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LECTURES

UPON

LOCKE'S ESSAY.

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PREFACE.

THE following Work has been undertaken with considerable reluctance. I have been repeatedly applied to by Dublin publishers to furnish them with a contraction of Locke's Essay, and have received liberal offers of pecuniary remuneration. Hitherto I have uniformly declined the undertaking, and have been only induced to enter upon the present work, by having ascertained that a spurious contraction, in a catechetical form, is in circulation under my name, sold by the booksellers as mine, and bought as such by the students. Finding the defects of my own works sufficiently numerous, without being stigmatised with the errors of others, I have, in self defence, attempted these Lectures upon the Essay.

To execute what the publishers first proposed, a mere contraction of Locke's Essay, was a task to which I could not prevail upon myself to stoop. If this be considered arrogance, it is a charge to which I must honestly plead guilty. I have, however, attempted a work which I hope will be found more useful than any contraction could be.

To illustrate and explain Locke's Essay on the Understanding in a series of Lectures, to compare his opinions on disputed points with those of other modern philosophers, to show where Locke disagrees with himself, and maintains contradictions, and to embody in the same work all the parts of the Essay, which were necessary and useful, by introducing them either in substance or in the very words of the author, where these are material, appeared to me a work likely to be more beneficial than the contraction required. Such has been my design in the present Lectures; how far I have succeeded, must be determined by the opinions of others.

The manner in which Locke's works are too often studied, appears to be attended with less benefit to the student than could be desired. It is the practice to "get by heart" the doctrines and sometimes little more than the words of this philosopher. Having no other works on the same subject in his hands, the student, when his academical studies are completed, frequently goes forth into the world, fully persuaded that the opinions which he has thus "committed to memory" are infallibly right, and the only doctrines, on these subjects, held by rational creatures of this age. Absurd as this may appear, I have known many examples of it. One of the great benefits to be derived from this department of science seems to be the exercise which the understanding receives in the investigations which it involves. What strength can the intellect derive from "getting by heart" the opinions of Locke? As well might we expect, by reading

a description of riding or walking, to acquire the vigour derivable from those healthful exercises.

My object therefore has been, on disputable points, to give the reader, in some degree, a view of both sides of the question, and to enable him to judge and reason for himself. Where, therefore, I have ventured to differ from Locke, it is of little moment whether I am right or wrong; it will, in either case, contribute to disenthral the mind of the student from the bondage of a particular system, in matters on which mankind is never likely to agree.

My publishers finding me determined against writing a catechetical contraction of Locke, have made a special request that I should annex a collection of questions upon the Lectures. Such students as think any advantage is derivable from this, will find them in the appendix. The questions which may be considered indispensable, and which even the most indolent student should be able to answer, are distinguished by the mark (§). Those who aspire to a more accurate knowledge of the Essay, should attend to those marked thus (†). Those who look for honors should be generally prepared in all the questions.

The answers to the questions will be readily found, by referring to the corresponding section of the Lecture. This arrangement will, I trust, accommodate all classes of readers.

LECTURES

UPON

LOCKE'S ESSAY.

LECTURE I.

INTRODUCTION.

1. LOCKE introduces the subject of his Essay by enumerating the motives which urged him, and which may therefore also be supposed to incite others to prosecute an inquiry into the nature and extent of the intellectual operations. These inducements he states to be three-fold: 1°. the nobleness of the subject, 2°. the usefulness of the results, 3°. the pleasure derived from the pursuit. When we consider that the understanding is the great power by which man is elevated above other animals, or in the words of our author, that which "sets him above the rest of sensible beings, and gives him all the advantage and dominion which he has over them," it cannot but be considered one of the noblest objects of investigation. This being the power which "directs our thoughts in the search of other

things," and by the operations of which we are enabled to view the recesses of nature, which, but for its improvement, must for ever have been concealed: and what is of still greater moment, that by which a knowledge of ourselves, and of those rules by which as beings accountable to a moral governor we should regulate our actions, its extensive utility must be most striking. That a pursuit having such an object,* and such ends, should be pleasurable, is a question only to be resolved by an appeal to experience. The pleasure derived from it is illustrated by Locke, by comparing it to the pleasure which light gives to the eye.

In such an inquiry there are necessarily considerable difficulties to be overcome. The difficulties arise from the circumstance, that the objects and instruments of investigation are the same, namely, the operations of the mind. The inquiry is into the nature of these, and the only instruments by which the inquiry can be conducted, are these very operations. This difficulty Locke illustrates by the eye, which, though it is the mean whereby we see other things, can never behold itself; thus the mind finds a similar difficulty in setting itself before its own view, and making itself "its own object."

2. Having introduced the subject of his work, or as he modestly terms "his Essay," our Author proceeds to develope the views he designs to take of the human mind and its capacities. His object he states to be "human knowledge" rather than the human mind, and "human knowledge" as far only as respects its "original certainty, extent and degrees." The word "original" here must be

* The object and the end in popular works are frequently confounded. The object is the subject matter of a treatise; the end, the purpose to be attained by treating of the object. Thus the objects of this Essay are the operations of the mind. The end is to teach proper methods of searching after truth.

taken in a limited sense. In its most extended acceptation it might be understood to apply to an investigation which would trace our knowledge and its elements, our ideas, as far back as their "first cause." To guard against this misconception, Locke distinctly declines the "physical consideration of the mind." Under the "physical consideration of the mind" is embraced 1°. all inquiry into its essence. 2°. The peculiar organic modifications and motions by which sensation is effected. 3°. Whether ideas in their original formation depend upon matter? These he declines, not from their inutility, but as not forming a part of his design, which, as has been observed, is strictly confined to what respects human knowledge, its original (*i. e.* elements,) certainty and extent.

The necessity of fixing the limits of knowledge, and of settling distinctly the measures of its certainty, must be strongly impressed upon us, when we observe the discordancy and even contradiction which exists in the opinions of mankind on various subjects. This discrepancy in judgment can only arise from men adopting wrong measures of probability, and false criterions of certainty, but is nevertheless frequently attended with the mischievous consequence of driving unreflecting minds into positive scepticism.

3. The method which our Author proposes to pursue in his inquiry is as follows:

1°. To inquire into the original of our ideas, or the ways whereby they come into the mind.

2°. To determine the knowledge derived from them, its 1°. evidence, 2°. certainty, and 3°. extent.

3°. To inquire into the nature and grounds of faith or opinion.

By faith or opinion is meant "that assent which is given to a proposition, of whose truth there is no certain knowledge."

4. An ignorance of the extent of our intellectual fa-

culties, and of the investigations to which they are proportionate, is productive of two opposite errors, scil. dogmatism and scepticism. The dogmatist overrates, the sceptic underrates our faculties. The one ascribes greater, and the other less validity to the conclusion of our reason than the grounds on which those conclusions are built would justly warrant. Of these intellectual maladies (for so we must call them) there are various degrees, and there is probably no finite being who is perfectly free from any degree of either. From the sceptic who rejects the conclusions of abstruse metaphysics, to the sceptic who will not venture to affirm his own existence, we meet in common life with all the intermediate shades of error.

Extreme begets extreme. Scepticism is the child of dogmatism. The dogmatist, confident in the fancied extent of his faculties, plunges into speculations, beyond the range of human intellect. He flounders in an ocean of error. Baffled and disgusted at his failure, and confounded with the contradictions and embarrassments in which he has involved himself, in a sort of intellectual sulkiness, he wilfully abandons all proper use of his mental energies, and concluding that, because he failed in his search into what was removed beyond the wit of man, he cannot depend with certainty on any thing, he gives himself up to absolute scepticism. The folly of this degree of scepticism is compared by Locke to that of one who would reject the use of his legs, and "sit still and perish, because he has not wings to fly." He also illustrates the folly of that indolence which is the consequence of scepticism, by one who would refuse the use of candle-light, because he had not broad sunshine, although the former were sufficient for his purposes. He that "entertains all objects in that way and proportion in which they are suited to his faculties, and capable of being presented to him," uses his understanding as he should. If probability is all that

can be attained, he rests content with it, gives the proposition its proportionate degree of assent, and governs his conduct conformably to it. He does not, like the dogmatist, attempt to reduce it to positive demonstration, nor like the sceptic, reject it altogether, because he cannot attain that demonstration.

These are manifest abuses of our finest faculty. Were it possible to do that perfectly which Locke proposes; to ascertain with distinctness the limits of our knowledge, the boundary between what may be, and what cannot be comprehended by the human mind, "the horizon which defines the enlightened and dark parts of things," these two abuses would be avoided. But though it be not possible to effect this purpose, however desirable, it is yet possible to do much towards approximating to those limits, though it be not possible, perfectly to cure the diseases, their intensity may be very much mitigated. This Locke proposed to effect by his inquiry into the human mind, and has certainly to a great degree succeeded in his design. He revolutionized the science of the mind, dashed to pieces speculations which had commanded the reverence and admiration of ages, and fixed that science upon more rational and firm foundations than the united talents of the sages who preceded him had by their continued efforts been able to effect.

5. Our faculties have limits. The knowledge therefore to be attained by those faculties has corresponding limits. But this is a predicament in which we stand in common with all finite created beings. The difference between man and the highest created being lies only in the *place* of the limit. On this score we have then no cause of complaint or discontent, unless one would aspire to one of the incommunicable attributes of divinity, infinite comprehension. As to the limitations which have been set to our intellectual capacity, Locke contends that we should rest satisfied with them for these reasons:

1°. When we compare our own powers with those of the other occupants of the globe, we must at once perceive the immense superiority which is given to us; so great, that although far from being the first in physical power, yet such is the dominion given us by the intellect, we maintain a sway over even the strongest and most ferocious.

2°. Although the powers of mind given to us fall infinitely short of comprehending the vast extent of being floating in the universe, and even probably shrink into nothing before the comprehensions of other and superior created beings, yet we have all that is necessary for the conveniences, comforts, and even luxuries and elegancies of this life, and what is of infinitely more consequence, we have powers fully adequate to point out the rules of conduct which will insure a permanent felicity in the next, we have, as St. Paul says, *παντα προς ζωην και ευσηβειαν*, every thing conducive to the convenience of life, and the cultivation of virtue.

3°. We have that degree of comprehension which is suited to our state. Had we more, the circumstances in which we are placed might become intolerable, and the extension of our intellect produce only an extension of misery. Had we less, our quantity of happiness would be proportionably less than our situation and circumstances would admit of.

In a word, whatever may be the limits of our faculties, they are sufficiently and more than sufficiently wide for all our purposes here, and it is perfect folly to reject the use of them because they are not more extended. The sounding line of the mariner, as our author observes, is of considerable use to him, although it be not capable of fathoming all the depths of the ocean. It is sufficient for him if it measure those parts through which his voyage lies, and it is his own fault if he wander into regions which lie out of his way. Our faculties are perfectly

adequate to investigate "all that concerns and conduct," and this is all that is absolutely necessary to be known here.

6. Previously to entering upon his proposed inquiry, Locke premises that he shall proceed upon a certain postulate. He states that he calls that thing about which the mind is occupied when the man thinks, an *idea*. His postulate is the assumption of the existence of ideas. It would appear from his definition that this is as evident as thinking itself. But from subsequent parts it appears that he means by the word idea, something more than is expressed in his definition. He speaks of *external things* as the exciting causes of *ideas*. He therefore evidently intends *ideas* and *external things* to be different beings. Suppose then it is asserted that the mind when it thinks is employed about external things, does Locke's postulate mean merely the existence of external things? Certainly not, for in one of the chapters of the fourth book, he occupies himself in the proof of this very proposition. Something more than is contained in this postulate than appears at the first view of it, and this is only to be collected from a consideration of other parts of the "essay." Locke's postulate is really this; that there exist in the minds of men certain effects produced there by certain things existing in what is called the material world. These effects are what the mind contemplates in thought, and they are the only indications or proofs which man possesses of the "existence of external objects," and they are what our author calls "ideas." The external exciting causes he denominates matter and its modifications. The existence of this latter he does not assume, but professes to prove from the former. The ideas and their exciting causes he takes to be things altogether heterogeneous, and admitting no comparison.

Locke thinks himself warranted in this assumption, as he declares that every man is conscious of the existence

of ideas in his own mind, and other men's words and actions convince him that they exist in theirs.

We have dwelt at length upon the matter of the introduction, as it is of considerable consequence in forming a clear view of the subjects of investigation, as we proceed through the essay itself.

LECTURE II.

Outline of the Essay. Of sensation and reflection. The Cartesian doctrine; that of the soul combatted.

1. BEFORE we enter upon the details of the "Essay" it may be useful to take a general view of its subject, somewhat more developed than the short plan which our author has laid down in his "method" given in the introduction.

Conformably to this plan he devotes the first two books to an inquiry into the true source of our ideas. The main doctrine which he establishes is, that all our primitive ideas originate in sensation. After the mind becomes furnished with ideas by the senses, it begins to exercise its capacities of compounding, comparing, abstracting, &c. The mind contemplating these, its own operations, acquires ideas of them, which ideas form a new class wholly distinct from the former, and which he calls ideas of reflection. His principal argument to establish the doctrine that sensation and reflection are the original of all our ideas, is an induction completed *a fortiori*. As it would be impossible to enumerate *all* our ideas, and prove each separately to come from one or other of these sources, he shews, in a general way, that very comprehensive classes undoubtedly arise from them; the most obvious are the ideas peculiar to each of the five senses, the ideas of the different operations of the mind, &c.

This induction, which must, from its very nature be imperfect, he confirms, by shewing that those ideas which seem to be most abstruse in their origin, and most unlikely to proceed from the sources he assigns, do, nevertheless, actually proceed from them, and from no other. The ideas he selects for this purpose, are space, time, and infinity.

2. This inductive process, though it is the principal, is not the only argument on which he founds his theory of sensation and reflection. There are several subsidiary arguments confusedly scattered through his work, which we shall attempt to enumerate here:

1°. Those who denied sensation and reflection to be the only sources alleged many of our ideas to *innate;* that is, to be originally impressed upon the mind in the first moment of its creation, and to constitute an essential and inseparable part of the mind itself. They not only alleged that there were certain ideas thus impressed, but also maintained that there were actually some truths, the perception of which was simultaneous with the creation of the living principle. To state this more plainly; they maintained that at the moment that life is communicated to that portion of organised and hitherto inert matter designed to receive it in the womb, there are at the same time conveyed to it clear and distinct perceptions of certain ideas, and even of the truth of certain abstract propositions, and hence these ideas and propositions have been called *innate.* Locke devotes his first book to the refutation of this doctrine; and if this be the only source assigned for ideas, his own doctrine may be considered to be thus established, by reasoning from the remotion of one part to the position of the others. No idea can be considered innate, the existence of which may be accounted for by any of the ordinary ways whereby we get other ideas. For it is unphilosophical to ascribe more causes than are sufficient to solve the phenomenon. It

is contrary to the economy of nature to do by two different causes that which might have been done by one and the same.

2°. He draws an analogical argument from tracing back the state of the mind from the adult to the child, from the child to the infant, and so back to the moment of its birth, which is the first moment in which we can observe it. Through all these stages we find the stock of ideas diminishing rapidly, and find scarcely any in the new-born infant; whereas, had we proceeded in the other direction, we should have found the variety of ideas increasing in proportion to the variety of sensible objects which presented themselves, and to the attention with which they are contemplated. Arguing, therefore, by analogy, we may infer, that were we able to carry our observation back from infancy to the moment of creation, we should find no ideas *then* actually existing, though probably they would immediately begin to exist.

3°. Locke frequently uses the *argumentum ad ignorantiam*. He appeals to his opponents to assign any idea not derived from these sources. Although this species of argumentation is in general not entitled to much weight, yet it is peculiarly fit in the case in which he applies it. It is on all hands admitted, that by far the greater number of our ideas arise from sensation and reflection. It is therefore much more easy to assign some of the few, which have been alleged not to arise from them, than to go through an inductive process to establish the contrary.

4°. He deduces an argument from etymology in support of this doctrine. He observes, that most of the words in use, even those expressing ideas of reflection, are derived from names expressive of sensible ideas. Such are, imagine, apprehend, adhere, conceive, instil, disgust, &c. spirit, angel, &c. And he conjectures, that if we were able to trace all names back to their first origin, we should find them all ultimately implying sensible ideas.

3. In the course of his investigations respecting the original of our ideas, he enters into several inquiries which do not strictly come under that head. Thus he examines other qualities of ideas, as their clearness, distinctness, reality, adequacy, &c. These considerations conclude his second book.

According to the method laid down in the introduction he should next have proceeded to the consideration of knowledge and its attributes. In his progress, however, finding a more intimate connexion between language and ideas than he at first had expected, he conceived it necessary to devote a part of his work to the consideration of language, and its influence upon our ideas and knowledge. This subject he has very fully treated in his third book. The fourth book is altogether devoted to investigations respecting knowledge and probability, and their attributes.

4. Having now stated more particularly the subjects to which we shall have to apply our attention in these lectures, we shall proceed to examine our author's reasonings respecting the original of our ideas. As the doctrine of innate ideas and principles is in a great degree exploded, we shall not at present enter into further particulars respecting the subject of the first book than those which have been already stated. Assuming then the existence of ideas in the mind, the question is, whence have they come? The mind, in the first moment of its creation, is compared by Locke to "white paper," capable of receiving various characters and impressions, but on which nothing is as yet written. "Whence comes it by that vast store, which the busy and boundless fancy of man has painted on it, with almost endless variety?" He ascribes all this in one word to EXPERIENCE. This experience is two-fold; sensation and reflection. Locke seldom gives formal and settled definitions of his terms, the circumstances under which he describes his "Essay" to

have been written may possibly account for this. His meaning is frequently to be only collected from carefully observing the manner in which he uses and applies his terms. The term sensation, is an example of this. He seems to use this term and perception nearly synonymously. When examined, however, we shall find that perception is a more general term, as it is applicable to ideas of reflection as well as those of sensation. There are several different passages in the Essay which are indifferently considered as definitions of sensation, and indeed seem to be given as such by the author. Such are the following:

"This great source of most of the ideas we have depending wholly upon our senses, and derived by them to the understanding, *I call* SENSATION. B. 2. Ch. I. § 3.

——— Sensation; *which is* such an impression or motion made in some part of the body, as produces some perception in the understanding. B. 2. Ch. I. § 23.

——— Sensation; *which is* the actual entrance of an idea into the understanding by the senses. B. 2. Ch. XIX. § 1."

From a comparison of the last two definitions, one might suppose that by the word perception, our author meant an idea. If he does not mean by the word perception, in the first of these definitions, an idea, the two definitions are not alike, and therefore he uses the word sensation unsteadily. If, on the other hand, perception means, as would appear from B. 2. Ch. IX. the *actual production* of an idea, the last definition applies to perception as well as to sensation; and in this case the second definition becomes absurd, only defining by a synonymous term. As to the first definition it is also objectionable, as we are ignorant (as far as respects any thing contained in it) what "that great source" is. These little inaccuracies are every where observable through our author, who seems better qualified to prescribe rules to others how

to avoid the unsteady use of words, than to avoid that abuse himself.

5. His definition of reflection is " the notice which the mind takes of its own operations, and the manner of them." This definition is perfectly adequate. The term " operations" might indeed be better replaced by powers, or still better by faculties, which implies either active or passive capacity. This objection, however, Locke guards against a little after by observing, that the term operation is used " in a large sense, as comprehending not barely the actions of the mind about its ideas, but some sort of passions arising sometimes from them, such as is the satisfaction or uneasiness arising from any thought."— This use of the word operation countenances a similar use of the same word in the definition of simple apprehension, in the Compendium of Logic by Murray. Judging by the example which our author here gives of the passive sense in which he uses the word operation, he does not seem altogether aware of the scope of the objection to it, as it occurs in the definition of reflection. That objection is simply this, that " the notice which the mind takes" of certain passive faculties, as for example, perception, strictly speaking, does not come under the definition of an idea of reflection, and yet our author plainly intends it should, for he declares that perception is the first faculty of the mind about its ideas, and *therefore* the first simple idea of reflection. (Ch. IX. § 1.) The suppressed premise in this enthymeme is evidently the definition of reflection; and it may be observed that he tacitly supposes the word " faculty" substituted for " operation." This, and such like examples, are properly the objections to the word "operation" in the definition of reflection; which objection is however removed, if the word operation be taken as synonymous with faculty.

6. Whatever confusion or inaccuracy there may be found in Locke's definitions of the terms sensation and reflection,

when subjected to a rigorous verbal scrutiny, no great difficulty can be presented to a candid inquirer after truth, who is not disposed to cavil in taking up the general tenor of our author's meaning. He supposes, as has been before observed, the existence of external objects, which, by affecting our organs, produce ideas in our minds. This, it is true, is an hypothesis; but that is no objection to founding upon it a definition. The impression which thus produces an idea in the mind is called sensation; and the ideas produced are called *ideas of sensation* or *sensible ideas*, and sometimes *sensible qualities*. The mind being furnished with these ideas, and being also endued with certain powers capable of being exerted upon ideas, the exertion of those powers and operations effected upon the ideas of sensation, follow. The mind being conscious of these operations, and *feeling* them going forward, turns its view inwards upon itself, and attentively observes the processes, and thus acquires ideas of these operations. This is called reflection. To give an example; let us suppose that yesterday a tulip had fallen under our view, and we thus acquired by the senses an idea of it. To-day we wish to describe it to another, and endeavour to reproduce the same idea without the presence of the object itself. Succeeding in doing so, we observe the process of mind necessary for that purpose, we acquire a distinct idea of it, and we call that idea by the name *recollection*. The acquisition of our idea, whether of sensation or reflection, is called *perception*.

7. The perception of ideas of reflection necessarily occurs later than those of sensation, for two reasons; 1°· because ideas of sensation must have been perceived before the mind could have had any operations, and therefore before it could have had ideas of reflection. 2°· Ideas of reflection require an observation of the operation of our minds, and an abstraction from external objects, which

cannot be looked for but in persons somewhat advanced in life.

8. Having explained the nature of sensation and reflection, Locke combats the principle of Des Cartes, that the quality of thinking is the essence of the soul. This Philosopher held the doctrine, that nothing exists but substances. Substances he divided into two classes, thinking substances, and extended substances; thus making thought the essential quality of the one class, and extension that of the other. The essence of spirit being thus fixed in thinking, he concluded that thinking is absolutely inseparable from spirit, and thence, that the supposition that the soul, at any moment was free from thought, involved a positive contradiction. In virtue of the other principle, that the essence of matter consisted in extension, he concluded that there was no vacuum, nor even a possibility of it, and that therefore the universe is absolutely full. By this principle, space, void of body, is totally excluded, for extension being implied in the idea of space, matter is so too, as he makes it the distinguishing property of matter. Locke attacks both these principles; we shall however for the present confine ourselves to the first.

