided into one hundred cents, each of which has the value of about one halfpenny. Although half cents have been coined, and may be used in some trifling purchases, they need never be entered in ordinary accounts. The cent thus seems to me to correspond to the smallest sum which need be treated in accounts, so that money statements are reduced to the greatest possible simplicity. The question may well be asked whether the lowest coin actually recorded is not truly the unit, of which all other coins are multiples. Perhaps the best answer would be to say that the unit is indifferently the cent, or the dollar, or the eagle. In English money it matters not whether we regard the pound, or its twentieth part, or its two hundred and fortieth part, as the unit. The absolute amount of the unit, I repeat, is totally a matter of indifference, and the only point we have to consider is whether it, or any decimal part of it, corresponds to the smallest sum of which we need take account. In this respect the dollar is the best existing unit; but it might admit of discussion whether the double dollar, or ten-franc piece of gold, equal to eight shillings, or one hundred pence, would not be better. If the wealth of nations continues to grow, and the value of gold to fall, even the cent will be too small a coin to appear conveniently in accounts, and the penny will be a better lowest unit. In this case the hundred pennies, or the ten-franc piece, would become the best unit. The choice thus seems to me to lie between the five-franc and the ten-franc piece in gold as the ultimate unit of international money. In favor of the ten-franc piece it may be added, that it would make a convenient gold coin of the smallest size which it would be well to issue. The gold dollar and five-franc piece are too small, and suffer great abrasion.

CHAPTER XV.

THE MECHANISM OF EXCHANGE.

Having now sufficiently discussed the subject of metallic money, we pass on to consider the devices which naturally develop themselves in a highly organized commercial nation, for the purpose of economizing the precious metals, or even avoiding the use of coins altogether. No sooner have a people fully experienced the usefulness of a good system of money, than they begin to discover that they can dispense with it as a medium of exchange, and return to a method of traffic closely resembling barter. With barter they begin and with barter they end; but the second form of barter, as we shall see, is very different from the first. Purchases and sales continue to be made in terms of gold and silver coin, but equivalent quantities of goods thus estimated are made to pay for each other. If ownership in gold or silver intervenes at all, it is in the shape of *warrants* or *representative documents*, with which gold can be procured, if desired, but which are seldom used to procure it.

At the outset we found that money performed at least two, and probably four distinct functions (Chapter III.); and, in a simple state of industry, it is convenient that the same metallic substance should fulfill all these functions concurrently. But it does not follow that this union of functions is the best possible arrangement under all conditions. We shall find that gold or silver always continues to be the common denominator of value, but that these metals cease to a great extent to be the actual medium of exchange which is passed about between buyer and seller. In a later part of the book (Chapter XXV.) I shall further show that money may with great advantage be replaced in its function as a standard of value for long periods of time by a *Tabular Standard.*

PROGRESSIVE DEVELOPMENT OF THE METHODS OF EXCHANGE.

Beginning with the primitive method of barter, a series of steps have been made to-

ward a perfect and world-wide system of interchange of commodities, with the least possible use of the precious metals. We may classify the devices employed for avoiding the use of metallic money under five different heads, as follows:

1. Replacement of standard money by representative money.
2. Intervention of book credit.
3. The check and clearing system.
4. Use of foreign bills of exchange.
5. International clearing system.

REPRESENTATIVE MONEY.

Metallic money, as we have seen, immensely facilitates and, so to speak, lubricates the operation of exchange. But nations employing gold and silver money have usually discovered, in the course of time, that tokens of small metallic value, or even pieces of leather and paper of nominal value, might be passed from hand to hand as signs of the ownership of coins. That which replaces gold, or silver, or copper money, is at first of a purely representative character. But, when a community has become thoroughly habituated to the circulation of a currency of this character, it is often found possible to remove the basis of valuable metal which it is supposed to represent, and yet to maintain the valueless bits of leather or paper in circulation as before. Thus arises the abnormal phenomenon known as an *inconvertible paper money*. Such a currency is, however, never accepted beyond the frontiers of the state recognizing it.

Merchants conducting large international transactions soon found out that great loss of interest and risk of loss of the whole money would arise, if they were to trade with actual specie. Hence they introduced the use, many centuries since, of *bills of exchange*, which are signs or certificates of debt, passed from hand to hand almost like representative money, and often accomplishing many acts of exchange by a single transfer of specie.

CHECK AND CLEARING SYSTEM.

There is yet a more potent way of avoiding the actual use of a medium of exchange, without encountering any of the inconveniences of barter. Those who frequently traded with each other, both buying and selling, found that it was absurd to pay a sum of money for what was bought, and then receive it back for what was sold. It was sufficient to estimate in terms of money the values of the articles exchanged, and then pay the difference, if any, in actual cash. The practice having grown up of depositing the metallic money not immediately wanted with goldsmiths or bankers, for safe custody, it was gradually discovered than an order to pay money would serve instead of the money; and that, if two persons trade with the same banker, they need not in their mutual transactions handle the money at all. A transfer in the books of their common bankers will effect the payment of any balance of debt. Bankers can in like manner arrange their mutual accounts, and in this way there has been gradually developed in this country and in America a vast system, which I propose to denominate the *Check and Clearing System*, whereby all the larger internal transactions of the people are arranged by a mere settlement of accounts.

In this system London naturally becomes the monetary center of the United Kingdom; but there is a further tendency to make London the banking center of the world as regards all large and international transactions. It is found to be advantageous to deposit money in London, or to obtain credit and make bills payable there, rather than elsewhere. By such a concentration of banking operations, London tends to become the seat of a *world-wide Clearing House*. Such are the principal steps in the development of the mechanism of exchange, and we proceed to consider them in detail.

CHAPTER XVI.

REPRESENTATIVE MONEY.

Although we now distinguish money according as it is metallic or paper money, because paper has in recent times been universally adopted as the material for representative money, yet it is well to remember that various other substances have been used for the purpose. We may pass, in fact, by gradual steps from the perfect standard coins, whose nominal value is coincident with their metallic value, to worthless bits of paper, which are yet allowed to stand for thousands, or even millions of pounds sterling.

Token money, which we considered in Chapter VIII., is in some degree representative money, because it derives its value, not so much from the metal it contains as from the standard coins for which it can be exchanged. There is no need that a promise should be always expressed by ink and paper. It may be still more durably recorded by a die upon a piece of metal. Accordingly, while the monarchs of England down to the end of Elizabeth's reign refused to debase their currency, as the notion seems to have been, by issuing such a poor metal as copper, the tradesmen supplied the want of pence by issuing tokens. These pieces were in the earlier centuries composed of lead, or latten, a kind of brass, or sometimes, it is believed, of leather. During the last century, again, they were issued in large quantities, chiefly in copper, and often bore an express statement that they served as promissory notes. Thus a well-executed piece, issued at Southampton in 1791, bears the inscription, "Halfpenny Promissory, payable at the Office of W. Taylor, R. V. Moody & Co." A token struck by

the Flint lead works in 1813, states the promise in different terms, thus: "One Penny Token, One Pound Note for 240 Tokens." The variety of such promissory coins issued at one time or other is very great, and their study forms an important branch of numismatic science, as will be learned by looking into such a work as "Akerman's London Tradesmen's Tokens." In quite recent years small money was found to be scarce in New South Wales, and some tradesmen issued copper or bronze tokens which circulated until the year 1870, when their further use was prohibited.

The ancients were well acquainted with the difference between a standard and a token currency. The iron money of the Lacedæmonians was probably standard legal tender, for it is described as being heavy and bulky, and yet of small value. The iron money of the Byzantines, on the contrary, was token representative money. We shall find in the following section that pieces of money of the same nature as bank-notes were also employed by several ancient nations.

EARLY HISTORY OF REPRESENTATIVE MONEY.

Ancient nations were unacquainted with the use of paper money, simply because they had no paper. But it would be a mistake to suppose that they did not employ representative money exactly on the same principles as we use bank notes. Some few particulars on the subject have long been known, but a recent article by M. Bernardakis in the *Journal des Economistes* (vol. xxxiii. pp. 353–370) has added much to our knowledge, and made it quite clear that the ancients were more acute in matters of currency than we have given them credit for.

One of the very earliest mediums of exchange, as we have seen, consisted of the skins of animals. The earliest form of representative money consisted of small pieces of leather, usually marked with an official seal. It is a very reasonable suggestion made by Storch, Bernardakis, and other writers, that when skins and furs began to be found an inconveniently bulky kind of money, small pieces were clipped off, and handed over as tokens of possession. By fitting into the place from which they were cut they would prove ownership, something in the same way that notched sticks, or tallies, were for many centuries used to record loans of money to the English Exchequer. We know by experience in the case of paper money, that if the people had become thoroughly accustomed to the circulation of these small leather tallies, they would in time forget their representative character, and continue to circulate them, when the government, or other holders of the skins themselves, had made away with the actual property Such is no doubt the history of the leather money which long had currency in Russia.

It is impossible to ascertain what was the character of the leather money which, according to an obscure tradition, was in use at Rome before the time of Numa. There is no doubt that the Carthaginians had a representative leather currency, for Æschines the Socratic tells us that they used small pieces of leather wrapped round cores of unknown material, and then sealed up. Neighboring nations refused to receive these curious pieces of currency, whence we may safely infer that their value was nominal.

It is, however, in China that the use of paper money was most fully developed in early times. More than a century before the Christian era, an emperor of China raised funds to prosecute his wars in a way which shows that the use of leather tokens was familiar to the people. The tokens having been made of the skins of white deer, he collected together into a park all deer of this color which he could find, and prohibited his subjects from possessing any animals of the same kind. Having thus obtained a monopoly of the material, reminding one of the monopoly of the Bank of England in water-marked paper, he issued pieces of the white leather as money at a high rate.

In the middle of the thirteenth century, Marco Polo found a paper money in circulation in China, composed of the inner bark of a tree beaten up and made into paper, square pieces of which were signed and sealed with great formality. These notes were of various values, and were legal tender, death being the penalty imposed upon those who refused to receive them. Counterfeiters likewise incurred the same penalty. Another traveler, who visited China in the fourteenth century, gives a very similar account of the paper money then circulating, and adds that, when worn or torn, it could be exchanged for new notes without charge. It is needless to follow out the long and doubtful history of the subject in later times, many particulars of which will be found in the article of M. Bernardakis, or that of M. Courcelle-Seneuil on Papier Monnaie in the "Dictionnaire de l'Economie Politique." It may suffice to say that the history resembles that of most inconvertible currencies. The quantity of paper afloat increased so much under the Mongol dynasty as to cause great evils, and the Ming dynasty, continuing the issues, went so far as to prohibit the use of gold or silver money. The value of the paper fell so low, it is said, that one metallic cash was worth a thousand paper cash, reminding us of the present state of the paper currency in San Domingo. The result was a collapse and reaction in the fifteenth centnry.

Among other Asiatic nations, the Tartars and the Persians also understood the use of paper money, and Sir John Maundeville, who traveled in Tartary in the fourteenth

century, gives the following account of the advantages which the Great Chan enjoyed in consequence. "This Emperour may dispenden als moche as he wile, withouten estymacioun. For he despendethe not, ne makethe no money, but of Lether emprented, or of Papyre. And of that money, is som of gretter prys, and som of lesse prys, aftre the dyversitee of his Statutes. And whan that Money hathe ronne so longe that it begynnethe to waste, than men beren it to the Emperoure's Tresorye; and than thei taken newe money for the olde. And that Money gothe thorghe out all the contree, and thorghe out alle his Provynces. For there and beyonde hem, thei make no Money nouther of Gold nor of Sylver. And therefore he may despende ynow, and outrageously." Not a few great emperors and kings, and even republics, have imitated the Great Chan, and have spent their paper money, "ynow and outrageously."

REASONS FOR THE USE OF REPRESENTATIVE MONEY.

It is well to analyse and state exactly the reasons which may be given for the introduction of pieces of representative money. Several motives may be detected, and they have been of different weight in different cases. The origin of the European system of bank-notes is to be found in the deposit banks established in Italy from four to seven centuries ago. In those days the circulating medium consisted of a mixture of coins of many denominations, variously clipped or depreciated. In receiving money, the merchant had to weigh and estimate the fineness of each coin, and much trouble, loss of time, and risk of fraud thus arose. It became, therefore, the custom in the mercantile republics of Italy to deposit such money in a bank, where its value was accurately estimated, once for all, and placed to the credit of the depositor.

The banks of Amsterdam and Hamburg were subsequently established on a similar system, and a full account of them will be found in Adam Smith's "Wealth of Nations," Book IV., Chapter III., and in Hewitt's "Treatise upon Money" (p. 121). The money placed to the credit of individuals in these banks was called *bank-money*, and commanded an *agio* or premium corresponding to the average depreciation of the coins. Payments were made by the merchants attending at the bank at a particular hour, and ordering transfers to be made in the bank books. The money paid was thus always of full value, and all trouble in counting and valuing it was avoided. The regulations of these banks were, however, in many respects complicated, and it is difficult to understand their purpose.

INCONVENIENCE OF METALLIC MONEY.

Closely involved with the previous motive for the use of representative money is that of avoiding the trouble and risk of handling large amounts of the precious metals. In order to keep large sums of metallic money in safety a person must have strongholds and watchmen. The origin of banking in England has never been sufficiently investigated, but, so far as we know, it arose for the purpose of safe custody. While public and well-regulated deposit banks had existed for centuries in Italy, the only trace of such an institution in England was found in the mint in the Tower of London, whither merchants were accustomed to send their specie for safe keeping. Unfortunately, in 1640 King Charles I. appropriated as a loan £200,000 thus deposited, and the merchants, no longer trusting the government, and finding it dangerous to keep large sums of money in their own houses during the troubled times which followed, resorted to the practice of depositing their money with goldsmiths, who probably had vaults and guards suitable for the purpose.

As acknowledgments of the possession of such sums of money, the goldsmith gave receipts, and at first these documents were special promises, like dock warrants. The practice arose of transferring possession by delivery of these receipts, or "goldsmiths' notes," as they were called. Such notes are frequently referred to in Acts of Parliament, and even as late as 1746 most of the London bankers continued to be members of the Goldsmiths' Company. It is plain from the manner in which these notes were mentioned in some statutes that they had become general and not special promises—mere engagements to deliver a sum of money on demand, without conditions as to keeping a reserve for the purpose.

THE WEIGHT OF CURRENCY.

Even the weight of metallic money would be a sufficient reason for the use of representative documents in large transactions. In proportion as the legal tender is more bulky and inconvenient to carry about, is this motive more powerful. Thus, when the state of Virginia employed tobacco as the medium of exchange in the eighteenth century, the tobacco was placed in stores, and receipts on paper were handed about. Paper money was issued in Russia under Catherine II. in 1768, on the ground that the copper money, then forming the legal tender, was inconvenient. So much were these *assignats*, or notes, preferred, that they at first circulated at a premium of one-fourth per cent.

In the present state of commerce, even gold money would be far too heavy to form a convenient medium for making large payments. M. Chevalier states that it would require forty men to carry the gold equal in value to the Regent Diamond. The average daily transactions in the London Bankers' Clearing House amount to about twenty millions of pounds sterling, which if paid in gold coin

would weigh about 157 tons, and would require nearly eighty horses for conveyance. If paid in silver the weight would be increased to more than 2500 tons. For the conveyance and custody of very moderate sums in coin or bullion, individuals, or even large banks, resort to the aid of the Bank of England, whose officials are experienced in the matter, and have all facilities.

I find that a Bank of England note weighs about 20½ grains (1⅓ grams), whereas a single sovereign weighs about 123 grains, and the note may represent five, ten, fifty, a thousand, or ten thousand such sovereigns with slight differences in the printing. If we were obliged to handle a medium of exchange actually embodying value, it would, ere now, have been necessary to employ precious stones, or some metal much more rare and precious than gold. But the use of representative documents is becoming so general in the most advanced commercial countries, that the portability of metallic money is a question of very minor importance. Gold already acts in England only as change for notes, and the question will arise whether it will long be needed even for that purpose.

SAVING OF INTEREST.

A further and very potent motive for employing representative tokens and notes, consists in the saving of interest and capital, which is effected by substituting a comparatively valueless material in place of costly gold and silver. Whenever a nation is in great straits for want of revenue, there is a great temptation to treat the metallic currency as a treasure to be temporarily borrowed for the necessities of the state. The ancient Greeks understood this as well as the modern English, Italians, or Americans. Dionysius, on this ground, obliged the Syracusans to accept tin tokens in place of silver coins, worth four times as much in metallic value. In the book on Economics, attributed to Aristotle, we are told that Timotheus the Athenian persuaded the soldiers and merchants to receive copper money in place of silver, promising to exchange it for silver coins at the close of the war. The Clazomenians made a similar issue of token money avowedly for the sake of the interest thereby saved. Being unable to pay twenty talents due to some mercenary troops, they were under the necessity of paying four talents a year as interest. They fell upon the device of coining iron tokens to the nominal amount of twenty talents, which they obliged the citizens to take in place of silver coin. The silver thus obtained was used for the immediate discharge of the debt, and there was a spare annual revenue of four talents, formerly absorbed in the payment of interest, which now enabled them in a few years to redeem the token money. Closely parallel to this is the case of the Guernsey Market, which was built without apparent cost. Daniel le Broc, the governor of the island, determined to build a market in St. Peters, but not having the necessary funds, issued under the seal of the island four thousand market notes for one pound each, with which he paid the artificers. When the market was finished and the rents came in, the notes were thereby canceled, and not an ounce of gold was employed in the matter. There is, however, no mystery in this advantage of paper money.

Daniel le Broc, by issuing his market notes, drove an equivalent amount of gold out of circulation, and thus effected a kind of forced loan out of the metallic currency of the island, without paying any interest for it. A similar gain of interest accrues upon all paper notes so far as their amount exceeds the gold held in readiness to pay them. The private and joint stock banks of issue in England in this way enjoy the interest upon a sum of about six millions and a half sterling, the Scotch banks upon two millions and three-quarters, and the Irish banks upon more than six millions. The issue of paper representative money is beneficial to all parties, provided that it be conducted upon a sound method of regulation, a subject upon which the greatest differences of opinion exist.

CHAPTER XVII.

THE NATURE AND VARIETIES OF PROMISSORY NOTES.

Before attempting to come to any conclusion as to the best mode of regulating the issue of promissory notes, we must carefully analyse the differences which may exist between one promise and another. What seems at first sight a very slight and subtle distinction, may be found to lead to important results. He who issues a representative or promissory document, engaging to give a certain quantity of a defined commodity in return for the document when presented, may really make any one of three distinct engagements.

1. He may promise to keep a certian identical article in his possession until it is called for.

2. He may engage to have in his possession a certain amount of commodity ready to meet the promissory notes, without distinguishing between portion and portion of a similar substance.

3. The undertaking may be merely to the effect that the required commodity shall be forthcoming when the note is presented, no covenant being made as to the quantity to be held in stock for the purpose.

SPECIFIC DEPOSIT WARRANT.

The most satisfactory kind of promissory document is the first, which is represented by bills of lading, pawn-tickets, dock-warrants, or certificates which establish owner-

ship to a definite object. A bill of lading entitles the legal holder of it to certain cases or packages of goods, described by marks, numbers, dimensions, or otherwise. The ship-master signing such a bill is obliged to retain the identical cases committed to his care, until he delivers them up in return for the bill of lading at the close of his voyage. Dock-warrants are of the same character, being receipts for packages of goods deposited in the London or other dock warehouses. The holder of a dock-warrant has a *prima facie* claim to the pipes of wine, bales of wool, hogsheads of sugar, or other packages named thereon. Transfer of the warrant by endorsement or otherwise, as required by law and custom, is accounted a transfer of the ownership of the goods. The important point concerning such promissory notes is that they cannot possibly be issued in excess of the goods actually deposited, unless by distinct fraud. The issuer ought to act purely as a warehouse keeper, and as possession may be claimed at any time he can never legally allow any object deposited to go out of his safe keeping until it is delivered back in exchange for the promissory note.

GENERAL DEPOSIT WARRANT.

We pass to the case in which the issuer of a promissory document engages to keep on hand goods exactly equivalent in quantity and quality to what are specified thereon, without taking note of individual parcels. In many cases commodities are so homogeneous that there seems to be no need to distinguish parcel from parcel, or to restore the identical portion deposited. Thus the keeper of a pig-iron store in Glasgow receives large quantities of pig-iron, of several brands, and issues corresponding warrants representing ownership therein. As no difference, however, is known to exist between different portions of iron of the *same* brand, it was the practice in former years not to allot one heap of pigs to each warrant, but simply to retain a stock of each brand equal in weight to the aggregate amount due on outstanding warrants. More recently a better system has been introduced, and each specific lot of iron has been marked and set aside to meet some particular warrant. The difference seems to be slight, but it is really very important, as opening the way to a lax fulfillment of the contract. Misunderstandings occasionally arise upon this point in other trades. For instance, a cotton merchant in Liverpool, a few years since, obtained a loan of money upon the security of cotton in his possession, and a court of law was subsequently called upon to decide whether he had mortgaged certain individual bales of cotton, and undertaken to retain them until the loan was repaid, or whether he had merely engaged to have in his hands an equal quantity of cotton of the same quality. I have heard that carrying and warehousing companies are sometimes careless about distinction of parcel and parcel. If they are continually conveying or holding portions of exactly the same goods, flour from the same miller, coal from the same seam, they will sometimes deliver out the required quantity of the same sort of goods, irrespective of its being the identical portion delivered to them for conveyance or safe custody.

DIFFERENCE BETWEEN A SPECIAL AND A GENERAL PROMISE.

The great importance of the distinctions pointed out in the last section will be easily apparent. He who has made a special promise to give definite parcels of goods in return for particular individual papers, cannot issue any such promissory papers without holding corresponding goods. If he does so, he will be continually liable to be convicted of fraud or default by the presentation of a particular document. If the promises made by him, however, are only general ones, any promissory document can be met by any portion of commodity of the proper quality, and it will be necessary to present most or all of the documents in order to disclose default. The way is thus opened for the speculative issue of promissory notes. The receiver of deposits, finding that a large portion of the deposited commodity always remains on hand, may proceed to use it in trade, only keeping so much as may meet current demands. So long as he does fulfill promises, no harm seems to be done; but experience proves that there will always be a certain proportion of persons who, in such circumstances, will not act so discreetly as to be in a position to redeem all their engagements.

Moreover, it now becomes possible to create a fictitious supply of a commodity; that is, to make people believe that a supply exists which does not exist. The possessor of a promissory note or warrant regards the document as equivalent to the commodity named thereon. It is only necessary then to print off, fill up, and sign an additional number of such notes in order to have a corresponding supply of commodity to sell. It is true that the issue of promises involves their fulfillment at a future day; but the future is unknown, and the issuer may believe that before the fulfillment is likely to be demanded the price of the commodity will have fallen. Thus, if pig-iron warrants could be issued in unlimited quantities (irrespective of the stocks actually in the stores at Glasgow), an unscrupulous band of speculators might perhaps make large profits by selling great quantities of iron for future delivery. After suddenly and excessively depressing the price of pig-iron they might succeed in gradually buying up enough at lower prices to meet the warrants when presented. This kind of "bear" oper-

ations has certainly been successful in other markets.

About ten years ago it became the practice to rig the market as regards the shares of particular joint-stock banking companies. A party would be formed, perhaps owning none of the shares of the selected company, and they would proceed to sell considerable quantities of the shares, hoping so to damage the reputation of the company and lower the value of the stock as to be able to buy up enough before delivery would be required. This noxious kind of speculation was checked by an Act of Parliament (30 Victoria, c. 29, 1867), which now requires the seller of bank shares to specify the numbers or the registered proprietors of the shares which he is selling for future delivery.

It might be urged, indeed, that there is a natural right belonging to all persons to make promises, if they can thereby benefit themselves. Any one can accept a bill, thereby promising to deliver money at a future day. It is quite common to make contracts involving the delivery of government stock, or of cotton or corn expected to arrive by sea, before delivery becomes due. But we must remember that all laws and all social relations are devised to secure the greatest good of the greatest number. If a right to make all promises be recognized by law, it must be because the right is beneficial to society, and it is the recognition by law which makes it a right. If, on the contrary, it be found by experience that freedom of making and selling promises in a particular way gives scope to illegitimate speculation, or otherwise injures society more than it produces benefit, the law ought certainly to restrict this freedom, and regulate the matter for the good of the community. The whole matter, in short, is one of expediency. It used to be held as a general rule of law, that any present grant or assignment of goods not in existence is without operation. Though the rule seems to be generally disregarded, there are many cases in which it might be advantageously enforced.

PECUNIARY PROMISSORY NOTES.

Applying these considerations to the special matter of money, we find that pecuniary promises are nearly always of a general kind. He who undertakes to pay a sum of money on a future day, rarely specifies the individual coins which will be paid. In fact, the Coinage Act, in defining legal tender, makes any sovereigns, shillings, and pence, duly coined and of proper weight, a discharge for a corresponding sum named in a contract. It is true that just as pipes of wine are warehoused in the London docks, cases of gold and silver bullion or, it may be, of foreign or English coin, are warehoused in the vaults of the Bank of England. In fact, imports of gold and silver, at whatever port in the kingdom they may arrive, are almost always sent up for delivery at the bullion office of the bank, which acts precisely as if it were a dock warehouse, and delivers the packages on production of the bills of lading. These bills of lading are specific promises, and may yet be passed by endorsement from one person to another. Such consignments of bullion, however, do not enter into the banking accounts.

The Bank of England note is neither more nor less binding upon the bank authorities than a bill of lading, but it does not specify the bag or box of money to be employed in paying it. Almost all other pecuniary engagements are in the same way general engagements. No banker could make any profit if he were obliged to put away the sovereigns deposited by a customer until that customer presented a check for them, nor would there usually be a sufficient motive for desiring such a special pledge. The idea never enters into our heads in mercantile matters. Disputes, however, have occasionally arisen upon this point. Some people have a peculiar fancy for collecting particular coins, and an old lady, having formed a hoard of fourpenny pieces, died after bequeathing them to a relative. Although wishing to keep them, out of respect for the old lady, this relative was in want of ready cash, and desired to realize their value; he thought to achieve both objects by pledging them with a pawnbroker. The broker readily received them, but after a while thoughtlessly used the groats as change. When the pawn-ticket was presented he considered that the tender of the equivalent sum in sovereigns and shillings was a sufficient discharge. Here, however, the pledge should have been held as a special one.

Now, if pecuniary promises were always of a special character there could be no possible harm in allowing perfect freedom in the issue of promissory notes. The issuer would merely constitute himself a warehouse-keeper, and would be bound to hold each special lot of coin ready to pay each corresponding note. But this is not the case, and much harm may arise from the excessive issue of promises to pay gold on demand. The gold market may be rigged as well as the iron or any other special market. One difference is that the gold market is the most extensive of all markets, so that a great many individuals or companies, each acting under the separate impulses of self-interest, must over-issue notes in order to produce any appreciable effect. A further difference is that gold, being itself the measure of value, the rise or fall in its price cannot be apparent except in the average fall or rise in the price of many commodities. This subject must be pursued in Chapter XXIV.

PRINCIPLES OF THE CIRCULATION OF REPRESENTATIVE MONEY.

In the last two sections of Chapter VIII

we found that by analysing the motives of individuals in receiving, holding, or paying away metallic money, we could arrive at certain laws of circulation, which were amply confirmed by experience. It was also pointed out that the same laws might be extended *mutatis mutandis*, to the mixed circulation of metallic and paper money. Habit is almost as powerful in supporting the use of representative money as of real metallic coins. Persons who have long been accustomed to pay away certain pieces of paper without loss, will continue to regard them as good currency until some rude shock is given to their confidence. This may go so far that a dirty bit of paper, containing a promise to pay a sovereign, will be actually preferred to the beautiful gold coin which it promises. The currency of Scotland is a standing proof of this assertion; and the same may be said of Norway, where, until 1874, no gold at all was in circulation, and notes for one, five, or ten dollars formed the principal part of the currency.

There is one all-important point in which representative differs from metallic money; it will not circulate beyond the boundaries of the district or country where it is legally current or habitually employed. No doubt Bank of England notes are frequently carried abroad by travelers, and are in most places readily exchanged for the money of the locality; but they never circulate, and are treated as bills upon London, forming a convenient mode of remittance. They do not satisfy a debt from this to another country, but rather create it, an English banknote, in the hands of a Paris banker, representing a claim which he has upon the Bank of England. The only money which can really be exported in payment of debts due to foreign merchants is standard metallic money. Hence paper money has exactly the same capacity for driving out standard money that light or depreciated coins possess.

In the case of inconvertible notes this has always been most obvious. As the quantity of such notes issued progressively increases, as almost always happens, coin must be exported, otherwise the currency would become excessive. But when most of the coin is gone, need of it begins to be felt for making foreign payments, and then the value of the paper falls below that of the coin which it is supposed to correspond to. Many persons begin to hoard the coins for the sake of anticipated profit, and nothing but paper is soon to be found in circulation. This effect of paper in driving coin out of use has been manifested over and over again, as in the time of the assignats of the French Revolution, the suspension of specie payments at the Bank of England between 1797 and 1819, and the late American war. One of the most recent and striking instances is to be found in Italy, where large quantities of beautiful gold and silver coins had been struck in the years 1862 to 1865, but all disappeared very rapidly from circulation as soon as the *cours forcé* of paper money was proclaimed.

CHAPTER XVIII.

METHODS OF REGULATING A PAPER CURRENCY.

We may now proceed with advantage to consider the various methods on which the issue of paper money may be conducted. This question is perhaps the most vexed and debatable one in the whole sphere of political economy; but, by carefully adhering to the analysis of facts, we may, perhaps, get a view of the subject free from the great perplexities in which it is commonly involved. The elementary principles of the subject are not of a complex character; and if we hold tenaciously to those principles, we may perhaps be saved from that dangerous kind of intellectual vertigo which often attacks writers on the currency.

The state may either take the issue of representative money into its own hands, as it takes the coining of money, or it may allow private individuals, or semi-public companies and corporations, to undertake the work under more or less strict legislative control. We will afterward briefly consider the relative advantages of government and private issues, but in either case we may lay down the following series of methods according to which the amount of issue may be regulated, and the performance of the promises guaranteed.

1. *The Simple Deposit Method.* The issuer of promissory notes may be obliged to keep a stock of coin and bullion constantly on hand, equal in amount to the aggregate of the uncanceled notes, each of which, being instantly paid on presentation, will produce a corresponding decrease of the reserve.

2. *The Partial Deposit Method.* Instead of being obliged to keep the whole of the precious metals deposited in his vaults, the issuer may be allowed to invest a fixed amount in government funds, or other safe profitable securities.

3. *The Minimum Reserve Method.* The issuer may be bound to have on hand under all circumstances a fixed minimum amount of coin and bullion.

4. *The Proportional Reserve Method.* The reserve may be made to vary with the amount of outstanding notes, being, say, at least one-third or one-fourth of the total.

5. *The Maximum Issue Method.* Permission may be given to issue notes not exceeding in the aggregate a fixed amount, prohibitory penalties being imposed upon any breach of this restriction.

6. *The Elastic Limit Method.* A limit may be assigned to the aggregate amount of notes, as in the last method, but the penalties on the excessive issue may be intentionally made so light, that the issuer will under some circumstances prefer to pay the penalty rather than restrict his issues.

7. *The Documentary Reserve Method.* The reserve of property which the issuer is required to keep may consist, not of gold or silver coin or bullion, but of government funds, bonds, shares, or other documentary securities.

8. *The Real Property Reserve Method.* Instead of merely documentary property, the issuer may be allowed to treat various property, such as land, houses, ships, railway shares, etc., as his reserve of wealth to meet engagements.

9. *The Foreign Exchanges Method.* Some important bank may be allowed to issue convertible notes on the understanding that it will not increase the amount in circulation so long as the foreign exchanges are against the country, and render the export of specie profitable.

10. *The Free Issue Method.* The business of issuing promissory notes may be left open to the free competition of all individuals, free from any restrictions or conditions, except such laws as apply to all commercial contracts and promises.

11. *The Gold Par Method.* Paper money may be issued, bearing the appearance of promissory notes, but inconvertible into coin. The issue being restricted as long as any premium on gold is apparent, the paper money may be thus maintained equal in value to the coin which it nominally represents.

12. *The Revenue Payments Method.* Inconvertible paper money may be freely issued, but an attempt may be made to keep up its value by receiving it in place of coin in the payment of taxes.

13. *The Deferred Convertibility Method.* Notes may be issued promising to pay metallic money at some future day, either definitely fixed or dependent upon political or other contingent events.

14. *The Paper Money Method.* Lastly, those who coin apparent promissory notes may be entirely absolved from the performance of their promises, so that the notes circulate by force of habit, by the command of the sovereign, or in consequence of the absence of any other medium of exchange.

Although I have, in the above statement, enumerated no less than fourteen distinct methods of managing the issue of paper currency, it is by no means certain that other methods have not been employed from time to time. There may be, in fact, an almost unlimited number of devices for securing the performance of promises, or for rendering the performance unnecessary. Moreover, these methods may be combined together in almost unlimited variety. The reserve may be required to be partially in the form of specie, and partially in documentary securities, or real property. A banker may be allowed to issue a certain fixed amount of notes without any condition as to reserves, and to issue further notes on the Deposit Method.

It would obviously require a very large volume to enter at all in an adequate manner upon a description of these methods, their relative advantages or deficits, and the ways in which they have been combined and carried into effect at different times and places. I must therefore confine myself in this small book to a very concise discussion of this most extensive subject.

1.—SIMPLE DEPOSIT.

This method is perfectly represented by the ancient deposit banks in the Italian commercial republics, by the banks of Amsterdam and Hamburg, or by the London goldsmiths, so long as they only acted as safe keepers of the specie committed to their care. Notes issued on this system have a purely representative character, like dock warrants or pawn tickets, as I have already fully explained. The performance of promises is rendered certain so far as legislation can provide for it. The amount of such currency will vary exactly like that of a metallic currency, and there can be no fear of paper replacing specie, and driving it out of the country, because the specie must be in the vaults of the issuing banks before the notes are issued.

At the same time the advantages of the method are comparatively slight, because the use of paper representatives merely saves the abrasion of coin, and the trouble and risk of carrying it about and counting it. The community loses the interest of the whole sum held in pledge, and this forms by far the largest part of the cost of the currency, as we have seen. The coin, too, may be safer in the hands of the people. When lying apparently useless within the reach of an abritrary government, it often proves an irresistible temptation. Charles I. seized the money in the Tower. When the French invaded Holland in 1795, a large part of the specie supposed to be deposited in the vaults of the bank of Amsterdam was not forthcoming, having been secretly lent to the Dutch East India Company, and the city authorities. The Russian government diligently collected a bank reserve in the citadel of St. Petersburg, which was under the cognizance of members of the Exchange, until the troubles of 1848 forced the emperor to assume the control himself. In innumerable instances governments, including the English government in 1797, have made use of bank deposits, under the form of suspending specie payments.

2.—PARTIAL DEPOSIT.

The Bank of England, under the Bank Charter Act of 1844, perfectly represents this

method. For each additional five-pound note which is put forth out of the issue department, gold to the weight of 616·37 grains must be deposited in that department. The whole amount of gold, however, retained in the vaults is less by £15,000,000 than the outstanding notes, this constant difference being covered by documentary securities, and by a sum of about eleven millions which the bank lends to the government without interest. Under this arrangement we secure all the advantages of the simple deposit system, while the community gains the interest amounting to about £445,000, of which the government receives £188,000 per annum. The character of the contract between the government and the bank is of too intricate a nature to be readily fathomed or described, but it substantially amounts to the government borrowing the larger part of the fifteen millions of deposits, and allowing the bank to use the rest to cover the cost of printing and managing the note circulation. I shall treat of this system again in Chapter XXIV. The Partial Deposit method is the basis of the new law concerning the issue of notes in the German empire, in combination with the Elastic Limit method, which possibly constitutes an improvement.

3.—MINIMUM RESERVE.

One mode of guaranteeing the payment of notes, which might be suggested, would consist in obliging the issuers to keep on hand a stock of specie, which is never to be allowed to fall below a certain fixed amount. This would be like recommending a man to avoid impecuniosity by always keeping a shilling in his pocket. The fact that the minimum amount must be kept in the vaults renders it unavailable for meeting demands when they come. There can be no use in such a reserve unless there be a power exercised by the legislature or executive government, of arbitrarily suspending the operation of the law when there is a run upon the banks.

4.—PROPORTIONAL RESERVE.

The issuer of promises to pay money on demand may be required to keep a reserve of coin never less than, say, one-fourth of the whole outstanding notes. This is analagous to the method on which the National Bank currency of the United States was lately regulated, and it is, perhaps, better to enforce the keeping of a certain amount than to leave the matter entirely to the discretion and good faith of the individual issuers. As the banker sees his reserve running down nearly to the legal limit, he will be compelled to use additional caution, in order to avoid a breach of the law. But if the untoward state of trade and credit causes any large portion of the outstanding notes to be presented, the legal tender reserve will be diminished in a greater proportion than the amount of notes, which is larger in absolute quantity. If there be 100,000 dollars of outstanding notes, and 40,000 dollars reserve, then it is obvious that the presentation of 20,000 dollars of notes will reduce these numbers respectively to 80,000 dollars of outstanding notes, and 20,000 dollars of reserve; and if the law required the reserve to be one-fourth part of the liabilities, no more notes could be paid. Thus, from the moment that the banker allows his reserve to touch the legal minimum, it becomes unavailable to him, except by a breach of law, and it may be said that the law is of little use except when broken. This system, in fact, reduces itself, when it comes into operation at all, to the Minimum Reserve method last described. The banker cannot touch his reserve just when he most wants it, and the deadlock thus occasioned was acutely felt in the United States during the panic of 1873.

This method of regulation has, moreover, little or no effect in removing the motives for an extension of the circulation. The greater part of the value of every additional note kept in circulation is a gratuitous addition to the loanable capital of the bank, and bears interest as long as it can be kept afloat.

5.—MAXIMUM ISSUE.

To allow a bank or banks to issue in the aggregate a certain fixed amount of promissory notes, and no more, appears to me quite consistent with the principles of political economy. It saves interest upon a certain portion of the circulating medium, and supplies a convenient and economical currency. At the same time, the notes issued cannot drive gold out of the country beyond a fixed amount. It is strongly urged by Mr. R. Inglis Palgrave and others that the limitation is arbitrary, and that the people want more money, but it is always open to them to use metallic money instead. The limitation imposed is not upon money itself, but upon the representative part, and though we thereby forego the increased saving of interest upon enlarged issues, this loss may be balanced by the freedom from any risk of producing a fictitious abundance of gold. This system is sufficiently illustrated in the 170 banks of England which are still allowed to issue notes. Sir Robert Peel provided, in the Act of 1844, that they might continue to issue, without any condition as to reserve, the same quantity of notes as they had issued on the average of twelve weeks preceding a day named. If any bank exceeded the amount thus determined it was to be fined a sum of money equal to the average excess of the month; and sworn returns of their circulations were required from all issuing banks.

6.—ELASTIC LIMIT.

The above is the best name which I can find for a new method of regulation which has just been adopted in the Bank Act of the

German empire. So far as regards the issue of bank-notes the banking organization of Germany will substantially resemble that of England. The new Imperial Bank, and such of the state or other banks which conform to the requirements of the law, will have the right of issuing notes not backed by gold to the aggregate sum of 385 millions of marks. They may apparently issue any further quantity of notes in exchange for a deposit of gold to an equal value. So far the method is precisely that of the *partial deposit* already described. Observing, however, that the English Bank Charter Act has on several occasions been violated to prevent a panic, the German legislature has provided that a tax of 5 per cent. be paid thereon. It is intended in this way to make it unprofitable for any bank to exceed the normal limits. It seems likely that this provision will work well, and form an improvement on our method. The English Government, indeed, has always deprived the Bank of England of the interest on any excess of notes which it issued during a suspension of the Bank Act, but the German law makes the limit of issue elastic in all cases, so as to avoid the danger of panic.

7.—DOCUMENTARY RESERVE.

It might seem enough in order to ensure the convertibility of notes, that the bankers issuing them should prove their possession of abundant funds, in the form of government stocks, bonds, exchequer bills, rentes, or even good mercantile bills, sufficient to establish the perfect solvency of the firm. If a considerable margin be left, it may seem impossible that the notes should not ultimately be paid. To argue in this way, however, is to forget that bank-notes are promises to pay gold or legal tender metallic money *on demand*, and that to pay the notes ultimately is not to pay them on demand. With such a reserve, payment can only be made in any large quantity by selling the stocks and bonds for metallic money, but it is just when there is a scarcity of gold and silver, that notes are presented for payment. No doubt good government funds and good bills can always be sold at some price, so that a banking firm with a strong reserve of this kind might always maintain their solvency. But the remedy might be worse for the community than the disease, and the forced sale of the reserve might create such a disturbance in the money market as would do more harm than the suspension of payment of the notes. Payment of notes on demand implies the possession of adequate gold and silver, and if there be not sufficient bullion and coin in the country, no paper documents, or promises to pay at a future day, can take their place.

8.—REAL PROPERTY RESERVE.

Many currency theorists have held, that in securing the repayment of notes we need not restrict ourselves to a single commodity gold, but may mortgage for the purpose, land, houses, or any kind of fixed real property. The celebrated scheme of John Law was of this nature In his remarkable tract on "Money and Trade Considered, with a Proposal for Supplying the Nation with Money," published in 1705, he suggests that commissioners should be appointed to "coin" notes "to be received in payments where offered," that is, I presume, as legal tender. He sets forth three alternative modes of issuing these notes on land security, the first and simplest being to lend them to land-owners at the ordinary interest, to the extent of one-half or two-thirds of the value. He endeavors to provide against depreciation of the notes by taking care that the prices are always estimated in silver money.

The assignats of the French Revolutionary Government represented land *assigned*, namely, portions of the confiscated estates of the Church. They were to be received back and canceled as the lands were bought by the public, but, as the price of the land was not fixed, no proportion was established between land and paper, and no amount of land could prevent the assignats from falling as they did to one two-hundredth part of their original value. In the subsequent issue of *Mandats*, an attempt was made to fix the price of land in mandats, but this scheme also failed. The inconvertible land mortgage notes, issued by Frederick the Great to recruit his treasury, exhausted by wars, were of somewhat the same nature, but bore interest.

Land is doubtless one of the best kinds of security for the ultimate repayment of a debt, and is therefore very suitable when money is lent for a long time. But representative bank-notes purport to be equivalent to gold payable on demand, and nothing is less readily convertible into gold on an emergency than land. In this respect a reserve of real property is worse than a reserve of exchequer bills or consols.

This method of providing paper money has generally been advocated on the ground that the quantity of money in circulation might thus be greatly increased, and the wealth of the nation augmented. It could readily be shown, however, that an increase of the money in circulation will lead to a reduction in its value. In any given state of industry only a certain quantity of circulating medium is needed, and were the notes really convertible into definite quantities of land or any other substantial commodity, the excess of notes would ultimately be presented for payment. To suppose that the currency could be made equal in aggregate value to any large part of the lands of the country is evidently absurd.

9.—REGULATION BY THE FOREIGN EXCHANGES.

A theory was very much in favor among

bank directors at the beginning of this century that a paper currency could be regulated merely by watching the rates of the foreign exchanges, and restricting the issue when the lowness of the rates and the export of specie showed a depreciation of the paper. This was one of the methods proposed in opposition to the celebrated Bullion Report, and a summary of the interminable discussions on the subject will be found in Mr. Macleod's Treatise on Banking, Vol. II. Chapter IX.

Regulation by the foreign exchanges is much better than no regulation at all, but if perfectly carried out it would give exactly the same results as the deposit method, and is only a loose and indirect way of reaching the same end.

10.—FREE ISSUE SYSTEM.

There is a school of economists, both in this country and America, who uphold the expediency of allowing all persons to issue as many promissory notes payable on demand as they can get other persons to accept. They call this system the Free Banking system, but incorrectly, because it is no necessary function of a banker to issue promissory notes, and a great many banks exist in England without any power of issue. This subject will be further discussed in a subsequent chapter, and I will only add here that under the system of unrestricted issue, a banker is bound by law to pay a note issued by him, but it is left entirely at his own discretion to keep such balance of specie for the purpose as he may think proper. As a general rule, no doubt, notes thus issued will be paid; but, having regard to the great fluctuations of commerce, which are becoming more, rather than less marked, there will occur periods when a pressure for payment of notes will be made. Experience abundantly shows that a certain number of individuals will calculate too confidently on their good fortune, and fail to carry out their promises and intentions when the critical time arrives.

11.—THE GOLD PAR METHOD.

Assuming an inconvertible paper currency to be issued, and to be entirely in the hands of the government, many of the evils of such a system might be avoided if the issue were limited or reduced the moment that the price of gold in paper rose above par. As long as the notes and the gold coin which they pretend to represent circulate on a footing of equality, they are as good as convertible. Since the beginning of the Franco Prussian war, the Bank of France appears to have acted successfully on this principle, and the inconvertible notes were never depreciated more than about one-half or one per cent. in spite of the vast political or financial troubles in France. But this is one of the very few cases in which inconvertible paper currency has not been depreciated. During the restriction of specie payments in England, gold was bought and sold at a premium varying up to 25 per cent., yet Fox, Vansittart, and other leading men of the time, declared it to be absurd to suppose that paper was depreciated. So unaccouutable are the prejudices of men on the subject of currency that it is not well to leave anything to discretionary management.

12.—CONVERTIBILITY BY REVENUE PAYMENTS.

In many instances governments have tried to maintain the value of a paper circulation by engaging to receive it as taxes, or even rendering its use for this purpose obligatory. The Russian government, when issuing assignats, received them at a fixed rate in place of copper coin, and required that at least one-twentieth part of every payment was to be thus paid. The French assignats of the Revolution were also received at the public treasuries. This would be a fair method of securing stability of value on two conditions:—(1) that the taxes or charges were themselves levied according to a fixed tariff; and (2) that the quantity of notes issued were kept within such moderate limits that any one wishing to realize the metallic value of the notes could find some one wanting to pay taxes, and therefore willing to give coin for notes. It is very unlikely, however, that these conditions could ever be fully and conveniently realized in practice.

The United States greenback currency was made receivable for United States stamps, and was also to be received in payment of all taxes and dues in sums of certain assigned amounts, excepting Customs dues. But the fact that some notes are thus withdrawn will not prevent depreciation, if they be soon paid out again with additions required to meet the pressing expenditure of a government

In a small way postage stamps are becoming used as currency in several countries. They were extensively used in the earlier years of the American war as the well-known fractional currency. They are now a recognized medium of payment in England, being repurchased by most postmasters at a discount of two and one-half per cent. if presented in a piece of two or more undivided stamps. Independently, however, of re-purchase, stamps are so continually being canceled by use in postage, that their value can hardly be lowered by excess of quantity. They form a convenient and costless form of remittance for very small sums, say from a halfpenny to five shillings, and little or no objection can be made to their occasional use as change, in place of pence. They would, however, form a very bad currency if circulated to any great extent.

13.—DEFERRED CONVERTIBILITY.

It is a common resource for insurrectionary or belligerent governments in want of funds,

to issue documents promising to pay cash after their successful establishment. When interest proportional to the time is also promised, these notes must be regarded rather as bonds. Of such nature were those issued by Kossuth in New York to form a Hungarian fund, to be paid after the erection of an independent Hungarian government. Similar bonds were signed by the notorious Walker, as President of the provisional government of the republic of Nicaragua By far the best instance of this kind of currency is furnished by the Confederate States treasury notes, the early issues of which were made payable six months after the ratification of a treaty of peace with the United States, and further issues were made payable two years after such treaty.

All such documents may be considered as bills of very long date and of very uncertain value. The public spirit of a people in time of war often enables them to be put afloat, and the need of currency keeps them in circulation for a time, but their value undergoes violent variations, and there are few instances in which such bills have been eventually paid.

14.—INCONVERTIBLE PAPER MONEY.

Finally we come to the undisguised *paper money* issued bv government and ordered to be received as legal tender. Such inconvertible paper notes have in all instances been put in circulation for convertible ones, or in the place of such, and they are always expressed in terms of money. The French mandats of 100 francs, for instance, bear the ambiguous phrase "Bon pour cent francs." The wretched scraps of paper which are circulated in Buenos Ayres, are marked "Un Peso, Moneda Corriente," reminding one of the time when the peso was a heavy standard coin. After the promise of payment in coin is found to be illusory the notes still circulate, partly from habit, partly because the people must have some currency, and have no coin to use for the purpose, or if they have, carefully hoard it for profit or future use. There is plenty of evidence to prove that an inconvertible paper money, carefully limited in quantity, can retain its full value. Such was the case with the Bank of England notes for several years after the suspension of specie payments in 1797, and such is the case with the present notes of the Bank of France.

The principal objections to an inconvertible paper currency are two in number.

1. The great temptation which it offers to over issue and consequent depreciation.

2. The impossibility of varying its amounts in accordance with the requirements of trade.

OVER ISSUE OF PAPER MONEY.

It is hardly requisite to tell again the well-worn tale of the over issue of paper money, which has almost always followed the removal of the legal necessity of convertibility. Hardly any civilized nation exists, excepting some of the newer British colonies, which has not suffered from the scourge of paper money at one time or other. Russia has had a depreciated paper currency for more than a hundred years, and the history of it may be read in M. Wolowski's work on the finances of Russia. Repeated limits were placed to its issue by imperial edict, but the next war always led to further issues. Italy, Austria, and the United States, countries where the highest economical intelligence might be expected to guide the governments, endure the evils of an inconvertible paper currency. Time after time in the earlier history of the New England and some of the other States now forming parts of the American Union, paper money had been issued and had wrought ruin. Full particulars will be found in Professor Sumner's new and interesting "History of American Currency." Some of the greatest statesmen pointed to the results; and Webster's opinion should never be forgotten. Of paper money he says: "We have suffered more from this cause than from every other cause or calamity. It has killed more men, pervaded and corrupted the choicest interests of our country more, and done more injustice than even the arms and artifices of our enemy."

The issue of an inconvertible money, as Professor Sumner remarks, has often been recommended as a convenient means of making a forced loan from the people, when the finances of the government are in a desperate condition. It is true that money may be thus easily abstracted from the people, and the government debts are effectually lessened. At the same time, however, every private debtor is enabled to take a forced contribution from his creditor. A government should, indeed, be in a desperate position, which ventures thus to break all social contracts and relations which it was created to preserve.

WANT OF ELASTICITY OF PAPER MONEY.

A further objection to a paper money inconvertible into coin, is that it cannot be varied in quantity by the natural action of trade. No one can export it or import it like coin, and no one but the government or banks authorized by government can issue or cancel it. Hence, if trade becomes brisk, nothing but a decree of the government can supply the requisite increase of circulating medium, and if this be put afloat and trade relapse into dullness, the currency becomes redundant, and falls in value. Now, even the best informed government department cannot be trusted to judge wisely and impartially when more money is wanted. Currency must be supplied like all other commodities, according to the free action of the laws of supply and demand.

Some persons have argued that it is well to have a paper money to form a home currency, which cannot be drained away, and will be free from the disturbing influences of foreign trade. But we cannot disconnect home and foreign trade, except by doing away with the latter altogether, If two nations are to trade, the precious metals must form the international medium of exchange by which a balance of indebtedness is paid. Hence each merchant in ordering, consigning, or selling goods must pay regard not to the paper price of such goods, but to the gold or silver price with which he really pays for them. Gold and silver, in short, continue to be the real measure of value, and the variable paper currency is only an additional term of comparison which adds confusion.

CHAPTER XIX.

CREDIT DOCUMENTS.

Much mystery has been created on the subject of money by those who assert vaguely that credit can replace coins, and that we have only to print sufficient bills and other promissory documents in order to have an abundant circulating medium. Credit has been said to multiply property and to perform all kinds of prodigies. When we analyze its nature, however, credit is found to be nothing but the deferring of a payment. I *take credit* when I induce my creditor to consent to my paying a month hence what might be demanded today; and I *give credit* when I allow my debtor in the same manner to put off the liquidation of his debt. This credit involves, as Locke, very accurately said, "the expectation of money within some limited time." The debts, indeed, may consist of a definite quantity of any commodity. I may have to pay corn, pig-iron, palm-oil, cotton, or any other staple article, but, generally speaking, debts are debts of legal tender money.

MEASUREMENT OF CREDIT.

In order to measure and define exactly the amount of credit which is given or received, and to estimate the present value of a debt, we must take into account at least five distinct circumstances. which are as follows:

1. The amount of money to be received.
2. he probable interval of time elapsing before its receipt.
3. The probability that it will then be paid.
4. The rate of interest likely to prevail in the meantime.
5 The legal liabilities which it creates or involves.

Writers upon currency have been too much accustomed to mass together all kinds of credit documents, taking no account of the important results which may follow from very slight legal or customary differences. No doubt every kind of promise to pay money has a certain value, but the degree in which it may be made available to facilitate exchange varies exceedingly according to circumstances.

BANK NOTES.

What we call a bank note is a promissory note, issued by a banker, and binding him to pay the sum named therein to the bearer immediately upon demand. The note is transferable by delivery, so that the holder is, like the holder of a coin, the owner *prima facie*, and as such can claim the fulfillment of the promise at any moment, within reasonable hours, without inquiry. The failure of the banker to pay the note when presented does not create any liability between the persons through whose hands the note had previously passed, so that the note is continually employed, like metallic money, in settling debts and removing liabilities. It is most important to observe that a bank-note being payable on demand bears no interest, and is never bought at a discount, except when the ultimate pay is doubtful. Hence the holder of a note has, like the holder of ordinary coins, no motive in keeping it, except to make future purchases. If a man has more notes than he expects to pay away in a week or two, he will do best to deposit them in a bank, where they will be safer and at the same time bear interest. There is thus an inherent tendency in notes to circulate like coins, and to be kept down in amount to the lowest quantity consistent with the accomplishment of retail purchases.

CHECKS.

A check payable to bearer is an order addressed to a banker, requiring him to pay the sum named to the bearer of the check on demand. Like a bank-note, it bears no interest, and is transferable from hand to hand without any formality, so that the holder is *prima facie* the owner. If there be no doubt at all as to the credit both of the drawer and of the bank on which the check is drawn, it is difficult to see why a check should be inferior to a bank-note as representative money, except that it is usually drawn for an odd sum. In some places checks have been so used, and in Queensland at the present time, in the absence of coins and notes, the settlers pay their men in small bank checks, which are received at the stores, and thus become the circulating medium of the colony. Obvious objections to this use of checks may be pointed out.

It is impossible to be acquainted with the check forms of all banks, the signatures of those who draw them and the credit of the drawers. If the public were in the habit of daily receiving and paying checks without minutely inquiring into their validity, immense facilities would be given to the perpetration of fraud. Forgery would be easy but

hardly requisite, since it would be better to obtain possession of a check book, and then fill up checks for amounts exceeding the deposits in the banker's hands. Every one accepting a check thus receives it at the risk of fraud or bankruptcy on the part of the drawer. There is, moreover, the possibility of failure of the bank on which it is drawn; for it is a well-understood point of law, that if the holder of a check does not present it in "reasonable time," that is, before the close of business hours on the day following the receipt of the check, he loses his claim against the drawer, if the bank should happen to fail. The reason obviously is that the drawer loses the deposit which he left in the banker's hands to meet the check, and should not suffer from the holder's want of diligence.

The salutary effect of this law and of other conditions is, that checks do not circulate in this kingdom in place of money, but are usually presented within one or two days of receipt. Hence they come to serve as mere instruments of transfer of money, and involve no considerable length of credit. Nothing can be gained by holding an ordinary check, for there is no interest, and something may be lost. Beyond the mere trouble of presentation, then, there is no motive to prevent a holder from at once getting coin or bank-notes for his check which, though paying no interest, are safer. Or, still better, he may deposit the sum at his bankers, get a low interest in the meantime, and draw a new check of his own when he wishes to pay the check away again. Experience shows that the latter is the most satisfactory course, the money being usually safer and more available in the hands of a good banker than elsewhere, and usually paying interest all the time. On this foundation is erected the extensive system of payment which will be described in the next chapter, and which may be called *the Check and Clearing System.*

There are, indeed, many varieties of checks. Bankers' checks are those drawn by one banker upon another, and are used as a means of remittance. If both the bankers concerned are of perfect credit, and the form and signature can be verified, such checks seem to me to be in no way inferior to bank-notes as representative money. If two perfectly well-known banks were to arrange to draw checks upon each other for convenient even amounts, and to issue these to their customers, it would effect a successful evasion of the law against the unlimited issue of notes. So great however is the force of habit, or the respect for law, that no such attempt is made, and bankers' checks are presented almost as promptly as any others.

Certified checks, as employed in the New York trade, are a still nearer approach to a bank-note, for they are checks which have been marked by the bankers on whom they are drawn, as sure to be paid on presentation. Either the banker in certifying the check has funds belonging to the drawer which he can retain to meet it, or else he pledges his own credit that he will meet the check in any case. Such checks are really promissory notes of the banker, and I can see no reasons why they should not circulate as freely as bank-notes, except that they are drawn for odd sums, and present few safeguards against forgery. The checks of the Check Bank, which will be subsequently considered (Chapter XXII.), are equivalent to certified checks, as they cannot be issued except against deposits which are retained until the check is presented.

Of late years the practice has become very general of making checks payable to order instead of to bearer, and of crossing them so as to necessitate their presentation through a banker. The order may, indeed, be discharged by an open endorsement, which renders the check again payable to bearer, but there remains the possibility of a forged endorsement, concerning which difficult points of law have arisen. A general crossing need not interfere appreciably with the circulation of a check, but when crossed specifically for presentation through a particular bank, the check becomes practically an order to credit a particular individual, who keeps his account in that bank, with the sum of money.

BILLS OF EXCHANGE.

A bill of exchange is an order to a person to pay money to the legal holder of the document on a day indicated therein. If payable at sight, a bill does not apparently differ from a check or draft to order, except that it will be usually drawn upon persons of less credit than well-known bankers. If not payable at sight, the length of time intervening between the day named for payment and the day of issue may vary from a day or two upward, and the money cannot be demanded in the meantime. Hence, a bill generally bears interest, or rather is only bought at such a discount as will enable it to be held to maturity without loss. To estimate the liability of loss, some estimate must be formed of the rate of interest likely to prevail in the meantime, and the value of the bill will thus vary according to a multitude of circumstances. Bills of exchange may be made payable to the bearer, but as a general rule they are payable to a specified person, and transferred by endorsement to other specified persons. Thus, every party concerned with a bill incurs a certain liability, which is not removed until it is duly paid. In several respects, then, a bill may differ from coined money, which bears no interest, and discharges instead of creating liability when tendered in payment of debts.

INTEREST-BEARING DOCUMENTS.

It is extraordinary that few writers on currency have remarked the deep difference between commercial documents which bear

interest and those which do not. On this point turns the possibility of their forming representative money. For it is an essential characteristic of coin that it yields no profit by keeping it in the pocket or the safe. I may be obliged to keep money ready to pay debts, but in the meantime I lose the interest which I might receive by investing the sum in the funds, in bills, bonds, or even as a bank deposit. Hence money must be considered as a commodity which, as Chevalier says, is *in a constant state of supply and demand.* Every one is always trying to part with it in a profitable purchase, and keeps as little in hand as possible. The same is even more true of bank-notes, checks, circular notes, bills at sight, and a few other kinds of documents, all of which are payable on demand at any moment, so that no amount of interest can be assigned to them. Except so far as the payment may be doubtful, or the possession of the documents may involve the holder in legal difficulties, these documents have the characteristics of coin, and the amount held is kept down to the lowest convenient figure. Interest-bearing documents, on the contrary, are held in as large quantities as possible, because the longer they are held the more interest accrues. It is the principal business of every banker to hold a portfolio full of good bills, which really represent the investment of capital in industry. Government bonds, or bonds issued by public companies and corporations, do not differ from commercial bills except in the fact that they have very long, or even interminable, usance, and that the interest is paid at definite intervals. Such bonds represent the sinking of capital in fixed undertakings, and are therefore held as property by individual investors. They may be bought and sold for money, but are not money themselves. They rather necessitate than replace the use of money, since currency must have been paid at the first investment, and is repaid by degrees at the periodical terms fixed.

A number of schemists have urged from time to time that, in addition to our ordinary currency, there ought to be an *interest-bearing currency.* The first small issue of the French assignats bore interest, and about twelve years ago the United States Government tried a similar experiment, which was soon discontinued. Persons have proposed to coin the whole National Debt into money, so that instead of some 160 millions of metallic and paper currency we might have more nearly a thousand millions. Mr. E. Hill has published a form of bank-note entitling the holder to one hundred pounds on demand, and to interest at the rate of 3½ per cent. up to the time when it is presented, the amount of interest being tabularly stated on the form. It is obviously impossible, however, that any government should issue such notes, because whenever the current rate of interest rose above 3½, and the value of the note accordingly fell below par, a profit would be made by presenting the notes for payment. Thus the government issuing such notes would have to keep a large quantity of coin in reserve to meet them, and would at the same time be paying interest on the whole of the notes. Thus there would be a loss of interest upon the whole reserve of coin.

The English government has rendered the National Debt as transferable as possible by authorizing in terms of the Act of 33 and 34, Victoria, chapter 71, the issue of stock certificates. These certificates resemble the bonds of the United States and other governments. They have coupons for the payment of interest, and when not filled up with a name are transferable by delivery like bank notes. They are issued in exchange for Three per Cent. Annuities for even sums of not less than £50 and not more than £1,000; and if the right to annuity could be passed from one person to another as currency, these certificates would allow of its being done. But it is understood that a comparatively small amount of such certificates has ever been applied for. They are, I believe, used to some extent by bankers and others, who have to hold sums of money invested in the funds for short periods, and can save the cost of transfers by the use of certificates. The public at large are found to prefer the old method of registering their stock in the books of the Bank of England.

DEFINITION OF MONEY.

Much ingenuity has been spent upon attempts to define the term *money*, and puzzling questions have arisen as to the precise kinds of credit documents which are to be included under the term. Standard legal tender coin of full weight is undoubtedly money, and as convertible legal tender bank-notes are exactly equivalent to the coined money for which they may at any moment be exchanged; it has often been considered that these also may be included. But inconvertible notes are often made legal tender by law, and can discharge in inland trade all the functions of money. Are they not then to be included? The question will next arise whether checks may not be as good as money.

All such attempts at definition seem to me to involve the logical blunder of supposing that we may, by settling the meaning of a single word, avoid all the complex differences and various conditions of many things each requiring its own definition. Bullion, standard coin, token coin, convertible and inconvertible notes, legal tender and not legal tender, checks of several kinds, mercantile bills, exchequer bills, stock certificates, etc., are all things capable of being received in payment of a debt, if the debtor is willing to pay and the creditor to receive them; but they are, nevertheless, different kinds of things.

By calling some money and some not, we do not save ourselves from the consideration of their complex legal and economical differences. Bullion is evidently not coin, but can be turned into it at little or no cost, and will make foreign payments almost as well as coin. Token coins are not standard coins, and will not make foreign payments, but are legal tender for small sums, and may be readily exchanged for standard coin at little or no loss. Bank of England notes are not exactly coin, but can be readily turned into coin by those who dwell near the Bank of England, and are received as equivalent to coin by other persons. Checks are not coin, but orders to receive it on demand, and are valuable in proportion to the probability that the sum will be received. Accepted bills are an engagement to pay coin at a day named; if we overlook the possible failure of the acceptor to pay them, they are, as it were, deferred money. A certificate of consolidated stock entitles the holder to an annuity, that is, to quarterly sums of money.

We get back, in short, to that with which we started. Standard legal tender coin is that in which all commercial transactions and documents are expressed, but according to infinitely various circumstances, the receipt of the money is more or less deferred, more or less involved in legal complexities, and also variable in amount, as interest is or is not to be received in addition. All other commercial property, mortgage deeds, preference shares and bonds, and ordinary shares, resolve themselves into more or less probability of receiving coin at future dates; and thus we pass insensibly from the golden sovereign in hand to the most flimsy chance of receiving gold which is still like the bird in the bush.

The word *cash* is used with exactly the same ambiguity as *money*. Originally cash meant that which was *encaissé*, *i. e.*, put into the chest or till. Strictly speaking, it should consist of actual specie, and the word is used in some English banks to include only coin of the realm. But I find by actual inquiry that bank cashiers use it with every shade of meaning. Some take Bank of England notes to be cash. Good checks upon a bank paid into that bank are evidently as good as cash. Others go so far as to include checks upon other banks of the same town, and even country bank-notes are sometimes included in cash. The question is evidently one of degree, and cannot be settled except by the general adoption among cashiers of some one arbitrary line of definition.

In ordinary life we use a great many words with a total disregard of logical precision. Who shall decide, for instance, what objects are to be included under the names *building* and *house?* Let the reader attempt to decide which of the following objects is to be considered a house, and why?—namely, stables, cow-houses, conservatories, sheds, lighthouses, tents, caravans, hulks, sentry-boxes, ice-houses, summer-houses, and parish pounds. The difficulty is exactly analogous to that of deciding what is money or cash.

CHAPTER XX.

BOOK CREDIT AND THE BANKING SYSTEM.

Considerable economy o the precious metals arises, as we have seen, from passing about pieces of paper representing gold coin, instead of the coin itself. But a far more potent source of economy is what we may call the Check and Clearing System, whereby debts are, not so much paid, as balanced off against each other. The germ of the method is to be found in the ordinary practice of *book credit.* If two firms have frequent transactions with each other, alternately buying and selling, it would be an absurd waste of money to settle each debt immediately it arose, when, in a few days, a corresponding debt might arise in the opposite direction. Accordingly, it is the common practice for firms having reciprocal transactions, to debit and credit each other in their books with the debt arising out of each transaction, and only to make a cash payment when the balance happens to become inconveniently great. An insurance broker is one who acts as a middleman between the owners of ships and the underwriters who insure them in shares. He has, therefore, to make many small payments to underwriters, for the premiums on policies, and at intervals has to receive back the indemnity for any insured vessel which has been lost. It is the common practice to avoid cash payments; the broker credits the underwriter with the premiums and debits him with losses, and only pays or receives the balance when large.

To represent the highly complex system of book credit which is organized by the bankers of a large kingdom, we shall have to employ a method of diagramatic notation. I will therefore remark that the simplest case or type of book-credit is represented by the formula

$$P \text{———} Q.$$

Each of the letters, P and Q, indicates a person or a firm, and the line indicates the existence of transactions between them. Only in special cases, however, will this direct balancing of accounts render the use of cash or of a more complex system unnecessary. Generally speaking, there will be a tendency for a surplus of goods to pass in one direction, so that money must pass in the opposite direction. The manufacturer sells to the wholesale dealer, the latter sells to the retailer, and the retailer to the consumer. By the intervention of the banker,

however, the transactions of many different individuals, or even of many branches of trade, are brought to a focus, and a large proportion of payments can be balanced off against each other.

SINGLE BANK SYSTEM.

To obtain a clear notion of the way in which bankers help us to avoid the use of money as the medium of exchange, we must follow up the rise of the system from the simplest case to the complete development of the complex organization now existing in the United Kingdom. Let us imagine, in the first place, that there is an isolated town having no appreciable dealings with other parts of the world, and possessing only a single bank, in which each inhabitant has deposited all his money. If any person, *a*, then wishes to make a payment to *b*, he need not go to his banker, draw out coin, and carry it to *b*, but may hand to *b* a check requiring the banker to pay the coins to *b*, if needed. But if *b* makes payments in the same way, he will not need to draw out any coin. It would be a mere formality for *b* to receive the coin due from *a*, and then pay it back over the counter to the credit of his account with the same banker. The payment is made by merely writing the sum of money to the debit of *a*'s account. If *b* wishes to make another payment to *c*, a similar record in the banker's ledger will accomplish the business. However many other traders, *d*, *e*, etc., there may be, their mutual transactions may be settled in the same way, without their seeing a single coin. We may represent this elementary banking organization by the following diagram,

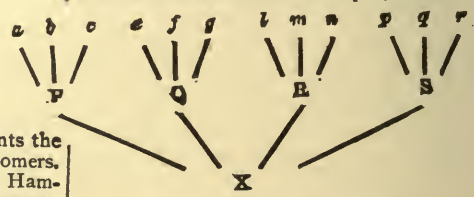
in which it is obvious that P represents the single banker, and *a*, *b*, *c*, *d*, *e* his customers. The deposit banks of Amsterdam and Hamburg form perfect illustrations of this arrangement.