9. Locke considers thinking the action of the soul, and conceives it to be no more essential to the soul than motion is to the body. The body having the power to move may or may not exert that power, as the will may dictate. So the soul having the power to think, the will possesses a certain power over the thoughts, though not to the same extent as in the former case. The action of the mind in thinking cannot be suspended by the dictate of the will. The attention may be increased or relaxed, the current of the thought may be in some degree regulated and directed by the will, but that current *cannot be stopped.* It ceases only in sleep or in death. This perhaps it was which led Des Cartes to his principle. Perceiving the

inability of the will to suspend the process of thought while awake, and not conceiving how that could be considered as an action over which the will had no power, he concluded, that it must be an essential quality of the soul, and that it must subsist in sleep, although from some physical cause, depending on the state of the body, we are not conscious of it. Locke considers Des Cartes to have been guilty of sophistry, in establishing this position by a *petitio principii*. He supposes him to have first *defined* the soul to be a thinking being, and then *inferred* that it always thinks. But Des Cartes was too acute to impose on himself, and too prudent, as well as too honest, to attempt to impose on others by such a flimsy sophism. The truth is, Des Cartes never designed it as an *inference*. It was one of his *hypotheses;* for the philosophy of that day proceeded entirely on hypotheses. Des Cartes invented this as that which was most adequate to solve the phenomenon. The objection which may with truth and effect be brought against the Cartesian principle is, 1°. That it is a mere hypothesis; and 2°. That it is inadequate to account for the phenomenon of sleep, in which all men agree that they are not conscious of thought.

We shall now follow our author through the different absurdities which he shews that the Cartesian doctrine will lead to:

1°. Granting that the soul thinks while the man sleeps, we can scarcely deny that it has the usual concomitants of thought, pleasure or pain, happiness or misery, according to the nature of its speculations. If we look further, and consider it as a moral agent, it has its duties and sins, and its merits and demerits, and is entitled to rewards, and obnoxious to punishment. Of all this the sleeping man is perfectly unconscious, and therefore is not answerable for it. Thus, to all intents and purposes, the

soul and the man are two distinct beings, the soul as a moral agent to be disposed of, and judged by circumstances, which the man has no more consciousness of, nor responsibility for, than Socrates had of or for the thoughts or deeds of Des Cartes himself. Thus personal identity is confounded.

The answer, that men are conscious of the process of thought during sleep, but immediately forget it, Locke rejects as a gratuitous assumption, and which in itself is in the highest degree improbable.

2°. Granting that the soul thinks while man sleeps, the thoughts ought to be more rational than while the man wakes, for then the thinking being is, as it were, disengaged from, and disencumbered of the material being, and therefore the thoughts should be more clear and elevated, and the conclusions and reasonings more valid. But whenever our sleeping thoughts (dreams) are remembered, they are always on the contrary found to be incoherent, absurd, and extravagant.

3°. Granting that the soul thinks while the man sleeps, and yet totally forgets its thoughts, such thinking is utterly useless. This contradicts that economy of nature by which she does nothing in vain, much less does she create one of the noblest faculties to be expended for no purpose.

4°. Granting that the soul thinks while the man sleeps, if it be answered, that the ideas are forgotten, because the bodily organs not being employed in this thinking, no impressions are left, and consequently no memory of such thoughts; it may be replied, that it is quite as easy to suppose the soul to retain its ideas without the help of the organs, as to receive and contemplate them.

5°. Granting that the soul thinks from the first moment of its creation, and before it has received ideas from the senses, it must have ideas not derived from sensation or reflection; of such ideas we find no trace.

LECTURE III.

Ideas, simple and complex.—Division of simple Ideas.

1. HAVING first divided our ideas as they enter the mind, into those of sensation and reflection, Locke next viewing them in another respect, divides them into *simple* and *complex*.

He defines a simple idea to be "one uniform and uncompounded appearance or conception in the mind, which is not distinguishable into DIFFERENT ideas."

We have rendered the word "different" here emphatical, because the definition has been frequently misconceived, by substituting the word "several" in its place. Our author extends the name "simple idea" to certain classes of ideas which are separable into "several" ideas, provided all those ideas be of the "same kind." Thus, for example, the idea of a straight line of the length one foot, is a simple idea, although it may be resolved into twelve ideas, or rather into twelve repetitions of the same idea of a straight line of the length one inch. This should be the more particularly observed, as some who wrote against the Essay shortly after its publication, fell into the same error, and were refuted by Locke merely by shewing that he used the word "different," and not "several," in his definition. Complex ideas are those which are made up of several ideas.

2. We have before observed that Locke uses his words loosely and unsteadily, and certainly without that exact attention to correctness which the nature of his subject required. This defect is doubly objectionable in one who promulges *new* doctrines, as his readers have no other guide in that case than his own definitions and reasonings. The use of the terms simple and complex ideas, is an instance of an apparent vacillation in the mind of our author, as to the exact signification of his terms. By his definition of simple ideas, he expressly includes those ideas which are compounded of the same idea; as in the instance already cited; and in Ch. XII. of the second book he makes "simple modes" one of the classes of complex ideas. His definition of "simple modes" is "those complex ideas which are only variations or different combinations of the same simple idea, without the mixture of any other." Here these ideas are expressly made *complex* ideas; and they are *simple* ideas according to his own definition. Again he changes his meaning in Chap. XV. Book 2d, when speaking of the simple modes of duration and space, "their parts being all of the same kind, and without the mixture of any other idea, hinder them not from having a place amongst our simple ideas." It will be observed that the very words of his definition of the class of *complex* ideas, called simple modes, are here used to prove that simple modes are *simple* ideas. On the whole, our author's meaning seems to be this:—

1°. Ideas which have no manner of composition whatever, whether of ideas of the same, or different kinds, come decidedly under the class of simple ideas, and no other.

2°. Ideas which are compounded of the same simple idea (simple modes,) though in a strictly literal sense they are complex ideas, yet our author generally refers them to the class of simple ideas, and speaks of them as such. In doing so, however, he does not set

aside all notice of their composition, but on the other hand, has occasion frequently to introduce it into his reasoning.

3°. Ideas which are compounded of different simple ideas, come decidedly under the class of complex ideas, and no other.

3. The power of the mind over its ideas is compared by Locke to that which we possess over the elements of matter. In this comparison the elementary parts of matter are considered analogous to our *simple* ideas, and masses of matter of various figures, &c. are analogous to our *complex* ideas. He compares them in five respects:

1°. As we possess the power of uniting together the parts of matter so as to form combinations in endless variety, so also we possess the power of uniting, in ways infinitely various, our simple ideas, so as to form complex ones.

2°. As we possess the power of comparing together collections of matter in various respects, so also we possess the power of comparing our ideas from which arises that class of ideas called relations.

3°. As we possess the power of dividing the parts of bodies so as to obtain any proposed part separately from the others, so also we possess the power of resolving our complex ideas into parts, so as to be able to consider any part separately from the others, from which arises abstract ideas.

4°. As we do *not* possess the power of creating a particle of matter, so neither do we possess the power of creating a simple idea not derived from sensation or reflection.

5°. As we do *not* possess the power of destroying a particle of matter, so neither do we possess the power of destroying any simple idea.

4. In the perception of simple ideas of sensation, the mind is perfectly passive, and cannot refuse to have, nor

can it alter the simple idea derived from any sensible object affecting the proper organ. This passiveness Locke illustrates by the images of objects placed before a mirror. There is, however, this difference, as we shall see hereafter. The "images" or ideas in the mind, and the objects which produce them, have no resemblance whatever. With respect to the ideas of reflection, it may be questioned whether the mind is passive in the reception of these. Locke declares that they require *attention*, and attention is not a passive faculty.

5. One of the peculiarities of simple ideas is, that their names do not admit of definition. A definition is the explanation of a word by several others not synonymous with the word defined, nor with each other. A simple idea not being compounded of *different* ideas, cannot be expressed by several words *not synonymous*, and therefore cannot, properly speaking, be defined. There are, however, three ways whereby the significations of the names of simple ideas may be communicated.

1°. By a synonymous word.

2°. By *naming* the subject in which the quality subsists.

3°. By *shewing* the subject in which the quality subsists.

Thus if the object of the colour we wish to express be not present, we say peach-colour, slate-colour, violet-colour, &c.

Though these observations properly respect words rather than ideas, yet, as in discoursing of simple ideas, we shall have occasion to allude to this peculiarity of their names, we thought it necessary to premise this previously.

6. The original conduits, therefore, and the only ones of simple ideas, are the senses. Language can never *communicate* a *new* simple idea. It may *recall* one formerly had by sensation, but here its power over simple ideas terminates. Without the senses we should have no ideas whatever; for, as we have already shown, sensation

must precede reflection. Although *we* cannot have any other ideas than those conveyed by our senses, it does not however follow that other beings may not have ideas for which we have no conduits. To suppose so would be just as unreasonable as for the blind or the deaf to suppose no ideas to enter by the senses of which they are respectively deprived. Of the number of our senses Locke declines giving any opinion, but seems to think that "they may be justly accounted more than the five which are commonly enumerated."

7. Our author next proceeds to a more particular division of our simple ideas "with reference to the ways whereby they make their approaches to our minds." He inadvertently professes here to divide only our "ideas of sensation," whereas the division includes all ideas. This division is sometimes considered therefore inadequate, "the parts containing more than the whole." This however is mere cavilling, and treating as an error what is really only a verbal oversight.

The classes of our simple ideas, divided with respect to their entrance into the mind, are four:

1°. The ideas which enter by one sense only.

2° The ideas which enter by more than one sense (*i. e.* by sight and touch).

3°. The ideas which enter by reflection only.

4°. The ideas which enter by both reflection and sensation.

The ideas which chiefly compose the first class may be enumerated as follows:

1°. Light and colours.

2°. Tastes.

3°. Sounds.

4°. Odours.

5°. Solidity, temperature, configuration, adhesion, and such like.

8. To enumerate all the simple ideas peculiar to each

sense, would, even were it of any material utility, be impossible; for they have not all names. Were all the varieties of ideas coming under the several classes above mentioned, to be distinctly denominated, names would be endless. One word signifies generally several modes and degrees of the same idea, as sweet and bitter. Instead of attempting to enumerate our simple ideas, and bring them successively under examination, our author selects one of these which he considers most material to his purpose, and which, though a frequent ingredient of complex ideas, is not apt to be particularly noticed. He selects the simple idea, " solidity," probably because it is connected with one of those principles of the Cartesian philosophy, which he proposes to refute.

LECTURE IV.

Solidity.

1. SOLIDITY is one of the most familiar of those simple ideas peculiar to the sense of *touch*. The same idea is sometimes expressed by the term impenetrability. Locke however prefers the former term, and grounds his preference on three reasons:

1°. Because Solidity is the term in most common use.

2°. Because Solidity is a positive, and impenetrability a negative term. The idea to be expressed being a positive quality, he thinks it improperly denominated by a negative term.

3°. He considers that impenetrability is rather a *consequence* of solidity than solidity itself.

2. We have already observed that the names of simple ideas do not admit of definition. Solidity is an instance of this. Locke consequently declines defining it, and the *description* he gives of it, is nothing more than an appeal to the senses. Let us bring together under our view the different attempts at describing this idea, which are scattered throughout this part of his Essay.

"It *arises* from the resistance which we find in body to the entrance of any other body into the place it possesses, till it has left it." Chap. IV. § 1.

"That which thus hinders the approach of two bodies,

when they are moved one towards another, *I call* solidity." ib. ib.

———" The idea the most intimately connected with, and essential to body, so as no where to be found or imagined but only in matter." ib. ib.

It is that property by which a body " will for ever hinder any other two bodies that move towards one another in a straight line, from coming to touch one another, unless it moves from between them in a line not parallel to that which they move in." § 2.

" If any one ask me, what this solidity is ? I send him to his senses to inform him : let him put a flint or a foot-ball between his hands, and then endeavour to join them, and he will know." § 6.

3. Any, or all of these may be received as a description to help the mind of the student to the meaning of the author, but none of them can for a moment stand the test of examination as a definition. We shall not here enter into any metaphysical discussion on the subject, farther than to compare the statement made in the third passage quoted above, with another of our author's statements. In this passage it will be observed, that something beyond mere explanation is contained. It contains a very important metaphysical theorem, scil: That the property by which a body refuses admission to another body into its place until it quits it, is a quality *exclusively* belonging to matter. " It is no where else to be found," nor even possible to be " imagined." We are strongly inclined to think that in writing some parts of the Essay, Locke forgot statements which he had made in other parts. We beg to call the attention of the student to the following passages :—

* * * " We never finding, nor conceiving it possible, that two things of the same kind should exist in the same place at the same time, we rightly conclude that whatever exists any where, at any time, excludes all of the same kind, and is there itself alone." Ch. XXVII. § 1.

" For though these three sorts of substances (God, spirits, and bodies,) as we term them, do not exclude one another out of the same place, yet *we cannot conceive* but that they must necessarily, *each of them* exclude any of the same kind out of the same place :" ib. § 2.

Speaking of the mind he says,

* * * As itself is thought to take up no space, to have no extension, so its actions seem to require, &c. &c. B. 2. Ch. IX. § 10.

Speaking of spirits he says,

* * * Each has its determinate time and *place* of existence, &c. B. 2. Ch. XXVII.

It must appear evident that Locke here ascribes to spirit that quality which is defined " the occupation of space to the exclusion of things of the same kind," and which when found in body is called solidity. And yet he denies to the human mind the same quality, for he says " it takes up no space," that is, it occupies no space. I confess that I cannot understand any thing by "mind," but a spirit; that being which we have altogether inde pendently of our body, which perceives, remembers, reflects, &c., and Locke declares that this spirit " takes up no space," although in another place he declares that finite spirits *do take up space*, to the actual exclusion of other finite spirits. Besides this, it may be a fair subject of inquiry, what difference does Locke acknowledge between spirits and bodies? Body occupies space, so does spirit. Body excludes body from its place, until it quits it, so also spirit excludes spirit from its place till it quits it. Can the occupation of space belong to a thing which is unextended? If not, then extension is a common attribute of both body and spirit. Body is moveable, so is spirit. Thus he ascribes to spirit a collection of attributes, which differ from the primary attributes of body only in being ascribed to a different being. We are thus

driven to the necessity of either acknowledging that spirit differs from body only in having the attributes of thinking, &c. superinduced upon the primary qualities of body, or of denying to spirit those attributes, which I cannot persuade myself would ever have been ascribed to it, had the absurd consequences to which they lead been detected.

4. Thus by following the reasoning of Locke upon this point, we are driven from absurdity to absurdity. This might easily, however, have been anticipated, as the hypotheses on which he proceeds are actually contradictory. He declares in the clearest and most explicit terms, in one place, that the quality of excluding other things of the same kind from the place it possesses, &c. is exclusively confined to body, and in another states, that it is "impossible to conceive" the same property not to belong to all substances of the same kind, having previously made the *kinds* of substances to be "God, finite spirits, and bodies."

5. It is very probable that many of the difficulties in which the subject is thus involved, have arisen from the imperfect definitions given by Locke of the term solidity. It will however be more useful to guard the student against certain senses of that word in which our author does *not* use it, than to enter into any further disquisition as to that sense in which he does use it. There are three commonly received uses of this word, which we may call its popular, physical, and mathematical senses.

1°. In a popular sense *solid* is used to a certain degree synonymously with *hard*. Thus a body is said to be more or less solid than another, according as its parts hold together with a more or less firm cohesion. This differs from the quality intended to be expressed by Locke by the term "solidity," in this respect, that the one quality admits of degrees, the other of none. The one is relative, the other positive. A body of any given species is said to be more or less hard as its parts adhere with a greater or less force or tenacity than those of bodies of that species usually do. Thus if we speak of stones, we

say diamond is hard, sand-stone soft; speaking of woods, box is hard, lime soft. Solidity, on the other hand, in that sense in which it is used in the Essay admits of no degrees; the softest body in the universe is not less solid than the hardest. When a body, after impinging upon another, occupies its place, the other body must either have quitted it or not; if it has quitted the place, it is solid, otherwise not. In such a quality it is impossible even to imagine *degrees*.

6. The compressibility of bodies is a phenomenon, which to a first view might appear to evert the hypothesis that all bodies are solid. Compressibility, however, when properly explained, so far from being the opposite of solidity is in some degree a consequence of it. Bodies of finite bulk are composed of small elementary particles of matter, which, though very close in their position, are not in absolute contact; the interstitial spaces, which constitute a part of the bulk or magnitude or volume of the whole body, are called *pores*. Substances are said to be more or less dense as their pores bear a lesser or greater proportion to their volume. The mass of a body is the quantity of particles of matter included in its volume. Compressibility is the effect which is produced, when the volume of a body is diminished without changing its mass. It follows then, admitting the quality of solidity, that the pores must be diminished by exactly the same quantity as the volume. Thus, in the Florentine experiment, if it be admitted that the change of figure of the globe instantly produced the dew upon its surface, and that the quantity of the water which thus forced its way out was exactly equal in volume to the diminution of volume produced by the change of figure, it would then follow that the water was not capable of being compressed by a force equal to that which produced the change of figure in the globe. But whatever might have been the result of this experiment it could neither establish nor subvert the hypothesis that all

bodies are solid, nor was the experiment ever designed for such a purpose. In this respect a student is extremely apt to fall into misconception from certain expressions used by Locke. His words are as follow:

"*The* experiment, I have been told, was made at Florence, with a hollow globe of gold filled with water and exactly closed, *which further shews the solidity of so soft a body as water.* For the golden globe thus filled being put into a press, which was driven by the extreme force of screws, the water made itself way through the pores of that very close metal." Chap. IV. § 4.

In these expressions, and especially those printed in Italic, it is certainly implied, if not directly affirmed, that the experiment was intended to be a criterion to establish the *solidity* of water, and that had the experiment produced a result different from that which followed, the conclusion would have been that water *was not solid.* This however Locke could never have meant, and we must ascribe his expressions to that negligence and inaccuracy which is observable throughout the works of this great man. He must have been perfectly aware, that all elastic fluids were compressible, and that if one of these had been enclosed in the globe the result would have been different, and yet the fluid so compressed would not be less solid (in his own sense of the word) than adamant. Air is capable of being reduced in its bulk in proportion to the compressing force, and Locke, knowing this, declares air to be as solid as water.

7. Although the physical investigation connected with the Florentine experiment has no relation to the object of our present lecture, yet as Locke has alluded to it, and as his allusion is calculated to mislead the student on this subject, we shall here digress so far from our subject as to put him in possession of a correct account of the matter.

An experiment was instituted at the Academy del Cimento, such as Locke describes, to try the compressibility

of water. The vessel containing the fluid was made spherical, because a sphere is the figure which possesses the quality of including the greatest possible volume within a given surface, and consequently any alteration of the figure which would produce no increase of surface, would necessarily diminish the volume; whereas had the vessel been of any other figure, an alteration might have increased the volume, and therefore nothing relative to the compressibility could have been inferred. Gold was selected as the material, being the least porous metal then known. Since this experiment, Platina has been discovered, which is still more dense than gold. The result was, that upon compression, the water first forced its way as described, and the outside of the globe was found wet. When further compressed, it actually made a cleft in the metal, and spouted out with considerable force. This experiment, properly considered, could not establish the fact of incompressibility. To do so it would be requisite accurately to measure the volume of the water which transuded upon the first compression, next to measure the diminution of the volume of the vessel consequent upon the alteration of the figure. All this never could be done with sufficient delicacy to estimate so very small a quantity, as it must have been obvious the compressibility of water was. Since the time of Locke, Canton, an English philosopher, has, by some very ingenious experiments, shewn that water and other liquids are not only compressible but elastic.

8. 2°. In physics, solidity is taken to mean that quality which is the opposite of fluidity. "It means that quality by which the minute parts are connected together, so as not to give way or slip from each other on the least impression."—(Hutton Dict. SOLID.)

9. 3°. In mathematics, solidity means that quantity of space occupied by a body. In this science *solid* is used in contradistinction to *line* and *surface*. Line is length with-

out breadth or thickness. Surface, length and breadth without thickness. Solidity is space, having all three qualities, length, breadth, and thickness. Line is technically called space of one dimension, surface, space of two dimensions, and solidity, space of three dimensions.

10. It will readily be perceived that the sense in which Locke uses the term solidity, is different from all these. It is built upon the hypothesis that extension or space is an existence distinct from body, and not merely one of its qualities. In the Cartesian philosophy, extension is merely considered an attribute of matter, and as incapable of any existence independently of matter, as solidity or colour. It was before observed, that it was the Cartesian principle that all *being* must be either body or spirit, the leading attribute of the one being extension, and the other thinking. The Cartesians would feel as much difficulty in admitting an extended spirit as a disciple of Locke's philosophy in admitting a solid spirit. The doctrine of Locke seems to be, that there are three classes of existence, spirit, body, and space. He expressly and repeatedly insists upon the existence of the last independently of either of the former, although in his formal enumeration of substances, he confines himself to spirits and bodies. (Book 2. Chap. XXVII. § 2.) Hence we may infer that his division of *being* is into substances and space; and his subdivision of substances as abovementioned.

Although he speaks of extension not merely as a quality, but as an independent being, yet he certainly also speaks of it as a quality. Thus he says, " the extension of body consists of the cohesion or continuity of solid, separable, and moveable parts." It is not easy exactly to shew his sense of the word extension. In many parts of his work he uses this term synonymously with space ; examples of this occur every where; thus in Chap. V. he says, space *or* extension is one of those ideas which come by " divers senses." On the other hand, in Chap.

IV. § 5. he says, that " the extension of space consists of unsolid, inseparable, and immoveable parts." Here he plainly makes extension a quality of space, and not space itself, otherwise the sentence would be absurd, " the space of space consists, &c. &c."

11. Locke contends, in opposition to Des Cartes, that extension or space is not inseparable from body, nor merely one of its attributes. He appeals to the imagination whether one body may not be conceived to move while every other body in existence is quiescent, and if so, the place from which it has moved gives us the idea of pure space void of body, and so enable us to imagine the existence of space as a being.

He anticipates an objection of the Cartesians, that motion could not take place in one body without producing motion in those which are contiguous to it; and answers by stating that the necessity of such a motion is built upon a gratuitous hypothesis, " that the universe is a plenum," or that all space is filled with body. Besides that when the question is merely confined to the possibility of having *the idea* of pure space, the fact, if admitted, that pure space has no existence is irrelevant, in as much as its non-existence does not argue the non-existence of an idea of it. Our author thinks that *the idea* of motion in one body no more infers the idea of motion in others, than the idea of a square figure in one body infers the idea of a square figure in others. He further declares, that the very fact of the existence of disputes about a vacuum proves that whatever may be determined with regard to its existence, there can be no doubt of the existence of the idea of it.

12. To this a disciple of the philosopher of France may be supposed to reply, that in order to imagine one body to move, all others being quiescent, it is necessary previously to have an idea of space into which it may move, and this space must be void of body, otherwise the

body occupying it would be displaced, contrary to the hypothesis, and therefore this process presupposes the idea of pure space, and therefore is a *petitio principii:* This is an objection of a more decided character than Locke seems to have anticipated. Besides, it may be replied, that to suppose the universe *not* a plenum is as much hypothetical as the reverse, and such a supposition as before presupposes the idea of a vacuum. Also as to the proof afforded by the existence of disputes about a vacuum, Locke should remember what he states himself in his third book on the abuse of words, where he condemns the schools for the constant use of terms, which never had any meaning, &c. These the student may suppose to be the replies of a Cartesian. They are not given here in refutation of the English philosopher, but to shew the student fairly both sides of the question.