So long as we regard only the internal transactions of a town, then, a stationary amount of coin, lying untouched in the bank, will allow the whole to be accomplished. If the traders never require to make payments at a distance, the metallic money might be dispensed with altogether. But since any of the customers *a*, *b*, *c*, etc., may want his money, the banker ought to keep at least as much as will meet possible demands.

SYSTEM OF TWO BANKS.

As a second case, let us suppose that there is a town which is able to support two banks Some of the inhabitants keep their money in one bank and some in the other, but all whom it is requisite to consider have an account with one or the other. In the diagram,

let P and Q be the two bankers, *a*, *b*, *c*, *a* being customers of P, and *q*, *r*, *s*, *t*, customers of Q. Now the mutual transactions of *a*, *b*, *c*, *d* will, as before, be balanced off in the books of P, and similarly with the customers of Q. But if *a* has to make a payment to *q*, the operation becomes somewhat more complex. He draws a check upon P, and hands it to *q*, who may, of course, demand the coin from P. Not wanting coin, he carries the check to his own banker, Q, and pays it into his account in place of coin. It is the banker, Q, who will now have to present the check upon P, and it might seem as if the use of coin would be ultimately required. There will be other persons, however, making payments in the town in the same manner, and the probability is very great that some of these will result in giving P checks upon Q, and some in giving Q checks upon P. The two bankers, then, will be in the position of the two traders before described, who have a running account. At the worst the payment to be made in coin will be only the balance of what is due in opposite directions; but as this balance will probably tend in one direction one day, and in the opposite direction the next day, the balance need only be paid when it assumes inconvenient proportions.



COMPLEX BANK SYSTEM.

A large commercial town usually possesses several banks, each with its distinct body of customers, The mutual transactions of each body will, as before, be balanced off in the books of this common bank, but the larger part of the transactions will be cross ones, resulting in a claim by one banker upon another. The probability is very great, indeed, that each banker will have to receive, as well as to pay, each day; but it does not follow that he will pay to the same as those who are going to pay to him. The complexity of relations becomes considerable; thus among fourteen banks there are $\frac{14 \times 13}{2}$ or 91 different pairs which may have mutual

claims, and among fifty banks there would be no less than 1,225 pairs. The result is, that P might happen to have a considerable balance to pay to Q, and yet might be going to receive about the same sum from R or S. The actual carrying about of coin under such circumstances would be absurd, because a manifest extension of the book-credit system at once meets the difficulty. The several banks need only agree to appoint, as it were, a *bankers' bank*, to hold a portion of the cash of each bank, and then the mutual indebtedness may be balanced off just as when a bank acts for individuals. In the figure we see four banks, P, Q, R, S, each with its own body of customers, but brought into connection with each other by the bankers' bank, X. P need not now send a clerk to present bundles of checks upon Q, R, and S, but can pay them into the central bank, X, where after being placed to the credit of P and sorted out, they will be joined to similar parcels of checks received from Q, R, S, and finally presented at the banks upon which they are drawn. Thus all the payments made by checks will be effected without the use of coin, just as if there were only a single bank in the town. What each bank has to pay each day will usually be balanced pretty closely by what it has to receive. Such balance as remains will be paid by a transfer in the books of X, the bankers' bank.

It is not precisely true that there is in any English town a bankers' bank, which thus arranges the payments between banks. The accountants' part of the work is carried out by an institution called the Clearing House, managed by a committee of bankers, and the Bank of England is employed to hold the deposits of the bankers, and make transfers which close the transactions of each day. The organization of the Clearing House will be described in the next chapter.

BRANCH BANK SYSTEM.

It is impossible to avoid perceiving that the organization of the English bank system is undergoing a complete transformation, and is approximating to that which has existed for a century or more in Scotland. Instead of a great number of small, weak, disconnected banks, there is arising, by amalgamation and extinction of the weaker ones, a moderate number of important banks, each possessing numerous branches. The Scotch banks have long had many branches, and at present each of the eleven great banks has on an average 78 branches, the lowest number being 19, and the highest 125. Already a few of the English banks have equally extensive ramifications. Thus the London and County Bank, and the National Provincial Bank, which have especially developed the branch system, have respectively 148 and 137 branches; the Manchester and Liverpool District Bank has 50 branches and sub-branches. The Irish Banks also adopt the the same system, and the National Bank of Ireland has about 114 branches and sub-branches. It is interesting to observe that in Australia, too, the banking system has taken a similar form, and a comparatively small number of strong banks, such as the Bank of New South Wales, or the Bank of New Zealand, leave no rising village without its branch.

Now, the close connection which exists between the head office and each of the branches of an extensive bank leads to a great clearing off of claims. The third diagram again serves to represent this relation, X being the head office, P, Q, R, S, branch banks, and *a*, *b*, *c*, etc., customers. If *a* pay *m* with a check on P. the check will be paid into R, credited to *m*, forwarded by post direct to P, and debited to *a*. The head office being informed of this transaction in the usual daily statement, will close the business by transferring the sum from the account of P to that of R. Much accountants' work seems to arise, but it is work of mere routine which costs little. Cash remittances are seldom necessary, because each branch settles accounts only with the head office, so that many sums will be credited and debited during each week, and the balance will usually be small. The head office, in fact, acts in every way like a clearing house, or bankers' bank.

The question naturally arises, indeed, how will the branches of one bank transact business with those of another bank? The solution, however, is simple; for unless the branches happen to be in the same town, or for other reason, in close relation with each other, they will communicate through their head offices. A check upon any branch of the London and County Bank received by a branch of the National Provincial Bank, will be presented through the head office of the latter at the Clearing House upon the head office of the former.

BANK AGENCY SYSTEM.

Another important feature of the banking system is the extensive organization of agencies. A large bank has various business to be transacted in each of the principal commercial towns of the kingdom, and if it has no branches in these towns employs a banker in each town to act as its agent. This agent-bank collects checks, notes, etc., payable in the district, cashes drafts drawn against them, retires bills according to instructions, and does almost all that a branch bank would do, the main difference being that the remuneration for this work consists of a commission. Each agent-bank has a running account with its principal, so that to a certain extent each important bank and its agencies form a clearing system analogous to that of a head bank and its branches.

LONDON AGENCY SYSTEM.

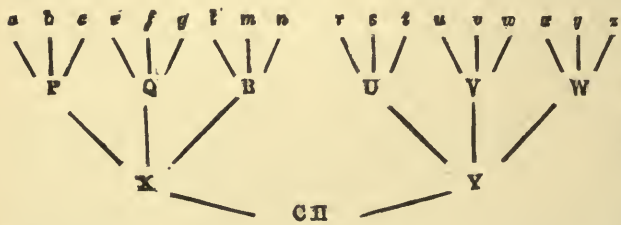
By insensible degrees there has grown up

in England an all-comprehensive and most perfect system of relations between the provincial and London city banks. Every banker in the United Kingdom, without, I believe, any exception, employs one or other of the great London city banks to act as agent. There are twenty-six city clearing banks which thus undertake agencies, and on an average each of these banks represents at least twelve country banks; but the number varies very much, and some country banks have two London agent banks.

This agency system leads at once to a clearing of transactions, because, if any two country banks have the same London agent, all their mutual adjustments of accounts can be made by transfers in the books of the agent. The third diagram on p. 70 applies once more, and X represents the city agent, having running accounts with P, Q, R, S, the country banks. The whole of the customers of all the banks, having the same London agent, are thus brought into close relation, though they may live in the most distant parts of the country. Each of the city banks may be regarded as a bankers' bank and a clearing house on a small scale.

COUNTRY CLEARING SYSTEM.

Only one further step is required to complete the system of connections between each bank in the kingdom and all other banks. Every country bank, as we have seen, has a running account with some city bank, and all the city banks daily settle transactions with each other through the Clearing House. It follows that a payment from any part of the country to any other part can be accomplished through London. In the following diagram,



let P, Q, R, be country banks having the London agent, X, and U, V, W, other country banks having the London agent, Y. If *a*, a customer of P, wishes to pay *r*, a customer of U, he transmits by post a check upon his banker, P. The receiver, *r*, pays it into his account with U, who, having no direct communication with P, forward it to Y, who presents it through the Clearing House on X, who debits it to P, and forwards it by the next post. Nothing can exceed the simplicity and perfection of this arrangement.

It will be readily seen, too, that sums of money passing between London banks, or rather cleared off in the Lombard Street Clearing House, will frequently be the balances of extensive running accounts between country banks and their agents and correspondents. So long as the balance of accounts between any two banks does not assume large proportions, it need not be paid in cash at all, except for special reasons. When a balance has to be paid, and the banks happen to have the same London agent, it is only requisite for the debtor bank to direct their London agent to transfer so much money to the credit of the other country bank. If any have different London agents, and P, in the last diagram, desires to pay a balance to U, it is done by directing X to credit Y, the agent of U. The credit note effecting this payment passes through the Clearing House amid a mass of other documents representing payments in one direction or the other, and will in general become an insignificant item in the general clearing. If it can be said to be paid in cash at all, it is in the form of a final transfer in the books of the Bank of England, as we shall see. Great as are the transactions daily settled in the London Clearing House, they are after all only those which have not been previously cleared off by any more direct communication, and they often represent the balances of multitudinous transactions which never pass through London at all.

CHAPTER XXI.

THE CLEARING-HOUSE SYSTEM.

By means of the London agency system, the banking transactions of the country are, as we have seen, brought to a focus in the city of London. The settlement of the reciprocal claims of the twenty-six principal city banks is therefore a business of the utmost magnitude and importance, representing as it does the completion of the business of no small part of the world. In a room of moderate dimensions, entered from a narrow passage running from the post-office in King William Street across to Lombard Street, debts to the average amount of nearly twenty millions sterling per day are liquidated without the use of a single coin or bank-note. In the classic financial neighborhood of Lombard Street, and even in this very chamber, the system of paper commerce has been brought nearly to perfection. The early history of the London Clearing House is buried in obscurity, and it is much to be desired that those who are acquainted with the principal incidents in its progress should put them on record before it is too late.

The Clearing House appears to have been first created just a century ago. About the year 1775 a few of the city bankers hired a room where their clerks could meet to exchange notes and bills, and settle their mutual debts. The society was of the nature of a strictly private club, the public knowing nothing about it, and the transactions being conducted in perfect secrecy. Mr. Gilbart tells us that, even in this form, it was regarded as a questionable innovation, and some of the principal bankers refused to have anything to do with it. By degrees, however, the convenience of the arrangement made itself apparent, more bankers were admitted to the society, and a distinct committee and set of rules were formed for its management. Although it remains to the present day a private and voluntary association, unchartered, and in fact unknown to the law, the Clearing House has steadily grown in importance and in the publicity of its proceedings.

Several important extensions of the clearing work have been made in the last twenty-five years. After the rise of the London Joint Stock Banks, subsequent to 1833, they were for a long time refused admittance to the Clearing House; but in June, 1854, they were at last allowed to join the association. The Bank of England long remained entirely outside of the confederation, but more recently it has become a member, so far as regards the presentation of claims upon other banks. The West End banks of London are still beyond its sphere, partly, perhaps, because their distance stands in the way of the working of the system. They are thus in the position of provincial banks, and can clear through city agents like provincial banks.

Before the year 1858 the business of the Clearing House was restricted to the exchange of checks and bills actually drawn on the clearing bankers. Country bankers receiving checks drawn upon other distant country banks were in the habit of remitting them direct by post, the paying bank effecting the payment by directing their London banker to pay the amount to the London agent of the receiving bank. In the year 1858, at the suggestion of Mr. William Gillett, but chiefly by the exertions of Sir John Lubbock, the country clearing system was organized. The country banker, instead of posting many checks every day to all parts of the kingdom, sends them in a single parcel to his London agent, to be presented through the Clearing House on the London agents of the paying banks. This exchange is made, as we shall see, at different hours of the day, but the results are summed up in the general balance of the day's transactions.

TRANSACTION OF BUSINESS AT THE LONDON CLEARING HOUSE.

There are three clearings daily at the Lombard Street House. The morning clearing opens on ordinary days at 10.30; drafts are received not later than 11, and the work must be closed at noon. The country clearing then begins, drafts being received until 12 30, and the clearing closed at 2.15. The heaviest clearing, however, is that of the afternoon, which begins at 2.30. The bustle and turmoil of the work grow to a climax at four o'clock, the runners rushing in with the last parcels of drafts, up to the moment when the door is finally closed. On the fourth day of each month, when the heaviest work occurs, the hours are extended, the House opening at nine o'clock.

The Clearing House is a plain oblong room, with rows of desks in compartments round three sides, and down the middle. A small office for the two superintendents stands at one end. Each bank sends as many clerks to the House as may be requisite for the rapid completion of the work, and some banks have as many as six clerks. The checks and bills to be presented by any one clearing bank, say the Alliance Bank, upon any other clearing banker, are entered at home in the "Out-clearing book," and are then sorted into twenty-five parcels, one of which is to be presented on each of the other clearing banks. On reaching the Clearing House, these parcels are distributed round the room to the desks of the clerks representing the several paying banks, who immediately begin to enter them in the "In-clearing books" in columns bearing at the head the name of the presenting bank. After being entered, the drafts are, as soon as possible, forwarded to the banking house for examination and entry in the bank books. Any checks or bills refused payment are called "returns," and can generally be sent back to the Clearing House the same day, and entered again as a reverse claim by the bank dishonoring them on the banks which presented them. At the close of the day the clerks of the Alliance Bank are able to add up the whole of the claims which have been made upon them by the other twenty-five banks, and they learn from the out-clearing book the amount of the claims which the Alliance Bank is making on other banks. The difference is the balance which the Alliance Bank has either to pay or receive as the case may be. These balances being communicated to the superintendents of the House are by them inserted in a kind of balance sheet. When finally added up, the debtor and creditor sides of the sheet should exactly balance, because every penny to be received by one bank must be paid by another.

In former years the balance due by or to each bank was paid in bank notes, and in the year 1839, average daily transactions to the amount of about three millions were cleared by the use of £200,000 in bank-notes, and £20 in coin, or about one-fifteenth part of the debts liquidated. More recently a suggestion of the late Charles Babbage was carried into effect, and the bal-

ances were paid by drafts upon the Bank of England, in which bank each city banker deposits a large part of his spare cash.

One ingenious minor arrangement in the London Clearing House is the division of the whole list of twenty-six bankers into three groups, in such a way that one of the clearing clerks of the Alliance Bank corresponds with one group of the other banks, a second clerk with the second group and so on. Thus when a comparison or correction of accounts is made between any two banks, it is known precisely which clerk must answer to the questions called across the room.

Although the rapid and effective way in which the settlement is carried out in the London Clearing House must always excite surprise, it is quite open to question whether improvements are not needed. The room does not seem to be large enough for the convenient and wholesome transaction of such vast and increasing work. Although some banks employ as many as six clerks, the pressure is very great at times. The facility which these clerks acquire by practice in making and adding up entries is very great, but the intense head work performed against time, in an atmosphere far from pure, and in the midst of bustle and noise arising from the corrections shouted from one clerk to another across the room, must be exceedingly trying. Brain disease is occasionally the consequence.

The question must arise, too, whether the privilege of clearing is to be forever restricted to twenty-six principal city banks, when there are certainly many other banks existing or being founded which need the convenience of access to the House. In New York the clearing circle, as we shall see, is much wider. At present the minor London banks are forced to employ the clearing bankers as agents, or to forego the advantages of the Clearing House altogether. It is hardly just or possible that a narrow monoply of the sort should be maintained forever.

MANCHESTER CLEARING HOUSE.

Though the London Clearing House is entirely the birthplace of the system, and the spot where the work has been organized on the largest scale, it does not follow that it is in every respect the most suitable for imitation in commercial towns of less magnitude. At least two English provincial towns, Manchester and Newcastle, have established local clearing houses. The bankers of Liverpool, also, I am told, have recently arranged a private system of clearing houses among themselves; and it is possible that the bankers of other towns may have taken a similar step without the fact becoming generally known. Through the kindness of some members of the committee, I have received full information as to the working of the Manchester Clearing House. The business seems to have been arranged chiefly, I believe, by Mr. E. W. Nix, with great success, and it may be useful to describe the arrangements in detail, as they would be very suitable for adoption in many English, foreign, or colonial towns, which will doubtless before long establish clearing houses.

In the Manchester Clearing House the work is performed entirely upon loose forms, and not in account books, as in London. Though these forms may seem rather numerous and elaborate, they greatly assist in the accurate and orderly settlement of the balance. The clearing clerk, before leaving his bank, sorts out the drafts, which he has to deliver, into thirteen parcels, one for each of the thirteen other banks, and then fills up thirteen lists, one for each parcel, in the Form No. 1 shown below, each check being represented only by the amount of money expressed in it. A copy of the list is entered in one of the books of the bank provided for the purpose.

Form No. 1.

MANCHESTER BANK CLEARING.

Mem. of Checks delivered by _____ to _____ Clearing _____ 187

Adding up each such list, he inserts the totals in one of the left hand columns of the Form No. 2. He thus obtains a complete abstract of all the claims he holds upon other banks, and adding up the columns ascertains the aggregate "Out-clearing."

Form No. 2.

MANCHESTER BANK CLEARING.

_____ 187

OUT.								IN							
	First Clearing.			Second Clearing.					First Clearing.			Second Clearing.			
								Adelphi							
								Bank							
								Consolidated							
								County							
								Cunliffe's							
								District							
								Heywood							
								Joint Stock							
								King Street							
								Lancashire							
								National Provincial							
								Salford							
								Sewell							
								Union							
								Total							
								Balance							

On reaching the Clearing House, the clerk walks round the room and lays on the desk belonging to each other bank the parcel of checks and the corresponding list already described. . In the course of a little time thirteen similar parcels and lists will be laid on his own desk by the clerks of other banks, and as they come in he compares the list with the checks, verifies the addition, and if all be correct, enters the amount in one of the right hand columns of the second form, against the name of the bank presenting the

drafts. These parcels are called the "*In-clearing*," and represent all the claims of other banks upon the one in question, so that when all the thirteen amounts are entered, and the columns added up, the clerk learns the aggregate which his bank will have to pay.

At Manchester two clearings are held each day. The first at 11.15 A.M. is a preliminary one only, and no payment of balances is made. As soon as the columns for the first clearing are filled up, the clerk returns to his bank with the in-clearing parcel of checks and drafts presented upon the bank. These documents are immediately examined by the proper officials in order to detect any which may be irregular, fraudulent, or, for want of funds or other reasons, must be dishonored. At the Clearing House the clerk has already made a first rough inspection, and returned any documents which were obviously irregular, but no draft is considered to be finally accepted until one hour after the clearing is over. The returned drafts are comparatively few, and, as soon as detected, are forwarded direct to the bank presenting them.

The second clearing takes place at 2.15 P.M. and is conducted just as in the morning. The second columns of the out- and in-clearing, in Form 2, having been filled and summed up, the totals of the first columns are added in, and the clerk learns the sum that has to be paid, and at the same time to be received, by his bank. The difference is the balance which he has either to receive or pay. These totals and the balance he copies into the following brief form, No. 3, which he hands to the inspector of the Clearing House:

Form No. 3.

CLEARING RETURNS.

Messrs. _____

Out-Clearing £ .. ..

In-Clearing £ .. ..

Balance . . . £ ..

Date _____ 187

The inspector now proceeds to verify the balances by inserting the amounts in Form No. 7, in an abbreviated form, only four of the names of the banks being inserted, to save space. In these forms the names of the banks are given in the briefest manner, and the Branch Bank of England is called simply "Bank."

Form No. 7.

CLEARING HOUSE.

Dr.		*Cr.*	
	£		£
Adelphi			
Bank			
Consolidated			
County			

It is evident that the total which some of the banks have to receive on balance must equal what the others have to pay, because every check has been added in twice, once in favor of, and once against, some bank. If the debtor and creditor columns of the seventh form, being added up, fail to balance, some error of account must have been committed, and all the work is submitted to careful re-examination until the error is detected. When all is correct, it remains only to effect the payments, which is done by means of credit and debit notes, directing transfers in the books of the Branch Bank of England, to or from the accounts of the clearing bankers. The payments are made, indeed, to and from the Clearing House, as a kind of fictitious entity; but as its payments and receipts each day exactly balance, the Clearing House requires no separate ledger account, except for small current expenses, or inconsiderable errors.

To effect the transfer the clerk of each paying bank fills up the double form, No. 4, as follows:

Form No. 4.

SETTLEMENT AT THE CLEARING HOUSE.

Manchester, _____ 187

To the Cashiers of the BANK OF ENGLAND,

Be pleased to TRANSFER from our Account the sum of _____

_____

and place it to the Credit of the Account of the Clearing Bankers, and allow it to be drawn for by any of them (with the knowledge of the Inspector, signified by his countersigning the Drafts).

£ _____

SETTLEMENT AT THE CLEARING HOUSE.

BANK OF ENGLAND,

Manchester, _____ 187

A TRANSFER *for the sum of* _____

_____

has this evening been made at the Bank, from the Account of Messrs. _____

_____

to the Account of the Clearing Bankers.

For the Bank of England,

_____

£ _____

The coupon on the left-hand side is a draft to be signed by the clerk, if he has authority for the purpose, or else to be carried by him to his principals to be signed, and then paid into the Bank of England. It directs the cashier to credit the Clearing House with the balance, and debit the sum to the paying bank in question. The authorized official of the Bank of England signs the corresponding form on the right hand, when the payment is made, as a receipt for the sum on behalf of the Clearing House.

When, on the other hand, the balance is in favor of a bank, Form No. 5, printed on green paper for the sake of easy diecrimination, comes into use. It sufficiently explain itself.

Form No. 5.

SETTLEMENT AT THE CLEARING HOUSE.

Manchester, _____ 187

To the Cashiers of the BANK OF ENGLAND,

Be pleased to CREDIT our Account the sum of _____

_____

out of the money at the Credit of the Account of the Clearing Bankers.

£ _____

SETTLEMENT AT THE CLEARING HOUSE.

BANK OF ENGLAND,

Manchester, _____ 187

The Account of Messrs. _____

has this evening been CREDITED *with the Sum of* _____

_____

out of the money at the Credit of the Account of the Clearing Bankers.

For the Bank of England,

_____

£ _____

There remains then only the question of the returned checks. Even these do not require cash payment. The balance at the close of the day is paid only provisionally, and those checks which have to be dishonored are returned within an hour to the

bank presenting them. Unless the irregularities be explained away or removed, the presenting cashier then signs the following form, No. 6, which is an acknowledgment that so much money too much was received by him at the last clearing. This form is included by the bank dishonoring the checks, in its out clearing parcel, and the matter is rectified in the balance of the next clearing.

Form No. 6.

MANCHESTER BANK CLEARING.

_____ *Manchester,* _____ 18

We shall Credit _____

in next clearing, on presentation of this slip, £_____

as below, for unpaid checks.

For _____

£_____

" _____

" _____

The settlement in the Manchester Clearing House is often effected in less time than it would take to read this account of the method, and the work goes on with noiseless ease, strongly contrasting with the turmoil of the London House. No doubt, the amounts cleared are comparatively insignificant in Manchester, the average daily sums being, in the years 1872, 1873, and 1874, respectively £226,160, £237,150, and £247,-930, or little more than one-hundredth part of the daily transactions in the Lombard Street House.

The Manchester Clearing House is managed by a committee of bankers, of which the chief agent of the Bank of England in Manchester is the chairman, and the superintendence of the clearing work is conducted by an official of the Bank of England. Thus the Bank, while naturally taking precedence, harmoniously co-operates with the local bankers.

NEW YORK CLEARING HOUSE.

The New York Clearing House was established in October, 1853, and has become a most important institution, embracing 59 banks, as compared with 26 in London, and settling transactions hardly, if at all, inferior in amount to those of the London house. The general method of settling the business is necessarily much the same as that already described, but it seems to be in some respects better arranged than in London. The work is carried on in a fine large Exchange Room, and there is proper accommodation for the manager and his clerks, instead of the small glass box in which the inspectors sit in the Lombard Street room.

Each New York bank has one settling clerk in the Exchange Room, besides a messenger, who brings and delivers the parcels of checks and bills, The settling clerks sit in a series of desks arranged in an oval form in the middle of the spacious room, and the exchanges are effected by an equal number of messengers simultaneously walking round the desks, delivering the parcels of "out-clearing," and receiving those of "in-clearing," or as they are called in New York the *Credit* and *Debit Exchanges.* An account of the institution will be found in Gibbon's work on "The Banks of New York." There are said to be no less than fifteen provincial clearing-houses in the principal cities of the United States, so that the clearing system would seem to be more developed there than in the United Kingdom.

EXTENSION OF THE CLEARING SYSTEM.

Until within the last few years there existed only two bankers' clearing houses, those of Lombard street and New York, but much progress has recently been made in extending a similar system to other places, and even to other branches of business. The Manchester Clearing House was established in July, 1872, and Newcastle has a similar establishment. On the continent only a single city has yet adopted the method. In Paris about eighteen bankers have formed an association, called a "Chambre des Compensations," which is located in the Place de la Bourse, and balances the reciprocal claims of these firms much in the manner of the English clearing houses. In France, Germany and other continental countries the use of the banker's check is much less developed than in England and America. In Germany a person wishing to remit a hundred pounds will often collect the actual coins, seal them up in a bag with five seals, and register them at the post office. Thanks to the excellent system of government *Postes* existing in Germany, this method of remittance is sufficiently safe. But it is evident that where the monetary arrangements of a country are of such a kind there is no need of a clearing house.

The method of balancing claims needs by

no means to be restricted to the business of banking. As, indeed, the monetary transactions of any locality come to a focus in the banks, the principal clearing will always be in the hands of bankers. But wherever a set of traders have numerous reciprocal claims, they may find it desirable to set up their own clearing house. As long ago as 1842 it occurred to Robert Stephenson and Mr. K. Morison, that the principle of the City Clearing House might be advantageously applied to settling the very complicated accounts arising between railway companies, which have *through* booking arrangements. The work constantly carried on in the great house full of accountants at Euston Square is vastly more complicated and various than that of a bankers' clearing house; but the final result is to ascertain how much each railway company is indebted to each other one. The balance due to or from each company is then paid by a transfer at the bankers.

Within the last twelve months an attempt has been made, unsuccessfully as yet, to introduce the general use of checks into Liverpool, where great sums of money are constantly passing, especially in the cotton market. For reasons which it would be difficult to trace out satisfactorily, the Liverpool merchants and bankers have never adopted the use of checks to the same extent and in the same way as in other commercial towns. Many firms in Liverpool still refuse to receive payment by checks, and only a year or two ago it was a common practice for a Manchester firm to send a clerk to Liverpool by railway with a bundle of bank-notes to make payments. At present, as I am informd, bank bills payable at sight, and forwarded by post, are substiluted for Bank of England notes.

A Liverpool stock or cotton broker, wishing to make a payment, draws money out of his bank in notes and gold, and his clerks carry it about the town. Every evening a number of small cash-boxes, containing large sums of money, are deposited at a well-known silversmith's shop, opposite the Town Hall, for safe custody during the night. A great amount of capital is thus kept lying idle, and it is surprising that the bankers do not secure this sum, as an addition to their deposits, by removing every obstacle. At present the practice is to charge one-eighth or one-fourth per cent. commission, whereas the actual cost of the accountants' work by which the bank transfers are accomplished is almost nominal in regard to large transactions.

An important extension of the clearing principle was affected by the establishment, in 1874, of the London Stock Exchange Clearing House, which undertakes to clear, not sums of money, but quantities of stock. As stock brokers settle their transactions only once a fortnight, or in consoles once a month, it naturally arises that, in the intervals, the same broker will usually have bought the same kind of stock for one client and sold it for another. The very same stock may have passed through several different hands, and the same brokers may have had reciprocal dealings with each other. Instead, then, of actually making transfers of stock for each transaction, and paying by checks which greatly swell the business of the Lombard Street Clearing House on settling days, a plan has been arranged, according to which each member of the Clearing House prepares a statement of the net amount of each stock which he has to receive from or deliver to each other member. The manager of the house, after verifying these accounts, which should balance in the aggregate, directs the debtor members to transfer qualities of stock to the creditor members in such a way as to close all the transactions. It will be noticed that, for pretty obvious reasons, the transfers are made in the stock exchange, directly from broker to broker and not to the manager of the Clearing House, as in banking transactions. A separate clearing has, of course, to be made in each kind of stock. It is found that the quantities actually transferred do not exceed 10 per cent. of the whole transactions cleared, and the checks drawn are diminished on settling days as much as ten millions sterling.

Still more recently the Cotton Brokers' Association of London, although unable to apply the system of clearing as yet to their money transactions, have arranged a clearing system for the settlement of business connected with the sales of cotton "to arrive." Under the new arrangement the first seller and the last buyer come into contact, and all intemediate business, which sometimes occasioned much dispute and delay from contracts involving many middle-men, will be, as it were, canceled by the Clearing House.

The business, indeed, is being extended, so that all contracts, declarations, and payments will be effected through the agency of the association.

It may very well admit of question whether we have at all reached the limit of the advantageous application of the clearing principle. From banker's transactions it has been extended to railways, stock exchange, and cotton broker's business. It is conceivable that any other body of merchants, brokers, publishers, or others who have frequent pecuniary claims upon each other, might have a clearing meeting once or twice a week. Suggestions to this effect have already been made, and I am told that in the Glasgow iron market, a settlement day for the clearing of mutual transactions has been established.

ADVANTAGES OF THE CHECK AND CLEARING SYSTEM.

Returning to the subject of the bankers' Clearing Houses, it is to be remarked concerning the vast system of relations which now exists between English banks, that it

has grown spontaneously, uninvented, unauthorized by the legislature, and only recognized by the judges when firmly established as a matter of business custom. No Act of Parliament has been passed to facilitate the operations of clearing, and it is only by an understanding between the banks, that the presentation of checks and bills through the Clearing House, or their settlement by the payment of a balance, is regarded as legally valid.

The advantages of the system are evidently of enormous magnitude. All the larger payments are made with a minimum of risk, loss of time, trouble, or use of the precious metals. While the check representing a payment is traveling about the country, the money which it is transferring is reposing in the vaults of some bank, or rather, not being needed in the operation at all, is lent or sent out of the country, so that its interest is saved. We found in p. 165 that the loss of interest upon the metallic money now circulating or stored up in the United Kingdom, amounts to between four and five millions annually. If payments were now made by coin only, many times as much metallic money would be needed.

The security with which the payments are effected is also an element of importance. Specie when transmitted in large sums, is always a temptation to thieves, and has usually to be accompanied by one or more guards. Through the agency of banks, whether by crossed checks or credit notes, the largest payments may be made with almost absolute immunity from risk. The checks, bills, and other documents transferred in the clearing houses are, as a general rule, so crossed or endorsed as to be of no value to any one but the legal owners, and in any case are regarded by thieves as "duffer," with which they dare not meddle.

PROPORTION OF CASH PAYMENTTS.

It is surprising to find to what an extent paper documents have replaced coins as a medium of exchange in some of the principal centres of business. In the *Statistical Journal* for September, 1865, Sir J. Lubbock published some particulars concerning the business of his bank during the last few days of 1864. Transactions to the amount of £23,000,000 were effected by the use of coin and other documents, as shown in the following statement:

	Per Cent.
Checks and Bills passed through the Clearing House	70.8
Checks and Bills not cleared	23.3
Bank of England Notes	5.0
Coin	.6
Country Bank-notes	.3
	100.0

The sums of money paid in by town customers amounted to £19,000,000, and when analysed gave the following results:

	Per Cent.
Checks and Bills	96.8
Bank of England Notes	2.2
Country Bank-notes	.4
Coin	.6

It is not for a moment to be supposed that these figures represent the average use of coin in banking transactions. The proportional amounts of different kinds of money and commercial documents used in different parts of the country, in different trades, or in banks of different size and character vary widely. It is much to be desired that bankers and others who have the facts before them should publish more copious information on the subject. In Manchester the use of Bank of England notes appears to be much more extensive than in London. Mr. R. H. Inglis Palgrave gave in the *Statistical Journal* for March, 1873 (p. 86), an estimate prepared for him by Mr. Langton, the Managing Director of the Manchester and Salford Bank, of the proportion of cash payments made in that bank. It appears that coin and notes formed 53 per cent. of the total turn-over in 1859, 42 per cent. in 1864, and only 32 per cent. in 1872, so that a rapid decrease has been going on. But we find that in 1872 the amount of notes was still large, the turnover of customers' accounts being thus composed:

	Per Cent.
Checks, Bills, etc.	68
Bank-notes	27
Coin	5
	100

I have endeavored to form some notion of the comparative amounts of checks and bills which are cleared off at successive points in the organization of the banking system. It is very desirable that we should learn what proportion the transactions of the Clearing House bear to the whole transactions of the banks of the kingdom. There would not be much difficulty in forming a fair estimate if we had from one or more banks in each of the principal towns a statement of the comparative amounts of checks dealt with in various manners. According to information kindly furnished to me by the authorities of one of the principal banks of Manchester, I find that, during the months July to October, 1874, the checks and bills on demand presented on or through the bank were disposed of as follows:

	Per Cent.
Checks paid in Coin and Bank-notes over the Counter	3·4
Checks on Selves paid to Credit of Account	25·4
Checks presented through Manchester Clearing-House	22·5

	Per cent.
Checks and Bills on demand on London presented through London Clearing-House	10·8
Checks on Country Bankers presented through the London Clearing House	3·5
Checks on Country Bankers presented direct	3·6
	100·0

Although considerable trouble has been spent in the preparation of this account, it seems doubtful whether the items are complete and correct, and I give it more as a specimen of the kind of information which is much wanted than as a reliable statement.

CASES TO WHICH THE CLEARING SYSTEM IS INAPPLICABLE.

It will now be sufficiently apparent that, so long as trade is reciprocal, the check and clearing system can arrange all exchanges without the use of coin. The values of goods are estimated and expressed in terms of gold, which acts as the common denominator of value, but metallic money ceases to be the medium of exchange. The banking organization effects what I have heard Mr. W. Langton describe as *a restoration of barter.* But it happens in some cases that the transactions are not reciproeal, and cannot be made to balance. In certain trades there is a permanent *set* of the goods in one direction. In the Manchester cotton trade, for instance, the manufacturers, in purchasing cotton from the Liverpool merchants, pay with cash or short credits The goods, when completed, are often shipped again at Liverpool for foreign consignees at long credits, but are not generally purchased by the Liverpool merchants. Consequently, while the Manchester manufacturer owes the Liverpool merchant for the whole cost of the raw material, and for the shipping charges and freights upon the goods sent abroad, there are no equivalent claims of Manchester merchants against Liverpool. The foreign consignees of the goods pay for them by bills upon London. Now, if the Manchester manufacturers held their funds in Manchester, and the Liverpool merchants their funds in Liverpool, there would have to be a constant current of money from London to Manchester, and from Manchester to Liverpool, whence it would go abroad to pay for the raw material. This inconvenient state of things is remedied to a certain extent, as we shall see in Chapter XXIII., by making London the headquarters and clearing-house both of home and foreign transactions.

But there is always a liability that claims expressed in metallic money, and actually capable of being demanded in that shape at the option of the owner, will sometimes be pressed. In certain states of trade, or under certain contingent circumstances, the holders of checks require gold, and bankers who have become accustomed to consider metallic reserves as almost superfluous, find themselves suddenly in a difficult position. Such, as we shall see in Chapter XXIV., is the real cause of the present instability of the English money market.

CHAPTER XXII.

THE CHECK BANK.

THE Check and Clearing System, so far as we have hitherto considered it, is mainly restricted to the arrangement of considerable payments. No one can enjoy its advantages unless he keeps a banking account, and for this purpose he must be able to command a certain sum of money, and must have a sufficiently good position and credit to be entrusted by a banker with a check book. The result is that the larger part of the population is entirely outside the banking system, and must either use coin, postage stamps or post-office orders in making payments.

A very ingenious attempt is now being made to extend the area of banking to the masses by the institution of the Check Bank. When preparing materials for this book, I was so much struck by the way in which this new bank seems to be adapted to complete the check and clearing system in a downward direction, that I applied to Mr. James Hertz, the able inventor of the scheme, for information upon the subject, and have been enabled to inquire minutely into it.

The weak point of the present ordinary check book is, that a person once getting a book full of blank checks, can fill them up for any amounts, irrespective of the balance against which they are supposed to be drawn. Here is an opening for easy fraud, if checks were generally received from strangers without inquiry. The Check Bank proceeds on the new principle of issuing checks which can be filled up only to limited amounts, as shown by printed and indelible perforated notices upon the forms. These checks, too, are only to be had in exchange for the utmost sum for which they can be drawn, which sum is retained as a deposit until each corresponding check has been presented. It follows that each check, when duly filled up and signed by the owner, is as good as a bank-note issued against a documentary reserve. It is true that check books or forms may be lost or purloined, and then fraudulently signed and issued; but, being drawn to order and crossed, these documents are very dangerous to meddle with in a criminal manner, and, in the only instance in which fraud has yet been attempted, swift punishment followrd.

RELATION OF THE CHECK BANK TO OTHER BANKS.

We have seen how much has been accomplished by establishing relations between

banks, as branches, agents, or correspondents of each other. The Check Bank carries out a similar system to the utmost extent by establishing relations with almost all the banks of the United Kingdom, as well as with most foreign banks of importance. Already 984 English, Irish, or Scotch banks, have entered into relations with the Check Bank, and 596 colonial or foreign banks cash the checks. One advantage of this arrangement is, that the sphere of the check system can be greatly extended without any equal increase of trouble and risk. Whenever a bank opens a new account with an individual, that account has to be kept apart in the ledger, and constantly watched. But a bank can sell Check Bank checks to any amount, without opening separate accounts with the purchasers, and may also pay such checks when presented without risk. The Check Bank thus aims at becoming a great institution of accountants, operating for the most part through other banks, but relieving them of much of the risk and trouble of small transactions. The Bank of England is a bankers' bank in the sense that it holds the reserves of other banks, and makes those final payments of cash which close the general balance of transactions. The Check Bank seems to be a bankers' bank in the opposite sense of making deposits in all other banks and employing them as agents.

A peculiar feature of the Check Bank is that it entirely abstains from using, or even holding, the money deposited. All money received for check books is left in the hands of the bankers, through whom they are issued, or transferred to other bankers, as may be needed for meeting the checks presented. The interest paid by these bankers will be the source of profit, and as the money thus lies in the care of the most wealthy and reputable firms in the kingdom, it could not be lost in any appreciable quantity, except by the break-down of the whole banking system of the country. It would hardly be true to say that these checks correspond to notes issued on the deposit of government funds, because each agent-bank can use at its own discretion the portion of the funds of the Check Bank in its possession. Nevertheless, as the portion in the hands of any one bank will usually be a small fraction of the whole, and there is, moreover, a guarantee fund of consols in the background, the system of issue is more closely analogous to that of a documentary reserve than any other.

THE CHECK BANK AS A MONETARY AGENT.

The Check Bank appears to aim at becoming the medium for the accomplishment of an immense mass of small payments. Small pensions and annuities, small dividends, small disbursements by officers of departments, by agents, clerks, or even domestic servants are made through it. A book of the Check Bank checks can be safely trusted to almost any servant or agent who can write, and the check when presented forms a record of the way in which he has applied the money. No one can venture in like manner to give signed blank checks to a servant, as they may be filled up for unlimited amounts, and the Check Bank checks are evidently better than a sum of metallic money, which may be more readily misapplied, purloined, or lost.

The recipient of such checks finds them one of the most convenient possible forms of remittance, because they will be cashed by almost any banker, and will therefore be received as cash by any person who has acquired sufficient knowledge of their nature. Thus the check bank seems to be capable of replacing with great advantage the money-order system of the English Post-Office.

To procure a post-office order it is requisite to apply at an office and wait while certain forms are being filled up. A definite office of payment must be selected, and the receiver of the order can obtain payment, as a general rule, only by applying personally at the office, and giving the name of the sender. Even if a person cannot afford to purchase a book of Check Bank checks, he can, in towns where agencies are established for the purpose, buy single checks filled up for any odd sum with less formality than at the post-office, and these checks are payable not at one office, but at almost any bank in the United Kingdom and in most foreign towns. They can afterward be restricted in payment if desired, to any particular bank. The cost of remittance by checks will on the average be lower than by money orders, since the Post-Office makes charges for inland orders, increasing from one penny for sums under ten shillings to one shilling for a £10 order, with much higher charges for orders to be paid in certain colonies or foreign countries. The Check Bank check costs only one penny and one-fifth of a penny in excess of the sum remitted, and of this charge the penny is for the government stamp duty and represents so much public revenue.

The government can have no reason for opposing the Check Bank, because if successful it must earn for the Chancellor of the Exchequer a large annual revenue. The money-order system, on the other hand, in spite of the higher charges, is understood to yield no profit, and is rather a burden upon the department. It is said that the issue of every money order involves the filling up of eight or nine forms, and the amount of labor rendered requisite swallows up the revenue. It is a very striking instance of the comparative inefficiency of government industry, except in special cases, that a single banking company can bring into use a form of remittance available in all parts of the world, and far cheaper than post-office orders, and yet pay duty upon their transactions.

The Check Bank also aims at becoming a collecting as well as a paying agency. Any public institution needing to collect a subscription, for instance, has only to procure a "paying-in" form, or credit note, and the sum inserted therein will be received by any of the numerous banks in relation. Thus small debts and subscriptions may be readily collected without trouble or expense in any part of the country.

PAYMENT OF WAGES BY CHECKS.

The managers of the Check Bank hope to substitute their checks for the coin now used by manufacturers in payment of wages. If this could be accomplished it would be convenient rather than otherwise to bankers, who are called upon to furnish large sums in gold and silver coin, and have the trouble and cost of holding and continuing a sufficient stock. Now, if a master in paying his men presented them with small checks, or, perhaps better still, with checks for even sums, and the balance in silver, the checks would be cashed by shopkeepers, and would be deposited by them in the banks, or might even be bought back in large sums by the masters for further use. It was at one time the practice of great railway contractors to issue tally checks in the form of one, two, or five shilling cards, which were paid to their workmen, and circulated among the publicans and tradesmen of the neighborhood, until taken back by the contractor in wholesale. Such checks constituted true representative money, but would be of doubtful legality. The Check Bank checks might serve the same purpose, and have been declared legal, but it is yet very doubtful how far the wholesome practice of immediately presenting ordinary checks will stand in the way of the continued circulation of other checks, for which there is no need of immediate presentation. Time after time we have found that habit and custom exercise an immense and very unmanageable influence in monetary affairs, and it will probably take a long time to teach the public to look upon a check as a safe document to keep.

THE CHECK BANK AS A SAVINGS BANK.

Already the Check Bank serves as a savings bank into which persons may put surplus money for security, receiving as an acknowledgment the check forms by which it can be drawn out or paid away with ease. No interest, however, is paid on such deposits. It seems to me, however, that the bank, if successful in its present aims, might readily become the most admirable of savings banks. Instead of issuing checks payable at any moment, it might issue through its agent-banks, deposit receipts, bills, or what comes to much the same thing, post-dated checks, the interest to be paid at the time of deposit as a discount at the rate of two or two-and-a-half per cent. This receipt could be retained, transferred by endorsement, or again discounted by the Check Bank. If retained until maturity it would become payable like a check at any bank in relation with the Check Bank. The money deposited in this way might be invested in consols at three and one-fourth per cent., and the cost of the documents and accountants' work being slight might leave a fair margin of profit

The Post-Office Savings Bank system as established by Mr. Gladstone is an admirable institution; it has been very successful, and has done great service in increasing providence. But it is troublesome and costly in working, and leaves no profit to the State. Already the Scottish banks serve almost in the capacity of saving banks by receiving small fixed deposits; and it is well worthy of consideration whether, by the assistance of the Check Bank, almost all the English banks might not be converted into savings banks, to the advantage of every one.

RESULTS OF THE CHECK BANK SYSTEM.

I have thought it quite suitable to this book to enter somewhat minutely into the actual and possible work done by the Check Bank, because, if successful, the institution opens an indefinite sphere for financial improvement. The institution is, indeed, at present a mere experiment, undertaken at the risk of the shareholders, and it can only succeed by offering conveniences to the public and the body of bankers. It may succeed in some of its schemes, and not in others, but in any case it will tend to replace coin payments by check payments, to be balanced off in the general London clearing. The profits of the bank depend upon a very small charge of one-fifth of a penny for each check and the interest on deposits. The amount of deposits remaining undrawn depends upon three circumstances: (1) the time before the check is utilized; (2) the time it is in circulation, or traveling about, and (3) the difference between the sum drawn and that deposited. The average duration of circulation, I am informed, was lately ten days, but many checks have already been out a year.

I should add that, in describing with some detail the operations of the Check Bank, I have no interest in the success of the institution other than a strictly scientific interest. In any case it is a most ingenious innovation, and if successful cannot fail to benefit the community in a high degree, adding a new feature to a banking system already wonderfully organized.

CHAPTER XXIII.

FOREIGN BILLS OF EXCHANGE.

In early times foreign trade consisted in the direct exchange of commodities. A caravan set out with a variety of manufact-

ured articles across the deserts of Arabia or Sahara, and came back with ivory, spices, and other valuable raw produce obtained by barter. In later times the merchant loaded his own ship and sent her forth on an adventure, trusting that his ship-master would sell the cargo to advantage, and, with the proceeds, bring back another cargo to be sold to great profit at home. Trade was thus evidently reciprocal and what was sent out paid for what was brought back, so that little or no money was kept idle in the mean time.

Wherever this direct reciprocal exchange did not exist it was necessary either to transmit metallic money, or to devise some mode of transferring debts. Now the transmission of money not only causes the loss of interest during the interval of transit, but leads to the expense of guarding it, and the liability of total loss. Many centuries ago, accordingly, it was discovered that the use of paper documents would economize if not altogether render needless, the use of metallic money in foreign trade.

ORIGIN AND NATURE OF BILLS OF EXCHANGE.

Even the Romans appear to have been acquainted in a slight degree with the system of foreign bills of exchange; but it is to the early Italian, and especially the Jewish merchants, that we owe the development of the practice. The history of the subject is buried in much obscurity, but there is evidence that, as early as the fourteenth century, the use of bills of exchange was fully established. The forms of the bills, and the laws and customs relating to them, were then much the same as in the present day.

A bill is nothing but an order to pay money addressed by the drawer to the drawee, or person on whom it is drawn, specifying the amount to be paid, the time of payment, and the person to whom it is to be paid. Whenever a bill is drawn, it is to be presumed that a debt is due from the drawee to the drawer. When presented to the drawee and accepted by him, this acceptance is an acknowledgment of the existence of the debt. The bill, although drawn in favor of a particular person, is transferable by endorsement, and thus represents a negotiable claim to receive money at a future date in a distant country. Hence it is capable of being transmitted in discharge of another debt of equal amount.

England buys every year from America a great quantity of cotton, corn, pork, and many other articles. America at the same time buys from England iron, linen, silk, and other manufactured goods. It would be obviously absurd that a double current of specie should be passing across the Atlantic Ocean in payment for these goods, when the intervention of a few paper acknowledgements of debt will enable the goods passing in one direction to pay for those going in the opposite direction. The American merchant who has shipped cotton to England can draw a bill upon the consignee to an amount not exceeding the value of the cotton. Selling this bill in New York to a party who has imported iron from England to an equivalent amount, it will be transmitted by post to the English creditor, presented for acceptance to the English debtor, and one payment of cash on maturity will close the whole circle of transactions. Money intervenes twice over, indeed; once when the bill is sold in New York, once when it is finally canceled in England; but it is evident that payment between two parties in one town is substituted for payment across the whole breadth of the Atlantic. Moreover, the payments may be effected by the use of checks, or the bills when due may themselves be presented through the Clearing House, and balanced off against other bills and checks. Thus the use of metallic money seems to be rendered almost superfluous, and, so long as there is no great disturbance in the balance of exports and imports, foreign trade is restored to a system of *perfected barter*.

TRADE IN FOREIGN BILLS.

It is an unnatural supposition that every importer of goods will meet with an exporter of goods to the same amount, so that two transactions will exactly balance each other. But there are many merchants in Liverpool indebted to American merchants, and many American merchants indebted to others in Liverpool. Hence there will be a continual supply of bills of various amounts, and a continual demand, and it becomes a profitable business for certain houses to deal in the bills, purchasing bills from those who can draw and selling to those who wish to remit.

Large firms of merchants often have houses both in America and in England, or a firm in one country has agents or correspondents in the other with whom they keep a running account. Not uncommonly, the very same firm may be both importing and exporting, so that a direct balancing of their accounts will be so far effected. The remaining balance need only be paid from time to time as opportunity offers. Thus, in foreign as in home trade, book credit serves in a great degree to economise the use of money. Only when there is a derangement of the balance of trade, and one country owes to another a preponderating debt of large amount, need specie be transmitted.

It is out of the question that I should, in this small treasise, attempt to enter into the intricacies of the Foreign Exchanges, which have been so admirably treated by Mr. Goschen, in his "Theory of the Foreign Exchanges." The general principle of the subject is, that bills of exchange drawn on any particular place constitute a new kind of article, subject to the laws of supply and demand. Any circumstance diminishing the

supply, or increasing the demand, raises the price of such bills and *vice versa*. The price being raised, there is additional profit on any transaction which allows a new supply of bills to be drawn. The export of any kind of goods in greater quantities tends to restore the balance, but, if requisite, coin or bullion can be sent at a certain cost, and bills drawn against it. Thus the cost of transmitting specie is the limit to the premium on bills. Gold and silver being everywhere considered a desirable possession, and being also very portable, form, as remarked at the outset, the natural currency between nation and nation. If a country were to be absolutely denuded of specie, and had foreign debts to pay, forced exportation and sale of the next most generally desirable and portable commodity would be the only resource, and the premium on bills might vary to almost any extent from par. Thus it is seen that, in an economical point of view, gold and silver differ from other merchandise not in kind but in degree.

THE WORLD'S CLEARING HOUSE.

It might seem that in the use of checks internally, and of bills of exchange in foreign trade, we have reached the climax in the economy of metallic money; but there is yet one further step to make. We found that so long as all the merchants of a town keep their cash with the same banker, they have no need to handle the money at all, but can make payments by transfers in the books of their banker. Let us imagine, then, that merchants all over the world agreed to keep their principal accounts with the bankers of any one great commercial town. All their mutual transactions could then be settled among those bankers. An approximation to such a state of things exists in the tendency to make London the monetary headquarters of the commercial world, and the general clearing house of international transactions.

All that is needed to secure economy of money is centralization of transactions, so that there may be wider scope for the balancing of claims. Before the elaborate system of English provincial banking grew up, considerable economy was effected by the practice of "drawing upon London." In every country town many persons wanted to transmit money to London, and others wanted to draw money from the same place. To vast private trading transactions with the capital and principal commercial towns was added the whole of the payments connected with the collection and expenditure of the public revenue. In each country town some prominent trader discovered that profit was to be made by selling bills on London to those who wished to remit, and buying with the proceeds the bills of those who had claims upon banks and firms in London. The capital thus becoming the monetary centre, it was often convenient to make payments to other towns by bills upon London. Each person wanting to remit was more likely to get a bill upon London with ease than upon any other place, and it was likely that the creditor would prefer such a bill to one upon a town with which he had no relations. It is obvious that if every important trader in England kept his principal cash with a city banker, the use of bills on London would have enabled all the commercial transactions of England to be centred in, and cleared through the books of these bankers and the Clearing House.

CENTRALIZATION OF FINANCIAL TRANSACTIONS IN LONDON.

There is a similar advantage in centralizing foreign transactions in London. In the absence of any general center, each two commercial towns must settle their mutual transactions directly and separately. A merchant will be receiving bills upon the bankers and merchants of many other towns. There is a double inconvenience in this. The supply and demand for bills upon comparatively small places must be comparatively small and variable, and the bills will be drawn upon minor firms, of the soundness of which it will not be easy to get satisfactory information. Many firms, too, in the present day have houses in several parts of the world, and it would be more convenient that their mutual transactions should be brought to a centre somewhere, just as the transactions of branch banks are brought to a centre in the head office. Thus there arises a tendency to prefer bills drawn upon well-known London banks, or other great London firms, whose credit is known all over the world, and *ceteris paribus*, such bills will command a readier acceptance in the exchange market. Persons having to draw bills will get a better price if they can draw upon London, which they can do by opening an account with a London firm, and arranging that remittances due to them shall be deposited to their credit in London. It comes to pass that a merchant in America, Australia, or India, will prefer to receive money in London rather than anywhere else. Everyone wishing to remit money can then do so in the form of a bill upon the holders of these funds in London, and the fund will be recruited from time to time by similar bills received and transmitted to London for collection.

This tendency to the centralization of financial business in London is much promoted by the fact that the largest mass of cheap loanable capital exists there. The general rate of interest in New York is at least 2 per cent. higher than in London, so that a trader who has credit enough to obtain loans in London, will make a profit by borrowing there rather than in New York. Thus, instead of first depositing money in London, and afterward drawing against it, the more usual and profitable form of the transaction

is to get a credit there, that is, leave to draw against a banker, making subsequent remittances to recoup the banker accepting and paying the bills. As regards continental trade, Paris, Berlin, Vienna, Hamburg, and Amsterdam are of course highly important centres, but recent wars have occasioned a considerable transfer of financial business to London. Moreover, the great foreign trade of England, reaching into every quarter of the globe, and the many distant colonies and dependencies which naturally have financial relations with the capital of the empire, tend to give London a unique position.

REPRESENTATION OF FOREIGN BANKERS IN LONDON.

The result of this centralization of banking transactions in London is, that colonial and foreign bankers find it very desirable to have agents, or even head offices in London. At the present time there are no less than 60 important colonial and foreign banks which have their own London offices or houses. These include the principal Australian, New Zealand and Indian banks, and a number of minor banks, established by English capitalists to cultivate the trade of the minor states of Europe, South America, China and the East. In addition to the above 60 banks, there are fully 1,000 foreign and colonial banking houses in correspondence with London bankers, so that almost every town in the world which can maintain a bank at all, has the means of correspondence with some member of the London banking system. The foreign bankers vary greatly in the importance of their transactions, and some of them would, according to English ideas, be considered merchants rather than bankers; but, in the aggregate, their transactions must be exceedingly large. It must almost inevitably follow that transfers of money will be more and more made through London. Just as this city is the link of connection between each English country banker and each other one, so it may, and probably will by degrees, become the link between the most distant parts of the world. But the greater becomes the profitable burden of financial business thrown upon Lombard street and Threadneedle street, the more it behoves us to take care that our currency system is maintained upon the soundest possible basis. It is requisite, too, that our bankers, financiers and merchants should regulate their operations with a thorough comprehension of the immense system in which they play a part, and the risks of derangement and failure which they encounter by over-severe competition. No one doubts that alarming symptoms have during recent years presented themselves in the London money market. There is a tendency to frequent severe scarcities of loanable capital, causing sudden variations of the rate of interest almost unknown thirty years ago. I will therefore in the next chapter offer a few remarks intended to show that this is an evil naturally resulting from the excessive economy of the precious metals, which the increasing perfection of our banking system allows to be practiced, but which may be carried too far and lead to extreme disaster.

CHAPTER XXIV.

THE BANK OF ENGLAND AND THE MONEY MARKET.

We commenced the study of money with the barter of ordinary commodities, and money appeared in the first place as some common commodity handed about as a medium of exchange. By degrees, however, the subject assumed a greater and greater degree of complexity. The metals took the place of other commodities as currency, and delicate consideratious began to enter concerning token and standard coins. From metallic representative money, we passed to paper representative money, and finally discovered that, by the check and clearing system, metallic money was almost eliminated from the internal exchanges of the country. Pecuniary transactions now present themselves in the form of a room full of accountants, hastily adding up sums of money. But we must never forget that all the figures in the books of a bank represent gold, and every creditor can demand the payment of the metal. In the ordinary state of trade no one cares to embarrass himself with a quantity of precious metal, which is both safer and more available in the vaults of a bank. But in international trade, gold and silver are still the media by which balances of indebtedness must be paid, and serious consequences may arise from any disproportion between the amount of transactions carried on, and the basis of gold upon which they are settled.

EXPANSION OF TRADE.

No one doubts that in the last thirty years there has been an immense expansion in the trade of this and most other countries. If, as is very commonly done, we take the foreign trade as a test of the general advance of industry, we find that the total declared real value of British and Irish produce exported from the United Kingdom was, in 1846, about 58 millions sterling. In 1866 it amounted to 189 millions, or more than three times as much. In the mean time the bank-note circulation had remained almost unchanged, and such alteration as there was, consisted in a decrease. The total circulation of bank-notes, English, Scotch, and Irish, was, in 1846, 39 millions, and in 1866, 38½ millions. I believe, however, that the best test of the progress of trade, both internal and external, is furnished by the out

put of coal, the mainspring of our wealth. Now, in 1854 the total quantity of coal raised was about 65 millions of tons, and the note currency 38 millions; in 1866 the coal raised had increased to 101½ millions of tons, or by 56 per cent., while the note currency still remained almost as before, namely, 38½ millions. Between 1866 and 1874, indeed, there was a remarkable increase in the circulation, the amount of which rose to £43,912,000, or by 14 per cent., but the production of coal had in the mean time risen to 127 millions, an increase, compared with 1854, of 95 per cent,

COMPETITION OF BANKERS.

It is quite apparent, therefore, that the tendency is to carry on a greater and greater trade upon an amount of metallic currency which does not grow in anything like the same proportion. The system of banking, too, grows more perfect in the sense of increasing the economy with which money is used. The competition of many great banks, leads them to transact the largest possible business with the smallest reserves which they can venture to retain. Some of these banks pay dividends of from twenty to twenty-five per cent., which can only be possible by using large deposits in a very fearless manner. Even the reserves consist not so much of actual coins or bank-notes in the vaults, as of money employed in the Stock Exchange, or deposited in the Bank of England, which again lends the deposits out to a certain extent.

Now the larger the trade which is carried on, the larger will be the occasional demand for gold to make foreign payments; and if the stock of gold kept in London be growing comparatively smaller and smaller, the greater will be the difficulty in meeting the demand from time to time. Such is, I believe, the whole secret of the growing instability and delicacy of the money market in this country. There is a larger and larger quantity of claims for gold, and comparatively less gold to meet them, so that every now and then there is a natural difficulty in paying claims, and the rate of interest has to be suddenly raised to induce those who have gold to lend it, or to induce those who were demanding it to forego their claims for a time. Most people, it is true, attribute all these troubles, either to the much abused gentlemen who meet weekly in the parlor of the Bank of England, or to Sir Robert Peel, who established the note issue of the Bank upon the partial deposit system already described in Chapter XVIII.

THE BANK CHARTER ACT OF 1844.

At all times during the last two hundred years, there has been some currency topic upon the anvil. In early days it was the scarcity of silver coin, the South Sea bubble, or the price of the guinea. Later on came the restriction of specie payments, the bullion report, the one-pound note question, and the joint stock banks. Since 1844, however, all currency theorists have concentrated their attentions upon the Bank Charter Act of that year, and while endlessly differing about the nature of the remedy, have been unanimous in attributing all kinds of evils to a settlement of our currency, which I believe to be a monument of sound and skillful financial legislation.

The Acts of 1844 and 1845 placed a fixed limit upon the amount of notes which can in this country be issued without an equal deposite of gold. At present (April, 1875) the Bank of England can issue, without gold, fifteen millions; the private and joint stock banks of England are individually restricted to fixed amounts, which, added together, make about £6,460,000, while the Scotch banks can, in a similar manner, issue notes to the amount of £2,750,000, and the Irish banks to the amount of £6,350,000, making in all about 30½ millions. In addition to this the Bank of England, and the Scotch and Irish banks, can issue as many more notes as they have deposits of bullion or coin; and in the year 1874, the extra amount thus issued was about 14½ millions. Let it be never forgotten, that no restriction is thus placed upon the sum total of the currency of the country; for the original legal tender of the country is the coined sovereign of 123·274 grains of gold, and every one who has the gold can readily turn it into sovereigns. The objectors to the Bank Charter Act urge that we want more currency, but they cannot really mean more metallic currency. We must not look to changes in the law to increase the amount of specie in the country, and, as I have remarked, any one can get sovereigns if he has the needful gold. This metal, again, is only to be had, in the absence of gold mines, by that state of foreign trade which brings it, and does not drain it away again. The principal currency, in short, must be regarded as a commodity, the supply of which is to be left to the natural action of the laws of supply and demand. The unrestricted issue of paper representative notes produces an artificial interference with these natural conditions.

THE FREE-BANKING SCHOOL.

What the currency theorists want, then, is not more gold, but more promises to pay gold. The Free-banking School especially argue that it is among the elementary rights of an individual to make promises, and that each banker should be allowed to issue as many notes as he can get his customers to take, keeping such a reserve of metallic money, as he thinks, in his own private discretion, sufficient to enable him to redeem his promises. But this free issue of paper representative money does not at all meet the difficulty of the money market, which is a want of gold,

not of paper; on the contrary, an unlimited issue of paper would tend to reduce the already narrow margin of gold upon which we erect an enormous system of trade. Here we reach the critical point of the whole theory of currency. There is also a school of currency writers, formerly represented in England by Ricardo and Tooke, who hold that it is impossible to over-issue convertible paper money. Arguments to this effect have been recently urged with great ability by Mr. R. H. Inglis Palgrave, in his work entitled "Notes on Banking," and his wide acquaintance with the subject should lend much force to his opinions. But there is, to my mind, an evident flaw in their position.

POSSIBILITY OF OVER-ISSUE.

When prices are at a certain level, and trade in a quiescent state, a single banker is, no doubt, unable to put into circulation more than a certain quantity of bank-notes. He cannot produce a greater effect upon the whole currency than a single purchaser can by his sales or purchases produce upon the market for corn or cotton. But a number of bankers, all trying to issue additional notes, resemble a number of merchants offering to sell corn for future delivery, and the value of gold will be affected as the price of corn certainly is. We are too much accustomed to look upon the value of gold as a fixed datum line in commerce; but, in reality, it is a very variable thing The tables of prices analysed by me in the *Statistical Journal* for June, 1865, show that between 1822 and 1825 there was an average rise of prices to the amount of 17 per cent.; and between 1844 and 1847, and 1852 and 1857, the average rises were respectively 13 and 31 per cent. Such variations of prices mean that the value of gold is itself altered in the inverse ratio; and these variations are produced mainly by extensions of credit. Every one who promises to pay gold on a future day, thereby increases the anticipated supply of gold, and there is no limit to the market. Every one who draws a bill or issues a note, unconsciously acts as a "bear" upon the gold market. Everything goes well, and apparent prosperity falls upon the whole community, so long as these promises to pay gold can be redeemed or replaced by new promises. But the rise of prices thus produced turns the foreign exchanges against the country, and creates a balance of indebtness which must be paid in gold. The basis of the whole fabric of credit slips away, and produces that sudden collapse known as a commercial crisis.

Now, what is true of credit generally, is still more true of the special form of credit involved in bank promissory notes. These purport to be payable in gold coin on demand, so that they are taken by every one as equivalent to the coin. Even bills of exchange can be paid in notes, and as regards internal trade, no difficulty would be felt in maintaining credit so long as promises to pay gold circulate instead of gold. But foreigners will not hold such promises on the same footing; and, if the exchanges are against us, the metallic, not the paper, part of the currency will go abroad. It is at this moment that bankers will find no difficulty in expanding their issues, because many persons have claims to meet in gold, and the notes are regarded as gold. The notes will thus conveniently fill up the void occasioned by the exportation of specie; prices will be kept up, prosperity will continue, the balance of foreign trade will be still against us, and the game of replacing gold by promises will go on to an unlimited extent, until it becomes actually impossible to find more gold to make necessary payments abroad.

Professor Cliffe Leslie, writing in *Macmillan's Magazine* for August, 1864, correctly pointed out, as I think, that speculative credit often raises prices for a time above their natural range. Representative credit, on the other hand, by which I suppose he means notes issued against the actual deposit of metal, obviously forms no augmentation of the currency, and can have no effect in raising prices above the level which would exist under a purely metallic system.

The actual exhaustion of the bullion of a country is no mere ideal event, for it is what occurred in this country in 1839, under the free system of note issue. The Bank of England had parted with almost the whole of its bullion, and was only saved from bankruptcy by the ignominious expedient of a large loan from the Bank of France. The narrow limits of this book evidently restrict me from entering into historical and statistical illustrations, but it may be said, that the collapse which followed the crisis of 1839 induced severer distress and depression of trade than has ever since been known in this country. We now carry on industry and commerce many times greater than in 1839, and there is nothing to indicate that either the bank directors or the commercial classes are more cautious or far-seeing than they then were. On the contrary, competition, speculation, and the bold erection of the widest affairs upon the narrowest basis of real capital is more common than ever. Knowing as we do the very narrow margin of real metal upon which our many great banks conduct their business, it is impossible to entertain for a moment the notion of allowing the paper currency of the country to rest upon the discretionary reserves of such competing bankers.

THE RIGHT OF COINING BANK-NOTES.

According to the view which I adopt, the issue of notes is more analogous to the royal function of coinage than to the ordinary commercial operation of drawing bills. We ought to talk of *coining notes*, as John Law did; for though the design is impressed on

paper instead of metal, the function of the note is entirely the same as a representative token. As to the right to issue promises, it no more exists than the right to establish private mints. For our present purposes that alone is right which the legislature declares to be expedient to the community at large. As almost every one has long agreed to place the coinage of money in the executive government, so I believe that the issue of paper representative money should continue to be practically in the hands of the government, or its agents acting under the strictest legislative control. M. Wolowski, in his admirable works on banking, has maintained that the issue of notes is a function distinct from the ordinary operations of a banker; and Mr. Gladstone has allowed that the distinction is a wholesome and vital one. Bankers enjoy the utmost degree of freedom in this country at present, in every other point, so that it is wholly a confusion of ideas to speak of the unrestricted emission of paper representative money as a question of free banking.

Professor Sumner and others have objected to the Bank Charter Act, that it cannot be regarded as a scientific settlement of the currency question, inasmuch as no other nation had adopted the same principles. Quite lately, however, the German Imperial government has adopted the main principle of a partial deposit, adding to it the liberty of increasing the issues under a tax of five per cent., an arrangement which I have described under the name of the Elastic Limit System (Chap. xviii). This provision appears to be designed to avoid the suspension of the law during times of crisis, and it is quite possible that we might with advantage introduce a similar modification into our own currency law. But the fine or tax upon the excessive issue ought surely to be much more than five per cent., and in this country should certainly not be less than ten per cent.

SCOTCH AND ENGLISH BANKING.

It is common, indeed, to point to the Scotch banks as a proof that a perfectly sound currency may be furnished by banks acting on their own unfettered discretion. Up to 1845, the twelve or thirteen Scotch banks certainly did possess the right of freely issuing notes down to one-pound notes, and only in one or two cases did bankruptcy occur. All this I grant, holding that Englishmen and Americans, and natives of all countries, may well admire the wonderful skill, sagacity, and caution with which Scotch bankers have developed and conducted their system. There is no doubt, too, that Scotch bankers are guiding the course of development of the banking system in England, India, the Australian colonies, and everywhere with conspicuous success. If we were all Scotchmen, I believe the unlimited issue of one-pound notes would be an excellent measure. But when we compare the Scotch and English banking systems, we discover a profound difference. In Scotland there exist only *eleven* great banks, which take good care that there shall not be a twelfth great bank. The undoubted monopoly which they possess is, however, used with great moderation and wisdom, and by an immense ramification of branches, every village has its banks, and every poor man may have his bank deposit, if he will save a few pounds. In England and Wales we have 267 private and 121 joint stock banks, or, in all, 388 banking firms, including in these numbers the London banks, but not including any of the numerous branch banks. There is, no doubt, a tendency to approximate to the Scotch system by the amalgamation of smaller banks. Still many new banks are from time to time started, and the competition between them is of the keenest character. The high dividends expected by the shareholders can only be earned by bold trading on small reserves and every commercial man is aware that the money market is becoming more and more sensitive.