The mobility of body, its resistance, impulse, and protrusion, are qualities of body arising immediately from its solidity.

LECTURE V.

Of Ideas which enter the Mind in several Ways.

1. The ideas which enter the mind by the senses of sight and touch are, according to our author,

1. Space or extension.
2. Figure.
3. Motion or rest.

When these ideas are said to enter by sight, the assertion must be understood with some modification. The eye, the organ of sight, is not capable of receiving any impression, except that of light. It is true, as will appear in the next lecture, that from the exertion of judgment on the impression made by light upon the eye, the mind arrives at the abovementioned ideas. But it may fairly be questioned how far those ideas can, upon these grounds, be properly said to enter by the sense of sight. As we shall have occasion to enlarge upon this subject hereafter, we shall not insist upon it further at present.

2. The ideas which enter by reflection alone, are those of the powers and operations of the mind. The actions of the mind are as various, if not more so, than those of the body. All the various modes of thinking, willing, memory, discernment, reasoning, judgment, knowledge, belief, &c. &c. are ideas of reflection.

The two principal faculties or powers of the mind, are

called the understanding and the will. The understanding is the power of thinking, and the will is the power of willing. In the use of the word perception, Locke vacillates. In B. 2. Ch. VI. he uses it synonymously with thinking; and in Ch. IX. he makes a marked distinction between these terms. When we come to treat of perception, we shall speak more fully of this distinction. It is sufficient at present to observe that the word thinking, in the definition of the understanding, is to be received as a general term, of which all the different intellectual faculties and operations are species or modes. This is evidently Locke's meaning, as may be seen by reference to B. 2. Ch. XIX. where he treats of the modes of thinking, under which he brings all operations of the mind.

3. The fourth class of ideas, divided as they enter the mind, is that of the ideas which enter by all the senses, and by reflection. This class Locke reduces to these five:

1. Pleasure.
2. Pain.
3. Power.
4. Existence.
5. Unity.

4. Under each of these it is understood that all the various modes and degrees of the respective ideas are included. That pleasure and pain are excited by objects affecting all the senses, every one's experience must prove. Those who, withdrawing their attention from external things, note the operations of their minds, and the feelings connected with them, must be sensible also that perceptions of enjoyment, and uneasiness, frequently accompany them. A *painful exertion of memory* is a common phrase; and there are few who have entered into scientific speculations who have not felt the pleasure arising from the exercise of the discursive faculty. We must not, how-

ever, confound the pleasure which arises from the ideas excited with the pleasure arising from the operation which excites them. These are totally distinct, though frequently so mingled in the mind that it is not easy to separate them. The ideas concerned in any speculation may themselves be pleasurable, either on account of their beauty, or grandeur, or sublimity; the ingenuity of the reasoning about them, the contrivances by which proper means are interposed, the mental artifices which are devised to exhibit the relation of the ideas, may also strike the mind with pleasure and admiration. In such a case, therefore, there are two sources of pleasure, one from the ideas themselves; the other from the operations of the mind, whereby the relations between these ideas are made apparent; in the one the pleasure arises from sensation, in the other from reflection. Although in the first case there may be no sensible object exhibited, yet the ideas excited must be sensible ideas formerly received from sensible objects.

The discoveries of Newton in Physics are remarkable instances of the two species of enjoyment blended together. It is difficult to say whether the magnificent speculations brought before the mind in his investigation of the motions and attractions of the bodies of the universe, or the wonderful powers of mind displayed in the process of reasoning by which he leads to these results, strike us with more admiration. Who can say whether his optical discoveries, or the reasonings used to establish them, are the more beautiful?

5. The uses of pleasure Locke states to be twofold:

1°. To excite us to action both mental and bodily. Ch. VII. § 3.

2°. To assist the memory. Ch. X. § 3.

The uses of pain are fourfold:

1°. To excite us to action. Ch. VII. § 4.

2°. To preserve our organs from injury, *ib. ib.*

3°. To induce us to look forward to a future state of greater felicity, "in the enjoyment of him with whom there is fulness of joy, and at whose right hand are pleasures for evermore." Ib. § 5.

4°. To assist the memory.—In this it is more efficacious than attention, as it acts quicker in grown persons, and supplies its place in children. Ch. X. § 3. It would probably be more correct to say that it *excites* attention in both grown persons and children.

6. Pleasure and pain are the springs of action. The will, whether it directs the actions of the body, or regulates the current of our thoughts, is *always* determined by a prospect of pleasure or pain, either immediate or remote. It is true, we see men not unfrequently, voluntarily undergo what produces immediate pain, and sometimes death itself. But in these cases there is always a previous calculation made in the mind, the result of which is, that though the course determined upon is productive of immediate pain, yet that ultimately there will be more happiness or less misery than in any other course of action which can be pursued. At this conclusion the mind must always arrive before the will can dictate the action. The reasoning by which we arrive at this conclusion, however, may be, and very frequently is fallacious and sophistical, founded on false principles, taken up hastily and inconsiderately. In such determinations, also, immediate pleasure operates much more powerfully than that which is remote, even though the latter should be equally certain and much more considerable. The reason of which is, that there is a repugnancy of the mind to the desire, *i. e.* uneasiness with which the intervening time must be occupied. So completely is the will decided by the *present view* which the mind has of the pleasure or pain arising from this or that action, that were these feelings not annexed to our actions and thoughts, our lives would be "a lazy, lethargic dream;" we should have no incite-

ment to prefer one action to another, motion to rest, waking to sleeping, active thought to passive reverie, and we should dream away an useless, unproductive existence, more resembling the growth of a vegetable than the state of an intellectual being.

7. The second use of pain is the preservation of our organs of sense, not only from destruction, but even from the slightest injury. It is a principle of the medical science, that bodily pain is a necessary indication of some bodily disorder. An animal, with all its organs in their natural and healthful state, regularly fulfilling their various functions, cannot be sensible of bodily pain. Should any derangement take place pain is produced, which warns us of the danger, and prompts us to guard against it. Bodily pain and bodily injury being found generally concomitant, we are justified therefore in the assumption, that one of the uses of pain is to give us notice of existing danger. Light and heat are instances of this. So long as these qualities are attended with no injurious effect, so long no pain is produced; but the moment the injury commences, pain commences with it. Those extremes, on the other hand, which are innocent, produce no pain. Darkness is an example of this.

8. Existence and unity are two ideas necessarily suggested by every idea both of sensation and reflection. An idea itself is an existence, and is *one*.

9. Power is two-fold, active and passive. Active power is the capability of producing, passive of receiving a change. It will hereafter appear, that active power is an idea purely of reflection. The changes which external objects continually undergo, as well as the effects constantly produced upon our own minds, are the sources of our idea of passive power. The power we possess of thinking and motion is the only source of our idea of active power. We shall enlarge upon this subject when we come to consider these ideas separately. The idea of suc-

cession, although specified amongst the ideas entering by sensation and reflection, is an idea purely of reflection. We have it from the contemplation of the train of ideas in the mind. Of this also we shall speak more fully when we come to speak of *time.*

10. We have now, in a general way, enumerated the principal of the simple ideas which the mind perceives, and which constitute the elements of our knowledge. It will possibly appear wonderful that so narrow a basis should allow of such a stupendous superstructure as human knowledge, and that such boundless variety as we find the fancy of man can produce from our stock of ideas, should proceed from such confined sources as THE SENSES. Let it be however considered that the modifications of one of our simplest ideas, *extension,* has occupied the learned of the world for more than three thousand years, and seems even still to furnish inexhaustible sources of speculation to the geometers of this and future ages. The endless variety of number shews what may be done by modifying an idea so simple as ONE; and language, what may be produced from the combinations of twenty-four symbols.

11. This lecture brings us to the conclusion of one stage of our progress. Our next object will be to enter upon a more minute inspection and careful examination of several of those simple ideas which have been already enumerated. Having first considered our simple ideas of sensation relatively to the things which produce them or their exciting causes, Locke applies himself to a particular consideration of the principal simple ideas of reflection, namely, perception, retention, discerning, comparing, compounding and abstracting. These will constitute the subject of the succeeding lectures, and will terminate the second stage of our course.

LECTURE VI.

Ideas of Sensation considered relatively to their exciting Causes.

1. NOTWITHSTANDING our author's resolution against entering upon the physical consideration of the mind, and inquiring "whether our ideas do in their formation any or all of them depend on matter or no," (Lect. I. § 2.) yet he subsequently found it necessary to change his determination. In order to discourse intelligibly of the ideas of sensation, it is necessary that the nature of sensation should be in some degree explained, and to distinguish between the qualities of bodies and the ideas produced by them. The student will observe that we assume not only the existence of certain beings in the mind, which Locke calls ideas, and which he considers as the immediate and only things about which we think, but we also assume the existence of a material world, external to, and heterogeneous with our mind and its ideas. We adopt as an hypothesis, that the beings of this external world, denominated bodies, produce certain effects upon our organs of sense, which are themselves bodies, and therefore homogeneous with them.

2. These effects are supposed to be produced either by the body immediately acting upon the organ of sense, or acting upon it through the intervention of some other body, as light or air. The organs thus affected are connected with the nerves, by which an im-

pression is immediately produced upon the brain. Various experiments have enabled us to trace the effects thus far, but here the physical part seems to end. When the brain thus receives an impression, the mind instantly becomes conscious of the presence of an idea. How the ideas are produced by the impression on the brain, we cannot tell. But we presume the relation of cause and effect to subsist between the impression and the idea. There are some circumstances which render it probable that the relation is reciprocal. The memory or imagination summoning an idea into the mind, we sometimes find that the brain, and thence the nerves, receive a corresponding impression. The effect of the imagination is well known to physicians, and every one must have observed the ravages which grief will sometimes make upon the body; this can only proceed from the impression made upon the brain and nerves by the ideas which are recalled by the memory.

If the existence of an external material world be granted, the connexion between the bodies of it as causes, and the ideas of the mind as effects, must also be granted. There is however this defect in it as an hypothesis, that it will not account for all our ideas, we must invent another hypothesis to account for some of them, *e. g.* ideas of reflection, memory, imagination, &c.

3. We shall now briefly state the manner in which the ideas of each of the senses are supposed to be produced in the mind by the agency of external objects. We must here be excused for stepping a little out of the way, and trespassing on the boundaries of natural philosophy. Without doing so it would be vain to attempt making the doctrine of Locke intelligible, and we shall digress no farther than is absolutely necessary for that purpose.

1°. Light is a fluid compounded of seven simpler elements. These elements differ from each other, and from the compound in several qualities, and particularly in colour. The particles of light are so extremely minute,

that their existence is manifested only by indirect means. They move in right lines with immense speed, and entering the eye through the pupil, impinge upon the posterior surface of the inner part of the eyeball. The substance thus affected by them is a nerve, which, extending to the brain, continues to it the effect produced. When this takes place, the mind is immediately conscious of the presence of an idea, which idea we call light. The idea produced, and the substance by whose impact upon the organ this idea is produced, are here called by the same name, although they are not only different things, but so utterly heterogeneous, as not even to allow a comparison, one being material, and the other mental. The eye, however, is not always the first body on which light impinges. It frequently impinges upon external objects, and being repelled or *reflected* from their surfaces, subsequently impinges upon the eye. Of the several component parts of the light incident upon the surfaces of bodies, all are not generally reflected. Of these component parts, some are absorbed and some reflected. Those which are reflected impinging upon the eye, produce an idea. This idea is that of *a colour*, and that colour depends upon the parts of the light reflected by the object. When therefore a certain object is said to be of a certain colour, all that should be meant is, that it is capable only of reflecting those parts of light which, when they impinge upon the eye, produce an idea in the mind called by the name of that colour. Here, as before, there is some confusion in the use of the name. It is applied as well to the idea in the mind, as to that part of light which produces the idea. But there is even still further confusion, for it is also applied to the body which reflects the light. As an example of this, the solar light is itself said to be *white;* when it impinges upon the eye, and produces an idea of a certain colour in the mind, that idea is called *white;*

when it impinges upon the paper on which I write, and thereby after reflection renders that paper visible, the paper is said to be *white*. Here the word white is made indifferently to stand for three things, differing altogether from one another. The quality in the light by which it produces the idea called white in the mind, and the idea so produced, are things of totally different kinds; and as to the paper, it has no more right to be called white, because the light reflected by it is called white, than a flat wall would have to be called round, because the tennis balls reflected by it are round. Such, however, is the imperfection of language, which imperfection has arisen from our ignorance as to the real nature of sensation.

Respecting the objects of sight, scil. colours, the student should therefore endeavour distinctly to bear in mind,

1°. That their names properly stand for certain ideas produced in the mind by light reflected from external objects affecting the eyes.

2°. That the capability of producing this effect upon the mind resides in the light and not in the object from which it is reflected, and that the name of the colour is sometimes used to express this power of the light.

3°. That the power or quality of reflecting any particular part of the light, and absorbing the remainder which exists in the body, is also sometimes called by the name of the colour.

4°. That *the ideas*, the power in the light to produce them, and the power in bodies to reflect that light, are called in general by the name *quality*.

2°. Sound is an idea produced by the vibrations of the air affecting the ear, which organ being connected with certain nerves which continue the effect to the brain, the idea called sound is produced in the mind. The vibrations in the air are usually produced by the impact of some body upon the air. Here also the name is ap-

plied to the body, which produces the effect upon the air, and the observations already made are (*mutatis mutandis*) equally applicable.

3°. The senses of smell and taste are differently circumstanced with respect to their exciting causes from those of hearing and seeing. The former are immediately affected by the object themselves, but the latter are affected by the objects through the mediums of air and light. Bodies affect the sense of smelling by continually projecting from their surfaces indefinitely small particles called *effluvia*, which affect our organs and produce the ideas in the mind. Bodies affect the taste by the minute component parts coming into contact with those parts of the palate fitted to receive impressions from them, and thence, as before, producing the corresponding ideas.

4. The sense of touch differs from the other senses in this, that it is capable of being affected by the grosser parts of bodies. This sense is also however capable of being affected by the minute particles, as in the case of heat.

Thus the senses in general are capable of being affected by particles of matter of inconceivable and intangible minuteness; it being the privilege of the sense of touch alone to be impressed by parts of gross and palpable bulk or volume. The ideas which are produced by the operation of minute particles, Locke denominates *secondary qualities*. He also however gives this name to the powers by which bodies produce these ideas. To the ideas which are produced by the grosser parts of body, as well as to the powers which produce these ideas, he gives the name *primary qualities*.

The doctrine of Locke is, that the idea produced in the sentient being and the power of producing it in the insentient, have no resemblance whatever in secondary qualities, but that they are exact copies in primary qualities.

5. I shall now endeavour, as far as I can understand

our author, to explain the arguments which he adduces in support of these two principles.

One might suppose that it would not require much argument to establish the fact, that an impact and a colour, or that a taste and friction are different things. However, it must be considered that Locke, the founder of a new doctrine, had to encounter ancient prejudices and preconceived and misconceived notions, and was obliged to select his arguments and proofs accordingly. We will here subjoin, in a summary way, his arguments that secondary qualities are not resemblances.

1°. Because it is no more absurd that there should be no resemblance between the ideas produced in our minds by external objects, and the qualities which produce them, than that there should be no resemblance between *pain* produced in us, and the thing which produces it.

2°. Because if we acknowledge the relation of cause and effect, a sufficient proof of resemblance in cases where the senses are concerned, we shall arrive at manifest contradictions, *e. g.* the same water which will produce heat in one hand, may produce cold in the other. This will happen whenever the one hand, having been previously immersed in water at a very high, and the other at a very low degree of temperature, both are plunged in water of an intermediate temperature. If then the heat be in the water because we feel it, the same water is hot and not hot at the same time, &c.

3°. An alteration in the texture and arrangement of the minute parts, will produce a corresponding change on the secondary qualities, which shews that these latter depend on the former. *E. g.* An almond pounded changes its colour.

4°. The colour of bodies change with the light in which they are seen, and yet it cannot be said that the same body has at the same time two different colours.

5. These are Locke's arguments against "secondary

qualities" being resemblances. They must be looked upon rather as the popular arguments in support of that principle: we shall take a more philosophical view of it presently.

Our author maintains that primary qualities *are* resemblances, with quite as much earnestness as he does that secondary qualities *are not* so. I have very carefully endeavoured to divest my mind of the influence of preconceived opinions, in order to select and state with their due force Locke's arguments, that primary qualities are resemblances. So little success, however, has attended my attempts that I have been unable to find a single passage in the entire chapter (Ch. VIII. B. 2.) which I can induce myself to believe that Locke seriously considered as an argument. I subjoin all the passages which relate to this principle.

"Qualities thus considered in bodies are, first, such as are utterly inseparable from the body, in whatsoever state it be; such as in all the alterations and changes it suffers, all the force can be used upon it, it constantly keeps; and such as sense constantly finds in every particle of matter which has bulk enough to be perceived, and the mind finds inseparable from every particle of matter, though less than to make itself singly to be perceived by our senses * * * * * *. For division can never take away either solidity, extension, figure or mobility, from any body * * * *. Book 2. Ch. VIII. § 9.

The particular bulk, number, figure and motion of the parts of fire or snow are really in them, whether any one's senses perceive them or no; and therefore may be called real qualities, because they really exist in those bodies; but * * * * § 17.

A piece of manna, of sensible bulk, is able to produce in us the idea of a round or square figure, and by being removed from one place to another, the idea of motion. This idea of motion represents it as it really is in the

manna moving; a circle or a square are the same, whether in idea or in existence, in the mind or in the manna, and thus both motion and figure are really in the manna, whether we perceive them or no: *This every body is ready to agree to.*" § 18.

The preceding extracts will, I believe, be found to contain all that Locke offers to prove that "primary qualities are resemblances."

If these be *arguments*, then it will be no very difficult matter to refute all the doctrines of Locke. It is only to make so many assertions contradictory to them, and to maintain each assertion by repeating it, under several different forms, and sometimes under the same form, with several degrees of force of asseveration, and sometimes with the same force, and the thing is done, the refutation is complete.

6. Locke seems emphatically to distinguish primary qualities by their being in the things themselves, whether we perceive them or no. Let us consider what this of "being in the things themselves, whether we perceive them or no," means.

Locke defines an idea to be "whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding.

He then defines the word quality thus:

"The power to produce any idea in our mind, I call quality of the subject wherein that power is." Ch. VIII. § 8.

If this be taken as the sense of the word quality, we shall find that it is by no means peculiar to primary qualities, "to be in the things themselves, whether we perceive them or no." The *power* of producing an idea is not destroyed because it is not exerted. The secondary qualities, considered as powers, are just as real, and just as really resident in the subject as primary qualities, and are quite as independent of the subject on which they act. When Locke asserts that the primary qualities are "in

the things themselves, &c." he cannot therefore be supposed to mean that the secondary qualities are not also " in the things themselves, whether we perceive them or no." Nor can his meaning be more clearly ascertained from other parts. His first distinction between primary and secondary qualities is this:

" To discover the nature of our ideas the better, and to discourse of them intelligibly, it will be convenient to distinguish them, as they are ideas or perceptions in our minds, and as they are modifications of matter in the bodies that cause such perceptions in us." Ch. VIII. § 7.

Locke here divides ideas into two classes. The first he states to be ideas or perceptions in our minds. The second class are ideas which are not ideas, but are the modifications of matter which produce ideas. It would appear from this that he considered the first class to be mental ideas, which terminate in themselves; the other physical ideas, which terminate in the production of mental ideas. All this, however, is mere jargon.

7. The difficulties and obscurity into which Locke has fallen, have arisen from his not perceiving that the arguments which must have convinced him of the absurdity of supposing a resemblance in secondary qualities, equally extend to primary qualities. The circumstance of being produced by the operation of indefinitely small particles on the senses, may be admitted as a good reason for distinguishing these qualities into two classes; and provided the meaning be previously explained, there is no material objection to the use of the terms " primary" and " secondary," as a mark of the distinction. But unless the want of resemblance is deduced from the distinguishing marks, why should it be supposed to apply to the one species and not to the other? The philosophical proofs of no resemblance are equally applicable to all ideas.

An idea can have no resemblance to any thing but to another idea. An idea is an existence in the mind, and it is perfectly impossible when due consideration is given to it, even to conceive a resemblance between an idea in a sentient intelligent being, and another existence in an insentient mass of matter. Can an idea exist in matter? Can any thing not an idea *resemble* an idea? Can there be any thing like thought in an unthinking being? such a supposition, if properly expressed, would become a verbal contradiction.

8. The existence of an external material world, known only by its effects upon the mind, is by some philosophers considered as a very unnecessary hypothesis, and productive of the most mischievous consequences in leading men to scepticism. They maintain that an external world, of which we can have no idea, can be of no use.

For it is on all hands admitted:

1°. That the external material world answers no other purpose than that of exciting ideas.

2°. That the ideas excited cannot bear any resemblance whatever to any thing in that external world.

It is considered, therefore, that nature would never create two worlds, one of which is of no other use than to produce the other, the external material world to produce the internal immaterial world, especially when it is also acknowledged that the latter can exist independently of the former. This is considered contrary to that principle of philosophy which forbids us to assign to several causes that which may be assigned to one and the same. These were the doctrines of Berkeley, and with some modification were adopted by Hume.

Other philosophers, on the contrary, altogether deny the existence of ideas, and maintain that we think of, and conceive the things themselves and their qualities immediately, without the intervention of ideas.

Such, and so various are the opinions on these subjects

held even at this day. They are mentioned here, in order that the student may not suppose that the principles of Locke are the only ones at present received.

9. We shall not insist further upon this very obscure part of the Essay, than to state in a summary manner such parts of the doctrines promulged in it as have not been already discussed. He conceives that positive ideas may arise from privative causes, because " all sensation being produced in us only by different degrees and modes of motion in our animal spirits, variously agitated by external objects, the abatement of any former motion must as necessarily produce a new sensation, as the variation or increase of it." Here it is supposed that " a new sensation" is a " positive idea," and also that " the variation or increase of a motion in our animal spirits," must necessarily produce a positive idea.

10. The outline of the doctrine of qualities, as it would appear that Locke intended to lay it down, is, that the powers of bodies to affect the senses are three-fold. The primary qualities produce in the mind pictures of themselves, the mental idea being an exact picture of the corporeal power which produces it. The other qualities he holds to bear no resemblance to the ideas they produce. A third sort of qualities are those by which bodies produce a change in the sensible qualities of other bodies, and through them acting upon the senses. These last he calls powers, and between these and the things which produce them, no resemblance is ever supposed. Locke accounts for our never supposing a resemblance between the powers of external bodies upon each other and the effects produced by these powers; and yet that we *do* suppose a resemblance when the same bodies affect our senses instead of affecting each other, thus: When bodies affect each other the cause and effect are both external and both material, and therefore admit of a comparison by which their dissimilitude may be ascertained; but when the effect

produced is an idea, and the cause producing it an external body, the cause and effect are so totally dissimilar, of natures so entirely discrepant, that they do not even admit of a comparison, or of being brought, as it were, into juxta-position ; being therefore unable to asertain their *un*likeness, we presume a likeness, merely because the relation of cause and effect exists between them. He denominates *powers* secondary qualities mediately perceivable, the others being secondary qualities immediately perceivable.

LECTURE VII.

Perception.

1. The method we have laid down now leads us to consider some of the simple ideas of reflection. The ideas of reflection being ideas of the operations of our minds, the first and simplest of these is perception. Perception being the name of a simple idea, is considered by Locke to be incapable of definition. (Lect. III. § 5.) "Whoever reflects on what passes in his own mind cannot miss it: and if he does not reflect, all the words in the world cannot make him have any notion of it." It may, however, be easily collected from what our author says himself, that he means by this term "the actual production of an idea in the mind." Under this definition memory would be included, and so memory would be perception. The mind may be as properly said to perceive an idea when recalled by memory, as when originally had from sensation or reflection, and thus memory may be esteemed secondary perception.

Locke uses the term perception in different senses. He sometimes expresses by it "the production of an idea," sometimes, the idea produced; thus he speaks of an idea and a perception synonymously. In another place he defines the understanding to be "the power of perception," and perception to be "the act of the understanding," and makes it threefold.

1°. The perception of ideas in the mind.

2°. The perception of the signification of signs.

3°. The perception of the agreement or disagreement of ideas.—B. 2. Ch. XXI. § 5.

2. In the present case we must be understood to confine the sense of the term perception, to the production of an idea. Locke states, that perception is distinguished in the propriety of the English language from "thinking," in this, that thinking is only applicable to those faculties in which the mind is active, whereas in perception the mind is for the most part passive. Notwithstanding this distinction, our author himself adopts the improper use of the term frequently throughout the Essay.

The passiveness of the mind in perception only applies to ideas of sensation. In the perception of the ideas of reflection the mind is certainly active, and cannot be otherwise. The reason why it is passive in the perception of ideas of sensation is, that this depends on the operation of external bodies upon the organs, the operation of the nerves of these organs upon the brain, and finally, the operation of the brain upon the mind. In this case the mind *suffers* the impression, and cannot increase it nor diminish it; and is therefore, in this respect, a passive recipient. But in the perception of ideas of reflection the body and its organs have no part whatever; the process is exclusively mental. The mind, by the dictate of the will, turns its attention to one of its own operations, and from viewing it, acquires an idea of it. Here there are two actions, an act of the will and an act of the understanding. In the perception of ideas of sensation, therefore, the mind is passive, and in the perception of ideas of reflection, active.

3. Locke *implicitly* enumerates three requisites for the perception of ideas of sensation; two of them bodily, and one mental:

1. Perfect organs.
2. Sufficient impression upon the organ.
3. That the mind should be disengaged from other objects.

On the *perfection* of an organ it would not be easy, or perhaps possible to pronounce. The ears or eyes of no two human beings were ever formed with the same degree of sensibility, and even those of the same individual change their sensibility from time to time. Some standard should therefore be selected as the standard of *perfection.* Without this, however, in a general and popular sense, an organ is said to be perfect when it has no obvious defect or inferiority to those of men in general. Eyes, which can see at the distance, and with the degree of light which is sufficient to produce vision in general, are deemed perfect, without fixing any standard more scientifically exact.

4. The impression necessary to be made upon the organ in order to produce perception, depends on its sensibility. An impression sufficient to produce perception in one organ may be quite insufficient to produce it in another. The quality of the impression made is also sometimes concerned. Some persons are able to read by moonlight, who could not see, distinctly, a face at three yards distant in broad day. On the other hand, there are persons who can see distinctly at considerable distance in the day, who could not distinguish a letter upon the page by moonlight. Deaf persons frequently find it easier to hear a distinct speaker than a loud one. The impression, therefore, both in its quantity and quality, must be suited to the state and construction of the organ which is designed to receive it.

5. Even though an impression suitable to the organ be made, and therefore the corresponding effect produced upon the sensorium, there may yet be no perception. This may happen when the attention of the mind is oc-

cupied in the contemplation of some other object. Every one must have experienced when occupied in intense thought, that he has not been sensible of persons addressing him. Various instances of this abstraction of mind continually recur. In order therefore that perception should follow an impression which is usually sufficient to produce it, it is necessary that the mind should be disengaged from the attentive contemplation of other objects.

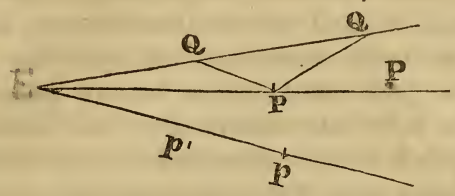
The precedency of our ideas in entering the mind, is not very easily determined, and not very useful, even if it were determined. Hunger and warmth, Locke conjectures to be the first. (After being born, pain and light are probably the first.) These ideas, which enter first, whatever they may be, differ from other ideas of sensation only in precedency of time. They are wholly different from innate ideas. (Lect. II.)

6. The perception of ideas of sight is produced, as we have stated, by the impression of light upon the eye. Colours are therefore the proper and only objects of vision. The eye, however, as has been formerly observed, takes cognizance of the ideas of space, figure, and motion. We now propose to examine how it happens that these ideas are common to the sight and touch, and in what sense only they can be properly said to be common to these two senses. In order perfectly to explain this matter, we must, as in a former instance, step a little out of the way.

Any object is seen in that direction in which the light reflected from it enters the eye. Let P be a visible point, and E the eye of the spectator, the *direction* in which the point P is seen and judged to be, is that of the line EP.

In like manner p being another visible point, it is esteemed to be in the direction Ep. Now if these points respectively move along the lines of their direction, the eye at E will be sensible of no change whatever in their mutual position. If P move to P′, and p to p', no visible change takes place as their mutual position. It is true that one will grow visibly larger and the other visi-

ble smaller, but this might take place had they remained at P and p, and changed their actual magnitudes.



Hence it appears that the eye is neither sensible of actual motion, nor actual position.

7. Let us suppose the point P to move from P to Q. The eye becomes immediately sensible that it has changed its direction by the angle PEQ. This change the *judgment* suggests may have been produced by some motion by which the point has passed across the intermediate space, but the effect would be equally produced by any motion across that space as PQ′; it is not even necessary that its motion between the two lines should be rectilinear. Finally, the effect may be produced, even when the point P is quiescent, if a corresponding motion in the opposite direction be given to the spectator. The conclusion from all this is, that the eye perceives neither distance nor motion. It only perceives the direction of objects, and that by the light reflected from them. We receive from this sense no idea of space but that of the inclination of the directions of different objects; and I leave it to the metaphysician to determine whether we would receive even this idea, had we not previously the idea of linear space, and the other modes of extension by the touch.

8. If the eye judge not of distance, it cannot judge of figure. The figure of a visible object must be determined by the different distances of the points of its surface from the eye: these distances the eye cannot estimate, and therefore cannot judge of the figure. When

Locke states that a globe of an uniform colour presents to the mind, when viewed with the eye, the idea of a flat plane, variously shadowed, he means that it presents the same idea to the mind, as a flat plane variously shadowed would present *when viewed with the eye.* The truth is, neither the globe nor the plane, nor any thing else affecting the sight only, could produce the idea of *a flat plane.* This is an idea to be had from the touch, and from the touch only. The light and colour reflected from a flat plane, and received by the eye, could no more of themselves produce in the mind the idea of a flat plane, than the light and colours reflected from the leaves of sweet-briar could produce an idea of the scent of that shrub.

9. To prove that the ideas produced by the same object through the senses of sight and touch are not the same, and indeed bear no resemblance whatever to each other, Locke produces the Problem of the celebrated Molyneux.

"Suppose a man born blind, and now adult, and taught by his touch to distinguish between a cube and a sphere of the same metal, and nighly of the same bigness, so as to tell when he felt the one and the other, which is the cube, and which the sphere. Suppose then, the cube and sphere placed on a table, and the blind man be made to see: *quere,* whether by his sight, before he touched them, he could now distinguish and tell which is the globe and which the cube? To which the acute and judicious proposer answers: not. For though he has obtained the experience of how a globe, how a cube affects his touch; yet he has not yet obtained the experience that what affects his touch so or so, must affect his sight so or so; or that a protuberant angle in the cube, that pressed his hand unequally, shall appear to his eye as it does in the cube."—Book 2. Ch. IX. § 8.

To this solution of the problem it has been objected that the cube gave to the touch an idea of a figure,

bounded in certain parts by right lines, and the globe gave the idea of curvature; that although the ideas produced, when viewed with the eye, be not the same exactly as those of the touch, yet that the cube both to sight and touch gives the ideas of right lines, and the globe of curvature. This objection, though at first view it appears of some weight, yet upon a closer examination is quite futile. It is founded on, and derives its force entirely from the supposition that the ideas of a right line and curve produced by the touch, are the same as these ideas produced by the sight; that is, that if a right line and circle be described upon paper, and viewed with the eye, and also the same lines formed of any tangible substance and felt with the hand, the mind will receive in both cases the same, or at least similar ideas. This, however plausible, is quite unfounded, the ideas received in these two ways are so perfectly distinct and dissimilar as not to bear a moment's comparison. The idea of figure and magnitude which we receive from sight has been called visible figure and magnitude. Those which we receive from the touch, tangible figure and magnitude. These ideas have no kind of resemblance. Having however been always accustomed to receive both ideas from the same subject, we bring ourselves by use to consider either indifferently as a *sign* of the presence of the same object. No sooner is the visible figure and magnitude perceived, than an act of the judgment substitutes in its place the idea of the tangible figure and magnitude. This is done under a supposition which seems to have prevailed with mankind, that the touch is a sense more to be relied upon in giving ideas of real existence than the sight.

10. Visible and tangible figures are ideas so totally different that Bishop Berkeley concluded that they could not belong to the same object, and uses this as one of the arguments to establish his hypothesis of the non-existence

of a material world. If external objects exist, and that figure and magnitude be attributes of them, this figure and magnitude is either 1°. visible, 2°. tangible, or 3°. both. The last is manifestly absurd, for no one will seriously believe, that the same object has, at the same time, two figures and two magnitudes entirely different from each other. If the external object exist then at all, it can have but one figure and one magnitude, and whichever of the two this is alleged to be, the other must be purely a mental fiction, having no real existence whatever. But if we acknowledge the ideas of one sense to be mere fictions, and not to belong to any external thing, we must also acknowledge those of all the senses to be so.

Reid maintains that visible and tangible figure and extension are both real, but that the former is a partial and incomplete conception, whereas the latter is a perfect conception of the qualities which really exist in the object.

11. It may be objected against Locke's theory, that the act of the mind whereby the idea of tangible figure is substituted for that of visible figure, the appearance for the cause, the sign for the thing signified, is not noticed, that we are not conscious of any such act. He anticipates this objection, and gives two reasons for our unconsciousness.

1°. The rapidity with which the acts of the mind are performed makes many of them often pass unnoticed. Thus the mind glances through all the steps of a demonstration frequently in less time than would be consumed in stating verbally a single step. He thinks it not wonderful that actions performed with such rapidity should not arrest the attention, and impress us with a consciousness of them.

2°. The process objected to, is one to which we must necessarily have been accustomed from our earliest in-

fancy; it is probably the first exertion of judgment which is demanded from the mind of a child; and it is one which must be practised every moment of our lives, except during sleep. When we consider that habit, in matters of much less frequency and much shorter duration, makes us unconscious of what passes in our mind, we cannot wonder at its effects in this case. Locke instances the use of by-words, and the fact of our being in darkness every time we wink our eyes without being conscious of either, as examples of this. It may however be questioned whether the latter example will hold; for it is known that the sensation continues for some time after the remotion of the sensible object, and if the eye be opened again before the sensation ceases, we have not been in darkness. Though this example may have been unhappily chosen, yet the principle he wishes to establish is certain. He gives a more just and striking example in language, where the idea is instantly substituted for the word without any consciousness.

12. The reason given by Locke why we change the ideas of sight into those of touch, and do not change the ideas of any other two senses one into another, is as follows:

"Because sight, the most comprehensive of our senses, conveying to our minds the ideas of light and colours, which are peculiar only to that sense; and also the far different ideas of space, figure, and motion, the several varieties whereof change the appearances of its proper object, viz. light and colours; we bring ourselves by use to judge of the one by the other." B. 2. Ch. IX. § 9.

This, I believe, will be found, when examined, to amount to nothing more than an assertion, that we do change the ideas of visible space, figure, and motion, produced by light upon the eye into "the far different" ideas of tangible space, figure, and motion, pro-

duced through the sense of touch. It is difficult to conceive how Locke could mistake a simple statement of a fact for a reason for that fact. The ideas of sight are changed into those of touch; and his object is to show why the ideas of no other sense are changed into those of touch, or into those of any other sense, and he does this by a very circuitous statement of the fact itself. If this fact could be admitted as proof in the case at all, it would prove the opposite; for by analogy, if what he states be the case with sight it is likely to be so also with the other senses.

Locke considers perception in its lowest degree to be the distinction between animals and the inferior orders of the creation.

LECTURE VIII.

Memory.

1. CONTEMPLATION is that act or power of the mind whereby it holds its ideas continually in view. This power in the human mind is very limited. It is limited both as to the number of ideas and the time it can contemplate them. According to Locke, the mind cannot have a distinct view at the same time of more than a single idea, nor can it keep the same idea in view for any considerable length of time. The ideas in the mind of man exist in succession, nor can that succession be stopped in order to dwell upon any particular idea. B. 2. Ch. XIV. § 13.

There are two ways whereby an idea may be produced in the mind, perception and memory. Properly speaking, these are both perception, but this term is usually confined to the production of an idea of sensation by the effect of an external object or of reflection by noticing the operations of our minds. The mind possesses a power of reproducing any idea which it has formerly had from sensation or reflection, merely by an act of the will, and without the presence of the object or the existence of the operation from which such idea was originally derived. Many attempts have been made by philosophers to account for this power, but it is probable that the *modus*

operandi must lie hidden from us until our faculties are so improved as to be able to discover the nature and construction of the human mind. Some have supposed that when the sensible object is removed, and therefore the impression upon the organ of sense, and on the nerves with which it is connected, has ceased, the impression upon the brain continues. This however will be found, even if admitted, quite inadequate to account for memory. It might indeed be taken as a reason for contemplation, but not for memory.

2. We shall here transcribe the observations of Reid, upon Locke's account of the memory.

Mr. Locke, and those who have followed him, speak with more reserve than the ancients, and only incidentally, of impressions on the brain as the cause of memory, and impute it rather to our retaining in our minds the ideas, got either by sensation or reflection.

This, Mr. Locke says, may be done two ways: "*First*, "By keeping the idea for some time actually in view, "which is called *contemplation*. *Secondly*, By the power "to revive again in our minds those ideas, which, after "imprinting, have disappeared, or have been, as it were, "laid out of sight; and this is memory, which is, as it "were, the storehouse of our ideas."

To explain this more distinctly, he immediately adds the following observation: "But our ideas being nothing "but actual perceptions in the mind, which cease to be "any thing, when there is no perception of them, this "laying up of our ideas in the repository of the memory, "signifies no more but this, that the mind has a power, "in many cases, to revive perceptions which it once had, "with this additional perception annexed to them, that "it has had them before; and in this sense it is, that "our ideas are said to be in our memories, when indeed "they are actually no where; but only there is an ability "in the mind, when it will, to revive them again; and,

" as it were, paint them anew upon itself, though some
" with more, some with less, difficulty, some more lively,
" and others more obscurely."

In this account of memory, the repeated use of the phrase, *as it were*, leads one to judge that it is partly figurative: we must therefore endeavour to distinguish the figurative part from the philosophical. The first being addressed to the imagination, exhibits a picture of memory, which, to have its effect, must be viewed at a proper distance, and from a particular point of view. The second being addressed to the understanding, ought to bear a near inspection, and a critical examination.

The analogy between memory and a repository, and between remembering and retaining, is obvious, and is to be found in all languages, it being very natural to express the operations of the mind by images taken from things material. But in philosophy we ought to draw aside the veil of imagery, and to view them naked.

When therefore memory is said to be a repository or store-house of ideas, where they are laid up when not perceived, and again brought forth as there is occasion, I take this to be popular and rhetorical. For the author tells us, that when they are not perceived, they are nothing, and no where, and therefore can neither be laid up in a repository, nor drawn out of it.

But we are told, " That this laying up of our ideas in
" the repository of the memory signifies no more than
" this, that the mind has a power to revive perceptions,
" which it once had, with this additional perception
" annexed to them, that it has had them before." This, I think, must be understood literally and philosophically.

But it seems to me as difficult to revive things that have ceased to be any thing, as to lay them up in a repository, or to bring them out of it. When a thing is once annihilated, the same thing cannot be again pro-

duced, though another thing similar to it may. Mr. Locke, in another place, acknowledges, that the same thing cannot have two beginnings of existence; and that things that have different beginnings are not the same, but diverse. From this it follows, that an ability to revive our ideas or perceptions, after they have ceased to be, can signify no more but an ability to create new ideas or perceptions similar to those we had before.

They are said " to be revived, with this additional " perception, that we have had them before." This, surely, would be a fallacious perception, since they could not have two beginnings of existence; nor could we believe them to have two beginnings of existence. We can only believe, that we had formerly ideas or perceptions very like to them, though not identically the same. But whether we perceive them to be the same, or only like to those we had before, this perception, one would think, supposes a remembrance of those we had before, otherwise the similitude or identity could not be perceived.

Another phrase is used to explain this reviving of our perceptions. " The mind, as it were, paints them anew " upon itself." There may be something figurative in this; but making due allowance for that, it must imply, that the mind, which paints the things that have ceased to exist, must have the memory of what they were, since every painter must have a copy either before his eye, or in his imagination and memory.

These remarks upon Mr. Locke's account of memory are intended to shew, that his system of ideas gives no light to this faculty, but rather tends to darken it; as little does it make us understand how we remember, and by that means have the certain knowledge of things past.

Every man knows what memory is, and has a distinct notion of it: But when Mr. Locke speaks of a power to revive in the mind those ideas, which, after imprinting,

have disappeared, or have been, as it were, laid out of sight, one would hardly know this to be memory, if he had not told us. There are other things which it seems to resemble at least as much. I see before me the picture of a friend. I shut my eyes, or turn them another way; and the picture disappears, or is, as it were, laid out of sight. I have a power to turn my eyes again towards the picture, and immediately the perception is revived. But is this memory? no surely; yet it answers the definition as well as memory itself can do. Reid, Essay III. Ch. VII.

3. It will be remembered that Reid's opinions are in direct opposition to Locke's doctrine of ideas.

Berkely and Hume pushed the doctrine of ideas much farther than Locke, and finished what he left imperfect. The first rejected the existence of the material world as an unfounded and an unnecessary hypothesis, and the latter rejected the existence of every thing except ideas or impressions. Hume's account of memory is as follows: impressions originally made upon the mind, when they re-appear and retain none of their original vivacity, become *ideas;* but when they retain a considerable share of their primitive vividness, they may be considered as something between ideas and impressions. The faculty of producing the former effect is imagination, and the latter memory.

4. Memory is a faculty which cannot always be commanded. Different men have it in different degrees, and the same man on different occasions has it in different degrees. Ideas are observed to be imprinted upon the memory, as it is figuratively expressed, with more or less force; by which it is meant that they are recalled with greater or less facility. There are several circumstances connected with the first perception of ideas which give this facility. These circumstances are usually called the helps to memory. Locke enumerates four of them:

1°. Attention to the original impression from sensation.

2°. Frequent repetition of the impression upon the organ of sense.

3°. Pleasure, which may accompany the original impression as well as the reminiscent recurrence of it.

4°. Pain, which may accompany them.

In addition to these, the association of ideas and method are sometimes enumerated.

5. The causes of ideas or impressions fading from the memory, or without a metaphor, the causes of an inability to revive ideas formerly impressed, are enumerated by Locke to be three:

1°. Because perception has not been produced sufficiently often, and perhaps but once.

2°. Because no attention, or insufficient attention has been given to it, even supposing the impression repeated.

3°. Because of some physical defect in the construction of those organs of the brain or sensorium on which memory depends.

He might also have added that the idea, though it might have occurred with frequency, and may have been attended to, yet not producing pleasure or pain, being, in a word, indifferent, did not fix itself in the memory.

6. As examples of ideas being lost from want of repetition, our author instances persons who became blind in early infancy, losing the ideas of light and colours. The ideas fade from their minds "like shadows flying over fields of corn."

He by no means supposes our ideas and our minds to be coeval either *a parte ante* or *a parte post*. He supposes the mind in the first moment of its creation to be completely free of ideas, "like a sheet of white paper;" and he thinks that our ideas, like the children of our youth, may die before us. Our minds, in surviving their ideas, he compares to the tombs to which we are hastening, "where, though the brass and marble may remain,

yet the inscriptions are effaced by time, and the imagery moulders away."

7. That Locke conceives the memory to be a faculty which, in a great degree at least, depends upon a physical constitution, appears from what follows:

"How much the constitution of our bodies, and the make of our animal spirits are concerned in this" (the degree of our retention,) "and whether the temper of the brain makes this difference, that in some it retains the characters drawn on it like marble, in others like freestone, and in others little better than sand, I shall not here inquire." B. 2. Ch. X. § 5.

8. The ideas which are least apt to be forgotten, he thinks are those which are oftenest repeated, and these he reduces to three classes:

1°. The primary qualities of bodies.

2°. The secondary qualities which oftenest affect us, as heat and cold.

3°. The affections of all beings, as existence, duration and number.

He might have stated as one class the ideas which enter by all the ways of sensation and by reflection. These must last as long as life itself.

9. Memory differs from perception in two respects:

1°. Perception (as far as regards sensation) requires an external object, a sound organ, and a sufficient impression upon that organ. Memory requires none of these. After the organs are gone, the memory of the ideas may remain.

2°. Perception (as far as regards sensation) is a passive faculty. Memory is sometimes passive, sometimes active.

Aristotle points out distinctions between different modes of memory.

The most perfect memory is where the idea offers itself without any spontaneous act of the mind, when there is occasion for it. The next degree is where the idea itself is forgotten, but some other idea with which it is asso-

ciated brings it into the mind without an effort. The third degree (specified by Locke,) in which the mind "sets itself on work in search of some hidden idea, and turns as it were the eye of the soul upon it," is distinguished by Aristotle as that degree of memory in which is included an act of the will, and which may be called recollection.

10. Between mere memory and recollection, Aristotle makes a marked distinction. So much so, that though he allows to brutes the former faculty, he denies them the latter. That brutes have memory Locke acknowledges, and produces the fact of birds learning tunes as an instance of it. The only possible causes which could account for this phenomenon are instinct, mechanism, or memory.

1°. Locke denies it to be instinct, because this faculty is only given to supply the want of reason in matters which concern the preservation of the animal. As the learning a tune does not in any way tend to the bird's preservation, he denies it to be instinct.