CASH RESERVES OF BANKERS.

It is important, but very difficult to decide, what is the amount of real cash held by the bankers of the United Kingdom in readiness to meet their liabilities. Many banks publish balance-sheets professing to show the reserve of ready money. I have already remarked (Chap. xix) upon the ambiguity which attaches to the words *money* and *cash* as commonly used; and, when we inquire into the nature of the banker's ready money, it is found to consist in a great degree of money invested in government securities, deposited with other bankers, especially the Bank of England, or held "at call," that is, lent to speculators who invest in negotiable securities. From the published balance-sheets we thus get no indication of the real metallic reserve of the country, available for the payment of foreign debts.

Mr. R. H. Inglis Palgrave, in his important "Notes on Banking," published both in the *Statistical Journal*, for March, 1873 (Vol. xxxvi. p, 166), and as a separate book, has given the results of an inquiry into this subject, and states the amount of coin and Bank of England notes, held by the bankers of the United Kingdom, as not exceeding four or five per cent. of their liabilities, or from one twenty-fifth to one twentieth part. Mr. T. B. Moxon, of Stockpert and Manchester, has subsequently made an elaborate inquiry into the same point, and finds that the cash reserve does not exceed about seven per cent. of the deposits and notes payable on demand. He remarks that even of this reserve a large proportion is absolutely indispensable for the daily transactions of the bankers' business, and could not be parted with. Thus the whole fabric of our vast commerce is found to depend upon the improbability that the

merchants and other customers of the banks will ever want, simultaneously and suddenly, so much as one twentieth part of the gold money which they have a right to receive on demand at any moment during banking hours.

REMEDY FOR THE SENSITIVNESS OF THE MONEY MARKET.

The present state of things in England is not to be cured by any legislation. No government can save those from trouble who will make unlimited transactions in gold, without a sure prospect of finding the gold when wanted It is absurd to suppo e that any single establishment like the Bank of England, itself becoming hardly more important than some of the great city banks, can prop up the whole fabric of English commerce.

The only measure which can restore stability to the London market, or prevent it from becoming more and more sensitive, is to secure by some means the existence of more satisfactory cash reserves, either in actual coin, or in Bank of England notes, representing deposits of coin in the bank vaults. It would be of comparatively little use, however, for some banks to become more prudent and self-denying, while others are allowed to stretch their resources to the utmost possible point, and outbid the more prudent banks in the rates of dividend they can pay. Combined action, therefore, seems requisite, somewhat in the manner suggested by Mr. Bagehot, as regards the city bankers.

As the Bank of England pays no interest upon the eight millions which it on the average of the last four years holds as the deposits of the London bankers, there seems to be no sufficient reason why the Bank should be allowed to make a profit out of so large a sum. If held by a committee of the depositing banks it would be equally safe, almost equally available, and might, moreover, by the investment of a portion in government stock, yield a profit to the depositors. It may be asked, Why not leave each bank to hold its own reserve in its own vaults? But there would then be no security against some banks running their reserves dangerously low, and trusting to extrinsic aid in times of difficulty. One objection which I should make to the scheme as put forth is, that government stock should not be allowed to form any part of the ultimate reserve. When loanable capital is very scarce, such stock can only be converted into actual bullion by forced sales which depreciate the funds, shock public confidence, and drain away money from those who would in some other channel have employed it in the money market. Unless government stocks be sent abroad, their sale cannot possible increase the stock of gold in the country. A cash reserve ought to be composed of *cash*, and although it may be very convenient to bankers to use this word in a loose and ambiguous manner, it ought not to mean, in speaking of the ultimate reserves of the country, anything but gold coin or bullion, or warrants, actually issued against coin or bullion, on the deposit system previously considered.

It has been pointed out, moreover, in an able article in the *Banker's Magazine* for February, 1875, that the proposed scheme would be very insufficient if carried out merely by a narrow circle of city bankers. The association should include, in one way or another, all the more important banks in the three kingdoms. The vast trade of the country cannot be placed upon a sound basis until the force of public opinion among bankers imposes upon each member the necessity of holding a cash reserve bearing a fair proportion to the liabilities incurred. It matters little who holds the reserve, provided it actually does exist in the form of metal, and is not evaporated away by being placed at call, or deposited with other banks which make free use of it. In the absence of some common action among bankers, it is certain that the sensitiveness of the money market will increase, and it is probable that commercial crises will from time to time recur, even exceeding in their violence and disastrous consequences those whose history we know too well.

CHAPTER XXV.

A TABULAR STANDARD OF VALUE.

At the outset it was observed that money, besides serving as a common denominator of value, and as a medium to facilitate exchange, was usually employed likewise as the standard of value, in terms of which contracts extending over long series of years are expressed. In letting land on long or perpetual leases, in lending money to governments, corporations and railway companies, it is the general practice to make the interest and capital repayable in legal tender gold money. But there is abundance of evidence to prove that the value of gold has undergone extensive changes. Between 1789 and 1809 it fell in the ratio of 100 to 54, or by 46 per cent., as I have shown in a paper on the Variation of Prices since 1782, read to the London Statistical Society in June, 1865. From 1809 to 1849 it rose again in the extraordinary ratio of 100 to 256, or by 145 per cent., rendering government annuities and all fixed payments extending over this period, almost two and a half times as valuable as they were in 1809. Since 1849 the value of gold has again fallen to the extent of at least 20 per cent., and a careful study of the fluctuations of prices, as shown either in the Annual Reviews of Trade of the *Economist* newspaper, or in the paper referred to above, shows that fluctuations of

from 10 to 25 per cent. occur in every credit cycle.

CORN RENTS.

The question arises whether, having regard to these extreme changes in the values of the precious metals, it is desirable to employ them as the standard of value in long lasting contracts. We are forced to admit that the statesmen of Queen Elizabeth were far-seeing when they passed the Act which obliged the colleges of Oxford, Cambridge and Eaton to lease their lands for corn rents. The result has been to make those colleges far richer than they would otherwise have been, the rents and endowments expressed in money having sunk to a fraction of their ancient value.

I believe that there is no legal impediment in the way of a landlord leasing his lands at present for a corn rent, or an iron, or a coal or any other rent. All that the law requires is that the contract shall be perfectly definite, and of exactly determinate meaning, so that the kind of commodity intended, and the quantity of that commodity, shall be exactly ascertainable. But the law, in defining legal tender money, provides against misapprehensions concerning money payments, whereas there is no security that mistakes and difficulties will not arise in taking other commodities as the matter of cents. Moreover, any single commodity, such as corn or coal, undergoes considerable fluctuations from year to year, and as regards periods of ten or twenty years, might prove not to be so good a standard as silver or gold. Commodities which are comparatively steady in value on the average of long periods may be subject to great temporary variations of supply or demand.

A MULTIPLE LEGAL TENDER.

The question thus arises whether the progress of economical and statistical science might not enable us to devise some better standard of value. We have seen (Chap. xii) that the so-called double standard system of money spreads the fluctuations of supply and demand of gold and silver over a large area, and maintains both metals more unchanged in value than they would otherwise be. Can we not conceive a multiple legal tender, which would be still less liable to variation? We estimate the value of one hundred pounds by the quantities of corn, beef, potatoes, coal, timber, iron, tea, coffee, beer, and other principle commodities, which it will purchase from time to time. Might we not invent a legal tender note which should be convertible, not into any one single commodity, but into an aggregate of small quantities of various commodities, the quantity and quality of each being rigorously defined? Thus a hundred pound note would give the owners a right to demand one quarter of good wheat, one ton of ordinary merchant bar iron, one hundred pounds weight of middling cotton, twenty pounds of sugar, five pounds of tea, and other articles sufficient to make up the value. All these commodities will, of course, fluctuate in their relative values, but if the holder of the note loses upon some, he will in all probability gain upon others, so that on the average his note will remain steady in purchasing power. Indeed, as the articles into which it is convertible are those needed for continual consumption, the purchasing power of the note must remain steady compared with that of gold or silver, which metals are employed only for a few special purposes.

In practice, such a legal tender currency would obviously be most inconvenient, since no one would wish to have a miscellaneous assortment of goods forced into his possession. He who wanted corn, would have to sell to other parties the iron, beef, and other things received along with it; gold, or other metallic money, would doubtless be used as the medium in these exchanges. This scheme would, therefore, resolve itself practically into that which has been long since brought forward under the title of the Tabular Standard of Value.

LOWE'S PROPOSED TABLE OF REFERENCE.

Among valuable books, which have been forgotten, is to be mentioned that of Joseph Lowe on "The Present State of England in regard to Agriculture, Trade and Finance," published in 1822. This book contains one of the ablest treatises on the variation of prices, the state of the currency, the poor-law, population, finance, and other public question, of the time in which it was published, that I have ever met with. In Chapter IX. Lowe treats, in a very enlightened manner, of the fluctuations in the value of money, and proceeds to propound a scheme, probably invented by him, for giving a steady value to money contracts. He proposes that persons shall be appointed to collect authentic information concerning the prices at which the staple articles of household consumption were sold. In regard to corn and sugar, authoritative returns were then and have ever since been, published in the *London Gazette*, and there seemed to be no difficulty in extending a like system to other articles. Having regard to the comparative quantities of commodities consumed in the household, he would then frame a *table of reference*, showing in what degree a money contract must be varied so as to make the purchasing power uniform. In principle the scheme seems to be perfectly sound; but Lowe did not attempt to work out the practical details, and his plan involves needless difficulties.

POULETT SCROPE'S TABULAR STANDARD OF VALUE.

A very similar scheme was independently proposed, about eleven years later, by Mr.

G. Poulett Scrope, the well known writer on geology and political economy. In a very able but now forgotten pamphlet, called "An Examination of the Bank Charter Question, with an Inquiry into the Nature of a Just Standard of Value" (London, 1833), Mr. Scrope suggests (p. 26) that a standard might be formed by taking an average of the mass of commodities which, even if not employed as the legal standard, might serve to determine and correct the variations of the legal standard. The scheme was also described in Mr. Scrope's interesting book on the Principles of Political Economy, published in the same year (p. 406), and in the second edition of the same book, called "Political Economy for Plain People," issued two years ago, (p. 308). The late Mr. G. R. Porter, without referring to previous writers, gave the same scheme in 1838, in the first edition of his well known treatise on "The Progress of the Nation," (Sections III. and IV. p. 235). He added a table showing the average fluctuations of fifty commodities monthly during the years 1833 to 1837.

Such scheme for a tabular or average standard of value appear to be perfectly sound and highly valuable in a theoretical point of view, and the practical difficulties are not of a serious character. To carry Lowe's and Scrope's plans into effect, a permanent government commission would have to be created, and endowed with a kind of judicial power. The officers of the department would collect the current prices of the commodities in all the principal markets of the kingdom, and, by a well-defined system of calculations, would compute from these data the average variations in the purchasing power of gold. The decisions of this commission would be published monthly, and payments would be adjusted in accordance with them. Thus, suppose that a debt of one hundred pounds was incurred upon the 1st of July, 1875, and was to be paid back on 1st of July, 1878; if the commission had decided in June, 1878, that the value of gold had fallen in the ratio of 106 to 100 in the intervening years, then the creditor would claim an increase of 6 per cent in the nominal amount of the debt.

At first the use of this national tabular standard might be permissive, so that it could be enforced only where the parties to the contract had inserted a clause to that effect in their contract. After the practicability and utility of the plan had become sufficiently demonstrated, it might be made compulsory, in the sense that every money debt of, say, more than three months' standing, would be varied according to the tabular standard, in the absence of an express provision to the contrary.

DIFFICULTIES OF THE SCHEME.

The difficulties in the way of such a scheme are not considerable. It would, no doubt, introduce a certain complexity into the relations of debtors and creditors, and disputes might sometimes arise as to the date of the debt whence the circulation must be made. Such difficulties would not exceed those arising from the payment of interest, which likewise depends upon the duration of the debt. The work of the commission, when once established and directed by Act of Parliment, would be little more than that of accountants acting according to fixed rules. Their decisions would be of a perfectly *bonâ fide* and reliable character, because, in addition to their average results, they would be required to publish periodically the detailed tables of prices upon which their calculations were founded, and thus many persons could sufficiently verify the data and the calculations. Fraud would be out of the question.

The only real difficulty which I foresee, is that of deciding upon the proper method of deducing the average. According to the method which I should advocate, a considerable number of commodities, say 100, should be chosen with special regard to the independence of their fluctuations one from another, and then the *geometrical average* of the ratios in which their gold prices have changed would be calculated logarithmically. This is the method which I employed in my pamphlet on the "Serious Fall in the Value of Gold, etc," and in the paper on the Variations of Prices since 1782, previously referred to (page 323). A somewhat similar method had been previously employed by Mr. Newmarch. In the annual Commercial History and Review of the *Economist* newspaper, there has, for many years, appeared a table containing the Total Index Number of prices, or the arithmetical sum of the numbers expressing the ratios of the prices of many commodities to the average prices of the same commodities in the years 1845–50. Whatever method were adopted, however, the results would be better than if we continued to accept a single metal for the standard, as we do at present.

The space at my disposal will not allow me to describe adequately the advantages which would arise from the establishment of a national tabular standard of value. Such a standard would add a wholly new degree of stability to social relations, securing the fixed incomes of individuals and public institutions from the depreciation which they have often suffered. Speculation, too, based upon the frequent oscillations of prices, which take place in the present state of commerce, would be to a certain extent discouraged. The calculations of merchants would be less frequently frustrated by causes beyond their own control, and many bankruptcies would be prevented. Periodical collapses of credit would no doubt recur from time to time, but the intensity of the crises would be mitigated, becauses as prices fell the liabilities of debtors would decrease approximately in the same ratio.

CHAPTER XXVI.

THE QUANTITY OF MONEY NEEDED BY A NATION.

It might seem natural that one most important point for discussion in an Essay on Money would be the quantity of money required by a nation. Nothing would seem more desirable than to decide how much each person needs of paper, gold, silver or bronze currency, so that the government might take care to provide sufficient for every one. In almost every country great complaints have from time to time been made as to the scarcity of the circulating medium, and the urgent need of more. All the evils of the day, the slackness of trade, falling prices, declining revenue, poverty of the people, want of employment, political discontent, bankruptcy and panic, have been attributed to the want of money, the remedy suggested being in former days the setting of the mint to work, and in later times the issue of paper money.

The true answer to all such complaints is that no one can tell how much currency a nation requires, and that to attempt to regulate its quantity is the last thing which a statesman should do. In almost every case the apparent scarcity of currency arises from unskillful management of the metallic currency, bad regulation of paper representative money, speculation, or some unsoundness in commerce which would be aggravated by a further increase of the paper currency. We shall find that to ascertain how much money is needed by a nation is a problem involving many unknown quantities, so that a sure solution can never be obtained.

QUANTITY OF WORK TO BE DONE BY MONEY.

To decide how much money is needed by a nation, we must, firstly, determine the quantity of work which money has to do. This will be proportional, *ceteris paribus*, to the number of the population; twice the number of people, if equally active in trade and performing it in the same way, will clearly want twice as much money. It will be proportional, again, to the activity of industry, and to the complexity of its organization. The more goods are bought and sold, and the more often they pass from hand to hand, the more currency will be needed to move them. It will be proportional, again, to the prices of goods; and if gold falls in value, and prices are raised, more money will be needed to pay the debts increased in nominal amount.

Few of the quantities concerned in such considerations are known. We know the number of the population approximately, and the amount of foreign trade, but the quantities of goods bought and sold in inland trade are almost entirely unknown. It is needless to dwell on this side of the question, as our knowledge is still more defective in other respects.

EFFICIENCY OF THE CURRENCY.

By the efficiency of the currency we mean the average number of exchanges effected by each piece of money in a unit of time, such as a year. The aggregate work done by money will be measnred by its quantity multiplied into the average number of times which each coin or note passes from hand to hand during the year. Now we know very imperfectly what is the quantity of the currency in most countries, and we know nothing at all as to the average rapidity of circulation. Some coins, especially small silver and bronze coins, may pass several times in the course of a day. Other coins or notes may be kept in the pocket for weeks, or may be laid by for months and years. I have never met with any attempt to determine in any country the average rapidity of circulation, nor have I been able to think of any means whatever of approaching the investigation of the question, except in the inverse way. If we knew the amount of exchanges effected, and the quantity of currency used, we might get by division the average number of times the currency is turned over; but the data, as already stated, are quite wanting.

There is no doubt that the rapidity of circulation varies very much between one country and another. A thrifty people with slight banking facilities, like the French, Swiss, Belgians, and Dutch, hoard coin much more than an improvident people like the English, or even a careful people with a perfect bank ing system like the Scotch. Many circum stances, too, affect the rapidity of circulation. Railways and rapid steamboats enable coin and bullion to be more swiftly remitted than of old; telegraphs prevent its needless removal, and the acceleration of the mails has a like effect. A decrease in the circulation of country bank-notes in England, in 1842, was attributed to the effect of the penny postal reform in facilitating presentation of notes by post.

EFFECTS OF THE CHECK AND CLEARING SYSTEM.

Far more important than these considerations is the fact that, where an extensive banking system exists, only a portion of the exchanges are actually effected by money. I do not lay much stress upon the use of bills of exchange as replacing money, because the degree in which they are so used must be comparatively limited, and they are rather articles bought and sold with money than money itself. But we have traced out step by step the way in which the check and clearing system enables debts to be balanced off against each other, so that the money is never touched at all, and only intervenes as the unit of value in which sums are expressed. Almost all large exchanges are now effected by

a complicated and perfected system of barter. In the London Clearing House transactions to the amount of, at least, £6,000,000,000 in the year are thus effected, without the use of any cash at all, and, as I have before explained, this amount gives no adequate idea of the exchanges arranged by checks, because so many transactions are really cleared in provincial banks, between branches, agents or correspondents of the same bank, or between branches having the same London agents.

If our knowledge of the amount of transactions in England is highly imperfect, we know still less of the way in which payments are effected in other countries. The New York Clearing House transactions are very extensive, as we have seen, and there is an elaborate banking system extending over all the States of the Union; but it would require much investigation on the spot to enable any one to form a notion whether the correspondence between these banks enables them to economize currency as much as the English system of London agencies. In France and most continental countries the check and clearing system can hardly be said to exist except in some of the large towns. Paris has an incipient clearing house, and the Bank of France, moreover, makes transfers between clients to the extent of two or three millions daily. All banks will to a certain extent economize currency, and those of Amsterdam and Hamburg have for some centuries carried on a system of transfers, the true prototype of our system.

Considerable changes, it is true, are taking place in the mode of conducting business in some parts of the continent. Professor Cliffe Leslie, who is well known to be intimately acquainted with the economical systems of the continental countries, attributes the rise of prices in Germany in a great degree to the quicker circulation of the money, and the freer use of instruments of credit. In the *Fortnightly Review* for November, 1870 (pp. 568–9), he says: "The improvement in locomotion and in commercial activity which have so largely augmented the money-making power of the Germans, have also quickened prodigiously the circulation of money; and the development of credit, likewise following industrial progress, has added to the volume of the circulating medium a mass of substitutes for money which move with greater velocity. A much smaller amount of money than formerly now suffices to do a given amount of business, or to raise prices to a given range; and to the increased amount of actual money now current in Germany we must add a brisk circulation of instruments of credit. Were the circulating medium composed of coin alone, whatever the amount of the precious metals issuing from the mines, or circulating in other countries, and whatever the price of German commodities in markets abroad, no rise in the prices of German commodities at home could take place without additional coin to sustain it.

So different, then, are the commercial habits of different peoples, that there evidently exists no proportion whatever between the amount of currency in a country and the aggregate of the exchanges which can be effected by it. Even if we had reliable statistics of the amount of currencies, such data should be regarded as indicating, not the comparative abundance or scarcity of money, but the degree of civilization, of providence, or of complexity of banking organization, in the country.

CONCLUSION.

From all the above considerations it follows that the only method of regulating the *amount* of the currency is to leave it at perfect freedom to regulate itself. Money must find its own level like water, and flow in and out of a country, according to fluctuations of commerce which no government can foresee or prevent. The manner in which paper notes may be used to represent and replace part of the metallic currency should be strictly regulated, because otherwise belief in the existence of metallic money is created when there is no such money to warrant the belief. But the amount of money itself can be no more regulated than the amounts of corn, iron, cotton, or other common commodities produced and consumed by a people. It must be allowed, indeed, to be no easy matter to discriminate precisely and soundly between those points at which the legislator must interfere in the management of the currency and lay down a fixed rule, and those points at which perfect freedom must be maintained.

A comparison of our present laws regarding currency and trade, with those which existed in this country from the tenth to the fourteenth century, will show a curious double progress. Many things which our ancestors attempted to regulate by law are now left free by general consent, and other things which they left free, or nearly so, are now strictly regulated. The rates of wages the price of the quartern loaf, the exercise of various trades, were then the subject of legisletion, though we know that they cannot be properly brought within the scope of legislative control. On the other hand, an endless diversity of weights and measures were formerly used in different parts of the country, and little or no attempt was made to reduce them to any system or precise definition. Almost every important town, too, had its mint in the earlier centuries, and barons and great ecclesiastics often exercised the right of issuing their own money. There are still a very few persons who advocate free coinage; but, by almost general consent, the work of coining metallic money is now, in every civilized country, committed to the care of the State. We provide for a uniform system of coins with the same care that we establish a nation-

al system of weights and measures. But while we thus take the greatest care of the metallic currency in one respect, we have utterly abandoned all the futile attempts which were in former centuries made to bring bullion into the kingdom in order to set the mint to work.

We must deal with the paper currency in an analogous manner, and regulate it both more and less than hitherto. Private issues should disappear like private mints, and each kingdom should have one uniform paper circulation, issued from a single central State department, more resembling a mint than a bank. The manner of issuing this paper currency should be strictly regulated in one sense; the paper circulation should be made to increase and diminish with the amount of gold deposited in exchange for it. At the same time, no thought need be taken about the amount so issued. The purpose of the strict regulation is not to govern the amount, but to leave that amount to vary according to the natural laws of supply and demand. In my opinion, it is the issue of paper representative notes accepted in place of coin, which constitutes an arbitrary interference with the national laws governing the variations of a purely metallic currency, so that strict legislative control in one way leads to more real freedom in another. I am quite willing to allow, however that questions of great nicety and subtlety arise in this subject, and that only in the gradual progress of economic science can they be finally set at rest.

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Beacon Lights of Science

ULTIMATE FINANCE

A TRUE THEORY OF CO-OPERATION

By WILLIAM NELSON BLACK

PREFACE.

This number of the Humboldt Library is a contribution to the politico-economic and social discussion which exercises so largely the intellectual resources of the age. It is addressed to all classes, capitalist as well as employee; but it is especially directed to the class whose circumstances are most in need of amendment. It claims to find in the ordinary methods of finance a way through which all men may control the capital needed for their own protection.

CHAPTER I.

THE ORIGIN OF SOCIAL DISCONTENT.

THE wind rises and falls, and between the gusts men fancy that the storm is abating. But it may only be gathering force for a new descent. It may come again with renewed energy, and driving the sea over the land destroy landmarks that have stood the blasts of centuries. It is so with human movements. The waves raised by the labor agitation are now at comparative rest, and seem to have gone out with the retreating tide. But it will be the part of statesmanship to prepare the shores during their quiescence, so that when they return they may not break against and submerge constitutional landmarks already too rudely assailed.

First, we must know what is the chief disability that creates social discontent. Complaint is well-nigh universal. It comes from almost every rank in life, and is heard as well among the moderately opulent as among the poor. It cannot be said that even the pre-eminently successful are satisfied. They are haunted continually by the sense of insecurity. Among those who are most prosperous may be found the first to turn prematurely gray, and to wear in their lineaments the deepest evidence that they are bearing an oppressive load. Men are wrestling with some untoward complications that seem to bear heavily upon all; and we should look to see if we cannot discover their nature. After it is found the entanglement should be unraveled with less difficulty.

Let us avoid abstractions, and pursue investigation along the pathways of practical life. The world is working for its material good. With the mass it can hardly

be said to have any other object; and even among men who follow intellectual pursuits the ultimate purpose remains substantially the same. They work for a livelihood. Men turn all their accomplishments, whether physical, mental, or moral, to the work of providing for their bodily comforts and enjoyments. This may not quite represent the ideal of life, but it represents the reality. We are neither philosophers, poets, nor preachers at the dinner table. There was never yet an astronomer so enthusiastic in his pursuits that he was willing to forego the possession of a comfortable study, and to stand unprotected under the bespangled heavens when demonstrating his theorems. It is our bodies, unfortunately, that teach us the fact of revolving seasons, of tropical heats and arctic colds. The mind may have its appetites. It is even susceptible to a sense of hunger after its own meats and condiments; but it must devote its finest accomplishments to the work of feeding, protecting, and serving the body. The chief wants of the world are material wants.

These reflections may be thought to place society upon too low a level. Then we will pursue them no further. To say truth they are not necessary in the lesson to be studied. It will be as well to say simply that men have wants, and that for the supply of those wants, whether exalted or low, there is but one chief agent. The word material, then, must be translated into a word more suggestive of the mart. The chief want of society is the want of capital. It is a want so urgent that it has become the chief disability. Men look abroad and see the evidence of great opulence, and they come to the conclusion that capital is abundant. They are apt to think, therefore, that there is privation only because wealth is unequally or unjustly distributed. But they could not take a more erroneous view. The apparent abundance is only a result of contrast. The world, after all its effort, remains almost inconceivably poor. Divide all the wealth of England equally among the people of the realm and it will give to each person, according to the latest attainable data, the equivalent of about $1,000 in money. Divide the wealth of the United States in the same manner, with our large immigrant population, and it is well known that the allotment to each person would be even less, or something more than $900 in money. In France the results of a division will drop to about $700 per capita, and in Germany it would fall to $500. Over the rest of the world, with the exception, perhaps, of some of the minor industrial States of Europe, the results of a division would be even less fruitful, and were the division made for all Christendom we would have to be content with about $250 or $300 for each person. Can we say in the face of these facts, which are statistical and sufficiently accurate for all the purposes of correct induction, that the world is opulent? It is evident that it has hardly yet advanced beyond the shaft which opens into the mine.

But let us assume that income and not accumulation is the true dependence for meeting human wants, and then see if the morning can be made to break through the perplexing clouds by which we are surrounded. It is not so easy to approximate the total of income as to reach the total of accumulated wealth. There is a lack of statistical data bearing on the subject, or, at least, a lack of data completely covering the ground. But we are not without means for making a reasonably close estimate. We know by the census estimates of 1880 that the total value of the product of this country for the year was $9,000,000,000. This included

mechanical, manufacturing, agricultural, and mining productions, and the figures were supposed to represent the market value of the total. If divided equally among the 50,000,000 persons who then made up the total of our population it would have given $180 to each person. Add to this the interest, or dividends, at six per cent., on something more than $11,500,000,000 invested in corporate or other securities, such as the stock or bonds of railways, banks, insurance companies, telegraph companies, and mortgages on real estate—$700,000,000 of income in all—and we find the total to be $194 per capita. It was fortunate, it will be seen, that large numbers of the total population were represented by infants in arms whose subsistence did not call for a large expenditure in money.

But this estimate if finished here would not be quite fair. Income is drawn not merely from production and dividends but from commerce. The same product may change hands frequently in the course of a year, sometimes increasing and sometimes diminishing the income of the tradesman through whose hand it passes, and here enters the element of uncertainty in calculation. We know neither the precise volume nor the exact profits of mercantile traffic. We are dependent upon estimates only in calculating the sales and the percentages. It is not possible to know within a few billions the total of mercantile transfers. It is estimated all the way from $25,000,000,000 up to $50,000,000,000 per annum. It will surely be covered by the latter amount. We know that ninety per cent. of our commerce is in domestic merchandise; and it is inconceivable that $9,000,000,000 in such merchandise, with ten per cent. added for foreign products, could change hands often enough in reaching the consumer to make the total volume of exchange more than $50,000,000,000. Then suppose this to be the total, and suppose that twenty per cent., in gross, is realized on the traffic. This would add $10,000,000,000 to the total of incomes drawn from production and dividends, and instead of $194 per annum for each person we have $394 per annum. This will be a fortunate increase. It withdraws the suggestion of impending starvation for the chief part of the community; but it is not sufficient, it will be seen, to make us cease to be thankful for the economy of subsisting the inmates of the nurseries. Unfortunately, too, the estimate is excessive.

Look upon this subject in any light of which it is capable and we see that the great want of the world is capital, or the power of producing income. Until this want is supplied there can be no general amendment. A note cannot be met when it becomes due if there be not money enough to make payment. Men may build castles in the air as high as a snow-capped mountain, and see their turrets glittering in all the coruscations that can be created by the lunar lights of socialism, but if at the foundation there be not wealth, and the resources for exchange, the stairways will prove too unsubstantial to sustain the footsteps of men who would essay to climb. We see the evidence of the great need upon every hand. Were it possible to obtain the capital by which they could be prosecuted there are projected enterprises enough not only to give employment to every unemployed workman in the country, but to add largely to the demand for labor, and to increase the rates of compensation. But this is not all. The builder is throttled even when his hand is in motion. There is hardly a work of any kind under construction where the labor is not needlessly prolonged by the difficulty of obtaining money to pay workmen and provide ma-

terial. Is it a question of railway building? The projectors work continually under the shadow of a receiver, and must often pledge about three dollars in stock for every dollar obtained and legitimately expended. Is it a question of constructing dwellings of a class suitable for men of limited means? We have heard of the expedients invented by the Building and Loan Associations. It costs illimitable invention and much self-denial on the part of the managers and members of those societies to construct dwellings that may be rated only a little superior to the better class of rookeries. Wherever a work of construction is to be undertaken we may be almost sure that it will be carried forward with crippled resources.

But why is it so difficult to obtain building capital? It is difficult simply because capital is so badly needed for other uses that it cannot be diverted to works of construction without great sacrifices. The merchant must strain every nerve to maintain or increase his stock of goods, and to enlarge his market. The manufacturer is continually finding that his plant is a destructible dependence, failing him as well through the progress of invention as through the deterioration of his material. The factory of to-day is generally an evolution of the factory of a quarter of a century ago; and every step in advance has been met by the sacrifice of invested wealth and the investment of new capital. We frequently hear it said that there is money enough to loan on good securities. It is a misleading remark. It simply means that the men who have money to loan will consider only the good securities. They will concentrate on such securities, and leave all that are in the least open to suspicion to go begging. Every merchant, manufacturer, and builder knows that money in amounts equal to all his needs is never easily obtained on terms that he is able to meet, and that he is often unable to obtain it on any terms. Every workman should know, too, that he would never be subjected to an hour of enforced idleness were it not for the inability of so-called capitalists to obtain capital. The difficulty meets men at every turn. It confronts the rich as well as the poor, and it hangs like an incubus on every manifestation of enterprise. It is truly the world's primal curse.

CHAPTER II.

DEFINITION OF CAPITAL.

FROM one point of view it might seem like folly to waste so many words in the statement of what should be thought a truism. But the assumption that there is a lack of capital in the world is not a truism to the great majority of men. To many men, indeed, the statement will be received with surprise, if not with incredulity. They will be disposed to discredit the statistical data on which it is founded. But the figures are correct enough to point a moral, and they show pretty conclusively that we have no right to reason upon the material aspect of social questions without first admitting that next to nothing has yet been accomplished towards placing society in a condition of general security. To attempt to reason from any other ground shows either an ignorance of fundamental facts or eccentric habits of mind.

It will form an instructive subject for study to learn why the world is so poor after centuries of apparently effective effort in the accumulation of wealth, and the inquiry will have a direct bearing on the conclusions to which the at-

tention of the reader is to be called. Much of the world's wealth is perishable, and demands renewal from year to year. Another, and still larger portion, demands renewal after a few years, and cannot enter into the total of permanent possessions. Only the bare land endures from generation to generation with a transmitted value, and even this representation of property is subject to incessant fluctuations, and is only to be made productive by a great expenditure of time and capital on a foundation of still other and vanished capital. The accumulation of national wealth seems to be a good deal like climbing a soft sand hill where every step of the ascent levels the pile almost as much as it elevates the foothold. But it would be premature to pursue this line of inquiry until attention has been called to the meaning of a word which men should learn to more fully comprehend.

What is capital?

The question might be answered differently by different persons. It is certainly a word somewhat confused in the application even among careful thinkers. It is often confounded with accumulated wealth, and made to convey the same meaning. Indeed, so general is the confusion all through the ritual of political economy and finance that it is impossible to follow the text without sometimes using the words interchangeably. But while accumulated wealth is capital the converse is not always true. Capital, both theoretically and practically, covers much the broader ground. If you ask a builder the extent of his capital he will not limit himself to the value of the property which he owns over and above the sum of all encumbrances. He will estimate on his resources, and give the total amount that he can put into any enterprise. If he be known for a man of probity, and uniformly or generally successful, his resources in capital might far transcend the resources of a rival following the same vocation whose accumulated wealth was greatly in excess of his own accumulations, but who was publicly known as unscrupulous or untrustworthy. It is a common saying among practical men that a man's credit is his capital, and in a large measure the saying is true. We also place to the account of capital the accomplishments, whether mental or manual, through which a man earns his subsistence. They bring returns in income, and yet bear no relation to accumulated wealth. They must vanish utterly from the earth with the disappearance of the person by whom they were possessed.