2°. He denies that it can be the mechanical effect of the traces produced by the sounds upon the brains of the bird, because the effect produced is not what such a mechanical cause would produce. Were the cause mechanical, the sound of the bird's notes would immediately follow the traces received by the brain, and gradually be lost when those traces would disappear. Whereas the case is exactly the reverse; the bird approximates gradually to the tune, instead of gradually losing it.

11. Locke enumerates two defects which exist in the memories of men, compared one with another:

1°. Oblivion, or the irrecoverable loss of the ideas. This is productive of ignorance.

2°. Slowness, or a difficulty of reviving the idea, which produces stupidity.

Memory supposes ideas to exist in succession. Therefore this quality itself is a defect, and one which could not

be ascribed to a perfect intellectual being who must necessarily be supposed to have all his ideas present together. It is a quality given to supply the want of perfect contemplation.

12. The primitive idea of sensation differs from that of memory:

1°. Because the presence of an object is required in the one, and not in the other.

2°. Because the same degree of pleasure and of pain does not accompany them.

3°. The idea of memory is generally more faint.

4°. The additional idea of having had it before accompanies the one, and not the other.

LECTURE IX.

Discerning, Comparing, Compounding, and Abstracting.

1. THE faculty by which the mind distinguishes between two ideas, and perceives them to be different, and perceives in what their difference consists, is called *discerning.*

Locke considers, that from overlooking the faculty of discerning, many general propositions have been mistaken for innate truths. Under this class all general propositions respecting identity and diversity come. Their truth was observed to be self-evident, and the perception of it really depends on the faculty of distinguishing between our ideas; and as the ideas themselves are not innate impressions, so neither are those propositions into which they enter innate truths.

2. The imperfections of the discerning faculty arise from three causes:

1°. Defective organs.
2°. Want of acuteness or attention in the understanding.
3°. Hastiness and precipitancy natural to some tempers.

The perfection of this quality is of the last importance to intellectual beings. Defects in it produce confusion in

our notions of things, and disturbance and uncertainty in our judgment and reasoning.

Judgment and wit are qualities which Locke places in direct opposition. He defines them thus:

Judgment consists in the nicely discriminating things between which there is the least difference.

Wit lies in the assemblage of ideas with quickness and variety, between which there is the most remote similitude.

The sense in which the word judgment is used here, must be carefully distinguished from another sense in which our author uses the same term in his fourth book, where he treats of probability. In the sense in which it is here used, it appears nearly synonymous with discerning. He probably intended that discerning should be the name of the power, and judgment the act.

3. The definition of wit given above, is pronounced by Addison to be the best and most philosophical account of that quality he ever met with. He adds, which indeed may be also collected from Locke, that every resemblance of ideas is not wit, unless it be such an one as gives delight and surprise to the hearer. In order that the assemblage of two ideas may be wit, it is necessary that they should not lie too near each other in the nature of things; for where the likeness is obvious it gives no surprise.

"When a poet tells us that the bosom of his mistress is as white as snow, there is no wit in the comparison; but when he adds, with a sigh, that it is as cold too, it then grows into wit." Addison thinks that although the source of wit pointed out by Locke is by far the most fertile, yet that there is another, which arises not from the resemblance, but from the remarkable opposition of ideas.

Lord Kames differs from Locke in defining wit. As, however, the subject does not strictly come under our ar-

rangement, we merely refer the student to his Elements of Criticism.

Wit is generally acceptable, because its beauty appears at first sight, and requires no laborious examination. Locke thinks that there is something in it not perfectly conformable to " truth or good reason," as it is considered an affront to subject it to these tests.

4. The power of comparing ideas furnishes the mind with that class of ideas called relations, of which we shall treat at large hereafter. Locke thinks that brutes participate in this faculty only so far as regards " the sensible qualities attached to the objects themselves;" in other words, he admits that they may compare particular ideas, but denies them the power of comparing abstract ideas, and then forming abstract relations. His reason for thinking that they do not compare abstract ideas is, that they cannot have an abstract idea. His reason for this opinion we shall presently explain.

5. That particular species of compounding, which consists in continual repetition of the same idea, is called *enlarging*. Our ideas of integral numbers are examples of this, being continual repetitions of unity or one. Locke thinks it probable that brutes have not the faculty of enlarging; for animals, which have a numerous brood of young, will not miss some of them if they be taken away. This being the simplest species of compounding, the fact of their wanting it might be taken as an *a fortiori* argument that they do not compound at all. But independently of this, he states, that the young of a fox may be substituted for those of a dog, and the animal will not be sensible of the change when once they have taken her milk.

6. Although brutes do not compound, yet this is no proof that theymay not have complex ideas. Many of our own complex ideas are not made by the mind. The senses receive from a single external object a collection

of simple ideas. The mind, without any act of composition, looks on that collection as a single complex idea; it supposes the simple ideas to be connected in nature. In this way brutes may, without compounding, receive complex ideas from external objects. There are some reasons which render it probable that they do receive and retain such ideas. A dog will know the different individuals whom he has constant opportunities of observing, from strangers. This indicates judgment. Though this renders it probable that brutes have complex ideas, yet it is not conclusive as to the fact, because the distinction might be founded upon a single simple idea, as the smell. One of the instances already mentioned would seem to countenance some such hypothesis.

7. The doctrine of abstraction is one, which at a very early period attracted the attention of philosophers, and to this day they have not agreed upon it. We shall first attempt to explain Locke's theory, and then shew the objections to it, and the opinions of others upon the same subject.

According to Locke, man is forced to abstract by his social habits. It would appear, from his observations, that if a solitary individual existed who never had occasion for language, he would probably never abstract. This opinion I found upon the following passage:

"The use of words being to stand as outward marks of our internal ideas, and those ideas being taken from particular things, if every particular idea that we take in should have a distinct name, names must be endless. *To prevent this*, the mind makes the particular ideas received from particular objects, to become general; which is done by considering them as they are in the mind, such appearances, separate from all other existences, and the circumstances of real existence, as the circumstances of time, place, or any other concomitant ideas. This is called abstraction, whereby ideas taken from particular

beings, become general representatives of all of the same kind, and their names general names, applicable to whatever exists conformable to such abstract ideas."—B. 2. Ch. XI. § 9.

It appears from this, that it is to prevent names "from being endless," that men abstract, and that therefore man is indebted for this most important exertion of his faculties, and that which Locke declares to distinguish him from brutes, to the necessity of holding society with his kind by means of his organs of speech. It would further follow from this, that if men could shew their ideas to each other immediately, and therefore had no occasion for words, they would have no occasion for abstraction. In some part of his Essay, Locke conjectures this to be a privilege of spirits, and from comparing this with what we have just stated, it would amount to this, that man is elevated above the condition of brutes by *having* the power of abstraction, and that spirits are elevated above the condition of man by *wanting* the power of abstraction.

8. The process of abstraction, according to Locke, as well as I can understand it, appears to be this: Things and their qualities exist individually. A general or abstract existence is an absolute absurdity, and if the definitions were substituted for the words, would become a contradiction in terms. Ideas of things and of their qualities also exist individually. These ideas are, in the first instance, conformable to the individual things and their qualities. But by due contemplation of these ideas, and subjecting them to certain modifications, the mind forms out of them other ideas, which although they are in themselves particular individual existences in the mind, yet they are not conformable to any particular individual thing, but are looked on as the mental general signs of certain classes of individual existences. This second class of ideas supposed by Locke to be made by abstraction, he

calls abstract ideas, or universal or general ideas. The Platonists held nearly the same opinions, differing only in this, that the abstract ideas are not made by the mind, but have been eternal and immutable existences, conformably to which all particular things have been made. Thus Locke holds that abstract ideas are formed from particular existences, and the Platonists, that particular existences are formed from abstract ideas. I cannot perceive any material difference between Locke's doctrine of abstraction and that of Aristotle. This philosopher rejected Plato's supposition of the eternal existence of abstract forms or ideas, but he held that every individual of a species must be conformable to the abstract idea of that species, and that the abstract idea constituted the essence of that species, and that all science must relate to abstract ideas as the individual existences are subject to continual fluctuation and change.

9. Other philosophers, and particularly of the moderns, Berkeley and Hume, deny the existence of any such process of mind as Locke describes, as well as the existence of any such ideas as are produced by it. They maintain that words are general, but that an abstract idea is a manifest absurdity.

There has been a third sect of philosophers who held that there are not only abstract ideas, but real universal existences. These three sects are called, from their peculiar tenets, the conceptualists, the nominalists, and the realists.

Locke himself appears to have been a conceptualist, although I think an attentive student of his Essay would become a nominalist. He seems to consider that the abstract idea is created by the mind for no other purpose than to receive a name. In the formation of this idea, or fiction of the mind, he states, that there is considerable difficulty, and when formed, considerable inconsistency.

"Abstract ideas are not so obvious or easy to children,

or the yet unexercised mind, as particular ones. If they seem so to grown men, it is only because by constant and familiar use they are made so. For when we nicely reflect on them, we shall find that general ideas are fictions and contrivances of the mind, that carry difficulty with them, and do not so easily offer themselves as we are apt to imagine. For example, does it not require some pains and skill to form the general idea of a triangle? (which is yet none of the most abstract, comprehensive, and difficult;) for it must be neither oblique nor rectangle, neither equilateral, equicrural, nor scatenon, *but all and none of these at once.* In fact it is something imperfect *that cannot exist*, an idea wherein some parts are different and inconsistent *ideas put together.*" B. 4. Ch. VII. § 9.

The most zealous nominalist could hardly support his system by stronger argument or clearer language than the above. What are we to think of a system, which demands from us a postulate that we have ideas which are made up of other ideas totally inconsistent with each other; that we have ideas existing in our minds, and yet not existing; that we have an idea of a triangle which is equilateral and not equilateral; isoceles and not isosceles at the same time; which is large and not large; small and not small, &c.—all these and none of these at the same time? But Locke thinks that we are driven to the necessity of calling into existence these mental monsters, for the mere purpose of giving them names. How then, answers the nominalist, do young children discourse so fluently? Have they even in their early infancy conjured up this world of inconsistent, impossible beings, which are declared by Locke to be *existences which cannot exist?*

At present we shall not enter further into the question between the nominalists and conceptualists, as it will be necessary to speak of it again, and considerably more at length when we come to treat of general terms.

10. As Locke considers abstraction to have been the consequence of language, he denies the faculty to brutes. Though many brutes, as parrots, &c. can produce articulate sounds, yet they are never used by them as language, nor to express abstract ideas, and yet men who have no language, who are dumb, find means, as our author declares, of expressing abstract ideas. His reasoning to shew that brutes have no abstract ideas, reduced to a logical form, stands thus:

All beings having abstract ideas express them,
Brutes do not express abstract ideas,
Therefore, brutes have not abstract ideas.

11. The faculties of the mind are, according to Locke, liable to two opposite defects, too great and too small a degree of intensity. To the one defect he ascribes lunacy, to the other, idiocy. The lunatic, by the violence of his imagination, adopts precipitately false propositions as principles, and from these, by right reasoning, he deduces false conclusions. The idiot, however, seldom puts ideas together, so as to form a proposition, and never reasons.

12. We have now arived at the conclusion of another stage of our course. In the investigations we have just made of the earliest and principal operations of the mind, we have for the most part considered them as employed upon simple ideas of sensation:

1°. Because these are the ideas about which the mind first employs itself.

2°. Because the operations are more easily understood relatively to simple ideas.

3°. Because these operations themselves employed about simple ideas of sensation, furnish another class of simpler ideas, viz. simple ideas of reflection.

13. Locke, recapitulating his theory of ideas, illustrates it in the following manner:

"These alone," (sensation and reflection,) "as far as I

can discover, are the windows by which light is let into this dark room; for methinks the understanding is not much unlike a closet wholly shut from light, with only some little opening left to let in external visible resemblances, or ideas of things without; would the pictures coming into such a dark room but stay there, and lie so orderly as to be found upon occasion, it would very much resemble the understanding of a man in reference to the objects of sight, and the ideas of them." B. 2. Ch. XI. § 17.

This illustration is evidently borrowed from Plato. He illustrates the manner in which we perceive external objects of sense, by supposing a dark cave in which men are so bound, that they can only view one part of it. Behind this, at a distance, is a light, some rays of which pass over a wall to that part of the cave which is before the eyes of those who are confined in it. Various objects pass between them and the light, the shadows of which they behold, but not the objects themselves. Locke, however, seems to confine the illustration to perceptions of sight.

LECTURE X.

Division of Complex Ideas. Idea of space and its modes. Extension not body.

1. COMBINATIONS of simple ideas frequently enter the mind from external objects, and are looked on as complex ideas, without having been connected together by any immediate act of the mind. In this way Locke thinks it probable that brutes receive complex ideas. (Lect. IX. § 6.) By far the greater number of our complex are, however, wholly made by and receive their unity from an act of the mind, and even those collections of simple ideas which are received from external objects are subsequently rendered more exact types of the originals from whence they were taken, by mental operations.

2. The classes of complex ideas, according to Locke, and which are sometimes called his Categories, are

1. Modes.
2. Substances.
3. Relations.

1°. Modes in general are "such complex ideas, which however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependences on, or affections of substances." Modes are twofold, simple and mixed. Simple modes are compounded of repetitions of the same simple idea. The component

simple ideas in a mixed mode are different, Locke uses the word "modes" in these cases, "out of its ordinary signification." But where it is necessary to communicate a new notion, it must be done either by inventing a new term or using an old one in a new sense. He thinks the latter preferable.

2°. Substances are "those combinations of simple ideas, as are taken to represent distinct particular things subsisting by themselves, in which the supposed or confused idea of substance, such as it is, is always first and chief." Substances are divided into *single*, as they are considered to exist separately, as a man or a sheep, and *collective* where several are put together, as an army, a flock.

3°. Relations are those complex ideas which arise from the comparison of two ideas in any respect.

3. In the examination of our ideas, Locke commences with the simple modes of space and time. He assumes as self-evident that we obtain the idea of space both by sight and touch. Space may be considered in three respects. 1° When it is considered "barely as length between any two beings," it is called distance. 2°. When considered as having length, breadth, and thickness, it is called capacity. 3°. Considered in the abstract, it is called extension.

4. The idea of immensity is obtained by repeating without limit the idea of a finite space. Figure, another modification of space, is "the relation which the parts of the termination of extension or circumscribed space have amongst themselves." The infinite variety of this class of ideas appears from the vast number of figures which really exist, as well as from the unlimited power of the mind in varying the idea of figure.

Place is "the relation of distance between any thing and any two or more points which are considered in keeping the same distance one with another, and so considered at rest." The necessity of fixed points to determine

place is manifest from our inability to determine the place of the universe.

5. Locke takes occasion in treating of space to impugn the Cartesian doctrine, that space is inseparable from body. He considers that the impossibility of solidity existing independently of extension, is not a proof of extension being inseparable from body, as many ideas require others as necessary to their existence, and yet the ideas may be perfectly different. Thus scarlet colour cannot exist without extension, and yet these are distinct ideas. He states also, that if spirit be admitted to be different from body because it has not extension, it must also be admitted, that space is different from body because it has not solidity. In fine he thinks extension or space different from body, for three reasons.

1°. Because extension includes neither the idea of solidity nor its consequence, resistance; and body includes both.

2°. Because the parts of space are inseparable really or mentally, and the parts of body are separable both really and mentally.

[To divide actually or *really* is by removing the parts from one another to produce two surfaces where before there was but one. To divide *mentally* is to imagine this done.]

3°. The parts of space are immoveable, and those of body moveable.

6. Extension has been defined to be that which has *partes extra partes*. This Locke translates, "that which has extended parts exterior to extended parts." This as a definition is defective, because the term to be defined is introduced into it; the absurdity of which he illustrates by comparing it to defining a fibre to be that which is made up of several fibres. He considers that extension being a simple idea does not allow of definition. (See Lect. III. § 5.)

The following dilemma has been brought to prove that space cannot exist without body:

Space is either something or nothing.

If nothing be between two bodies they touch.

If something be between them, it must be either body or spirit.

∴ There is no space, &c.

This is a *petitio principii*, for it assumes that all beings are included under body and spirit, whereas the very point in question is, whether there is not a third being, viz. space.

7. Locke thinks that those who deny the existence of pure space must suppose body infinite; for if body were finite it would be impossible not to suppose space beyond its limits. Let a man placed at the bounds of body stretch forth his hand, and he must stretch it into pure space. He also thinks that they must deny to the Creator the power of annihilation, for if they grant that, they must at least grant the possibility of a vacuum. He conceives that the motions of the bodies of the universe prove the existence of pure space, for if space was completely filled with matter, no motion could take place; for no solid body could be conceived to be so divided that the parts would move freely amongst each other.

LECTURE XI.

On Duration and its Modes.

1. THE difficulty of explaining what duration is, arises from the circumstance of its being a simple idea, and therefore incapable of definition. Locke mentions one who being asked "what time was?" answered "*si non rogas intelligo;*" which evidently means, "I know what it means, but cannot explain it." Locke, however, considers this answer to be equivalent to saying "the more I set myself to think upon it, the less I understand it." According to Locke, the manner in which we obtain the idea of duration is as follows: by observing the train of ideas passing continually in our minds we get the idea of *succession*, and "the *distance* between any parts of that succession, or between the appearance of any two ideas in our minds, is that we call *duration*." It should be carefully observed that the word "distance" here means the *number* of intervening ideas, and not the time elapsed between the passage of the two ideas in the mind; for if it meant the latter, it would be saying no more than that we get the idea of duration from duration. From the succession of ideas we are conscious of the continuation of our existence, and the continuation of existence suggests immediately the idea of duration.

That succession is necessary to the idea of duration appears from this; that when succession ceases our idea or

consciousness of duration ceases with it. Thus a man in sound sleep is not conscious of duration. When he awakes it is true he perceives that a certain portion of time must have elapsed by observing the change from evening to morning, or by observing the hour indicated by a clock; but this is acquiring the conviction that duration must have elapsed by a process of reasoning.

If Adam and Eve (when they were alone in the world) instead of their ordinary night's sleep had passed the whole twenty-four hours in one continued sleep, the duration of that twenty-four hours had been irrecoverably lost to them, and been for ever left out of their account of time. "If however during sleep a man dreams, and a variety of ideas make themselves perceptible in his mind one after another, he has then during such dreaming a sense of duration." Locke's arguments to prove succession necessary to duration seem to be these:

1°. Because in sound sleep where succession ceases, we have no sense of duration.

2°. Because if during sleep we dream, the sense of duration returns.

3°. Because if a man could keep one idea without variation in contemplation, he would have no sense of duration.

2. Some have supposed that our idea of succession was derived from motion. Locke contends that motion only produces the idea of succession by exciting a train of ideas in the mind. He conceives that motions which fail to excite this train, produce no notion of succession. This is the case with motions either very quick or very slow. "Motions very slow, though they are constant, are not perceived by us, because in the remove from one sensible part towards another, the change of distance is so slow that it causes no new ideas in us, but a good while one after another, and so we have no perception of motion or succession."

3. " On the contrary things which move so swift as not to affect the senses distinctly with several distinguishable distances of their motion, and so cause not any train of ideas in the mind, are not also perceived to move; for any thing that moves in a circle in less time than our ideas are wont to succeed each other in our minds, is not perceived to move, but seems a perfect circle of that matter or colour." Locke infers from these circumstances, that the velocity of the succession of our ideas has a *major* and *minor* limit. He conceives that portions of duration, less than the *least* possible interval between two ideas, are not perceived. As an example of this he supposes " a cannon bullet to pass through a room, and in its way to take with it the limb and fleshy parts of a man. It is clear that it must successively strike the two sides of the room, that it must touch the parts of the flesh in succession, and yet no succession can be perceived." He therefore conceives that all successions are measured and determined by that of our ideas.

4. The power of the will over the succession of ideas is very limited. As has been observed, it cannot increase or diminish its rapidity beyond certain limits. It follows therefore *à fortiori*, that it cannot *stop* the succession in order to contemplate solely and exclusively any one idea. The only powers possessed in this case by the will is, the selection of the ideas and the degree of attention with which they are observed.

5. Time is " duration, set out by certain periods, and marked by certain measures or epochs." Time is more difficult to measure than space, because its parts are not coexistent. There are three requisites for a good measure of time, that it should be, 1°. Constant; 2°. Regular; 3°. Universally observable. If the measure of time were not constant, the chronology of one age of the world could not easily be compared with that of another. If it were not universally observable, different nations should

have different measures of time, and therefore their chronology could not be compared. A measure of time not regular, that is, which does not divide duration into equal portions, would obviously be useless. The revolutions of the celestial objects are good measures of time, because they fulfil all these conditions. They are observable to the whole world; they are regular, and have continued so since the creation. It is however by their periodical appearances, and not necessarily by their motions, that they measure duration. Any periodical phenomenon, "as the freezing of water, or the blowing of a plant returning at equi-distant periods at all parts of the earth, would serve to reckon years as well as the motion of the sun. An instance of this is found in an American nation, who counted their years by the coming of certain birds among them."

6. No two parts of duration can be certainly known to be equal, because they are not co-existent, and do not therefore allow of juxta-position. "Duration itself must however be considered as going on in one constant, equal, uniform course; but none of the measures of it which we make use of can be known to do so."

Two erroneous opinions have prevailed respecting time and motion; one, that motion is the measure of time and the other, that time is the measure of motion. We have already showed that motion is no more a measure of time than any other periodical phenomenon. Time is only one of the elements necessary to measure motion. If by motion be meant velocity, then time and space are necessary to measure it. If by motion be meant moving force or momentum, then three things are required to estimate it, the time, space, and the mass or quantity of matter in the thing moved. The measures of time, minutes, hours, days, &c. are no more necessary to duration than inches, feet, yards, &c. are to space. Having, however, acquired ideas of finite lengths of duration from

these measures, we can apply them to duration in which the measures themselves did not exist. Thus we can conceive twenty-four hours before the creation of the sun. In this sense we are to understand the expressions day and night, applied in the Mosaic history before the creation of the sun.

7. Having obtained the idea of any finite length of time, as a day, or a year, and being able to repeat it, and add it to itself without ever coming to the end of such addition, we get the idea of eternity.

LECTURE XII.

Duration and Expansion compared.—Number—Infinity.

I.

Duration and Expansion.

1. HAVING considered the modes of space and duration separately, Locke next proceeds to compare them together. The idea which he has hitherto expressed by the words space or extension, he here calls *expansion.* He thinks the term space objectionable, because it is sometimes applied to duration ("the distance of fleeting successive parts,") and he rejects the term extension, because it implies body. Although Locke makes this selection of terms, he by no means subsequently adheres to it, and he uses the term extension at least as often as expansion to express pure space.

2. Locke points out six remarkable congruities between the ideas of expansion and duration, and two striking points of dissimilitude. Before we enter upon the particulars of each of these we shall shortly enumerate them.

Congruities.

1. They are both capable of greater and less. That is, they consist of parts and not of degrees, and are capable of unlimited increase and decrease.

2. They are neither of them bounded by those things which are commonly used as their measures. Space is not bounded by matter, nor duration by motion.

3. Time is to duration as place is to expansion. This analogy holds good in two senses of the words time and place.

4. They are affections of all beings. Every thing that exists must have time and place of existence.

5. All the parts of extension are extension, and all the parts of duration are duration.

6. Their parts are inseparable.

Differences.

1. Duration is as a line and expansion as a solid.

2. All the parts of expansion are coexistent, and no two parts of duration are coexistent.

3. These ideas derive their first point of agreement from being both modes of quantity. Quantity is whatever consists of parts, and its modes are space, duration, and number. Other ideas, which consist of degrees, are not capable of unlimited increase, for example, colours, &c. Locke considers, that if we were to allege that beyond the bounds of matter there is nothing, we would be limiting the Deity to matter, of whom Solomon declares, "heaven, the heaven of heavens, cannot contain thee." Although no one denies infinite duration, yet many are found who doubt of the infinity of space. He accounts for this thus: it has been usual to express space by the term extension, and extension has been conceived to be an essential attribute of matter; so that matter and extension became so associated in men's minds, that they were inseparable, and never supposing matter to be infinite, men were unwilling to ascribe infinity to its attribute extension. This difficulty Locke gets rid of by adopting the principle that space or extension is not an attribute of matter, but

an independent being, and that properly the attribute of matter is the capability of filling space.

4. Time is analogous to place in two respects. 1°. They are each of them so much of those boundless oceans of eternity and immensity as is set out and distinguished from the rest, as it were by land-marks, and so are made use of to denote the position of finite real beings in respect to one another in those uniform oceans of duration and space. In this sense, time is that portion of infinite duration bounded by the existence of the world, and place that portion of infinite expansion occupied by the world. 2°. Time is also sometimes applied to such portions of infinite uniform duration, which we upon any occasion do suppose equal to certain lengths of measured time, and so consider them as bounded and determined, even though those portions of duration be before the creation. And thus likewise we sometimes speak of place, in that great inane beyond the confines of the world, when we consider so much of that space as is equal to or capable of receiving a body of any assigned dimensions as a cubic foot.

5. Expansion and duration being simple modes, it is natural to ask what the simple idea is of which they are compounded? Locke thinks, that the least portion of either of which we have clear and distinct ideas, may perhaps be fittest to be considered by us as the simple ideas of that kind, out of which our complex ideas of space, extension, and duration, are made up. Such a part of duration may be called a moment, and is the time of one idea passing in our minds in their ordinary succession. The simple idea of expansion may be called a sensible point, and is the least part of matter or space we can discern, and which is ordinarily about a minute of a circle of which the eye is the centre.

II.

Number.

1. The most simple of our ideas is unity, or one. There is no shadow of variety or composition in it, and every object of our senses and every thought of our minds brings this idea with it. The modes of unity furnish us with that class of ideas called number. These modes are of all others the most *distinct*, "because every the least variation which is an unit making each combination, as clearly different from that which approaches nearest to it as the most remote. This is not so in other simple modes, in which it is not so easy, nor perhaps possible for us to distinguish between two approaching ideas which are yet really different. Who can assign that angle next in magnitude to a right one? Hence it is that demonstrations in numbers are the most precise. All number is related to one standard quantity, unity, and the relation to this is always clearly conceived and expressed; whereas in geometry there is no such fixed standard. The clearness of our ideas of number does not, as is sometimes observed, arise from it admitting of a *least* quantity, unity, for this would be excluding fractions from the idea of number. In one or two instances it would appear that Locke extended his notions of number no further than integers. Thus, he says, that ninety-one is the next excess above ninety.

2. There are two requisites to perfect numbering. 1°. That the mind distinguish carefully two ideas, which are different from one another only by a single unit. 2°. That it retain in memory the names or marks of the several combinations, from an unit to that number. This is the reason why children do not number earlier.

III.

Infinity.

1. Finite and infinite are modes of quantity. They are primarily and literally ascribable to space, duration, and number. When infinity is attributed to the Deity, it is strictly ascribed only to his duration and ubiquity, but figuratively to his power, wisdom, and goodness. Infinity may, however, in a certain sense, be literally applied to the moral attributes of God, as to the *number* and *extent* of the *acts* or *objects* of these powers.

2. The idea of infinity is derived from our faculty of enlarging, applied to whatever admits of unlimited increase. It is therefore only applicable to those ideas which consist of parts, and not to those which consist of degrees. For in all these last, there is a degree beyond which is no higher. Thus there are various degrees of white or red, but it is plain that there is an highest degree of each of these colours.

3. We have no idea of a space actually infinite, although we have of the infinity of space. The having an idea of a space actually infinite implies a contradiction. The infinity of space is the conception of the capability of the endless enlargement of our idea of a finite space.

Infinity, as has been observed, is applicable to all the modes of quantity, but number affords the clearest idea of it. Locke illustrates our different conceptions of the infinity of number, duration, and expansion thus: the infinity of number resembles a line whereof one end terminating with us, the other is extended still forwards beyond all that we can conceive. It is plain from this that Locke confines his ideas of number to integers. The infinity of duration resembles this line of number extended both ways to an inconceivable undeterminate and infinite length. The infinity of space is as if we conceived our-

selves in the centre and those interminable, lines of number extending from us in all directions. Matter, though not supposed infinite, yet affords us the idea of infinity by its divisibility.

4. It has been sometimes maintained that the idea of infinity is positive. This principle has been supported by defining infinity the negation of an end, and assuming that an end is negative, its negation is positive.

5. This argument Locke considers puerile, and may be retorted on its own principles. A beginning must be acknowledged to be positive, therefore its negation negative, and therefore infinity *a parte ante* may be proved negative by the same proof that *a parte post* it is proved positive. But independently of this he denies that an end is negative, and states that he who perceives that an end of his pen is black or white, and possesses attributes, will find it difficult to admit that it is a mere negation. Locke considers our idea of infinity partly positive, partly relative, and partly negative. 1. The idea of so much space as the mind can clearly contemplate is positive and clear. 2. Greater than this is clear also, but comparative. 3. So much greater as cannot be comprehended is plainly negative.

LECTURE XIII.

Modes of Thinking.—Pleasure and Pain.—Power.

1. IT is unnecessary to enter into a particular enumeration of the simple modes of other sensible ideas, nor indeed would it be possible, as most of them have not particular names. In general it may be observed, that those simple modes which are considered but as different *degrees* of the same simple idea, though they are in themselves many of them very distinct ideas, yet have ordinarily no distinct names, nor are much taken notice of as distinct ideas, where the difference is but very small between them. This defect in naming may have arisen either 1°. from men wanting measures nicely to distinguish between the ideas; 2°. because were they so distinguished that knowledge would not be of general or necessary use.

I.

Modes of Thinking.

2. Amongst the most striking modes of thinking are, sensation, remembrance, recollection, contemplation, reverie, attention, study or intention, dreaming and ecstacy

Sensation is the actual entrance of an idea into the understanding by the senses. (See Lect. 11. § 4.)

Remembrance is the recurrence of an idea, without the operation of an object on the external senses.

Recollection is recalling an idea with exertion and difficulty.

Contemplation is the retaining an idea under attentive consideration.

Reverie is the floating of ideas without choice or selection in the mind.

Attention is the careful notice taken of ideas, so as to register them in the memory.

Study or Intention is the earnestness with which the mind fixes its view on any idea, considers it on all sides, and will not be called off by the ordinary solicitation of other ideas.

Dreaming is having ideas in the mind, whilst the outward senses are stopped, (so that they receive not outward objects with their usual quickness,) not suggested by any external object or known occasion, nor under any choice or conduct of the understanding.

Ecstacy may be defined to be dreaming with the eyes open.

From the various degrees of intention and remission, which are to be observed in thinking, Locke infers that thinking is the action, and not the essence of the soul, the essential qualities of things not being capable of these variations.

II.

Modes of Pleasure and Pain.

3. Things are said to be naturally good or evil, only in reference to pleasure and pain. We call that good which is apt to produce or increase pleasure or diminish pain in us, or to procure or preserve to us the possession of any other good, or absence of any evil. On the contrary, we name that evil which is apt to produce or increase any pain, or diminish any pleasure in us, or else to procure us any evil, or deprive us of any good.

Pleasure and pain are the hinges on which our passions turn, of which we may form ideas from observing the effects of pleasure and pain.

Love is the thought of the delight which any present or absent thing is apt to produce.

Hatred is the thought of the pain which any present or absent thing is apt to produce.

Desire is the uneasiness produced by the absence of a thing whose present enjoyment carries the idea of delight with it.

Joy is the delight occasioned by the present or assured approaching possession of some good.

Sorrow is the uneasiness produced by a good lost, which might have been enjoyed longer.

Hope is the pleasure arising from the thought of the profitable future enjoyment of any thing.

Fear is an uneasiness upon the thought of future evil.

Despair is the thought of the unattainableness of any good, which works differently in men's minds, sometimes producing pain, sometimes indolence.

Anger is pain produced by the receipt of an injury, with a present purpose of revenge.

Envy is the pain produced by the thought of a good which we desire, obtained by one we think should not have had it before us.

Anger and Envy differ from the other passions above-mentioned, in not being caused by pleasure or pain, simply in themselves, but having in some mixed considerations of ourselves and others. They are not therefore, like the others, to be found in all men.

III.

Power.

4. By observing in any thing the possibility of having its sensible qualities changed, and in another the capability of producing that change, we obtain the ideas of passive and active power; passive power being the capability of receiving, and active power the capability of producing the change. Cause and effect are the exertions of active passive power. It has been observed elsewhere that Locke divides beings into God, finite spirits, and bodies. He conceives God to be incapable of passive, and matter incapable of active power. Intermediate beings alone he considers capable of both.

It may be objected against classing powers among our simple ideas, that they include the idea of relation (viz. a relation to action or change) and so ought to be brought under the class of complex ideas. Locke assigns three reasons for placing them amongst simple ideas. 1°. All our ideas, when attentively considered, include relation. 2°. Powers constitute the principal ingredients of our complex ideas of substances. 3°. They generally terminate in the change of some sensible quality, and therefore in the production of some simple idea.

5. No clear idea of active power can be had from sen-

sation, and the only way by which we obtain it is by reflection. Locke proves this by the following disjunctive reasoning. All action consists in either thought or motion. Of thought we acquire no idea by sensation. Motion does not necessarily give the idea of action. That which produces motion is an action, but the *continuation* of motion, after it has been produced, is no more an action than the continuation of the alteration of the figure of a body by a blow, is an action. Of the production of motion we receive no idea from sensation, which only gives us an idea of its continuance when received. Hence it follows, that since all idea of active power must be derived either from thought or from the production of motion, we must have it by reflection alone.

6. The will and understanding are two powers; the act of the will being called volition or willing, and the act of the understanding perception or thinking. Any action is called voluntary when it is the immediate dictate of the will, involuntary if done without any exertion of the will. Voluntary is not opposed to necessary, for the same action may be both voluntary and necessary. We may choose to act so or so, and yet might have been unable to act otherwise had we not so chosen. Perception, or the act of the understanding, is three-fold. 1°. The perception of ideas in the mind. 2°. The perception of the signification of signs; and 3°. the perception of the agreement or disagreement of ideas. All these are attributed to the understanding or perceptive power, though it be the two latter only that use allows us to say we understand.

7. In what precedes, a short draught has been given of our original ideas, from whence all the rest are derived, and of which they are made up. Locke conceives that they may be all reduced to the following:—

EXTENSION,
SOLIDITY,
MOBILITY,
} By sensation from Body.

PERCEPTIVITY,
MOTIVITY,
} By reflection from the Mind.

EXISTENCE,
DURATION,
NUMBER,
} By both Sensation and Reflection.

These are sometimes called Locke's Catagories.

LECTURE XIV.

Mixed Modes and Substances.

I.

Mixed Modes.

1. MIXED modes are distinguished from complex ideas of substances, by not being looked upon to be characteristic marks of any real beings that have a steady existence, but scattered and independent ideas put together by the mind. From the circumstance of being made exclusively by the mind without reference to patterns, and being as it were their own patterns, they have been called notions, as if they had their original more in the thoughts of men than in the reality of things. The scattered and independent ideas which compose a mixed mode derive their union, and the mode derives its unity, from an act of the mind compounding them, and looking upon them as one; and the marks of that unity, and that which renders the union permanent, is the name. The cause of making mixed modes is the necessity in our intercousse with society, for an easy and rapid interchange of ideas, and, therefore, we give names to those combinations of ideas which we have frequent occasion to speak of. And as these occasions vary with the state of society, and with

the variation of civilization and knowledge, so also the words necessary to express ideas of mixed modes change, some becoming obsolete, and new ones continually appearing. Also, the different states of society in different countries, render it necessary to have words in one language expressing ideas, which have no corresponding names in another. Hence we continually find untranslateable words. Mixed modes being thus arbitrary, can only be said to exist in their names : as soon as the name is lost or forgotten the idea ceases to exist.

2. We usually obtain the ideas of mixed modes in three ways:

1°. Observation.
2°. Invention.
3°. Explanation.

The last is the most usual way, for we hear the words or names most frequently before the idea occurs, and in order to understand the language we hear spoken, we are forced to seek for *explanations* of the terms.

3. The ideas which have been most modified are thinking, motion, and power. Because action being the great business of mankind, and that about which all laws are conversant, it is no wonder that the modes of thinking, motion, and power, (in which all action consists,) should be carefully noticed and named. The principle that thinking and motion includes all action, might seem to be contradicted by the import of certain terms which seem to express action, but really signify nothing of the modus operandi at all, but barely the effect produced, with some of the circumstances of the subject wrought upon, or the cause operating, *e. g.* creation, annihilation, &c. Freezing, which seems an active term, merely signifies the effect produced.

II.

Substances.

1. There are two points of view in which the ideas of substance may be contemplated. It was observed in a former lecture, that certain combinations of simple ideas are observed to co-exist in nature, and so are taken to represent particular things. Finding this constant co-existence, and presuming it not to take place without some efficient cause, we habitually assume, that there is some substratum or support or substance in which these co-existent qualities unite. Now the idea of substance is sometimes taken to be the idea of this substratum, and sometimes as merely being a complex idea, composed of the simple ideas of the co-existent qualities. The one is called substance in the abstract, the other the sorts of substances.

2. Of substance in the abstract, Locke contends that we have no idea whatever. To say that it is the support of accidents, is to define by a synonymous term, since the word support is equivalent in this sense to substance itself. He illustrates the absurdity of attempting to form an idea of substance in the abstract, by the Indian philosopher, who alleged that the world was supported by a great elephant. Upon being asked what supported the elephant, he answered a great tortoise; and upon being further pressed, he acknowledged his ignorance of the final fulcrum of the universe.

3. We obtain ideas of the sorts of substances, by carefully observing and collecting such combinations of simple ideas as are by experience and observation of men's senses noticed to exist together, and are therefore supposed to flow from the particular internal constitution or unknown essence of that substance.

4. For these reasons it appears that we have as clear ideas of spirits as of bodies. Of the substance in the abstract we have no idea in either case, and we have as clear ideas of thinking, knowing, motivity, and the other qualities of the mind, as we have of extension, solidity, and the other qualities of body.

Our ideas of substances are composed of primary qualities, secondary qualities, and powers. The last two classes ought properly to be considered one, both being powers. By far the greater part of the ingredients are therefore powers.

Locke conjectures that if our organs of sense were rendered considerably more acute than they are at present, all the secondary qualities of objects would be changed. When the minute parts of any coloured object would affect our sight it would appear wholly different from what it does. We have an example of this in blood, which, when viewed through a microscope, appears to be a pellucid liquid, having some few globules of red in it. Hence he thinks that our faculties of discovery are suitable to the state in which we are placed (see Lect. 1. § 5.) It is probable that any material alteration of our faculties would render a change in our situation in every other respect necessary. He conjectures that it may probably be the privilege of superior spirits to frame and shape to themselves organs of sensation or perception suitable to their present design, and the particular circumstances of the objects which they would converse with.

Our conception of the infinite spirit of God is obtained by adding infinity to expansion, duration, and the moral attributes.

LECTURE XV.

Relations in general.

1. WHEN the mind considers one thing, so as to bring it to and set it by another, and so compares these things in any respect, there arises the idea of a relation. The things compared are called correllatives, and it frequently happens that only one of the two correllatives have received a name; in consequence of this the relation is frequently overlooked, and the term considered absolute. Such relations are called *external denominations.* Many terms also seem absolute until their meanings are carefully examined, such are old, great, imperfect, &c. The sameness of relation does not suppose a sameness of subject, neither does a change in the relation suppose a change in the subject. Between different pairs of men the same relation, *e. g.* father and son, may subsist, and between the same men different relations, as younger, stronger, &c. may subsist at the same time. Of relations in general we may observe:

1°. That all things which admit of comparison are capable of relation.

2°. That the relation is frequently clearer than the ideas of the subjects related, because the relation after includes but one simple idea.

3°. Relations can be resolved into simple ideas.

4°. All terms which lead the mind beyond the subject denominated are relative.

I.

Cause and Effect, &c.

1. When a change in any substance is produced it is called an effect, and that which produces it is called cause. It has been observed before, that cause and effect are the exertions of active and passive power.

Creation is the production of a thing, no part of which had any previous existence.

2. Generation is the production of a substance formed of pre-existing particles, produced in the ordinary course of nature by an internal principle, but set on work and received by some external agent or cause. This is called making, when the cause is extrinsical, and the effect produced by a sensible separation or juxtaposition of parts. When any quality is changed, we call it alteration.

Time, dates, ages, places, are all relations, although the terms seem absolute.

II.

Identity and Diversity.

1. We derive our ideas of identity from comparing any thing existing at any determined time and place with itself existing at another time. Our notions of identity are founded on the supposition that it is impossible for the same thing to exist in different places at the same time, or

for different things to exist in the same place at the same time. Hence time and place become the criterions of identity. It follows from this also that the same thing cannot have two beginnings of existence, nor different things the same beginning of existence, since the beginning of existence is determined by the time and place of that beginning.

2. There are three classes of substances:

1. God.
2. Finite spirits or intelligences.
3. Bodies.

Since God fills all space, and all time his identity, and his unity are evident. The identity of spirits is to be determined by the *principium individuationis*, or the beginning of their existence. The identity of a particle of matter is to be determined in the same way. The identity of a mass of matter is to be determined by the identity of its parts.

3. The identity of living things is to be determined by the participation of the same continued life, by constantly fleeting particles of matter in succession, vitally united to the same organized body. The identity of an animal is illustrated by that of a watch. It continues the same watch although every part of it may have been successively changed by repairs.

4. Personal identity consists in consciousness. The word "person" means, "a thinking intelligent being, that has reason and reflection, and can consider itself as the same thinking thing in different times and places." This being Locke's definition of the word person, it is evident that sameness of person must be determined by an appeal to consciousness.

III.

Proportional, Natural, Instituted Relations.

1. Proportional relations arise from considering the equality or excess of the same simple idea in several subjects, as whiter, sweeter, &c.

2. Natural relations arise from the comparison of things with respect to the circumstances of their origin or beginning, *e. g.* father, son, &c. It is the peculiarity of these relations that they are as lasting as the subjects to which they belong. It may be observed of these relations, as well as of other relations and of mixed modes, that such only have received names as are necessary for communication.

3. Instituted relations arise from considering things with respect to some act whereby any one acquires a moral right, power, or obligation to do something, *e. g.* a general, a citizen, &c. These relations differ in particular from natural relations in being all of them alienable from the subject to which they belong, while the others are permanent. It frequently happens with instituted relations that they are only external denominations, having no correllative terms, and are therefore frequently not considered as relations.

LECTURE XVI.

Moral Relations.

4. MORAL relations arise from considering the conformity or disagreement of our actions to a rule to which they are referred, and by which they are judged. Good and evil are two-fold, natural and moral. Natural good and evil are nothing but pleasure and pain, or that which produces or increases pleasure and pain. In like manner moral good and evil is the conformity or disagreement of our actions to some law whereby good or evil is drawn on us by the will and power of the legislator, which good or evil is called the sanction of the law, or the reward and punishment. There are two requisites to render a law efficacious. 1°. It must be published or promulged to those whose actions it is designed to govern. 2°. It must be attended with a sufficient sanction, that is, a reward or punishment independently of any good or evil which is the *natural* consequence of the law itself. By the *natural* consequence is here meant any good or evil which would have attended the action had the law not been made; for evidently such a good or evil would have operated upon the agent equally forcibly without any law. Thus it would be absurd in the civil legislature to pass a law against intemperance and debauchery, and to declare that the punishment should be a shattered constitution, broken fortune, and danger of punishment in a future life.

5. The laws by which men's actions are or should be regulated are threefold:

1. The Divine Law.
2. The Civil Law.
3. The Law of Opinion.

In the divine law God is the legislator. It is promulged partly by that light of nature, that is to say, we obtain a knowledge of it by the use of our natural faculties, and partly by revelation. The Deity possesses the right to legislate because we are his creatures; he has, 1°. Infinite wisdom to direct us to what is right. 2. Infinite power to reward the conformity with, and to punish the breach of his laws. 3°. Infinite goodness to temper the severity of justice. This law is the only infallible touchstone of moral rectitude; actions relatively to it are denominated *sins* and *duties*.

6. The civil law is the rule set by the commonwealth to the actions of those that belong to it. Relatively to this law actions are denominated *criminal* or *innocent*. The right of the commonwealth to legislate is ultimately derived from the power which every individual has over his own actions, and the absolute freedom which he possesses in a state of nature. This power over himself, and this absolute liberty, he surrenders to those who are delegated by the public to frame laws, and receives in exchange civil liberty, which in society is found more valuable. As the Commonwealth is bound to protect the lives, liberties, and properties of those who live according to its laws, so it has power to take away the life, liberty, and property of him who disobeys them.

7. The law of opinion is the general judgment of the community in which we live, approving some actions and condemning others. Relatively to this law actions are denominated *virtuous* or *vicious*. That this is the proper sense of virtue and vice, will appear to any one who considers that although that passes for vice in one country,

which is counted a virtue, or at least not a vice in another; yet every where virtue and praise, vice and blame, go together. The following passages show this.

Sunt sua præmia *laudi*. Virgil.

Nihil habet natura præstantius, quam *honestatem*, quam *laudem* quam dignitatem quam decus; Cic:

"Whatsoever is lovely, whatsoever is of good report, if there be any *virtue*, if there be any *praise*," &c. St. Paul. Philip. iv. 8.

8. The law of opinion for the most part coincides with the divine law. This is not surprising when we consider how natural it is to encourage with esteem and reputation that wherein every one finds his advantage, and to blame and discountenance the contrary; and nothing can be more certain than that the law which God has established tends to the general good of mankind, even here, without any reference to a future state. Even those men whose practice is otherwise in this respect, give their approbation right, and for their own sakes discourage in others the faults and crimes which they commit themselves.