We see, therefore, at the very threshold that capital transcends the limitations of wealth, and possesses a much broader significance. It may be assumed, indeed, that the chief agency which maintains industrial and mercantile activity is not accumulated wealth. It is a certain intangible force set in motion by men who eventually become possessed of accumulated wealth, but whose activity and strength are not altogether dependent on its possession. It may even be said that ninety per cent. of all the money which men handle is maintained in circulation by forces that bear only a secondary relation to accumulated property. A thousand workmen leave the factory every Saturday night, or every Saturday at mid-day under the new dispensation, and they carry with them the proceeds of a week's labor. Count or estimate the amount and you will see that these proceeds reach the large total of, say, $12,000 in money. Yet it is even conceivable that not one of those workmen, were he to die tomorrow, could leave behind him wealth enough to give his family

subsistence for a month. The house builder goes on piling bricks upon bricks until a stately new facade, crowned with massive cornice and finials, rises many stories from the ground. He has met the wages of his workmen as the money became due, and honored all his bills as fast as they were presented. But investigate and you will find that he had only enough accummulated property in the beginning to offer a pledge of his good intentions, enough to carry the structure to the limits of the first story. Is he building, then, on the accumulated means of others? Not necessarily. He surely is not building on the accumulations of his workmen; and if you will examine his transactions carefully in detail you may find, in some extreme cases, that not a pound of material nor a dollar of money goes into the work so free from liens that any one person could claim a clear title to possession. Encumbrances may be the rule; and no one expects to see the titles cleared until the building is finally placed upon the market and sold. But will they be cleared even then? Perhaps the man who makes the purchase will not pay more than one-fifth of the purchase money in hand, and give a mortgage for the remaining four-fifths. Finally, even the fifth part paid may not represent accumulated property. If it represents only another lien in the form of a note at thirty or sixty days, the receipt of the money to be dependent on the completion of some commercial transaction in hand, it will be more the concern of the buyer than of the seller.

Find another illustration of the intangible nature of capital in the resources that construct a railway. Take one of the Pacific, or transcontinental roads, as an example. The construction of either one of those roads was a very large undertaking. Some of the roadbeds lay, for nearly two thousand miles, through the wilderness where the foot of civilization had rarely or never been planted. Among the obstructions to be overcome were almost impenetrable fastnesses, and the most difficult mountain ranges. There were also financial obstructions more formidable even than the obstructions to be met and mastered by the engineers. It was hardly to be conceived that even the interest on the money demanded for construction could be immediately paid from the traffic returns after the work was finally completed. The chief resource would be wanting. It is very well known that no railway can yield really good returns unless it is secure in a large local traffic, and this dependence was out of the question. Yet those Pacific roads were built, four through lines in all, and, except in a single instance, it may be as well to say that they were not only an exclusive product of private enterprise unaided, but that they absolutely created the capital by which they were constructed.

But the Government gave them land enough to form several empires. This has been said, and said so often that it has become a part of the stereotyped literature of the country. But what was the value of the land when Congress made the donation? As a matter of simple truth and justice it would be better to say that the Government gave them nothing whatever except the right of way through a territory over which it held the authority of eminent domain, and gave this right only on condition that the roads should be built, and confer the character of property on something which Congress had been vainly trying to give away during many previous years. Until the roads were built a square mile of the land was generally worth no more than any single clod that went to make up an insignificant part of one

acre. These roads, therefore, instead of having received capital through the liberality of Congress, were really contributors to the potential wealth held by the Government. Congress gave them a franchise. The builders of the roads converted the franchise into a marketable commodity, and on this foundation built up the superstructure of their bonds. There will be no room in this little book for the discussion of irrelevant subjects; but it may be said, in passing, that it would probably have been better for the promoters of the transcontinental roads had they bought their land instead of receiving it as a much vaunted gift. The price could have been only nominal before their roads were undertaken; and as they would have held it subject to no conditions they would have maintained a more independent position before the country. They could have given a still more signal illustration, too, of the creative power of enterprise.

But we need not look to works of construction alone when we wish to find examples of the power of expedients, acting independently of accumulated wealth, in the creation of capital. Such examples may be found abundantly in commercial fields, though, owing to the greater secresy observed in trade, their manifestations in those fields may be less open to observation. We know, however, that upon every side are to be found men of wealth who began a mercantile career without money, and who yet, externally, always seemed to be principals in all their transactions. We know that appearances were sometimes very deceptive, and that they were often only factors; but they managed nevertheless, between substitution and credit, to be always able to give a good account of themselves at the bank and to their correspondents.

These are familiar examples, and they could be carried further. It could be shown how even the most richly provided railway is built upon bonds which owe their best security to the expenditures that go into the enterprise day by day, and how the ship is launched with her head so close to the wind that the helmsman often finds he has not even steerage way. Old gentlemen who have come down from a past and not intensely active generation might shudder and shake their heads at such illustrations. They might even call them pictures of wild cat finance, and say that if they represent real transactions they are portentous representations neither to be admired nor copied. But the old gentlemen would be in the wrong. The pictures represent entirely legitimate transactions, made habitually among enterprising men in the soundest markets. The sounder and more enterprising the market, too, the more commonly will they be made. The truth is that in all works of construction every man who creates an income producing property has given a pledge against any very disastrous loss to his backers or colaborers, and men can afford to take slight risks with the prospects of considerable mutual gain. No community can look forward to a very rapid development in wealth unless this spirit of enterprise and co-operation largely prevails. For reasons that spring from the statistical data already given no community that builds on accumulated wealth alone can build rapidly or well. There is not enough of accumulation to offer more than a mere basis for security; and even this basis, however necessary in trade and in the treatment of movable property, is hardly needed in immovable works of construction. Any man who is honest enough to be trusted with the transfer of money from hand to hand, and capable enough to know

needed work and to do it well, belongs to the class of capitalists whom the world most needs.

When broadly defined, then, capital, it will be seen, represents not so much wealth itself as resources for the production of wealth. Credit is capital, income is capital, education is capital, nay, at the foundation of all, good character is capital; and the last named resource may add more to a man's capabilities than gold or silver in dishonest hands. Anything that may be used to enlarge the boundaries of trade, to increase the volume of production, to raise the rate of compensation for service, or to add to the possibilities of enterprise is capital. There are potential dollars in all or in any of these elements; and it only needs a cunning hand to convert them into currency.

CHAPTER III.

MEN NOT CAPITALISTS BECAUSE NOT CREATORS OF CAPITAL.

After this hasty generalization on the nature of capital some further suggestions on the causes of the general poverty may profitably be made. We should aim to discover the chief reasons for our attenuated estate; and when they are found it should be less difficult to suggest the best means for increasing resources. We have long been told that the true dependence in the accumulation of wealth is industry and frugality. But since the world, after all its Herculean labor and self-denial, remains miserably poor there is evidently something either altogether wrong in this idea, or something only partially right. We shall not learn why it is wrong until we have discovered the secret of the very limited total of wealth.

Not only in the view of recognized facts but in answer to the preceding argument, moralists and men of a more philosophical than practical turn might tell us that the cause for our lack of capital must be sought in the dishonesty and incapacity of the race. If capital be an object of so much flexibility, and so easily created, how does it happen that society is afflicted with such poverty in resources? This is a question which men might be expected to ask, and the inquiry, it must be confessed, would be not without justification. If credit be capital it would be capable of unlimited expansion were it not true that men cannot be trusted to make an unselfish or prudent use of the resources committed to their charge. Were all men perfectly honest, incapable of taking advantage of an opportunity to defraud, and infallible in judgment, we should find a diminished use for banks, and no use whatever for a stamped currency. The mere numerals, written by the debtor on a piece of blank paper and transferred to the creditor, would serve us just as well. But we must deal with men as we find them, and try to amend their circumstances despite their bad character. All men are not reliable, some failing for lack of principle, and others for lack of discernment; and in the study of needed reforms we must take the weaknesses of men into consideration. This much is certain. The mere trick of saying that men are unhappy because they are wicked does not promise to bring the reign of universal virtue so rapidly as we could wish to see it come. There is a long and painful journey to be traveled in darkness and tribulation if society can be lifted into the light by no other means than religious or moral evangelism. But perhaps other forces may be brought into action. The head was intended to divide with the heart the direction of human affairs; and here is a case where the evils resulting

from a lack of cerebral tissue appear to be aggravated.

Let us at once, then, dismiss all ethical considerations from this phase of the discussion, and pursue investigation along the same material ground that we defined in the beginning. Taking men as we find them, with a full acknowledgment of the limitations which compel us to erect barriers against their encroachments or short comings, it will be found that the chief reason for the absence of capital lies in the fact that, except incidentally and by an enforced process, only a very small minority of men are engaged in its production. It will not be an exaggeration to say that nineteen men in every twenty are voluntarily producers only to the amount of their own consumption. This declaration will not be quite popular. It pleases the great body of men to believe that when engaged at their labor they are partners in the production of capital, or its accepted correlative, wealth; and they like to think themselves defrauded of their due proportion by unjust social conditions. But the idea is erroneous. No one is engaged in the production of capital, using the word in either its restricted or broader sense, save those who directly contribute towards the maintenance of its product in the market after the fruits have acquired a merchantable value. It would be idle to assume that any man who consumes the full value of his product is adding anything to the total of accumulated wealth. But such a man is equally inefficient in the production of operative wealth or capital. The profits which are supposed to be drawn from his labor, and which partly represent the measure of accumulation, are due to the resources of the person by whom he is employed. Within himself he is only an agent for the transfer of money from hand to hand, his own subsistence supplying the reward. Transfer the product of his labor to an incompetent manager on the date of its completion and his total contribution, in brain and muscle, might result in loss to the employer. A badly conceived enterprise, indeed, may signify nothing but loss from the beginning, the workmen only finding it a means of temporary subsistence, but the projector sacrificing his entire investment. Therein may be found the touch-ston of the whole performance. It is a superficial political economy which teaches that an employee, except to the extent in which he is a contributor to the income drawn from finished products, is engaged in the production of wealth. It was an idea accepted without any close analysis of economic processes, and formulated into a dogma without reflection. Labor does not create wealth. The product of labor, notwithstanding the number of times that its creative power has been announced from the rostrum, is too perishable for any such achievement. Wealth is broadly a fruit of some form of capitalization on surplus earnings or income. The man who fails to act upon a conception of this truth might give employment to a million men and still remain poor. We comprehend the situation more clearly when it is said that only a few men are directly engaged in the production of wealth, and that the great body of men are dependent pensioners on the resources of these few.

But the accusation may be carried still further. It may be truthfully charged that not only are the great majority of men not producers of wealth, but that a very large proportion of this majority are consumers of the accumulations of the few, and help to deplete the granaries where the public harvests are stored. The improvident are always wasteful. A man who has received his allotment of $394, the

average income per annum for each person in the country, it will be remembered, may claim it as his right if he chooses to use this money in such manner that he will reduce, by the trifle of, say, $10, its power of contributing to the general fund. This seems like a light sacrifice; but if the power of each corresponding allotment in income be reduced by the same amount the total reduction for the whole country will reach $500,000,000. This is a sum sufficient to carry at six per cent. a principal of nearly $8,500,000,000, almost one-fifth the total of our national wealth according to the census estimates of 1880! In this view of the case the reduction seems very far from trifling. It may be claimed that it would not be a destruction of actual wealth, but only an abnegation of possible wealth, or capital. This would be true; and though the claim will not relieve the prodigal of all responsibility for his wastefulness it must be accepted in part extenuation. But the fact still remains that large numbers of persons live upon society in one way or another, some honorably, some charitably, and some roguishly, without contributing even so much as their own living to the general fund, and these persons aid very considerably in retarding the progress of accumulation.

It may be said, then, that there are three chief obstructions to the rapid growth of national wealth, first, the obstruction growing out of the perishable nature of many of its objective forms, secondly, the obstructions raised by the inertia of the masses who are not directly contributors to the capitalization established on production and income, and, thirdly, the obstructions caused by the large number of non-producing consumers which society, for its combined transgressions and follies, is obliged to supply with the means of subsistence. But of these three obstructions the obstacle raised by the inertia of the masses is incomparably the most serious. It lies at the foundation of almost every monetary disability from which men suffer. It is the direct or the indirect cause of every panic and bankruptcy that occurs, it is the source of all idleness, and there is not a beggar on the street who must not charge his poverty to the fact that he, together with the great mass of his fellows, has never been a contributor to the general fund from which subsistence must be drawn. The perishable nature of production is not an incident to be deplored. On the contrary it is our chiefest blessing. Men find their income and resources in the necessity for reproduction. Were products not perishable exchange would cease, and civilization itself, would soon fall into a decline and perish. The non-producers, too, who live at the public table without bringing even so much as a napkin to the feast, are comparatively a small impediment to our advance. In fact they would hardly come in at the summons for a free repast were they not brought in by their fellow dependents who think themselves contributing members of the household, and demand honors and a distinguished place at the table. The men who do no labor are a burden. But they are incomparably a lighter burden than the men who only make the fire, cook and serve the meats, wash the dishes, and then mistakenly fancy that they contribute liberally towards the maintenance of the house.

CHAPTER IV.

SOCIAL RESULTS CONSIDERED.

LET us hastily recall what has been written and see how far we have advanced. It was discovered

in the beginning that this apparently so opulent world is in reality very poor, and that the total of its accumulated wealth is barely sufficient for the subsistence of its inhabitants, in accordance with civilized habits, for a single year. It was concluded, therefore, that the chief want of men is for more capital and larger resources. In the second chapter an attempt was made to define capital. It was found that, though inseparably joined to wealth in the popular conception, it is yet a force greatly transcending wealth for executive uses, and capable of maintaining an independent being on much the more comprehensive field. In this distinction we discover the possibility of making enterprise comparatively independent of wealth, and placing its operations on a more liberal foundation. Finally, in the third chapter, it was maintained that the lack of capital is chiefly due to the fact that only a comparatively limited number of men are engaged in its production. The great mass are content to look on and criticise, sometimes deridingly and sometimes ill-naturedly, the efforts and missteps of those who have assumed the burden. Through the remaining pages we shall find most profit in amplifying on the consequences of our undeveloped financial condition, in suggesting remedies, and in illustrating the advantages of the measures to be proposed.

In the first place it must not be thought that the evil results of the general poverty in resources fall with peculiar weight upon any one section of the community. It is a popular belief that their only sinister weight falls upon the shoulders of the poor. As a matter of fact they rest as a common incubus upon all men. It happens that wealth and capital have been linked together, and it is difficult for the one to move freely forward at any considerable distance in advance of the other. At certain paces they are joined hand in hand; and in the popular understanding it is impossible for any man to be a capitalist who is not possessed of large accumulations. This throws a formidable obstruction in the way of the leaders in enterprise. They carry the only load of care for the success or failure of their ventures; and generally find themselves crippled at every step by the want of resources to do something that ought to be done to insure good results. But their employees suffer, and must continue to suffer, as long as the unnatural relations between the parties are maintained. True, the employee feels no solicitude concerning the conclusion of a transaction on which the stability of the firm by which he is employed may depend. He does not even know that such a transaction is under negotiation or contemplated. But, after providing very imperfectly for his family, he will be very solicitous to know if he can save enough from his earnings to meet the next bill for rent. He would like, also, to be spared the mortification of standing before his market purveyor on the next Saturday night, and begging, with much apologetic shuffling of feet and many confused grimaces, for another week of credit and forbearance. He sometimes in his perplexity thinks his employer a hard and unscrupulous robber who is depriving him of adequate payment for his services. But at the moment when he is indulging his resentment he does not know that the employer may be in still greater tribulation. This not always fortunate but much distrusted person may fear that he will be compelled to ask his employees for an extension of time. He may not be quite sure that they will not be forced to wait for their dues until funds for payment can be obtained through the arrange-

ment of some obligation not yet matured. Instances of such embarrassment among employers may not be so common now as they were in the days when capital was even less abundant than it is to-day, and when the machinery of finance, as represented in banking institutions, was less flexible and accommodating. But they are still experienced with much too great frequency. They are so common that all employers, even the most successful, are obliged to hold their liberality very closely to the market rates of compensation for service, while the less successful are often forced to take advantage of every incident that can be turned to their account. They must take advantage, for example, of such incidents as pecuniary distress, manifested in applications for employment from men and women who must have the work or starve. If forced to take such advantages, then, should the less successful men cease to be employers? Were all of this class to retire their present employees probably would starve. They would at least be heard repeating the old proverb: A half loaf is better than no bread.

But the evil consequences of the general lack of resources not only fall with about equal force upon all sections of the community, crushing here and there an individual no matter what his social position or vocation, but they descend with a peculiarly oppressive weight upon society at large, and not only cripple its movements, but breed malevolent instincts and passions. For years past the country has been kept in a condition bordering upon financial anarchy. No contractor has been able to take a contract with any feeling of certainty that he would be permitted to finish his work without finding himself forced into bankruptcy, or compelled to suffer heavy losses. No manufacturer has felt any security that he would be allowed to manufacture and market his goods without subjecting himself, through some unfortunate step, to a boycot, a disaster that would cripple his means, and make the fire that consumed not only his stock in trade but the very plant itself seem like a blessing in disguise. No railway managers have been able to carry on the service of transportation with any feeling of confidence that, between the discontented employee and the demagogue, the stockholders would not be deprived of the dividends to which they were entitled by every consideration that should govern in the enlightened and just administration of public affairs. And, finally, the entire community has no pledge, except in its growing battalions of policemen, that the streets of our large cities may not any time break forth into riots that will culminate in bloodshed and the destruction of property. There is no question but that the spirit of robbery is rampant, just as we hear it asserted. But it is an error that charges its exclusive possession against those who have least occasion for its exercise. It is always the starved rat that will make the most intrepid forays. The sleek, well-fed companion can afford to lie in wait, and abide the time when the cat will have lost her appetite.

The events of the past fifteen years are worth reviewing. Recall, first, the panic which occurred during the earlier half of the last decade, together with the bankruptcies and the long period of distress that followed. These events have almost passed from the memory of all except those who most keenly suffered. But the brakeman's rebellion of a later date, culminating in the riot and the destruction of several million dollars worth of property, at Pittsburg, is fresher in the public memory, while the echoes of the final catastrophe at Chicago

have hardly yet died out of the public ear. We have passed through a decade of disorder unparalleled in any previous decade when the country was nominally at peace, and the contest has not yet been brought to a close. Nay, it has not even been brought to a pause. It is carried forward under new leaders and in new fields. The echoes of the brawl are heard in Congress, in the State Legislatures, and in the courts. They are heard, too, wherever a body of squatters can find a vacant corner and a few empty chairs to serve in the theatric spectacle of a Legislative investigation. Honorable men, and men by courtesy called citizens of a free republic, are haled before inquisatorial committees, and, by threats of imprisonment, made to answer questions, which, a few years ago, it might have cost the inquisitor a black eye to ask.

Are we deriving any benefit from these unseemly exhibitions? On the contrary we are suffering great injury. We suffer in the first place in the loss of self-respect, a sentiment worth preserving at all hazards. We suffer, also, in the loss of that honorable instinct which is above both deceit and the suspicion of deceit. No men but those who wish to do evil are prone to suspect evil. But the heaviest blow is delivered at our material interests. There was never another period in the history of the country when the cry of depression was so prolonged and hopeless as it has been during much of the last decade; and never any past time when the intervals of prosperity, breaking through rifts in threatening clouds, were so illusive and transient. Irresolution and uncertainty have been the chief characteristics of the market during all these years; and the feeling of dissatisfaction with prevailing conditions has become almost universal.

It seems to be the fatality with men to misconceive both their evils and the remedy that should be applied to effect a cure. To say nothing of the bloodshed, privation, and distress caused by our civil war, one-half the material resources expended and destroyed in that now fondly remembered struggle would have bought the freedom of every slave in the country, and provided him with the means of starting auspiciously on his career as a freedman. Is there not something startlingly suggestive of current blunders and follies in this illustration? Men who, by courtesy, are called statesmen are engaged in feeding the passions which it is their duty to allay. If they find an uninstructed mob, numerous enough to give promise of honors and emoluments for all who secure its applause, moving in the wrong direction they are ready to place themselves at its head and become the champions of its errors.

It would be idle to say that this is not the spirit in which the misconceptions of the age should be met. If such a course can be pursued without final disaster it will be because Providence is a more powerful factor in human government than either the wisdom or honesty of men. The object at this time should be to discover and make evident the true line of conduct to be followed. It may be asked, and the inquiry would be pertinent, if it is the intention to charge the prevalent evils against those who think themselves peculiarly oppressed by the unfortunate complications that surround society. No, this is not the intention. It is the intention only to charge these evils against an undeveloped system; but the truth should be told no matter how much it reflects on men who think they have right to go through the world without contributing to the resources from which they draw their subsistence, and then a further right to com-

plain of the hardships which their dependent condition entails. They have the right to do neither the one nor the other. They have only the right to study economic laws more closely, and to see if they cannot find, through the seemingly mysterious labyrinth of finance, a road that will lead them to ground of greater security. They are poor not because they have been kept poor by an oppressive social order. They are poor to the point of helplessness because they have failed to take advantage of laws that can be made ample for their protection. Granted that the world must have its producers, and that all men cannot enter the market to buy and to sell and to become tradesmen, the only field where great opulence can be won. It does not follow, therefore, that the men who are withdrawn from the market, either from choice or necessity, have no alternative but dependence. We may lay this truth to heart, and the sooner it is universally recognized the better. Were society to last as long as the innumerable cycles that have come and gone since the beginning of the Archaic age, and were nineteen-twentieths of its members to depend upon the resources of the other twentieth for the means of subsistence, the relative condition of the different social grades would not be materially changed. The humbler grades might rise. They might advance in education, in intelligence, and even in the possession of means for securing their material comfort. But they would rise at the same time to a clearer perception of the immeasurable distance that separated them from their leaders. They would rise, also, to a keener feeling of discontent, always inflamed by the spectacle of social contrasts. During the last fifty years we have been witnessing this kind of an advance, followed by just these manifestations. It has been an advance in which the rear has failed to close up any part of the distance which separated it from the van; and the improvement is neither appreciated nor recognized. It only intensifies the feeling of unrest. Hence the prevalent disorder, and the necessity for plain talk on questions of cause and effect.

CHAPTER V.

THE EVOLUTION OF FINANCE.

THE question to follow will come naturally. In deference to the overwhelming testimony of statistics, strengthened by observation and experience, all that has been claimed may be admitted. It may be confessed that the evils from which men suffer are not due to the unequal distribution of wealth or profits; that the world is poor; that men are driven to innumerable expedients to find the means for making the improvements necessary for their comfort and convenience, and that the masses are content to live without putting forth any strong personal effort towards contributing to the total of either accumulated resources or capital. But it will be asked in what possible way the situation is to be amended. If it be true, after all these centuries of effort, that society, in its material environment, has only succeeded in advancing beyond the lines of barbarism, how is it to receive an impulse that will carry it rapidly forward in the work of accumulation? If it be also true that the great mass of men are satisfied to remain inert and dependent how are we to cause the leopard to change his skin, and to put on some less traditional fashion of covering? These questions are pertinent; and at the first blush the outlook is not encouraging. It seems as though we would be compelled to allow men to go

blundering through quagmires, sometimes sinking into the oozing slime until they are almost strangled and lost, and anon finding a foothold which suffers them to stand temporarily erect and gather breath for a new wrestle with their obstructions. But the world is growing. Even if it has not yet become very rich and independent, it is rapidly beginning to accept and apply principles which will finally prove strong enough to overcome the evils caused by its inertia, and the neglect of beneficent laws. It is entering upon the right road, and has even advanced further than most persons in their blindness are able to discover. Men are quick to learn from their necessities, if not from their innate sense of what is theoretically sound.

The most phenomenal and significant incident in the growth of modern civilization is the evolution of institutions designed to promote the efficiency of personal effort, to strengthen the weakness of individual methods, to combine dispersed and antagonistic forces under a definite head, and even to give to benevolence a material body and vital functions. Since the institution of the Bank of England, in 1694, probably the initial association of bankers unless the Bank of Venice may be called an exception, the progress of financial organization has been continuous and rapid. The seed of a new system was planted in rich soil, and, in England and the United States most noticeably, it is proved to have been of immense vitality. A vigorous trunk of almost redundant growth has been prolonged into branches and groups of branches which have in turn become strong and capable of bearing most excellent fruit. Even before the incorporation of the Bank of England there was organization. There were the guilds, dating back to the reign of Edward III.; and some writers trace the system of incorporation into Grecian and Roman history. The determined virtuoso of modern antiquities might even insist on finding the chief stem from which grew the prevailing system of co-operative finance in the East India Company, incorporated, in 1600, by Queen Elizabeth. But this company was a mere trading organization, and it is to the banking system that we must look when we wish to discover what is most hopeful in the growth of association. Industrial companies, trading companies, and companies for the transportation and distribution of merchandise have been of incalculable service. They are both strong and enterprising, and working hand in hand with each other they push out into new fields, and carry the arts and wants of civilization over comparatively unexplored territory. It is chiefly the work of these companies that has compressed continents into States, and robbed the ocean of that illimitable surface which once caused it to be held as a symbol of eternity. But they displace as well as occupy in their domestic field of operations, thus serving to diminish the benefits that might be expected to flow from their great resources, and, unlike the banks, they do not enfold within the principles of their being a germ which may be cultivated to cover the whole earth with an abundant and general harvest. We must find in the banking system and its auxiliary forces the true impulse and key to material progress.

This may be thought extravagant praise for a system that seems to have become thoroughly commonplace, and to be suggestive of only sordid purposes and ideas. But it will be found that the encomium is merited. The banks are teaching men the real significance of interest, the final author, gauge, and regulator of all wealth, though once thought to have been the

wicked invention of the totally depraved and despised Jew. In this service they are rapidly becoming recognized as the fountain of all the streams that flow forth and fructify the world; and the dull economic ritual that mistook the substance for the soul, and found wealth in perishable production, must be recast at the feet of this highly enlightened teacher. But the banking system is great not alone because it gives practical application to a true economic principle, but because it makes the application in conformity with a popular need. Before the advent of banking associations there were bankers; and again the good germ must be sought among the non-electrical and unilluminated ancients. But when found it is seen to have been only a germ. It could shoot upward and blossom into a tree, with branches broad enough and sturdy enough to offer almost unlimited shelter, only in the form of co-operative banking. In any other form it would not have proved strong enough to illustrate its own possibilities, nor to sustain the canopy which it has been appointed to uphold. The banking system has matured, if not perfected, a new science of finance; and herein lies the chief element of progress. Men are beginning to find that wealth need not consist solely in objective forms, in gold and silver, in lands, castles, equipage, and cattle. They are learning to see that an acknowledged exchange of service may be made to bring the substance of wealth more imperishable even, and more capable of transmission, than fine gold. Our banking system, though not yet upon the highest plane of development, is already an agency to double and quadruple the resources of capital. As we proceed it will be seen that, modified, it may be made to increase those resources almost infinitively.

But the utility of the banking system in the course of its future development will not be found so much in the main stem as in the combination formed between the main stem and its connecting branches. Its first and strongest branch is insurance. This was an offset of wonderful vigor, financial in its features, but benevolent in its functions and fruit, and full of promise for the future of society. Its merits as a protector have been sufficiently extolled in circulars and it will not be worth while to amplify on this feature of the system. It will not be necessary to engage in a superfluous effort at illustrating what insurance can do at the portals of the grave. We all know its beneficence, when it offers to be only just. But we must deal with insurance as an economic force. It must be treated here simply as an agent, a beneficent agent if you will, for the accumulation and transmission of property. There is no wealth in objective production. The dream of riches from this source must be dismissed like other superstitions that have led the world astray. But there is wealth in the superstructures of finance that rest upon a foundation of production and among all that have been reared there is no edifice so fair as the temple erected by the architects of insurance. The gleam of its polished marble shines along the future like emeralds and precious stones, and the whole atmosphere is made luminous in its glow. Like the banking system, insurance has not yet reached its full development. It can never reach the final measure of its utility until certain perfected forms of association are prepared; but in its potential resources it is able to make even the figure of charity, however highly exalted in our ethical code, look pale and faded. Nay, it can finally convince her that she was never more than a name signi-

fying nothing, a piece of sounding brass or a tinkling cymbal. We have no desire to disparage benevolence. It has served, and is still serving, a good purpose in the world; and our benevolent societies, offsets, also, from the banking system only one branch removed, have been adding materially to the philosophy which is receiving an institutional embodiment. They are sometimes founded on a too charitable idea, and are conducted with an imperfect conception of the resources of finance. They need often a stronger or more liberal transfusion of business with benevolence. But they have been helping to pave the way for the advent of a better system, and, *in memoriam*, will eventually be entitled to a tablet in the temple to be erected in celebration of some of the apotheosized but retired cardinal virtues. These virtues have served us well; but the reign of charity and benevolence approaches its end. In the banking system alone there is a golden hope of fruition; but when its resources are combined with the resources of its connecting limb the two together may be made to seem almost like the harbinger of that mystical thousand years projected into the future of mankind from the Apocalypse. The fulfillment of the prophecy need not be long delayed. Even the children of the present generation, the parents of the next, may step forth completely enfranchised from the shackles in which poverty has so long bound the race, and find the liberty which is now thought the privilege of only the fortunate few, but which in reality is the boon of none. The anticipation may seem rose colored, but it is justified. Men will have only themselves to blame if they do not so improve their opportunities that charity, benevolence and all corresponding terms must lose their material application, and give place to words of less humiliating significance.

Is there not good reason to be hopeful? All the favorable conditions for an immense stride have been developing around us for many years; and as a fresh ground for hope we may point to the evidence that the consuming masses, to whose inactivity has been charged the slow progress made, are awakening from the lethargy in which they have been so long bound. The manifest growth of their discontent is not a circumstance to be regretted. On the contrary, it is a manifestation to be welcomed, and it is only the duty of those who hold the position of guides and leaders to see that the spirit of discontent does not lead to excesses that may retard rather than advance the general movement towards higher ground. The masses still remain impracticable in their plans. They are always ready to follow leaders who have no conception of social evolution, and who stand ready to remedy all the evils that spring from lack of development by a treatment of either concentrated or reduced dynamite. But they are beginning to see the disadvantage of living without capital or security; and though their dissatisfaction has not yet led to any more practical action than combination for the purpose of maintaining wages it is drawing them over ground which cannot be occupied without causing their ideas to take form in some more tangible conception than they have yet embodied. When men co-operate for the maintenance of wages they are playing with a toy of which they will finally become weary. But they will acquire habits of co-operation which will eventually be turned into more productive channels.

CHAPTER VI.

EVERY MAN HIS OWN HOUSEHOLDER.

WHEREVER possible the skillful general advances to his attack under cover. Such a course is prudent; and it helps to confound the enemy. But if the line of advance up to this point has seemed obscure the obscurity must be charged to no strategic purpose. There were hills to be captured, hollows to be occupied, and points of vantage to be surveyed. But the reader, it is to be presumed, is becoming solicitous to know more definitely the purpose of all this preliminary skirmishing. He may not have quite seen the objective point of the maneuvers. That the world lacks capital may be admitted; that idleness and distress may spring from its want will be readily seen; that even financial depression, panics, and bankruptcies are the direct consequences of this lack, however wisely men may reason on human incapacity and frailties, is hardly to be denied, and there is a great deal that must be accepted for truth in all that has been stated and claimed. But how the general stock of capital is to be increased by depending on men who have no capital, and not much expectation of capital, except in the narrow sense of mental or manual accomplishments, may not be so readily comprehended. The dependence is reasonable nevertheless; and it will be the next object in the discussion to show why it is reasonable.

It happens that the men who have least capital, as capital is comprehended, receive, in the mass, much the larger proportion of the total of income. Potentially, therefore, they have incalculable power to maintain capital. It would be almost perilous to give the total income of employees in the United States. It cannot be accurately given on any census data to be obtained; and even a reasonable estimate, if offered without exact data, might seem so extravagant that it would almost weaken the argument. We know that the amount rises to many billions of dollars each year, and forms nearly ninety per cent. of the income of all the people combined. But in offering illustrations on the resources of employees it will not be necessary to consider totals. It will be better, indeed, to investigate the subject in its details, and make a local application of every instance. Every employer who employs a large number of workmen is conscious of their capabilities. Could he only retain ten per cent. of their earnings on each Saturday night, and use it in accordance with his knowledge of financial expedients, he knows that he could soon duplicate his fortune, vastly enlarge his field of operations, and employ two workmen where he now employs only one.

It may be objected that employees have not the means of turning any portion of their income into capital. It is commonly believed, among workmen themselves at least, that the great body of employees are too poor to spare even a trifle from their receipts for any other purpose than to meet the necessary expenditures for their subsistence, and the subsistence of their families. It might be objected, further, that, even were it possible to save, employees have no better place of deposit than savings banks; and that, these banks, though institutions of great utility to small tradesmen who are only holding their money until they can find a good place for its investment, fail of meeting the chief want of the man who is not a tradesman, and needs an opportunity to make his savings fruitful. The word savings has little significance as an economic term except when made

to represent some form of capitalization devised for the benefit of the person from whose economies it results. These are objections, we say, which might be raised. But the first objection will be contradicted by the experience of almost every employee who will take the trouble to watch his expenditures closely, and observe the waste that flows continually from his hand. Even under prevailing conditions, almost every man wastes money. As for the second objection, the ground for its validity could be easily removed. The only reason why employees do not save a very considerable part of their income is to be found in the want of a well organized system that will enable them to carry the principal which their economies can be made to represent. Give them the means of escaping the payment of onerous expenses by diverting their savings to the work of maintaining personal resources and we will soon find how quickly they will avail themselves of the opportunity. Only show them that the assumption of obligations in one direction can be made the measure, and more than the measure, of relief obtained in other directions, and that the net results will be greater security for themselves and families, and we would soon find little occasion to speak of their improvidence and want of foresight.

Let us descend to particulars and apply this reasoning where it will be most readily understood. The payment of rent is felt to be the most onerous obligation that rests upon the shoulders of the poor. Next to a short supply of coal, the playwright finds in the necessity for rent paying the material for his most pathetic and melodramatic situations. The novelist has exhausted his invention in portraying the wretchedness and sufferings of the tenant; and the orator of reform is never quite so felicitous as when he can flavor his eloquence from the sewers of the tenement houses, and cause to float before the vision of his audience the gaunt spectres of misery which, from that atmosphere, are readily invoked. Even the political economist, who, if a true economist, is usually hard headed and implacable, has been known to shudder as he contemplated the law that seemed to make rent paying inevitable, and to find in its barren, oppressive features not only a justification, but a cause of commendation, for the doctrine of the survival of the fittest. It is not wonderful that the subject should be found so perplexing. It seems exceedingly unjust that a man should be compelled, year after year from youth to old age, to pay heavily for the mere space which he occupies in the world, and to finally die and be able to transmit no title that can prevent the dispossession of his family. But it is not unjust. It is only exceedingly foolish; and if any man can follow the illustration by which the fatuity of rent paying can be exposed without confessing that there is still a great want of practical common sense in the administration of human affairs he must be a slave to economic superstitions.

Every dollar paid for rent from the hands of an employee is a dollar wasted; and the withholding of the dollar, through legitimate financial expedients, would cause no loss to the landlord to whom the payment is made. This may sound like an incomprehensible declaration; but let us see if it be not true. Here is a five-story double flat house, built on one of the most eligible and central streets of our commercial metropolis, at a cost, including the cost of land, of $20,000. In its interior decorations it contains tiled corriders, marble, or what means equal elegance, marbled slate mantels; and all the ornamentation is tasteful, and suggestive of

refinement. It shelters ten families; and the heads of these families pay, annually, an average in rental of $230. This makes the cost for each family only about $4.50 a week, and places the suites of rooms within the reach of very limited means. From the total of his rental the landlord pays taxes, fire insurance, and the cost of repairs; and after suffering the losses caused by vacant premises and bad tenants he thinks himself fortunate if he realizes six per cent. on his property. He will not often realize more than five per cent. on first cost, for landlords are often compelled to share with tenants the losses caused by sickness or want of employment. The entire rental, it will be seen, is $2300 a year, and the amount seems pretty large. But the interest on the property at six per cent., together with the fire insurance, and, in any city not suffering from extravagant administration, the taxes, will not amount to more than $1800 a year. Divide the obligation for the payment of this amount among the ten tenants, then, and the total would only be $180 due from each person. This sum, it will be seen, leaves a margin of nearly $50 between the amount which each tenant is now paying for rent and the reduced amount to be paid were he his own householder. Then why should not the tenants pay the interest, taxes, insurance, and all costs, giving their bonds to the landlord in exchange for the title to the property, and save the remainder? This seems like a reasonable arrangement.

But here enters the lion in the way. These ten tenants are poor, and they could give no security for the redemption of their bonds. Were the landlord to transfer the title to their possession, subject to the payment of the interest on the share held by each person, he might get this interest while they lived; but after their death he or his heirs would be compelled to take back the property, possibly in a very dilapidated condition. No one would have been greatly the gainer; and the landlord might have lost chances for profit through a possible sale of the premises. On this basis, therefore, it will be decided that the arrangement would not be worth while. But it will be remembered that there was a margin of $50 remaining in the hands of each of the old tenants as a fruit of the rearrangement and transfer of obligations. Here, then, we are standing at the portals of the golden gate, and can cry Eureka! There is a wonderful power in fifty dollars when properly invested. It will help to carry a life insurance fund from which the heirs of the investor will be entitled to about $3,300 in money, estimating on actual risks without any consideration of insurance company expenses or profits. Then why should not the money be used for this purpose? It would not only cover the bond for $2000 given by each tenant, and secure its redemption, but it would cover an additional $1,300 for the use of the family after the head of the household has gone where the real estate agent will possibly cease from troubling. This seems like a better plan than to throw away $230 a year on a person who, it should be seen, is no gainer by the sacrifice, and who, under prevailing methods, is often subject to considerable trouble and no little loss.

But the lion in the way has not been thoroughly bound. The plan suggested might be pronounced theoretically good in its main features, but so far as outlined it will seem too loose. It would be liable to fail for causes that may be readily conceived. It presupposes better faith on the part of all parties to the arrangement than we are in the habit of conceding to fallible men; and the contracting parties

might be subjected to infinite complications through the failure of one or several of the old tenants to meet the obligations imposed. They could not absolutely make way with the property either by sale or removal. But one or all might lapse in the payments due on fire insurance, and then the house could be burned down and become a partial or total loss. Or, they could fail in meeting the demands of the tax collector, and the State might exercise its right of sequestration. Or, the life insurance pledge, thus far too vaguely defined in its details, might not be maintained, and the former landlord might be forced to take back the shares that were found in default instead of the money he had stipulated to receive. Either one or all of these complications would be possible unless the ground were made perfectly secure, and their possibility would stand in the way of any weak or partial attempt to escape from the prevailing system. It would magnify the lion in the way until he became more colossal than a mastodon.

But when we wish to be thorough no weak nor partial attempt should be made. Given an amendment which is desirable and the means for reaching it should be made adequate to the end. If the idea of an improved system of householding, to be followed and attended by an improved and less oppressive system of general finance, appeals favorably to the judgment it should be pursued at whatever sacrifice of traditional notions or predilections. The road to reach it in this case should be found neither difficult nor obscure. It lies along the pathway which the more advanced and successful members of society have been long following, and in which they are well advanced. There is not a principle to be considered which does not lie at the foundation of systems already operative and successful. But the necessity is far more highly perfected and general organization than finance has yet essayed. All that has been done, magnificent as are the total results, is but a prophecy of the work yet to be accomplished.

Shall we descend to details? Unhappily, the world has but recently awakened, or, to describe its condition more accurately, it is only just awakening from the fevered, restless slumber of centuries, and its eyes are not yet quite open. It is no more than half conscious of the morning. It fails to observe the glory of the sunrise, the softness of the air, the beauty of the verdure, and the odor of fresh flowers. It has been sleeping a fitful, disordered sleep, and dreaming of burglars. It thoroughly believes in burglars, notwithstanding the fact that the belief does violence to its own instincts, and it suspects a robber behind every bush. It has been toiling, too, even while it slept, working in shambles; and the scent of the ofial has not yet disappeared from its conception of sweet odors. Will it be possible to speak to an intelligence so beclouded in language that will be understood? Can we, with any chance of receiving credit, say to a man who thinks himself upon the point of having his pocket picked that the thief is only a figment of his own imagination which will be dissolved as soon as he walks forth into the reviving air? Will the man who believes that his fellows were born to prey upon each other accept a philosophy which teaches that they were born to co-operate with each other, and that it is only the conditions on which personal success is won that cause them to seem cruel, rapacious, selfish, and full of duplicity and cunning? It is a bold venture to undertake to unveil a possible future to men with perceptions so perverted. But the experiment must be tried; and

according to its success or failure must we hold to the opinion that the world is either ready for its new environment, and is prepared to go cheerfully forward in the light that is blazing upon every hand, or that it is only seeking the shadows of the old castles and dungeons, where it so long reposed, in order that it may lie down again and sleep forever.

Let us conceive, then, of companies numbering ten, fifteen, or twenty thousand men, the more the better until the safe limits of localized administration are reached. Let us further conceive these companies to be organized with administrative boards, after the manner of those associations of supposed highwaymen who have taken possession of the avenues of transportation throughout the country, or of those other Robin Hoods of the green baize who sit in the executive rooms of banks, trust companies, insurance companies, and like organizations. The new companies should be organized after the manner of the old companies, first, because it is the best form of administrative organization to be conceived, and, secondly, because they will have corresponding functions and duties. The new system will comprehend some of the principles of banking, and put in operation, with new machinery and a new and more comprehensive purpose, all the functions of insurance. The companies, therefore, should have a thoroughly executive organization.

The administrative functions of these new combinations may be soon outlined. They will have power to issue and maintain bonds founded on a reserved proportion of the income of members, and will assume all responsibility for the payment of the interest on these bonds. They will also have power to maintain an insurance fund, equal to the total amount of the obligations thus floated, and this fund will be held for the redemption of the bonds as fast as the death of members cuts off the source of interest. These are the hief provisions. But the responsibility of the company will not be limited to the discharge of its obligation to the bondholders. It will have duties to perform in behalf of its own members. It will stand behind them in all their investments; and see further that sickness, or misfortune of any kind, does not render the obligation to pay the interest on the bonds oppressive.

This gives the main features of the kind of organization needed to enable employees to become contributors to the capital in use, and at the same time to come into the possession of property which may be transmitted unincumbered to their families. Were it not for one reason all further details could be left to the invention of the reader. But this reason is peculiar. It is necessary to be very explicit in dealing with a generation that, without any intention of perpetrating a jest, can organize a company for insuring bank depositors against loss. It will be well, therefore, to go a little further into details so that there may be no chance for mistaking the true character of the organization proposed.

The plan, then, must contemplate not the subjection but the greater independence of the individual. The bonds issued by these companies must not be company bonds. They must be issued in the name of the company, and find their chief element of strength in its endorsement; but they must be personal bonds bearing the name of individual members, and must be handled as personal obligations, subject only to such regulations as may be demanded for the general security. The company cannot be allowed to control the member in either his personal possessions, his

movements, or his conduct. Neither can it be allowed to maintain any fund that can be diverted into the channels of corporate speculation; for such a privilege could not contribute to individual profit, and would prove a source of demoralization and danger. To the members, the company must stand only in the relation of an endorser, and find its own security for the endorsement in the insurance fund which it is permitted to maintain. It will be merely a bond insurance company, and might with propriety be legally known under this designation.*

The resources of a company thus organized, and containing, say, twenty thousand members, would be almost inconceivable. Even at the rate of compensation for service given to common laborers the combined income of the members of such a company would be about $9,000,000 a year. One-fourth of this sum would pay the interest and insurance on bonds to the amount of more than $30,000,000, a sum sufficient to buy and make habitable an incredible number of tenement houses in any city in the Union. Or, it would buy the ground and build a suburban city of real elegance and comfort. It should be seen, too, that the payment of this interest and insurance could cause no reduction in the living resources of the person who pays. His funds, when providing himself with ordinary personal comforts, would not be diminished. Men must live in houses, and those who receive the benefit of their shelter must pay for their construction in one way or another, or they will not be built. This is the law of reciprocity that obtains everywhere; and it will be better to own the property and pay the interest and insurance than to waste the money in the payment of rents.

*Appendix A.

The idea of such companies may seem contrary to the spirit which animates the race. It is in perfect conformity with the spirit which animates the wiser representatives of the race; but with large numbers of men the savage instincts seem to be yet extremely powerful. It is hard to tell whether they most love or hate each other. But something can be trusted to their self love. Stimulated by this instinct very mean men have been made almost philanthropists; and it is possible that the same instinct may work a similar transfiguration in the bosom of society. But the coming of the day when it shall begin to manifest itself in good works depends on the men most directly concerned. It may come quickly or it may be delayed for coming generations. During many years past men have been rushing together in what are known as protective organizations. Protective against what? Protective against the consequences, and the inevitable consequences, of their own partial conception of their duties and capabilities. An infinitesimal part of the strength wasted in the pursuit of shadows would have served to lift all those who thought themselves endangered to a ground of very perfect security. It is time to either abandon the idea of protective organization, or to change the meaning of the words. There are no wolves. There are a great many lambs, however, which, for one cause or another, would fare much better were they brought into some kind of a fold.

CHAPTER VII.

ILLUSTRATIONS FROM REAL LIFE.

BUT we must not desert the line of investigation as it leads out from the preliminary statement of facts. The possession of homes, which may be held on easy terms, and

transmitted unincumbered to heirs or descendants, should be held as a chief object of endeavor; but it would be folly to rest satisfied with the attainment of this object, no matter how much it is to be desired. It was assumed in the beginning, on data too strong to be controverted, that the world's chief want is capital. On this assumption the lesson must be studied ; and not until it is made clear that the total of operative capital can be duplicated, or even multiplied infinitively, can the argument be said to have reached its aim.

Look around and observe in detail the execution of work demanding a large expenditure of money. Let us again find an example in the construction of a railway. It is a popular impression that capital springs out of the ground for the construction of railways; and to say truth there is a great deal in the methods of fertilizing and watering the plant to sustain the opinion. The capital is seen to expand from small beginnings in a very mysterious manner until it becomes a tree of really magnificent proportions beneath the shadow of which men of fortune rest and seem to take solid comfort. It is supposed, therefore, that the promoters must be men of large resources. As a matter of fact they are usually men of very limited resources, in the sense that combines capital with accumulated wealth. They are most commonly engineers, contractors, or unclassified men with a turn for large ventures in construction, but with very little money. They win their spurs as capitalists by becoming capitalists in the most ethereal sense of the word, and then painfully materializing themselves into bodies of greater or less consistency.

Let us observe how these men operate. Three, four, or possibly a half dozen such men get together and form a company. But in the list of twenty-five incorporators, largely made up of men practically known as dummies, there may not be found the name of a single man of wealth. The promoters may sometimes manage in the beginning to attach to their enterprise the names of a few men not altogether unknown in financial circles; but even the nature of this backing is often equivocal. It may be given for personal motives, or it may come from a desire to see the work undertaken on account of some indirect personal benefit to be derived from its prosecution. But these ornamental auxiliaries have rarely any idea of subscribing for the stock to an amount in excess of the legal requirements. They only hold themselves in a position to take advantage of any fortunate turns that may occur in the history of the company. But it is not unusual when a newly formed company is compelled to dispense with even those top feathers. It as often happens when it must be started on its career without even a putative godfather.

Now, it is not conceivable that a company thus organized and launched, no matter what the ability of the promoters, could raise the many million dollars required in the work of construction without Herculean efforts, and the use of innumerable sharp expedients. No matter how promising the enterprise on paper, the managers are regarded as financiers without experience; and men without either money or experience will never be men with large credit. To expect the banker to throw open his vaults and place all his resources at the disposal of such men would be unreasonable. He is not often a man of such confiding judgment. He will not risk a dollar in the adventure until he has first assured himself, so far as a man who is something of a financial gambler from necessity can assure himself of any-

thing, that his dollar will not be managed away from his control. He will not only demand this assurance, but he will further demand very large margins. Under the circumstances they may not be unreasonably large; but they will be large enough to compel an excessive capitalization in the beginning for the purpose of covering contingencies. They will be large enough, also, to give the stock a second inflation on the completion of the work of such liberal magnitude that intelligent journalists and statesmen will be scandalized at the spectacle.

But what else can you expect? Trace the work as it goes forward. Here is a handful of men without much money, and without credit, except to the extent that they can convince capitalists of the merit of their enterprise, engaged on a work which demands the services of several thousand workmen whose wages must be paid every Saturday night. All the world should know that their resources are limited; and it is soon found out that they are continually at their wits' end to find the means for the payment of their employees, and to cover the cost of the material demanded. To make their case still more embarrassing the air is soon full of rumors concerning the appointment of a receiver, or of some other catastrophe which the popular imagination can always create, and all their financial negotiations must be conducted under the shadow of these real and imaginary clouds. They plod on, however, and hope for better days. But, suddenly, they meet their crowning disaster. At the moment when they may have found a possible chance to market a few of their bonds on what might be thought reasonable terms a telegraphic operator flashes to the press an account of a frightful riot on some section of the work caused by the non-payment of wages. The story is graphically told. A contractor has been compelled to take to cover behind some barricade where he is holding several hundred infuriated laborers at the muzzle of his revolver. He has been unable to meet their dues for a month past; and they have grown exasperated at the delay. Is it likely under the circumstances that the bonds will be marketed on very easy terms? To presume so we would have to suppose bankers to be only peace-makers, men engaged in pouring oil on troubled waters.

This may be thought an exaggerated illustration of the difficulties in the way of railway construction. but it is only a fair picture; and the suggestively bad feature of the exhibit consists in the fact that almost all the money paid goes into the hands of workmen, the chief part into the hands of workmen,—masons, laborers, or teamsters,—employed on the ground. Over and above the living expenses of the promoters, and sometimes without this exception, all the money is expended for service, including, of course, the service of the contractor for material. Herein lies the entire source of difficulty. It was the need for money, due every Saturday night for wages, that caused the directors to almost mortgage their souls, and in a few instances probably compelled them to make the contract. The cost of material could be secured by liens, the manufacturing contractor in this case having to bear the labor load; but the money which went directly to the workmen was hopelessly sunk for any imminent emergency.

Is there not something here startlingly suggestive of a bad system? If the railroad cost $10,000,000, and, after the promoters had wasted five or ten years in preliminary struggles, was two years under construction, the total amount of interest to be paid may have reached

$500,000. This would be five per cent., or $5 to every $100, on the money paid for labor. Yet it was the uncertainty about the payment of this interest which made bankers, brokers, and every man approached in the course of the monetary negotiations timid and distrustful. It was this uncertainty, too, which caused the final capitalization of the road to be placed at probably $30,000,000, although the actual cost was only $10,000,000 in money expended. The public, to whom these concerns are always very clear, supposes the excess in capitalization to have been due to the original sin of railway projectors. But the public is sometimes mistaken. No great profit comes to any man from the inflation of railway stock beyond the values founded on its traffic at reasonable rates. In this case the stock was inflated for security; and it would never have been inflated had the interest on the money expended in its construction been paid by the workmen, the workman, in return, receiving as much of the stock as they carried by their payments.

Illustrations of about equal force could be drawn from every department of industry and trade. The secret history of ninety-nine per cent. of the industrial and trading firms of the country, could they be given to the world, would tell the same story of battles fought against overwhelming odds, ending sometimes in victory and sometimes in defeat. Shall we attempt to fix the blame for the unfortunate methods which prevail? Perhaps no one is to blame. The world is old in its stratification of rocks; and it abounds in fossils that suggest an incredible antiquity. But its political economy is only just born; and in its financial practice it has not yet passed the empirical stages. But it seems to be high time that the men who are most dissatisfied with their condition should begin to wake up and confess the cause of their abject estate. The community needs better reciprocal relations between its members; and improved relations can only be reached through the material co-operation of that great mass of men who now occupy a position of inert dependence, and trust to the irresistible forces above and beyond them to supply the means of subsistence. The plea that they are poor and helpless cannot be entertained. They handle ninety per cent. of the money in circulation; and if from this total they cannot divert enough to help carry the capital from which they must draw their subsistence there is evidently something wrong in their habits which needs reforming. But it is not probable that their apathy springs from their unwillingness to act in their own behalf. It springs from the lack of comprehension of a subject which they have never studied except under the tuition and lead of impracticable men. They would doubtless be willing to take up their end of the load to be carried, if they knew where to place their hands, and felt that they would be trusted for a sustained effort. With their assistance the burden would cease to be a load, and of course they would be trusted. There is not an employer who would not find relief in their co-operation; and as for a knowledge of the place to exert their strength let them study the load for themselves, and learn where they can put forth their efforts to the greatest advantage.

It will be necessary to appeal to insurance. But, fortunately, it is a good dependence, better in some respects than accumulated wealth. It cannot be wasted, cannot be lost through mismanagement, and, when divested of some of its institutional machinery, it can easily be carried. It would be hard to overrate the importance of insurance considered in its ultimate status as a force in

political economy. Owing to the perishable character of products, and property founded directly on production, insurance seems to be about the only agency that can transmit wealth from generation to generation in amounts sufficient to lift society above a condition of general penury. But men should be able to see its advantages without looking very far into the future. It is a crime, in any case, for a man with a family to go through the world without insurance.

CHAPTER VIII.

EFFECTS ON MATERIAL GROWTH.

It will be worth while to be more explicit in calculating some of the industrial and commercial benefits to follow upon the adoption of a system which would make all men contributors to the operative capital in use. That the results would be comprehensive will be readily believed; but few men without carefully weighing the subject will be prepared to estimate the effects in all their magnitude.

The example in railway construction, given to illustrate the flimsy foundations on which speculative enterprises are built, was a generic example. It applies to all enterprises, but it applies with peculiar force to enterprises undertaken with no element of co-operation at the foundation, and dependent on the force of individual effort to carry them to a successful conclusion. There is a power to inspire confidence even in names; and when many names are associated the power will be increased in something like the ratio of increasing numbers. If one man is efficient, it is felt that two men should be doubly efficient, and a score of names should give a suggestion of almost irresistible strength. It is only because of this prepossession in favor of united effort that railway construction by private enterprise is even possible. A single person of great wealth could no doubt carry such an undertaking to a successful termination; but men who have amassed fortunes in one field of investment do not turn their attention to different and new fields unless they see a certainty of great profit. Such men, therefore, are out of the field for any enterprise that must be considered at once new and speculative, and the work must be undertaken by the less successful men. But it would be even presumptuous for any one man, with no better standing in finance than most of the men who conceive and carry through enterprises in railway construction, to so much as make an unaided attempt at building a new road. He would be thought no better than one of the demented. But it is equally true that any individual operator who depends upon his own unaided exertions, no matter what his field of operations, will be weak in compelling confidence; and as the vast majority of men who give employment to other men still insist on operating on their own strength we can easily see why the example in railway construction offers rather a mild than an exaggerated illustration of the difficulties everywhere experienced. Individuals who undertake to give employment to large numbers of men for the purpose of prosecuting an imperfectly established and speculative enterprise, or industry, assume a very grave responsibility. It cannot be said that it is a responsibility which they ought not to assume under any circumstances; but it may be truthfully said that they will do better if they find one or more persons to help carry their load.

The weakness which obstructs new men everywhere is in their

lack of power to give security for the payment of interest and the repayment of loans. Without loans an unfledged business man is only a bird without wings. But the obstructions in the way of obtaining loans have been reared to huge proportions. Money can be obtained in any amount when it is reasonably certain that the interest payments will be met, and that the principal can be recovered when the limitations of the contract are reached. But, in one form or another, it is supposed that accumulated wealth must lie at the foundation of all loans made in accordance with the rules of the market; and that this wealth shall be held subject to the fulfillment of the contract. The title may not be vested in any single hands, but it must lie at the mercy of the loan. The operations of every man, therefore, are theoretically limited to twice the amount of his accumulations; and as this amount is necessarily small in the beginning his operations must be also restricted. It is often the case, it is true, when apparently independent business men have no foundation whatever in accumulated wealth. But in such a case they must hold the position of mere factors, and remain subject to some possibly known but silent principal. It may be said in general terms that the restrictions thrown around business men in the beginning of their career are almost suffocating; and that comparatively few are ever afterward enabled to breathe with perfect freedom, or to move without restraint.

But the rule observed in financial operations is not the universal rule. In fiscal administration other theories obtain; and municipal bodies and States can obtain money on very easy terms without giving any pledge in objective wealth. Their credit rests upon the power of taxation. They are trusted because there is no doubt upon their ability to pay interest and their good faith is accepted as a matter of course. Yet it is notoriously true that neither municipal bodies nor States have any conscience; and they have proved that they can be as dishonest as the most unscrupulous of individual operators.

There is something very suggestive in this difference of code in the treatment of debtors. We see that the restrictions imposed in finance spring rather from a distrust of the abilities of operators than from want of confidence in their honesty. If the truth were known there is a very general confidence in the good intentions of men, so far as they are expressed in a desire to pay just dues. They are believed to be honest, and to mean well in the main. The most conservative bank in the country, after the directors had assured themselves that the applicant was engaged in some legitimate pursuit, would probably consent to loan money to first comers were there no possibility of loss through other causes than dishonesty. The miscarriages would be so few that they could afford to take their chances. But the ability of men to pay interest, and to hold their affairs so well in hand that they can return the principal in accordance with the contract, is a very reasonable cause for distrust. It may be called a sufficient cause when we take into consideration the immense disadvantages of the prevailing management in finance, the uncertainties of the market, and the limitations of human foresight. But men do not quite like to regard it as the chief cause of their difficulties. Possibly for the purpose of inflicting a penalty for failure, they have a curious habit of charging all men who do not succeed in meeting their obligations with an intention to defraud; and such men are held up to the public censure as delib-

erately bad subjects. It is a habit, however, that throws more than the due load of approbrium on the shoulders of dishonesty. The deceitful spirit is made to carry the responsibility for all the frailties through which men suffer loss; and this is hardly in accordance with the injunction in which we are told to give the devil his due.

There is a lesson here which teaches with peculiar force the need for improved methods. Were interest paid from the savings of employees, in accordance with a system that would enforce payment at once, there could be no longer any question on the ability to pay. Almost all money loaned begins to flow into their hands from the day it leaves the counting-room of the banker; and the diversion of a sufficient stream to meet the interest on the amount which they receive, while it would be found a matter of such trifling importance in its effect on their receipts that it would hardly be noticed, would put an end to everything like default in the discharge of this obligation. With regard to the security demanded for the recovery of the loan the best possible security is offered in insurance. It would never be compromised by mortgages, nor subjected to any of the other complications which beset accumulated wealth.

Let us suppose, then, that general organization has taken place after the plan outlined in a preceding chapter, and that the payment of interest, made almost automatic in the process, has been placed beyond question. There can no longer be default, nor the suspicion of default; and from this foundation let us study the power of the new combinations as their strength would be made manifest in the different avenues of production and exchange, and see if we have not made a very large gain.

The first manifestation of improvement would be found in the disappearance of all difficulty in obtaining money for any object that promised good returns. Money is but the representative of some income producing agent, and the tally of exchange. When we have created the agent, and given it a form to be serviceable in the market, we have created the object. In this case we could look, with confidence, to see the bonds of any company in good standing cashed over the counter of even the most conservative bank as fast as the money was needed for use in the construction of any work, or the execution of any contract, for which they were pledged. There would no longer be any occasion for distrusting the qualifications of the financier who stands at the head of the enterprise in which the money is to be invested. It would no longer be necessary that he should be a person of exuberent invention, trained even in the arts of duplicity, and capable of giving to jet black all the tints of the rainbow. It would only be necessary that he should have skill and knowledge in the practical work of production and exchange, and these are qualifications to be discovered by the men whose interests he would direct and control. The banker would be relieved of all embarrassment on the score of character and capabilities, and, at the most, would only have occasion to examine the merits of the venture in which the money was to be invested. If satisfied with the results of this examination he would no longer find it necessary to keep his vaults enclosed in triple steel, and could afford to be liberal in the treatment of his customers.

Among the first benefits to be derived from this increased facility in obtaining money for legitimate uses would be moral benefits. Many sensible readers may think that these benefits ought not to be the

first considered; but they shall be put first for courtesy. With the adoption of the proposed system the intensely speculative spirit, more often stimulated by desperate straits and business complications than by a morbid desire to get rich, will disappear; and with its disappearance will go a train of subject essences, known variously as defalcations, forgeries, and breaches of trust. The young Napoleons of Finance, to borrow a phrase from the current journalism of the day, will all vanish; and in their place we may have the more staid Washingtons of Finance, or men who can be satisfied with greatness without brilliancy. Everywhere we shall find a clearer atmosphere, and incomparably better hygienic conditions.

But what will be the material benefits? This will be the chief question to consider; for we cannot resist the conviction that the moral tone of men and women is more largely dependent on their material advance than on any occult influence in ethics. We have been taught to believe that the material environment of society can be brought to perfection by the cultivation of the ethic or religious faculties; but we cannot help holding to the opinion, whether truthful or heretical, that it will be easier to improve public morals by improving the material environment of men, and removing the inducements to do wrong, than to improve the environment through the cultivation of any kind of sentiment. We insist, therefore, in keeping the material features of the question constantly in view, and think that the discussion will be most effectively maintained when it is made to show their importance. What will be the material effect of enabling all men to become contributors to the capital by which the manifold operations of life are carried forward?

The first effect will be observed in the disappearance of all enforced idleness. Want of employment is the first fruit of the prevailing want of capital, and it is the employees most distressing disability. The fear of idleness haunts him even when he is most actively engaged at his labor, and the frequent materialization of the spectre, which lives continually in his imagination, pinches him with sharp pains. But the gaunt presence is not necessarily his daily attendant and frequent visitor. It is only a product of the undeveloped system which obtains. There is no good reason why every employee should not become practically his own employer, and then if he is ever idle it will be only because he feels that he needs rest. Under the prevailing system a laborer goes out on the railway under construction and solicits employment. He is met by the assurance that the men already employed have difficulty in obtaining payment for their labor, and that there is room for no more employees. It is only a question, indeed, if some of the force already engaged must not soon be discharged. It will all depend upon the success of the managers in floating a few more of their bonds. But under the proposed system the laborer will come, if necessary, as a subscriber for the stock to an amount equal to the sum of his wages. He will no longer appear as a suppliant for favors then, and in his changed attitude he will meet with a different reception. The contractor will tell him that he is the very man for whom the directors have been in search, and might even advise him to become an agent of the company and to go out and bring in his fellows. This illustration it will be seen suggests very encouraging possibilities. The negotiation might not take place in just the informal fashion represented. It would presumably be

carried forward through the office of the company of which the laborer was a member, and be completed before the railway was put under construction. But it will serve to suggest the difference between two systems, one good and the other most detestably bad.

It should be easy to foretell the effect of this facility in obtaining money on the development of the country. We have now one hundred and fifty thousand miles of railway in the United States, and their construction has cost fifty years of labor. Under the proposed system the number of miles might be duplicated in ten years could a sufficiently large working force be brought together, and sufficient additions made to the iron manufacturing plant of the country, to provide the labor and material for their construction. Indeed, under this system, railway building would be carried forward so freely that we would be compelled to make regulations for preventing the impairment of property already in service. For the first time in our career we could find real, practical use for railway commissions. We could look to see new railways constructed over every mile of our territory as fast as they could be made to pay dividends, and possibly even faster were not construction held in check. We could look, also, to see the length of our telegraph lines soon quadrupled, our express service made to reach every hamlet, the electric light set up along every urban and village street, if not along every rural highway, and a telephone receiver located in every house.

"But such an advance will be too rapid," the old conservative will exclaim. "We must dig, and drudge, and cover ourselves with mud, and filth, to extract gold from the bowels of the earth, and men must learn to labor and to wait." But the conservative will have no occasion for alarm. He will be astonished at the power of the market to absorb products when all men are at work with the feeling that they and their families are to be compensated for their labor, and that the long night of abject poverty is soon to pass away. Rates of interest might fall. It is probable that a decline would be experienced; but it would be a matter for slight concern to any person whether the rates fell or were maintained at a fixed standard. The magnitude of transactions would certainly preserve an equilibrium in any case, and no interests would suffer irretrievable or serious damage. In the multiplicity of investments there would be profit, and were prices to fall until they reached one-fourth the prevailing rates we should still find the average of incomes vastly enlarged.

Every material interest of the community demands the introduction of this system. Our financial fabric is a pyramid standing on its apex; and it turns the wisdom of its builders into foolishness by tumbling to pieces with almost periodical regularity. Then it must be painfully rebuilt, but after each catastrophe it has been rebuilt in the same inverted position. and there it stands to-day, trembling through every stone, and ready to collapse at the lightest breath of summer. Nay, it is always ready to fall without any external impulse. It settles gradually to its overthrow through the unbalanced weight of the blocks painfully upheld in mid air, and it would come down were the earth as completely denuded of atmosphere as the moon. But under the proposed system it could never fall. There could be no panics and no bankruptcies, for no man would be obliged to carry a load beyond his capacity.

CHAPTER IX.

OBJECTIONS ANSWERED.

To some men these suggestions will sound impracticable, on account of their seeming want of consistency with prevailing customs. To others, again, they may sound revolutionary; and seem to imply a disposition to place the operations of finance on a new and radical foundation. But, theoretically, they are neither the one nor the other.

As already suggested, the world is changing rapidly in its conceptions of the true significance of wealth. Since the introduction of the corporate and joint stock systems the objective character of property, and the methods of its production, have largely, even radically, changed. Were there a modern Prince Hal. and a Jack Falstaff they would find it difficult to undo any tradesmen in the suburbs of London by a repetition of their madcap adventures. They could hardly waylay a train of pack-horses loaded down with gold and silver for use in the metropolitan market. Property is no longer recognized in the substance, but in the sign; and the sign is indicated in the figures that represent income. This change is in part, in large part no doubt, due to the multiplication of new pursuits, invented and organized in recent years. Proportionally, men have probably no more houses and lands to-day than they had in the days of Charlemagne, and no more flocks and herds. But relatively they are even beginning to turn away their eyes from such possessions; and to find in certain artificial and subtile creations more desirable objects of pursuit. This is a manifestation that springs from the variety of objects to be desired; and it must become continually more and more pronounced as civilization advances and wants are multiplied. But the change is chiefly due to the division of property into shares represented by stock certificates. and to a growing comprehension of the meaning of interest and dividends. Sell the material of half the companies in being to-day and it would hardly bring enough to cancel their outstanding obligations incurred to meet running expenses. to say nothing of the total estimates made on the value of their securities. Take the stock of an express company as an example. A few horses and wagons for the local delivery of merchandise form about the only possessions needed by such a company; and were the dividends satisfactory the stock would sell just as well in the market were even those conveniences obtained for hire. Your great newspaper is honestly worth millions of dollars. Yet it is almost exclusively water, as the word is popularly understood, notwithstanding the abhorrence for that most excellent fluid frequently expressed by some of the editors. In the true valuation also of banks, insurance companies, and even of railway companies, as indicated by the price of the stock at market quotations, everything is measured by income. Trusting to his own opinion on the course of trade, no man thinks of consulting more than official reports on earnings to learn the value of any property in which he may think of investing. Income, and a continuation of the favorable circumstances that will maintain income, will form the only test for his judgment.

From an observation of these facts we have the right to conclude that the old method of estimating property on production, or the cost of production, has been substantially abandoned. We have the right to conclude, also, that, economically, income, using the word generally to cover interest, rents,

dividends, or profits, is the only true creator of property, and that whoever can guarantee the return of a certain sum in annual income possesses the power of producing a property equal to the principal represented by that income when estimated as lawful interest. It matters not what the objective form of the creation. It may be represented in the form of a dwelling returning so much per annum in rent, or it may be only a bit of secured paper bearing a pledge of certain definite returns to the holder. It will be property in either case; and with the spirit prevailing in financial circles at the present day the latter form, if the security be ample, will be held in best esteem. This is the reason for holding that there is nothing inconsistent and consequently impracticable in the idea of maintaining securities based on personal income. All income is fundamentally personal income, and the principles which underlie cannot be changed by methods and combinations.