9. The enforcements or sanction of the law of opinion are commendation and discredit. There is no law so rigidly observed as this. The divine law is frequently violated, because its penalties are remote, and not very obvious, and therefore few men seriously reflect on them, and of those that do, many, while they break the law, entertain hopes of future repentance and reconciliation. The civil law is violated because men flatter themselves that they shall escape with impunity; but no man escapes the punishment of their censure and dislike who offends against the fashion and opinion of the company he keeps.

10. To conceive rightly of moral actions we must take notice of them under this two-fold consideration: 1°. Without any reference beyond themselves, and merely as combinations of simple ideas, under which point of view they are mixed modes. 2°. The same complex idea, when re-

ferred to a moral law becomes a relation. Thus duelling, considered as a mixed mode, is a particular sort of action distinguished from others by particular ideas. When this action is referred to the law of God it is called a sin; to the civil law, a capital crime; and to the law of opinion, valour and virtue. When the mixed mode and moral relation have the same name, a confusion is frequently produced in reasoning. Thus the taking from another what is his without his knowledge or allowance, is properly called stealing; but that name being commonly understood to signify also the moral pravity of the action and to denote its contrariety to law, men are apt to condemn whatever they hear called stealing as an ill action; and yet the privately taking away his sword from a madman is properly denominated stealing, although when compared with the law of God, it is no sin or transgression, but the contrary.

LECTURE XVII.

Ideas, clear or obscure. Distinct or confused. Real or fantastical.

1. IN the preceding Lectures the original of our ideas has been analysed and traced back to the two great fountains of all notions, sensation and reflection. We have also followed these simple elements through the various combinations into which they are formed by the powers of combining and comparing, and examined generally into the results of these operations, scil. mixed modes, substances and relations. There are, however, some other qualities of ideas, which not coming immediately within this arrangement, the discussion may form a supplement to the preceding Lectures.

I.

Clear and obscure Ideas.

1. The clearness and obscurity of ideas may be illustrated objects illuminated with different degrees of light. A *simple idea* is said to be clear when it is such as the object itself from whence it was taken did or might, in a

well ordered sensation or perception present it. So far as it may want this exactness, so far it is obscure. *Complex ideas* are clear when the component simple ideas are clear, and their number and order determinate and certain. Hence a complex idea may be obscure from either or both of these two causes.

2. The causes of obscurity are threefold. 1. Dull organs. 2. Slight impressions. 3. Defective memory. Locke illustrates these causes by the impression of a seal upon wax. He compares dullness of organs to wax so hardened by cold as to refuse the impression. The second cause of obscurity he compares to the seal being impressed with insufficient force; and the third to the wax being of so soft a quality as not to retain the impression.

II.

Distinct and confused Ideas.

1. Locke first defines a distinct idea to be one wherein the mind perceives a difference from all other ideas, and a confused idea such a one as is not sufficiently distinguishable from another from which it should be different. This definition he shows, however, to be absurd, because "let any idea be as it will, it can be no other than such as the mind perceives it to be, and that very perception distinguishes it from all other ideas. No idea, therefore, can be undistinguishable from another from which it ought to be different, unless you would have it different from itself."

2. He therefore thinks that ideas can only be said to be confused in reference to settled names. That which makes an idea be said to be confused is, when it is such that it may be as well expressed by another term as that which is used to express it: the difference which keeps the things

to be ranked under those two different names distinct, and makes some belong to one and some to the other being left out, and so the distinction, which was intended to be kept up by those different names being quite lost.

3. The causes which produce confusion are threefold :—

1°. When any complex idea is made up of a smaller number of simple ideas that the idea which word it is expressed by signifies. This is caused probably by the common method of defining by general terms, so as to explain the meaning of one word by two others, instead of enumerating the component simple ideas severally. Thus, to define a leopard to be a spotted beast, does not distinguish it from a lynx and other beasts.

2°. Another cause of confusion is the component ideas being jumbled confusedly together, although their number may be complete. He illustrates this by comparing it to a confused mass of colours upon paper, but which when viewed through particular glasses adapted to the purpose, are reduced to the order and position which form a picture or likeness of something.

3°. The mutability and indeterminateness of the component ideas is another cause of confusion.

The way therefore to prevent confusion is, first to collect and unite to one complex idea, as precisely as possible, all those ingredients whereby it is different from others ; and secondly, to apply steadily the same name to such combination.

Complex ideas may be partly distinct and partly confused ; instances of which occur in the idea of infinity applied to duration, divisibility, &c.

III.

Real and fantastical Ideas.

1. Ideas, when considered in reference to their archetypes, or the things from whence they are taken, may be divided into

1. Real and fantastical,
2. True and false.

Real ideas are again subdivided into adequate and inadequate.

2. An idea is said to be real when it is such as has a foundation in nature. This is the first criterion Locke gives for the reality of an idea. He however adds two others, scil. " they are such as have a conformity with the real being and existence of things, or with their archetypes." It will be observed that these criterions only agree when the archetypes of the ideas are real existences. If the ideas have not these qualities they are fantastical or chimerical.

3. Simple ideas are real, not because they are images or representations, but because they answer and agree to those powers of things which produce them in our minds, that being all that is requisite to render them real and not fictions at pleasure.

4. Mixed modes and relations having no other reality but what they have in the minds of men, there is nothing more required to this kind of ideas to make them real, but that they be so formed that there is a possibility of existing conformable to them. The only requisite therefore to their reality is, that they should be composed of consistent ideas.

5. The ideas of substances being designed for the representations of known existences are no farther real than as there are such combinations of simple ideas *known* to exist without us.

LECTURE XVIII.

I.

Adequate and inadequate Ideas.

1. A REAL idea is said to be adequate or inadequate according as it *perfectly* or *imperfectly* represents the archetype from which the mind supposes it taken.

2. All simple ideas are adequate, because being nothing but the effects of certain powers in things, fitted and ordained by God to produce such sensations in us, they cannot but be correspondent and adequate to those powers.

3. Mixed modes being voluntary collections of simple ideas, which the mind puts together without reference to any real archetypes or standing patterns existing any where, are, and cannot but be adequate ideas. They are their own archetypes, and must be adequate to themselves.

4. The ideas of mixed modes may however be inadequate with respect to fixed names. This inadequacy takes place when ones idea is different from the ordinary signification of the name.

5. Ideas of substances, taken in every sense, are inadequate. We have no idea of substance in the abstract, or of that real essence which constitutes the connexion of the

co-existing qualities. In this sense, therefore, we have no adequate idea of substances, because we have no ideas at all of them.

Considering the ideas of substances as complex ideas, made up of the co-existing qualities, they can never be adequate, because no one could have opportunities of observing all the various powers of any substance upon every other species of substance, which however would be necessary to form an adequate complex idea of the co-existing qualities.

6. With reference to their originals, ideas are either ectypes or archetypes. Ectypes are copies or signs of originals. Archetypes are the originals themselves. Simple ideas are therefore adequate ectypes; substances inadequate ectypes, and mixed modes are archetypes, and therefore necessarily adequate.

II.

True and false Ideas.

1. Truth and falsehood are, properly speaking, affections of propositions, and not of ideas; and even when applied to ideas, there is some tacit proposition implied. An idea being nothing but a bare appearance or perception in the mind, can be no more said to be true or false than a single name can.

2. Whenever the mind refers any of its ideas to any thing extraneous to them, they are then, in reference to these things, capable of being called true or false. Because the mind in such a reference makes a tacit supposition of their conformity to that thing: which supposition, as it happens to be true or false, so the ideas themselves come to be denominated. Those extraneous things to which

ideas are referred are usually 1°. other men's ideas; 2°. real existence; 3°. supposed real essences. The cause of the last reference is the disposition of the mind to generalise or to reduce particular individual things to sorts, in order to facilitate the enlargement of knowledge. The species of things being thus formed, a real essence of each species is supposed or assumed. This subject, however, will be more fully explained hereafter.

3. In reference to other men's ideas, simple ideas are least liable to be false, because the standard of their truth is so obvious, that their falsehood is at once detected and corrected. Substances are liable to falsehood in this respect, but there being a standard to refer them to, the true idea may, in general, be obtained with comparative ease; but the ideas which are most liable to this kind of falsehood are mixed modes, which not having any standards in nature, their falsehood is not in general either easily ascertained or corrected.

4. No ideas referred to real existence can be false but those of substances. Simple ideas are true in this sense, for the same reason that they are real and adequate. Mixed modes cannot be false in this sense, because no reference is made to real existence in forming them. The ideas of substances may be false in this respect, 1°. when simple ideas are put together, which in the real existence of things have no union; 2°. when from any collection of simple ideas, which always exist together, there is separated by a direct negation any other simple idea which is constantly joined with them.

5. Ideas in general may be false:

1°. When they are taken to be conformable to other men's ideas without being so.

2°. When they are taken to be conformable to real existence without being so.

3°. When they are taken to be adequate when inadequate.

4°. When they are taken to represent the real essence of substances.

True and false ideas are more properly called right and wrong.

III.

Association.

1. Unreasonableness, eccentricity, and extravagance, in all its various degrees, extending to absolute madness or insanity, proceeds from a wrong association of ideas. Some things are associated in nature, and a corresponding association takes place in our ideas: but besides these *natural* associations, there are some of quite another kind, in which the ideas are arbitrarily put together by the fancy, without any other connexion than that which is given to them by the mind.

Such associations are produced by our various inclinations, educations, interests, propensities, passions, &c. and are therefore different with different men. Such are the cause of most of our sympathies and antipathies. This explains why time cures mental disorders, which are out of the reach of any other remedy, because the association is broken, and the idea which produced the injurious effect no longer follows its companion. Thus the recent loss of a favourite child never occurs to the parent without bringing with it the idea of the pleasure derived from it while living; but time enables the parent ultimately to think of the loss without reflecting upon the pleasure, and thus mitigates the effects of grief.

LECTURE XIX.

Of Language.

1. THAT man was designed by nature for a social being we may conclude from these circumstances: 1°. He has been made with an inclination for society. 2°. He is laid under the necessity of it in order to supply the various wants and conveniences of life; and 3°. He is gifted with the means, by being endued with language, the great instrument and common tie of society. There are three requisites for language:—1°. To form articulate sounds—2°. To make these sounds the signs of ideas—3°. To make them general. The last two are by no means necessary consequences of the first. For we find many animals able to produce articulate sounds, but which never are applied to communicate ideas; neither does it follow, even if they did, that they would communicate general ideas, as it has been already shown that it is highly probable that animals have not general ideas.

2. There are no names in any language which, properly speaking, signify no ideas. Negative terms, such as nihil, ignorance, &c. relate to the positive idea, and signify its absence.

3. The structure of language would seem to confirm the principle that sensation is the original source of our

ideas; for these words, which express actions and notions quite removed from sense, have their rise from thence, and from obvious sensible ideas are transferred to more abstruce significations. (See Lecture II.)

4. To understand better the use and force of language, as subservient to instruction and knowledge, it will be convenient to consider,

1°. To what it is that names in the use of language are immediately applied.

2°. To consider what the species and genera of things are.

5. Words, by reason of their plenty and quickness, are a fit instrument of communication. It is however by an arbitrary association made by the mind between the sound and the idea that the former comes so readily to excite the latter, and not by any natural or necessary connexion; for if it was so, there would be but one language in the world.

The proper signification of words is the ideas in the mind of the speaker. They are however secretly referred, 1°. To ideas in the minds of other men; and 2°. To the reality of things. The former applies to the names of simple ideas and modes, and the latter to those of substances.

The facility and quickness with which words excite ideas is to be ascribed altogether to the effects of association. It not unfrequently happens, however, that they fail in this, which shows how arbitrary the determination of the ideas expressed by language is.

5. All things that exist being particulars, it might perhaps be thought reasonable that words being conformable to things, ought also to be particular in their signification. Yet the far greater part of words, that make all languages, are general terms. This is not the effect of neglect or chance, but of necessity and reason.

Words are the representatives of ideas, and not immediately of things; and as it would be utterly impossible for the mind to frame and retain distinct *ideas* of all particular things, it is not wonderful that we have not particular names, not having the corresponding particular ideas. There is therefore a positive necessity that words should be *general* in their signification.

But even were it possible that every particular thing should have a particular name, still it would be useless, either for the immediate purpose of communication, or for the extension of knowledge. Communication could not be effected by particular names applied to particular things, whereof I alone having the ideas in my mind, the names of them could not be significant or intelligible to another who was not acquainted with all those very particular things which had fallen under my notice. Neither could a particular nomenclature serve the extension of knowledge, which enlarges itself by general views, to which things reduced to sorts under general names are properly subservient. Names, therefore, are for the most part general, those things only which it is necessary to speak of when out of sight having proper names.

6. Ideas become general by abstraction (See Lect. IX.) and words become general by expressing general ideas. In the old Logic general terms served to facilitate and abridge definitions. Locke, however, thinks that defining by general terms is not only not the only way, but that it is not the best. He considers that the old Logicians defined by genus and difference, merely to save the labour of enumerating the simple ideas, and frequently to save the shame of not being able to do so. Definition by genus and difference is not always possible, for language is not constructed to accommodate the arbitrary rules of Logic, so that every term shall be exactly definable by two others. But even were this method of defining always possible, still he thinks that it would serve

the purpose better to enumerate severally the simple ideas.

7. According to Locke, species and genera are purely fictions of the mind. He denies that nature has made things in sorts or species, and holds that they are made individually, but that men observing certain degrees of similitude amongst individuals, form them into sorts or classes for the mere purposes of language, without which he conceives that species and genera would have never existed. The essence of a species he holds to be the abstract idea signified by the name of that species, which he attempts to establish syllogistically thus:

Having the essence of the species makes a thing be of the species.

Being of the species gives the thing a right to the name of the species.

Having a right to the name infers a conformity to the idea.

∴ Having the essence is having a conformity to the idea.

From this *Sorites* he infers that the essences of the ancient Logicians were nothing but abstract ideas.

7. Essences are of two kinds, real and nominal. The real essence is the real and actual constitution of a thing whereby it is what it is, and from which all its properties may be deduced. The nominal essence is the complex idea signified by the name. Concerning the real essences of corporeal substances, there have been two opinions: the one is of those, who using the word essence for they know not what, suppose a certain number of those essences according to which all natural things are made, and wherein they do exactly every one of them partake, and so become of this or that species. The other, and more rational opinion is, of those who look upon all natural things to have a real but unknown constitution of their insensible parts, from which flow these sensible qualities, which serve us to distinguish them one from another, according

as we have occasion to rank them into sorts under common denominations. The former of these opinions, which supposes these essences a certain number of forms or moulds, has much perplexed natural knowledge. The frequent production of monsters is inconsistent with this hypothesis. Besides, were there no other objection, the supposition of such unknown essences to distinguish species would be useless.

8. In simple ideas and modes the real essence is the nominal essence; but in substances the real essence is the real unknown constitution, from which the qualities which compose the nominal essence flow. The maxim that essences were ingenerable and incorruptible, shows that these essences must have been abstract ideas, and not the real internal constitution, which is continually liable to change.

9. Though all words signify nothing immediately but the ideas in the mind of the speaker, yet upon a nearer survey we find that the names of simple ideas, mixed modes, and substances, have each something peculiar and different from the other. Locke enumerates six peculiarities in the names of simple ideas:

1°. They (and those of substances) are distinguished from the names of mixed modes by intimating real existence.

2°. They (in common with those of mixed modes) are distinguished from those of substances by signifying both real and nominal essence.

3°. They are undefinable.

4°. They are least doubtful.

5°. They have but few steps in the predicamental line.

6°. They signify ideas which are not at all arbitrary.

10. We have already explained what a definition is, and shown why the names of simple ideas cannot be defined. (See Lect. III.) We have also shown the different ways whereby the meaning of these terms may be

made known. It is obviously absurd to suppose all terms definable; for if the terms of one definition were still to be defined by another, where at last should we stop? The not observing this has produced that eminent trifling in the schools which is so easy to be observed in the definitions they give us of some few of these simple ideas. The peripatetic definition of motion is "actus entis in potentiâ quatenus in potentiâ." The act of a being in power as far forth as power. Locke proposes that this definition should be given to a Dutchman to find that word in his language to which it belongs, as a test of its absurdity. The moderns, in attempting to define simple ideas, assign their causes. The atomists say that "motion is the passage from place to place." This is not properly a definition, because passage and motion are synonymous. (See Lect. III.) Descartes defined motion to be the successive application of the parts of the surface of one body to those of another. The peripatetic definition of light is the "act of perspicuous as far forth as perspicuous." Locke proposes to attempt to give a blind man the idea of light by this definition, a criterion to which no definition of motion could be subjected, because it is an idea of touch, a sense which is inseparable from life. Some have defined light by ascribing its supposed cause, by saying that it is a great number of small globules striking against the bottom of the eye. The idea of the cause, however, if we had it ever so exact, would no more give us the idea of light itself than the figure and motion of a sharp piece of steel would give the idea of pain. He illustrates the absurdity of attempting to get from definition a simple idea, of which we want the proper organ, by a blind man, who endeavouring to find out what scarlet was like, concluded that it resembled the sound of a trumpet. We are fitted to define the names of complex ideas when we know the component simple ideas and their names. In this case complex ideas can therefore be always defined.

11. Although the names of simple do not admit definition, yet they are of all others the least doubtful. They have not that multiplicity of component parts which makes the signification of the names of mixed modes so doubtful, nor are they referred to any unknown essence which confuses those of substances. This great simplicity and uncompoundedness of these ideas prevents their names from having many steps in a predicemental line, for the lowest species being but one simple idea, nothing can be left out of it, that so the difference being taken away, it may agree with some other thing in one idea common to them both.

12. The peculiarity of the names of mixed modes is that they express ideas made by the mind arbitrarily, without patterns, and merely for the purpose of communication. That they are arbitrary is plain from this, that the idea and its name is frequently made before there has been any existence conformable to it. This also explains why they are so complex, and why their names are usually acquired before the ideas themselves. (See Lect. XIV.)

LECTURE XX.

Language continued. Particles, terms abstract and concrete. The abuses and imperfections of words, and their remedies.

WORDS are two-fold: Terms and Particles.

TERMS are words which express ideas.

PARTICLES are words which express the connexion of ideas, or of propositions.

As the signification of terms is comparatively obvious, the right use of particles is what chiefly contributes to the beauty and perspicuity of style in composition.

To think well it is necessary 1°. That we should have clear and distinct ideas. 2°. That we should perceive their agreement or disagreement; and 3°. We must think in train, and observe the dependence of our thoughts and reasonings upon one another. So also to discourse well it is necessary to have distinct names, not only (terms) for our ideas themselves, but also (particles) for the connexion, restriction, distinction, &c. which we give to each part of our discourse.

As an instance of the effect of particles on the sense of a sentence, Locke mentions the use of the word "but," of which he gives four applications.

1°. "But to say no more,"

2°. "I saw but two plants."

3°. " You pray, but it is not that God should bring you to true religion,"

4°. " But that he would confirm you in your own."

2. Terms are concrete or abstract.

A concrete term is the name of a quality or a thing, as black, rational, pater.

An abstract term expresses the essence of a thing, as blackness, rationality, paternity.

The distinction between abstract and concrete terms is not the same as between substantive and adjective, although Locke seems to intimate this; for pater and paternitas are both substantives, and yet the former is concrete and the latter abstract. An abstract term, however, is always a substantive, but a concrete term not always so.

Locke affirms, that had men attended to the construction of language they would probably have discovered in it a tacit acknowledgment that we have no ideas of the real essences of substances. For although we have abstract as well as concrete names of similar ideas, as sweetness, sweet,—and of mixed modes, as justice, just,—and of relations, as paternitas, pater, yet we have only concrete names of substances. Although in the schools we find animal, animalietas; humanus, humanitas; corpus, corporietas, and such like, yet such terms have never come into general use, and must be considered to be invented by the schools to suit their absurd hypothesis of real essences. This exclusion from general use proves that men have no ideas corresponding to such terms. Although the term humanity is in common use, yet it is in quite a different sense the abstract of human.

3. The use of words is two-fold:

1°. For recording,

2°. For communicating our thoughts.

For the first purpose any words will serve, only observing the rule to use the same words always in the same sense.

The use of words for communication is two-fold:

1°. Civil,

2°. Philosophical.

The civil use of words is such a communication of thoughts and ideas by words, as may serve for the upholding of common conversation and commerce about the ordinary affairs and conveniences of civil life.

The philosophical use of words is to convey the precise notions of things, and to express, in general propositions, certain undoubted truths, which the mind may rest upon and be satisfied with in its search after true knowledge. Much more exactness therefore is necessary in this than in the former.

4. Words have but one imperfection, scil. *doubtfulness* in their signification. The causes of this imperfection are four-fold:

1°. Where they stand for very complex ideas.

2°. When the compound ideas have no necessary connexion, and therefore no standard to adjust the signification by.

3°. Where the word is referred to a standard not easily known.

4°. Where the signification of the word and the real essence of the thing are different.

These are the difficulties attending words which are intelligible, but there are others which Locke thinks it unnecessary to mention, as the want of organs or faculties to acquire the idea which the word signifies.

5. The first two of these causes of imperfection apply particularly to mixed modes. The reason of this complexity, and the arbitrary manner in which they are made by the mind without existing patterns, have already been explained.

Propriety is but an imperfect remedy for these, because no one or two or more individuals have a right to set themselves up as the standard of propriety. Their causes

of imperfection are more sensibly felt in moral discourses, and in the construction of laws, than elsewhere, because the ideas which enter these sciences are all complex, mixed modes and relations.

6. The last two causes of imperfection obviously apply to substances, the real essences of which are unknown to us. Even the nominal essences, or collections of necessarily coexisting qualities, are very imperfectly known, as has been already explained. Although with this imperfection their names serve for the common purposes of life, yet it is a great obstruction to our progress in the science of bodies.

To show how much we are misled by the imperfection of modes, Locke mentions an instance of a dispute, whether any liquor passed through the filaments of the nerves. He proposed to the disputants to define liquor, upon which they found that the dispute originated in their having different ideas attached to that term.

Of all words the names of simple ideas are least doubtful. See Lect. XIX. § 11. Next to them, simple modes, especially those of figure and number, and the most doubtful of all are the names of mixed modes, and very compounded ideas of substances.

7. Besides those defects which necessarily arise from the nature of language, there are others which arise from the wilful abuse of it. The abuses of words are seven :

1°. Using words without any or clear ideas.

2°. Using words unsteadily.

3°. Affecting obscurity by their misapplication.

4°. Taking words for things.

5°. Setting them for what they cannot signify.

6°. Supposing them to have a *necessary* signification.

7°. Figurative language.

8. The first abuse of words is two-fold :

1°. Using words which have not, nor ever had, any distinct meaning. The various sects of philosophy and reli-

gion have been most eminent in this. 2°. Using words which, in the propriety of language, do express distinct ideas, without any or without clear signification. This abuse is produced by children learning the names before the ideas, and beginning and continuing the use of them without ever taking the trouble of learning the exact signification. Locke illustrates the difficulty of refuting men whose notions are thus unsettled by that of dispossessing a vagrant of his habitation, who has no settled place of abode.