It might be objected that a system resting on a foundation of personal bonds would be open to criticism from the beginning; that such bonds are justly thought objectionable, and that they could not be maintained without proving a source of hardship and danger to the person by whom they were carried. But this objection could not be raised against the consistency of the system when compared with the prevailing system. It could only be raised against its advantages; and it would not weigh very heavily even there. The prejudice against personal bonds is due to the uncertainty that hangs over everything negotiable under our empirical system of finance. Such bonds are to be feared only because casualty is to be feared, and there is no certain dependence for the future. Intrench with sufficient thoroughness against casualty and you have removed everything objectionable from the nature of personal bonds. They may be made the true instead of the subterfuge representative of capital. We must not forget to observe the trend of the current if we wish to find easy navigation. By far the larger proportion of the operative capital in the world is represented in bonds, or in their equivalent, mortgages, which are most commonly personal bonds under an old form, and we should not be able to move without the aid of these very useful crutches. The plan, while pre-eminently consistent with all that is good in the accepted system, is not dangerous, and it proposes not hardship but relief from hardship.

It might be claimed, however, that the system would be found impracticable on account of obstacles that would have no foundation in finance. Its consistency and general soundness admitted, it might be thought likely to fail on account of the want of coherency and purpose on the part of the men who must be depended upon to make it practicable. There seems to be a possible obstruction here; but if the right spirit prevails among leading men it ought not to prove an obstruction. It ought not to be difficult to convince even the least practical man that if he can have $1,000 by paying the interest, and giving satisfactory security for the final redemption of his bond, he had better take the money. It ought to be still easier to convince him that he had better take $5,000 on the same terms. Men who can follow the leaders of the Anti Poverty Society, and endorse a single tax scheme, may need considerable tuition before they can grasp theories founded on commonplace finance; but the darker the night the more brilliant may be made the illumination of the electric candle.

The reasons for holding that the

suggestions for an improved financial system are not revolutionary are equally well entrenched in the tendencies of the times. True, evolution is generally made to mean revolution by the changes wrought during the course of a century in the organic features of society. Even our Federal Union, with its clearly defined and written Constitution, has been made to show that it is not exempt from the law of motion; and we have seen the disappearance of one of its most strongly outlined, though abnormal, features. But the changes proposed here are hardly equal to the changes wrought in a century of ordinary growth. Society misapprehends its own status at the present time. Men have not taken the full measure of its advance during the last hundred years. It stands to-day at the threshold of the proposed system, and in such a position that a single step will enable it to enter. Nay, the advance has already entered, and has reached even the rail of the chancel. The strongest movement of the age is in the direction of organized co-operation. The philosophers of reform do not discover this fact because our political economy has not been sufficiently analytical to give them the right cue, and they have mistaken the true field of co-operation. While they have been talking and dreaming of co-operative production they have misapprended the true scope of the word production, and proposed the production of objects instead of the production of values. But practical men have been wiser. Co-operative organization, and co-operative production, in the true meaning of the terms, have gone on apace, the benefits of co-operation have been widely disseminated, and the dispersed masses, though still blindly hostile to the movement, are compelled to admit its irresistible force. They feebly imitate it, indeed, and while condemning, and calling it the combination of capitalists, they form feeble counter organizations. But they mistake the nature of the manifestation. It is not the combination of capitalists. It is simply the combination of men who become capitalists through the force of their combination; and the whole world is upon the point of conversion to the excellence of their principles. Even the men who are most determined to stand alone, and to work for their exclusive personal interest, are generally beginning to see that their position is hopelessly weak, and they are trying to find strength in some modified form of association. They may not in all instances intend more than the formation of leagues; but it is safe to presume that most leagues will be only preliminary to something more complex and efficient. We have heard a great deal recently on the subject of trusts. They have been made and are still made shuttlecocks in the political game between parties; and the statesman who can strike down a trust with the greatest neatness and despatch thinks himself a made statesman. Of course trusts are opposed. Anything new and meritorious is very likely to meet with opposition. The modern banking system was opposed with considerable bitterness in its infancy; and the Bank of England would never have been chartered had it not been necessary to the English Government. But the bank lived, and it is safe to presume that trusts, though their growth may be checked by repressive, dishonest, or ignorant laws, have come to follow its example. Among other trusts we are greatly in need of a bank trust, pledged to protect every bank in the country against failure.

But perhaps the possible objection that the suggestions are revolutionary is not yet quite met. It may be raised not so much against the

financial as against the social features of the plan. It may be admitted that the financial features are entirely consistent with much that is practiced daily in the market, and strictly in accordance with financial principles; but it might still be objected that the result could prove revolutionary from a social point of view. The sudden accumulation of new operative capital in hands trained only to handle the laborer's pick and shovel, the mechanic's tools, and the accountant's pen might tend to disintegrate or dislocate both financial and social relations. To this it can only be answered that society has never yet suffered from a plethora of capital that could be turned to industrial uses. It may or it may not have suffered from the concentration of accumulated wealth in too few hands. The question is one that there will be no profit in discussing here, and not much profit in discussing anywhere else. But it will certainly not suffer by placing operative capital in the hands of its most discontented members, and giving them a larger stake in the well-being of the community. It would doubtless make the poor somewhat more influential. From a condition of mere dependence they would become stockholders wherever there was stock to be bought or sold. But they would soon learn to take conservative, practical views, and would not be found troublesome stockholders. They would not be found of the kind given to injunctions, and other legal obstructions that cause embarrassment among boards of directors. They would be of the kind to see the importance of maintaining the value of stocks, and we might hear less talk of enforced reductions in charges. The weakest point of the plan, when it is a question of securing prompt popular approval, consists in the fact not that it represents any form of aggression but that it contains nothing absolutely new or sensational, and offers no prospect that capable men will be put down, and deposed from their position as leaders. Men have been so long enslaved to their conditions that they think they have personal outrages to redress.

No, the suggestions are not revolutionary, and they ought not be found impracticable. It is not a revolution that is proposed, but simply an extension of the foundations on which the financial structure is built. Men full of traditional ideas think that this structure rests on a foundation of accumulated wealth. But it cannot be too frequently reiterated that this conception is no longer true. As a matter of fact it rests on a foundation of six per cent., or on something as nearly approximating six per cent. as it is possible to reach. Accumulated wealth in the old sense can be considered as barely more than the corner-stone, and it may be relieved in even this office by the resources of combination and insurance. Financial transactions may be said to rest more upon accumulating than upon accumulated property. Bankers turn their backs upon houses and lands, and refuse to accept mortgages for half their estimated value. But they will loan money on stocks to within ten per cent. of the market quotation and never ask if they are not half water. Why is this true? It is true because stocks have a quoted market value, and have become a chief medium of exchange. To within ten per cent. of their worth they may be made practically a currency; while the more objective property, not represented in shares and dependent upon vague estimates for its valuation, is too inert for the swift processes of modern commerce. The day will probably come when even houses and lands will be universally represented in

shares; and when that day arrives they will be serviceable for something besides their provisions of shelter and food. But for the present they have been compelled to withdraw from the mart. Stocks and bonds have possession of the field. It is known that the corporation in whose name they were put forth will struggle to keep them as nearly at par, or at quotation rates, as circumstances will permit, and that, under ordinary conditions, nothing less than a panic can cause them to fall much below market quotations. But very few merely personal securities, using the term in the sense of property without corporate endorsement, unless put in the form of gold and silver and deposited in bank, would receive so much consideration. Personal affairs are too complicated, and too obscure, for these days of organized and institutional enterprises.

What should concern us most in the study of this question is the frightful waste of resources that follows on the prevailing system of financial management. The men who in the total of their earnings are competent to carry the entire weight of finance without feeling the load contribute nothing whatever to its strength. Yet they themselves suffer because of their neglect, and society is retarded in its progress beyond calculation. No broader economic question could be raised, nor one more worthy of careful study and deliberation.

But in holding the argument so closely to the material ground on which it was originally begun we have no wish to assume that other considerations have no relevance. They are worthy the largest regard, the more truly because there are some errors that should be uprooted, and, as already suggested, some vices that would disappear with the disappearance of the causes that incite to crime. Our ethical teachers tell us that the distresses of men are necessary for disciplinary purposes, and for the development of the character. It is possible that they may even find some sanction for these precepts in the literary productions of the Kings and Princes of Israel, men who wrote poetry and conceived distresses which they thought might benefit their subjects, but which they themselves were not often called upon to experience. Certainly, were there anything in suffering to improve the character, and to justify the assertion that it is only a blessing in disguise, men manage to condense enough of its benefits into the three score and ten years allotted to human life to serve them for all the remaining cycles of their more permanent being. The disciplinary blessing is pretty evenly distributed, too, among all ranks and conditions. The number of wretched, sleepless nights passed by the beggar in his penury and despair is only paralleled by the number of correspondingly bad nights passed by the expectant millionaire while he is confounded by visions of bad debts, notes going to protest, and all the disasters that can befall a man who has a great deal to lose and thinks that he sees a rising, imminent chance for its disappearance. To readers sitting quietly in their own domiciles the story of struggles against adverse circumstances may seem entertaining, and full of romantic interest. Modified by invention it has been made entertaining in the pages of the novelist and the playwright; but the pleasure is all experienced by the reader or the audience. To the actors on the stage it is only the dreary rehearsal of a five act tragedy, with no scenic embellishments to enhance the romance, and no auditors present to applaud. But to the spectator the exhibition may seem heroic, like conduct of the man who can suffer

the loss of an arm without flinching. Hence, probably, the common opinion that such struggles quicken the intellect, enlarge the sympathies, and strengthen the character. This is one of the most fondly cherished superstitions of men, and it will be a pity to bring it into discredit. But it is fundamentally and altogether an error. It would be as wise to say that the stunted growth of a tree in its infancy is favorable to a broad limbed, well shapen, and sturdy maturity. The truth is the early experience of almost every man who assumes the control of large and speculative enterprises is favorable only for the cultivation of faculties which ought not be too highly developed. If his intellect is quickened it is quickened only for the practice of sharp and unscrupulous expedients. If his sympathies are enlarged they are enlarged simply in the capacity for self pity, and in behalf of the bosom whence they emanate; and if the character is strengthened it acquires the strength of a stubbornness which will break sooner than bend. The early career of every man of intense activity and large ambition is a career of constant temptation; and if it does not end in making him utterly selfish and unscrupulous it is a sign that he was endowed by nature, or education, with a fund of correct principles too deep to be entirely exhausted by his period of adversity. The theory that men are made better or stronger by suffering, though possibly a source of some encouragement for those who suffer, presupposes a Creator who can only perfect his work by making himself a hard master. This would be an unfortunate conception of the Infinite. It is to be presumed that growth is to be eternal; and it would be disheartening to believe that suffering must also be made eternal to the end that we may be properly stimulated to exertion. We prefer to believe that the virtues live and thrive to a healthful maturity only in the placid atmosphere of contentment.

No, the moral and intellectual growth of the community demands better reciprocal relations between the members; and we may dismiss the idea that there is anything in the prevailing methods to be commended on either ethical or disciplinary grounds. Were it worth while, or consistent with the argument of a treatise meant to be mainly economic in its objects, the reasoning from such grounds could be made overwhelmingly strong in favor of a change of system. We could point, as other men have pointed, to our overflowing prisons, filled as often by undeveloped men who have been driven or led to crime by the wretchedness of their early environment as by their lawless instincts. We could point, also, to the spectre of ruin that haunts the streets at midnight, and challenge the moralist to separate the inherently vile from those who have found the impulse to evil in the despair of homelessness and privation. But where the argument from material grounds alone should be found irresistible, it would be a waste of time to go up to the reinforcement of the preacher and the philosopher of social science.

CHAPTER X.

SOME POLITICAL REFLECTIONS.

When we come to the political bearings of the question we meet with manifestations so closely related to political economy, and so fraught with danger, insidious and direct, that the discussion would hardly be complete without giving them more than an incidental con-

sideration. These manifestations spring from both political and economic causes; and they need to be subjected to all the light that can be brought to bear upon their meaning. The age is socially one of intense unrest, and it is impossible to meet the agitation continually maintained without feeling its effect upon political institutions.

We follow in the United States certain clearly defined constitutional theories. These theories are so well defined that it is almost difficult to maintain political divisions founded on their interpretation. Men go from party to party without the consciousness of having changed their convictions on any question that involves their conception of the Constitution, and parties sometimes change measures in seeming ignorance of the fact that they are masquerading in the garments of their adversaries. This was the experience of an entire century following the close of the Revolutionary War; and it should not be necessary to say that it was a healthful experience, suggestive of the possibility of maintaining government strong enough for the maintenance of the public security without the recurrence of those periodical or frequent convulsions that signalize the history of most other countries. So strongly were our people imbued with these moderate and unaggressive theories that the Civil War, springing from the one traditional inconsistency in our political code, failed to weaken their force, or lead to more than a temporary suspension of their operations.

But since the agitation of public questions has become more destinctively social than constitutional we have been compelled to witness a new movement. It cannot be denied that the atmosphere of political discussion has been materially changed; and that a recationary tide has set in which has already proved strong enough to destroy some landmarks, and to threaten others with overthrow. Public men seem no longer inclined to ask if any proposed new measure will be constitutional. They only ask if it will be popular. They wish only to know if it will win votes from the precincts where votes are most numerous, not where the voters are most intelligent. It would be reassuring to be able to believe that this reckless disregard of a statesman's first duty springs from an excessive confidence in the strength of the Constitution, and that it is due to a belief that the organic law will prove strong enough, in some of the various departments of administration, for its own protection, notwithstanding the treason of its chosen defenders. But we are not permitted to indulge even in this poor illusion. There is evidence that it is becoming common with public men to reason from transcendental theories. In place of a frank acceptance of political principles which were the evolution of liberty loving centuries of Anglo Saxon civilization, revised and perfected beyond the reach of kingcraft, we see a disposition, if not openly to challenge our constitutional theories, to at least obscure them by false issues and to defeat them by subterfuges. Has the want of resources, or the condition of the market, caused some unfortunate manufacturer to close his factory and discharge his workmen? The Government is to blame. It should sell or call in some bonds, or make an appropriation. Or, better still to the conceptions of our most advanced thinkers, it should take possession of the machinery of production and insure those workmen, who would not consent to own a factory if it were thrust upon them, against idleness. Is the rent bill onerous? Tax the land to the last penny that it will bear for the support of the Govern-

ment to the end that the rent bill may be lightened. Do the railways find the service of transportation complicated, and surrounded by difficulties which only their managers of largest experience and best talent are able to comprehend and meet? The government is the proper appeal. A handful of Government servants, trained in the law and familiar with the modes of packing and carrying a convention, should know how to pack and despatch merchandise. Do the managers of the telegraph impose a tariff on messages, and learn secrets which no cipher can be made to cover? Let us have done with them, then, and establish a Government telegraph where charges will be next to unknown, and where secrets can neither be bought nor sold.

This is the spirit in which the jest is carried forward and matured. Day after day, and year after year, under the impulse of the prevalent social discontent, we see our theory of individual self government, the only theory of self government that possesses any special significance, assailed in its most vital principles. We not only see it assailed, but have seen it disregarded and set aside by the highest law making body in the Union in response to the clamor of men whose heads have been turned by the fantastic misconceptions of reformers and State socialists. Yet men meet the demonstrations against their constitutional rights with a dazed expression of countenance, and seem to wonder if it be not true, after all, that our political system was conceived in error. They begin to suspect, apparently, that every man must be made to walk under the direction of some official superior, even after he has passed his own threshold, and stands beneath the shelter of his own roof. The picture is not overdrawn. We hear incessantly the clamor for more laws, more stringent and repressive legislation, and every Legislature that meets is at once flooded with bills, which, if passed, would have about as much business in the statute books of a free State as an imperial ukase. But these bills are not always defeated.

The surrender has not been made at the hands of any distinct political party. It has been made at the hands of the demagogue who is at home in all parties; but if either the one party or the other wears the more abject countenance at this time it is the party which has always most distinctively claimed to be the advocate of self government. Hence, it will be seen that, on account of the misconceptions of the times, we are in danger of seeing the champions of free government become the conspirators for its overthrow; and we should be the more keenly alive to the danger of allowing the existence of evils which breed social discontent. We cannot afford, in response to demands that should never be made, to see compromised the only principles on which free government can be maintained.

The reason why we are running unusual risks at this time should be easily comprehended. Society, considered independently of the Government, which of course is a compulsory organization of the entire community, is half organized and half unorganized. Here is the first cause for disagreement. Among the organized forces lies the chief strength of the entire body for the prosecution of great enterprises, or the achievement of brilliant success; and the display of this strength provokes jealousy and all kinds of uncharitableness. The operations of a portion of these organized forces have been vast and comprehensive. In the possession of the chief avenues of communication, and entrenched in

our complex and highly developed banking system, they have assumed control of two functions which, in the rudimentary days of political evolution, were held as the prerogatives of the crown or king. They control the monetary sources, and all that is best worth holding in the highways. This is entirely right, and consistent with a just conception of popular functions in a free State. It is not the people in office who are sovereign. It is the people out of office. But this is an ultimate distinction which the men in office do not always care to observe; and the traditional theories, conceived in the days when England was only emerging from military despotism, are still maintained, and made the foundation of even our republican code. Reasoning from these theories it is easy to maintain that the people should be held subject to rulers in everything that was once the prerogative of the crown; and we are in danger of seeing ourselves forced backward to ground that will be hardly the less unrepublican and oppressive because the rulers happen to be elective instead of hereditary rulers.

But the instinct of independence is so strong in this country that this kind of reasoning, reactionary and false when carried to any considerable extreme beyond the mere duties of police, would give us little cause for concern were the organized forces of the community all organized for corresponding purposes. Were the objects always similar we could look to see the organized forces work together; and the exigencies of the situation would very soon compel universal organization. Then there would no longer be danger of appeals to the Government for the protection which every man would find in his environment, and there would be little opportunity for covert encroachment on popular rights. But, unfortunately, the organization is for distinct and antagonistic purposes. The majority of the organized forces are combined rather in obedience to an instinct than in response to the demand of any coherent principle; and their organization, while promising well for the future, remains, for the present, a chief source of danger. They believe themselves in peril from what they term the capitalistic combinations, and cast about in every direction for the means of protection. Naturally, they turn to the Government, and offer themselves as the allies of encroachment.

Under these circumstances we should readily see what would be likely to happen. The financial companies are strong not only in the superiority of their system, but in their material resources. They do not yet possess more than one-fourth the accumulated wealth of the country; but they possess it in the form in which it may be most powerfully wielded for the accomplishment of any end, and they hold the operative capital of the entire community almost completely under their control. They represent a race of gigantic individuals in fact, surrounded by a race of pigmies; and they can hardly move without the danger of stepping on one of these pigmies and crushing him out of all semblance to humanity. Hence, the continual uproar in the community, and the clamor for repressive laws. Hence, also, the peculiar danger that comes from the merely protective organizations. While helpless for any financial arrangement that can be productive of considerable benefit to their members, such organizations may be made powerful agents to assist in attacks on the liberties of citizens, made under pretext of protecting the community against so called monopolies. All the meddlesome, reactionary laws that have been placed upon

the statute books within the past few years, and they are not a few, have been passed in response to the demands, or the supposed demands, of some form of protective organization, Granger, Knight of Labor, or Trade Union. And there is not one of those laws which, besides being fundamentally unconstitutional under the American conception of free government, has not either worked mischievously or proved abortive.

But it is not so much the evils which we have reached that should give us concern as the evils to be anticipated if we continue moving over the road we are now following. At the moment we are going in the wrong direction at a very much more rapid pace than men who do not trouble themselves by taking observations suspect. Nothing is so treacherous as the force of a current in the middle of a broad river. More than one boat has been swept hopelessly into the rapids above Niagara Falls when the boatman did not even suspect that he had reached a current that he was unable to stem. Political movements, more than any other movements, are insidious. Congress has the right to regulate commerce between States. Certainly, it was so provided in the Constitution; and no man can be found to dispute the proposition. Then it must have the right to take control of all the railroads chartered by the States, appoint a new board of Federal directors, and to practically usurp the chief functions of railway management. While you are making regulations it will be as well to make them organic and institutional as to have them merely statutory. Again the proposition is simple, and few are found to raise their voices in protest. But what will come next? Once in control of the railways, Congress, with equally good logic, can turn them to any political service for which it thinks them adapted, and, little by little, make them an entering wedge to rend asunder and destroy our constitutional theory of localized, or restricted, eminent domain. Will it be said that there could be no inducement for such an extreme act? It will not be difficult to find an inducement for any encroachment that could be conceived when the most potent motive force that is driving us forward is inspired by the clamor of one portion of the community determined to repress and subjugate another portion at all hazards. When upon every hand we hear men, impelled by their misapprehensions, demanding even the extinction of their own liberties, on the plea that they must be protected against encroachment, we must not put too much confidence in want of inducement. It is hard to foretell the fate of a society divided against itself. We should have the most repressive government on earth were half the laws and regulations that are advocated once proclaimed and put in operation. We have even at this time organized factions clamoring for the destruction of both the first and second largest fields for personal investment in the country. The Government is asked to take possession of both the lands and the railroads, to say nothing of the bagatelle represented in the telegraphs. True, these factions are strong neither in numbers nor in the force of their leaders; but they are strong enough to encourage demagogues, and help them to carry unconstitutional measures. We shall have little room for government in this country. As a large proprietor and operator, with despotic functions, it represents a stronger personality than we can prudently let loose on the community. When the masses have learned to do their duty there will be such a demand for new fields of investment that even the postal

service must possibly be surrendered to the people, and converted into a source of personal profit.

Security against aggression on popular institutions will be found in promoting the work of organization on lines that will give it some meaning in the field of practical finance. We cannot go backward were we crazy enough to wish to turn away from the best progress of the age, and become as rudimentary again in our social relations as a tribe of Comanche savages. But neither can we suffer a continuance of the discordant and belligerent spirit now manifest in the community without risks which no prudent people would care to run. Logic is fate. Civilization is bound towards complete enfranchisement, or it is bound to extinction under the shadow of reaction and strong government. It may change direction frequently, now advancing and now returning on its paces. But the general progress will be finished at one or the other limit.

APPENDIX A.

In proposing measures for increasing the monetary resources of the community it is desirable that everything indeterminate shall be eliminated from the plans. The following bill was prepared, therefore, in colaboration with a member of the New York bar, who is a member, also, of the Legislature for the current year; and it is offered for the deliberations of legislative bodies. It is believed to contain the chief provisions needed for the successful administration of the system suggested in the foregoing treatise. Experience might demonstrate the need of amendment; but the bill has been carefully matured with an eye to the various sources from which danger could be apprehended in the administration of companies organized under it provisions, and it is confidently felt that it leaves fewer openings for irregular conduct on the part of either officers or members than most of the acts of incorporation now in force.

No man can be found, not utterly selfish, who will deny the justice of the measure. There may be a few men who will deny its expediency. They may charge the general poverty among the masses to lack of thrift, and to a disregard of the means through which a few men obtain wealth. But the subject of this little book has been discussed in vain if it has not been shown that it is a physical impossibility for more than a few to obtain even a decent subsistence under the prevailing system, while the great body of men must remain not only poor but perilously exposed to casualty. The bill was drawn for the benefit of this latter class, and not for the men with the more prehensile fingers. It is commended to the Legislatures of all the States.

An Act for the Incorporation of Bond Insurance Companies.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1.—Any twenty or more persons of full age, citizens of the United States, a majority of whom shall be also citizens of this State, who shall desire to associate themselves for the improvement of their condition, may make, sign, and acknowledge before any officer authorized to take the acknowledgement of deeds in this State, and file and record in the office of the Secretary of State, and also in the office of the Clerk of the county in which the principal office of the association shall be situated, a certificate in writing in which shall be stated the name or title by which such association shall be known in law, the particular business or object for which it shall be formed, the number of trustees who shall manage its concerns, with their names for the first year of its existence, and the name

of the town, city, or county in which its operations shall be conducted. But such certificate shall not be filed, unless by the written consent and approbation of one of the Justices of the Supreme Court of the district in which the principal office of such company or association shall be located, to be endorsed on such certificate; and nothing in this act contained shall authorize the incorporation of any society or association for any purpose repugnant to the Constitution or any statute of this State, or prohibited by the Constitution or laws of the United States.

SEC. 2.—Upon filing and recording a certificate as aforesaid, the persons who shall have signed and acknowledged such certificate, and their associates and successors, shall, by virtue of this act, be a body politic and corporate by the name stated in such certificate, and by that name they and their successors shall and may have succession, and shall be persons in law capable of suing and being sued in any court of law or equity in this State, and they and their successors may have and use a common seal, and may alter and change the same at pleasure, and they and their successors by their corporate name shall in law be capable of taking, receiving, purchasing, leasing, holding, and conveying any personal and real estate which may be necessary to enable them to carry on their operations and transact the business of their incorporation, but for no other purpose whatever.

SEC. 3.—The number of trustees in said company shall be not less than five nor more than thirteen. They shall be elected annually by ballot, each member of the company having one vote and no more, and due notice of the date and time of election shall be given in a newspaper most convenient in place of publication. It shall be the duty of the trustees to elect a President, to appoint and fix the salaries of clerks and other assistants, and, as hereinafter provided, to meet all regular and contingent expenses entailed in the work of administration. They shall be paid a compensation not in excess of the sum given to the most highly compensated member of the company when engaged in his pursuit or calling for a livelihood.

SEC. 4.—The said trustees shall make suitable by-laws for the regulation and government of the company, provided, however, that no by-law shall be adopted which shall be inconsistent with the Constitution and laws of the United States or of this State, or which will infringe on the liberty of the member to select or change his place of domicile, or restrict his freedom in making or executing any contracts for which the sureties of the company are not pledged.

SEC. 5.—It shall be lawful for the said company to maintain a fund founded on an established percentage reserved from the wages, salaries, or income of its members in their various callings, and paid into the treasury of the company or to its agent by their employers, or in accordance with such other regulations as the trustees may adopt, the said fund represented in bonds bearing the names of individual members to be apportioned in allotments among the members according to the percentage or percentages so reserved, and used either for the construction of dwellings or for general investment under regulations imposed in the by laws of the company. All bonds shall be fixed at an amount that will leave in the treasury, after the payment of interest, a fund sufficient for their redemption on the death or permanent disability of the members in whose names they were issued, and cover the expense of managing the concerns of the company, including the payment of losses on property by fire. On a majority vote of the members the percentages may be increased to meet any benevolent or educational plans which may be thought expedient, but in no case shall they be made to cover speculative objects or plans under the control of the trustees.

SEC. 6.—All investments of funds made by the members of the said company in any manufacturing, mercantile, or financial concern shall be made subject to the consent of the trustees, and without such consent the company shall not be held liable for any losses which may be incurred. In case of the suspension or bankruptcy of any firm with which the funds of any member of the company are invested, it shall be the duty of the trustees to take such legal steps as may be thought expedient to recover the amount; but both the interest and insurance on all or any part of the amount which cannot be recovered must be paid by the member making the investment until the claim is fully satisfied.

SEC. 7.—The trustees shall have no power to order an assessment on the members of the company, nor to fix the allotments to members low enough to leave a permanent reserve in the treasury larger than one and one-half of one per cent. on the total receipts; but the Supreme Court, on the application of the trustees, may order an assessment to meet the demands of a judgment obtained against the company in a court of law, or to cover unusual losses caused by fire, pestilence, or the disability of members.

SEC. 8.—On receiving an application for membership it shall be the duty of the trustees to investigate the character and fitness of the applicant. No person shall be deemed eligible to membership who is not industrious and trustworthy, and no person who has once been a member of any company which may be formed under the provisions of this act shall be admitted to membership in any other company without bringing a certificate of his good standing and qualifications from the trustees of the company of which he was last a member.

SEC. 9.—It shall be the duty of the company to maintain an employment bureau, where shall be kept a registration of the names of members seeking employment, and the names, when furnished, of employ-

ers wanting service; but the performance of this duty shall not be construed to give to the trustees the power to fix rates of wages or terms of employment. During the temporary idleness or disability of a member, the percentage reserved from his wages or salary shall be paid from the reserve fund of the company; but in any such case the said member, when again employed, shall be liable to the payment of a double percentage until the deficiency is met.

SEC. 10.—The right to membership in any company formed under the provisions of this act shall not be held as an exclusive right; but no person, not a trustee or other officer, shall remain eligible to membership except while actually engaged in the pursuit of some industrial, mercantile, or professional calling for a livelihood.

APPENDIX B.

WE have undertaken to give in the foregoing pages a true theory of co-operation founded on the facts of our social, economic, and political development. That there may be also false theories of co-operation will be readily apprehended, for there is no virtue in a word, however attractive the train of associations, which it may awaken. It will be worth while to point out a few of the objections which may be raised against some of the various systems of co-operation that have been taught and practiced.

Until within the last two or three decades political economy has been a very inconclusive science because of the lack of data from which correct deductions could be drawn. The statistician is a being of very recent development; and even the census taker, when his services comprehended more than the mere count of numbers in population, has only recently reached a stage of real efficiency. The earlier writers on political economy knew only theoretically of economic conditions, or of the nature and division of the forces that enter into the accumulation of national wealth. Indeed, they may be charged with a very imperfect conception of the substance of wealth itself, and of its sociologic relations. They knew only the rudiments of financial science as it is made intelligible today in statistical tables and current facts; and many of their theories are still accepted only because they entered into the early education of a generation which has not yet entirely passed away.

But if the masters of political economy often failed to comprehend the principles of the science which they taught, what could be expected of men whose impulses were chiefly benevolent, and who undertook to divert the crude deductions or rather the *a priori* theories of those masters into schemes for ameliorating social conditions? They could be expected to conceive only ideal systems, founded rather upon ethical than upon material grounds. They would look only to discover what they conceived to be the duty of a man in his dealings with his fellows, and overlook the fact that we belong to an exceedingly self-seeking race. Such men might be good prophets, or evangelists, of a new era; but they could hardly be expected to give form to any plan that would meet with universal or even general favor. Unprovided with facts, and filled only with philanthropic sentiment, they would merely devise schemes that would prove fundamentally wrong and impracticable.

Of this character, unfortunately, were the men who conceived and instituted the various systems of co-operation that have been attempted in divers times and countries. Their first dream was of industrial co-operation. Well, this is a good enough conception when it is fully comprehended; and it is to be hoped that those who are able to read between the lines have found in this treatise a suggestion that it is both good and practicable. But pursued as a prime object it is altogether worthless. The facts furnished in the first chapter prove beyond question that no great ben-

est can come to the race through the adoption of a system in which industrial co-operation shall be more than incidental. There is not enough profit in production, and not enough wealth accumulated through its contributions, to add appreciably to the comfort or security of any of the men who would become the recipients of a universal and equal dividend. Hence the failure, or the lack of vitality, manifest in all schemes looking to industrial co-operation. All the coparceners remain as poor as ever when such schemes are tried; and, to add to the causes for dissatisfaction, they are restrained in their liberty both of movement and action. The notion of industrial co-operation was conceived before statistics enabled men to define both the possibilities and limitations of production.

Similar reflections must be made in relation to the co-operative store system which has been worked up to such large proportions in England during the last quarter of a century. We are told that the combined capital of the English co-operative stores reaches the large total of $45,000,000, and that their dividends distributed among the stockholders amount to $15,000,000 annually. But those stockholders number nearly 1,000,000; and when we divide the total of dividends among this large army of partners we find that each partner has received only a few dollars, a smaller sum of money than a middle-priced mechanic would earn in this country in a single week. It will be seen, therefore, that co-operative stores add very little to income; and as for their contribution to the accumulations of the stockholders a division will give less than $50 to each person. Can a better illustration of financial impotency be conceived? But the system is not impotent for evil. These co-operative stores are absolutely mischievous in their effects upon the market. They intensify competition, and, whether intentionally or not, they reduce prices, and, as a final consequence, they reduce the income of the stockholders by whose subscriptions they are maintained. They furthermore violate that economic principle which demands variety in pursuit, and the widest possible extension of reciprocal service.

Another development of the co-operative idea is found in those combinations known as building and loan associations. Here at least, it will be claimed, the co-operative movement has been productive of much good. But even here the claim cannot be admitted without great qualification. During nearly a half century co-operative building societies have been carrying on their operations in different parts of the world; yet the number of employees who have obtained homes through their agency would not be as a single unit to five thousand. Why this failure if they have proved efficient? Advocates of the system will charge the insignificant results obtained to want of thrift and foresight on the part of employees. But there are various causes for failure, and the lack of thrift and foresight is not the chief cause. The system itself is essentially weak. The class of dwellings offered through building societies is not such as would be desired by men of reasonable ambition, and not calculated to awaken a high degree of enthusiasm. But for the population of large cities a second objection is even more fatal than the first. Employees cannot afford to live in the suburbs. They must be found at their places of employment at an early hour in the morning, and must remain until a late hour in evening. The cost of transit to and from suburban homes is also considerably in excess of the cost in town. Yet it is only in the sub-

urbs, where space is necessarily abundant and of little value, that building societies have been found strong enough to operate. These are serious obstructions in the way of co-operative building as heretofore prosecuted. Besides, the scheme has no economic bearing, and entirely fails to provide for that general increase of operative capital which should be held in view.

The most popular, and as employees seem to believe, the most successful form of co-operation yet tried has been developed through the agency of trade unions and kindred organizations for maintaining wages. Such combinations have probably been successful in securing something like stability for wages; but at best a trade union can never be more than a breakwater to prevent a too sudden outflow of the current. In spite of all efforts at control, we see continually that wages rise and fall in sympathy with the industrial or rather the commercial situation. These organizations are also dangerous when not directed with the utmost address and judgment. Wages must always fall after a panic, or half the total of employees would starve. They must also fall during a prolonged period of depression, or the same catastrophe, modified possibly by half rations, would follow. It may be easily possible, then, to precipitate a panic, or compel wholesale discharges of employees, by contending too stubbornly for rates at times when the commercial movement has become undecided and weak. The best means of maintaining wages will be found in an increase of capital and the enlargement of enterprise.

On the whole it may be said that all theories of co-operation save those that are founded on our growing financial methods may be pronounced either inefficient or mischievous. This condemnation, however, must not be interpreted to lie against certain mutual benefit societies which are moving on the right road, but have not yet succeeded in advancing to any considerable distance.

THE END.