9. He compares the second abuse of words to one who in his accounts uses the figures unsteadily, sometimes to signify one number and sometimes another, as suits his interest. But he thinks this the more dishonest argument, inasmuch as truth is more valuable than money.

10. The third abuse of words is three-fold:

1°. By applying old words in new and unusual significations, *without defining them.*

2°. Introducing new and ambiguous terms, *without defining them.*

3°. Putting words together so as to confound their ordinary signification.

In this abuse of words the schools have been most remarkable, and have done true philosophy the greatest injury. The absurdity of their doctrines necessarily led to this, for there is no more effectual way of defending strange and absurd doctrines than to guard them round by legions of obscure, doubtful and undefined words, which yet make these retreats more like the holes of foxes, or the dens of robbers, than the fortresses of fair warriors; which if it be hard to get them out of, it is not for the strength that is in them, but the briars and thorns, and the obscurity of the thickets they are beset with. Neither is there any ingenuity displayed in this abuse of language, no more than there would be in writing a book in which

the signification of the letters of the alphabet should be changed A for B, and B for A, D for E, &c.

11. The fourth abuse is also remarkable in the schools; as instances, none of the disciples would for a moment think of doubting the existences of things called substantial forms, vegetative souls, abhorrence of a vacuum, intentional species, &c.; no pluarist doubted of the existence of "the soul of the world," nor Epicurean of the end carried towards motion in abuses at rest!!! The worst effect of this abuse is that it renders error lasting.

12. As an instance of the fifth abuse, he mentions using the names of substances for the real essences. This is the reason why men who have different ideas of substance, yet both refer them to the same species, because they secretly suppose the name annexed to an immutable essence of a thing existing, on which these properties depend. Hence it is generally admitted, that there may be a change in the subject without changing the species.

13. The cause of this abuse is the supposition that nature works regularly in the production of things, and gives exactly the same constitution to each individual which we rank under the same name. This abuse contains two false suppositions. 1°. That there are certain precise essences, according to which particular things are made, and by which they are distinguished into species. 2°. That we have ideas of these essences.

14. As an instance of the sixth abuse he mentions "Life," a term in common use, and yet if it come in question whether a plant, that lies ready formed in the seed, whether the embryo in an egg before incubation, or a man in a swoon without sense or motion have life or no, it is easy to perceive that the term life has not a necessary and evident signification.

15. Locke considers that although figurative speech may be tolerated in works from which pleasure only is sought, and in popular addresses, &c. yet that it cannot be

at all admitted in serious philosophical discourses, in which he admits no part of rhetoric but order and clearness. He anticipates however opposition in this doctrine, and declares that "Eloquence like the fair sex has too prevailing beauties in it to suffer itself to be spoken against."

16. The ends of language are 1°. to convey our ideas; 2°. to do it with quickness, and 3°. thereby to convey knowledge. Men's words fail in these.

1°. When they are used without ideas; which is like one that knows the titles of books without their contents.

2°. Where there are ideas without names; which is like a bookseller who has in his warehouse volumes that lay there unbound, and which he can only make known to others by showing the leaf sheets.

3°. When the same word is not put always for the same idea. This is like one who at a market sells several things under the same name.

4°. When the words of a language are applied out of their usual signification.

5°. When substances are imagined which have no existence.

All these defects apply to the use of the names of substances, the first four only to those of mixed modes.

17. The remedies enumerated by Locke for the abuses and imperfections of words are five:

1°. To use no word without an idea.

2°. To have distinct ideas of modes and conformable of substances.

3°. Propriety.

4°. To make known the meaning of words.

5°. Steadiness in the use of them.

For the several ways of making known the meaning of the names of simple ideas, see Lect. III. § 5.

The names of mixed modes may be perfectly explained

by definition, because they consist of ideas arbitrarily made by the mind. See Lect. XIV.

The names of substances may be made known partly by definition and partly by shewing. The leading and obvious qualities are best explained by shewing, and the powers by definition.

Locke thinks that morality is susceptible of demonstration, because the terms being the names of mixed modes, all admit of perfect definition.

LECTURE XXI.

Of Knowledge in general. The degrees of Knowledge.

1. KNOWLEDGE is the perception of the agreement or disagreement of our ideas. This agreement or disagreement is of four sorts:

1°. Identity or diversity.

2°. Relation.

3°. Coexistence, or necessary connexion.

4°. Real existence.

Actual knowledge is the present view which the mind has of the agreement or disagreement of ideas. This knowledge consists in the perception of the thing proved, together with its proofs.

Habitual knowledge is the memory, a former conviction of a truth.

2. There are two kinds of habitual knowledge. One is the memory of a former conviction, united with a power of recalling and retracing the proofs if necessary. The other is the memory of the conviction when all recollection of the proofs is lost. This latter knowledge is not inferior in certainty to the former, but its certainty depends on different principles. The certainty of the former depends on the continued ability to verify it by actual

proof. The certainty of the latter depends on the knowledge of having once proved it; abstract ideas, as well as their relations being immutable, what was once true of them must continue to be true. Thus the principle of the immutability of the same relation between the same immutable things, is the principle upon which this certainty rests. It appears, therefore, that habitual knowledge of this kind is only applicable to abstract ideas as particular beings, and their qualities are mutable.

3. The degrees of knowledge are threefold, intuitive, demonstrative, and sensitive.

Intuitive knowledge is the immediate perception, which the mind has of the agreement or the disagreement of two ideas, without the intervention of any other idea. This is the highest imaginable species of certainty, and is the foundation of all other knowledge.

Demonstrative knowledge is the perception of the agreement or disagreement of two ideas, by the intervention of other ideas, whose agreement with each other and with the first is perceived intuitively. This is called reasoning, and the intermediate ideas are called proofs. Quickness in the discovery of proofs is called sagacity. Locke illustrates the inferior clearness of demonstrative knowledge by a face reflected by several mirrors, by which lustre is lost in each reflection. It is not however to be concluded from this that the certainty of demonstrative knowledge is inferior to that of intuitive.

Locke considers that the necessity that each step of demonstration should be intuitively perceived, gave rise to the maxim that all reasoning was " ex præcognitis et præconcessis," which shall be hereafter shown to be erroneous.

The third degree of knowledge is that which we have of the existence of objects which affect the senses. Many

have doubted whether this ought to be allowed to be knowledge. Locke however thinks otherwise, for reasons which we shall give in a subsequent lecture.

The clearness of our knowledge does not depend on the clearness of our ideas, but on the clearness of our perception of their agreement or disagreement.

LECTURE XXII.

Of the Extent and Reality of Knowledge.

1. SINCE knowledge is the perception of the agreement or disagreement of ideas, it follows that its extent is limited by our power of obtaining this perception, and this power is considerably limited in each of the three degrees of knowledge.

1°. An intuitive knowledge cannot extend to all our ideas, because we cannot examine all the relations they have one to another by juxta position, or an immediate comparison of one with another.

2°. Demonstrative cannot extend to all our ideas, because we cannot always find such mediums as we can connect one to another with an intuitive knowledge.

3°. Sensitive knowledge only extends to the existence of such things as are actually present to the senses.

The clearness of our ideas by no means infers a clear knowledge of their relations. Locke gives two remarkable examples of this from mathematics and metaphysics.

We have clear ideas of a square and a circle, and yet have never been able to describe them equal to each other. This is the well known problem of the quadrature of the circle. We have also clear ideas of matter and thinking,

and yet have never been able to determine whether mere matter is capable of thought; in other words, whether the thinking faculty can be the mere result of organization.

2. To determine the extent of knowledge let us consider the four different species of agreement or disagreement.

1°. Our knowledge of identity and diversity extends as far as our ideas.

2°. Our knowledge of co-existence is very limited, owing to our ignorance of the real essences of substances, whether material or immaterial. The repugnancy to co-existence is more easily perceivable, owing to the impossibility of inconsistent qualities belonging to the same being.

3°. The extent of our knowledge of relations is the largest field of our knowledge, and it is hard to say how far it may extend, because its enlargement depends on our sagacity in finding intermediate ideas, to which there is no obvious limit. As an instance of the prodigious extent of demonstrative knowledge of relations, Locke mentions the wonders effected by algebra, and suggests that some similar methods may hereafter be discovered for investigations in other departments of science. In particular, he conceives, that the science of morals is capable of being reduced to a demonstrative form, if proper methods were applied to it. For since the ideas of ourselves as rational and accountable beings, and that of God as a creator and moral governor are perfectly clear and defined, as well as those of our actions, he maintains that from self-evident propositions, by necessary consequences as incontestable as those in mathematics, the measures of right and wrong may be made out to any one that will apply himself with the same indifferency and attention to the one as he does to the other of these sciences. As instances he proposes the two moral theorems: "Where there is no property there is no injustice," and "No government allows of absolute liberty." For property implying a right, and injus-

tice a violation of a right, it is as evident that the proposition is true, as that the three angles of a triangle are equal to two right angles. Again, the idea of government implying rules and laws, a conformity to which is enforced, and the idea of absolute liberty being the power of absolutely doing what one pleases without reference to a rule, the truth of the second principle is also evident.

Two circumstances have contributed to the notion that propositions involving moral ideas are incapable of demonstration, their want of sensible representations, and their great complexity. In these respects the mathematical sciences, particularly geometry, have greatly the advantage over ethics. The ideas involved in the former are all modes of the simple idea of quantity, and in geometry are capable of being represented by draughts or diagrams, which assist the mind in the investigation of their several relations. The ideas which are engaged in moral science, on the other hand, being those of the actions of rational beings, are generally very complex, as has been already shown, and not being referred to visible or external things, but involving the notions of internal feelings and sentiments do not admit of any such pictures or draughts, the investigation of the relations of such ideas is attended with considerable difficulties. These difficulties are not, however, considered by Locke as insurmountable, and he suggests as remedies for them, to have settled and clear definitions of all moral words, and to have the mind disengaged from all prejudices, and impressed with a sincere desire after truth.

4°. Our knowledge of real existence is limited to an intuitive knowledge of our own existence, a demonstrative knowledge of the existence of the Deity, and a sensitive knowledge of things present to the senses.

3. Our knowledge being so confined it will give us some light into the present state of our minds, if we take

a view of the causes of our ignorance. These are three-fold:

1°. Want of ideas.

2°. Want of discoverable connexion between them.

3°. Want of tracing and examining them.

4. The want of ideas is two-fold: the want of those which we are incapable of acquiring, as those of colours to a blind man, and the want of those which we have faculties to attain, but which the remoteness or minuteness of the objects prevent us from receiving, as the state of vegetation and modes of life upon the different planets, or the minute constituent parts of bodies which fall under daily observations.

5. Our inability to perceive the nature of the constituent parts of bodies induces Locke to suppose that the properties of bodies depending on their constituent parts, which are the object of chemistry, can never be reduced to a science. He acknowledges that our ideas of the sorts of bodies which fall under our notice may be *distinct*, but denies that under our present constitution they can be *adequate*. Our knowledge of the properties and constitution of spirits must necessarily be even more confined than of bodies.

6. The second cause of ignorance enumerated above is eminently observable in the ideas of secondary qualities of bodies, for we are and must continue to be utterly ignorant of the connexion between these ideas and their exciting causes. Amongst other instances of the limits of our faculties he mentions the resurrection of the dead and the future state of this globe, as beyond our conception.

The third cause of ignorance is wilful, and frequently proceeds from the abuse of words.

The universality of our knowledge is equal with that of our ideas.

7. As to the reality of our knowledge it may be ob-

jected, that if knowledge consist only in the perception of the agreement or disagreement of ideas, it may be all visionary and fanciful; knowledge, however, is real when the ideas are real, and the criterions which determine the reality of ideas have been fully explained in Lect. XVII.

LECTURE XXIII.

I.

Of Truth.

TRUTH is the joining or separating of signs according as the things signified by them do agree or disagree amongst each other. By the joining or separating of signs is here meant what by another name is called proposition. Signs are either words or ideas; accordingly there are two species of propositions, mental and verbal. To form a clear notion of truth, it is necessary to consider truth of thought and truth of words distinctly one from another; but yet it is very difficult to treat of them asunder, because it is unavoidable, in treating of mental propositions, to make use of words, and then the instances of mental propositions cease to be barely mental and become verbal. Another difficulty in treating of mental propositions is, that most men, if not all, in their thinkings and reasonings within themselves, make use of words instead of ideas, at least when the subject of their meditation includes complex ideas. Mental truth consists in the putting together or separating ideas in the mind, as they or the things they stand for do agree or not, and verbal truth is the affirming or denying words as the ideas they stand for agree or disagree. This latter, as will be

presently explained is two-fold, either purely verbal and trifling, or real and instructive.

II.

Maxims.

There are a sort of propositions, which, under the name of maxims or axioms, have passed for principles of science, and because they are self-evident, have been supposed innate. We shall, therefore, inquire into the reason of their self-evidence, and whether this quality be peculiar to them alone, and how far they influence the other parts of our knowledge.

Knowledge being the perception of the agreement or disagreement of ideas, it is self-evident when this agreement or disagreement is perceived without the intervention of any other idea. This then is the true ground of the self-evidence of axioms; nor is this self-evidence peculiar to them, but extends to a vast class of other particular propositions.

In identity and diversity our intuitive knowledge is as extensive as our ideas, and therefore all propositions expressing this species of agreement or disagreement, are equally self-evident, although it is only a few general ones, such as "whatever is, is;" and "it is impossible for the same thing to be and not to be," and such that have been dignified with the name of axioms.

As to co-existence, owing to our ignorance of real essences, we have few self-evident propositions. There are however some, *e. g.* the idea of filling space equal to the contents of its superfices being annexed to an idea of body, it is a self-evident proposition that two bodies cannot be at the same time in the same place.

As to real existence, Locke declares that we have no

self-evident proposition. He has here, however, forgotten what he elsewhere asserts, that we have an intuitive knowledge of our own existence. a mistake. Mrs Gardiner did not read the passage

We shall now consider what influence maxims have upon the other parts of knowledge. The rules of the schools, that all reasoning is *ex præcognitis et præconcessis*, seem to lay the foundation of all other knowledge in these maxims, and to suppose them to be *præcognita*, whereby is meant these two things: 1°. That they are the truths first known, and 2°. That upon them the other parts of our knowledge depend.

Now that the very abstract propositions which pass for axioms are not the truths first known, will be perceived by any person who considers the progress of his own knowledge. It is evident that we first acquire a knowledge of *particular* self-evident propositions, and from due contemplation of these particulars, the mind, by its abstracting power, makes the general propositions called axioms.

It follows also from what has been said, that these maxims are not the foundations of our other knowledge; for if there be a great many truths which have as much evidence as they, and a great many which we know before them, it is impossible that they should be principles from which we deduce all other truths.

Although these general maxims are neither of use to prove less general self-evident propositions, nor are they the foundations of our knowledge, nor even of use in advancing the progress of scientific discovery, yet they are not altogether to be rejected. They answer a two-fold purpose.

1°. They are of use in teaching the sciences by the ordinary methods, as far as those sciences are already known.

2°. They are of use in disputes for silencing obstinate wrangles, and bringing these contests to some conclusion. With those who dispute merely for the sake of victory,

and not for the love of truth, and who will therefore not scruple to deny the truth of any proposition, however self-evident, it is necessary to have those established maxims which are supposed to be granted in all disquisitions.

In the use of maxims, even in this way, we should be cautious lest by the ill use of language we should be led into contradictions. He that with Des Cartes shall frame in his mind an idea of what he calls body, to be nothing but extension, may easily demonstrate that there is no vacuum by this maxim, "what is, is;" for his idea of body being mere extension, his knowledge that space cannot be without body is certain.

In the application of maxims to complex ideas, we are peculiarly liable to error, because men generally mistake, thinking that where the same terms are preserved, the propositions are about the same things, though the ideas they stand for are in truth different; therefore these maxims are made use of to support those which in sound and appearance are contradictory propositions.

LECTURE XXIV.

Trifling Propositions.

THERE is an extensive class of Universal Propositions, which, though they be certainly true, yet they add no light to our understanding, bring no increase to our knowledge. Such Proposition may be reduced to three heads: 1. Identical Propositions. 2. Those in which a part of a complex idea is predicated of the whole. 3. Those in which words are used unsteadily.

Identical Propositions are those in which a term is affirmed of itself, or two synonymes of one another. Such Propositions are contained under the general one, what is, is; and they are manifestly trifling.

The second class is where a part of a definition is predicated of the word defined. This only teaches the signification of words, but gives no real knowledge. This is most usual in our ideas of substances. In fine, Propositions purely verbal or trifling, may be known by these marks: 1. Predication in the abstract. 2. A part of the definition predicated of a term.

Existence of God.

It has been observed that we have a three-fold knowledge of existence: 1. Our own existence, which is in-

stinctive. 2. The existence of God, which is demonstrative. 3. The existence of external things, which is sensitive.

The proof of the existence of God is founded on two principles, which are assumed as self-evident. 1. That "*ex nihilo nihil fit*," which amounts to this, that no being can be imagined to create himself.

2. That what had its being or beginning from another, must also have that which is in and belongs to its being from another. All the powers it has must be owing to, and received from the same source.

From the former principle it follows that admitting our own existence, there must have been an eternal existence; and from the second, that this eternal being must be most powerful, most wise, and in a word must possess all those powers which we find in ourselves and other beings in the greatest degree. Thus by adding infinity to duration, space, and the moral attributes, we obtain the most adequate idea of the Deity, which in our present state we are capable of having.

Locke considers that of the two classes of beings whose existence we know of, viz. cogitative and incogitative, it cannot be supposed that the latter could produce the former, because he thinks it as difficult to conceive incogitative matter producing a cogitative being as that *nothing* should of itself produce matter.

We have shewn that the knowledge which we have of our own being is intuitive, and that of God demonstrative. The knowledge of the existence of other things we can only have by the senses; for there being no necessary connexion of real existence with any idea in the memory, nor of any other existence but that of God, with the existence of any particular man; no particular man can know the existence of any other being, but only when by actually operating upon him, it makes itself perceived by him. Having an idea of a thing in our mind, proves the

existence of the thing no more than the picture of a man proves his being in the world, or the visions of a dream establish a true history.

The evidence of the senses, though inferior to the certainty of intuitive or demonstrative knowledge, yet is as great as human nature is capable of, respecting the existence of material beings. Independently of the confidence every man feels in it, we are also further confirmed in this assurance by the following concurrent reasons:

1°. We cannot have those ideas except by the senses. It is plain that the organs of sense themselves do not produce them, for then the eye would produce colours in the dark, and the nose the smell of roses in winter.

2°. Because an idea from sensation, and another from memory, are different perceptions. (Lect. VIII.)

3°. The pleasure and pain which accompanies the idea of sensation do not return when the same idea revives without sensation.

4°. The senses confirm each others testimony.

From what has been said it follows that there are no abstract propositions concerning existence, the truth of which is knowable by us. Our own existence, and that of the Deity, are singular propositions, and the existence of the things present to the senses at any time is a particular proposition.

The existence of spirits can only be known by revelation, and past existence of material beings by memory.

It has been shewn in a former lecture, that maxims do not tend to the improvement of knowledge. Locke considers that the only true method of extending and improving it is: 1°. To acquire clear and complete abstract ideas, and to express them by settled names. 2°. To discover those intermediate ideas which are necessary to establish the agreement or disagreement of other ideas,

which cannot be immediately compared. Concerning our knowledge it may be further observed, that it is partly necessary and partly voluntary. The degree of attention which we give to any investigation is voluntary, but the relation perceived between the ideas is necessary. We must perceive things as they are, and not as we please.

LECTURE XXV.

Of Probability, and the degrees of Assent.

LOCKE uses the word Judgment in different senses. As opposed to Wit, it has been defined in Sect. IX. As opposed to Knowledge, it consists in the putting together or separating of ideas in the mind when their certain agreement or disagreement is not perceived, but presumed to be so, which is, as the word imports, taken to be so before it certainly appears.

Probability is to judgment what demonstration is to knowledge. Demonstration consists in shewing the agreement or disagreement of two ideas by the intervention of ideas which have a constant, immutable, and visible connexion with each other.

Probability, on the other hand, consists in perceiving the agreement or disagreement by the intervention of proofs, whose connexion is not constant and immutable, or not perceived to be so; but is, or appears to be, generally so. Hence it follows, that a remarkable distinction between certainty and probability is, that the latter admits of degrees, the former of none.

The matter of probability is two-fold: matter of fact, and matter of speculation.

In matter of fact the grounds of probability are two-fold:

1°. The conformity of the *particular fact* with our own general knowledge, observation, and experience of *similar facts.*

2°. The *testimony* of others vouching their knowledge, observation, and experience of the *particular fact.*

Locke has here omitted to include, in the second ground of probability, the testimony of others as to the conformity of the particular fact to similar facts. In examining the degrees of assent, he however subsequently takes this into account.

In order to give its due weight to the testimony of witnesses, we must consider,

1°. The number of witnesses.

2°. Their skill.

3°. Their integrity.

4°. The design of the author, if a book be cited.

5°. The consistency of the circumstances of the narrative.

6°. Contrary testimonies.

The opinion of others is frequently urged as a ground of probability. Locke considers this a most dangerous principle, and one which is productive of much falsehood and error among men. If authority be a good ground of probability, men would be Heathens in Japan, Mahometans in Turkey, Papists in Spain, Protestants in England, and Lutherans in Sweden.

The degrees of assent are, or ought to be, regulated by the grounds of probability. In matter of fact the highest degree of assent is where the concurrent testimony of all men, in all ages, as far as it can be known, agrees with our own *constant* and *never-failing* experience as to the conformity of the *particular fact*, with *similar facts*, of which all men, in all ages, and ourselves, have been witnesses, and where *the particular fact* is vouched by the testimony of undoubted witnesses. Thus, for example, if it be said by all Englishmen who have occasion to men-

tion it, that it froze in England last winter, or that they saw swallows there last summer, the fact would be nearly as certain as demonstration. Our assent, in this case, which is the highest degree next to absolute knowledge, may be called moral certainty, or *assurance.*

The second degree of assent is where the testimony of mankind concurs with our own experience as to the general (but not never-failing) conformity of the *particular fact* with *similar facts*, and where the particular fact is vouched by undoubted witnesses. Thus, for example, the general experience of mankind testifies that most men sacrifice the public good to their private advantage. Now if all historians who write of Tiberius agree that he did so, it is extremely probable. In this case, our assent rises to that degree which may be called *confidence.*

The third case is, where a particular fact is of an indifferent kind, or which cannot be reduced to any general rule, as that a bird should fly this way or that way, that it should thunder to the right or the left, and such like. In this case the general experience of mankind cannot be taken into account, and our assent rests wholly upon the testimony as to the particular fact. As an instance of this may be given, the existence of Julius Cæsar, 1700 years ago, the existence of the city of Rome, &c.

From these degrees downwards, through belief, conjecture, guess, doubt, &c. the shades of assent and dissent are innumerable, and change with various degrees of accuracy and credibility of the witnesses.

Traditional testimony becomes weaker the more removed it is from its original source. Nothing, therefore, can be more fallacious than the received doctrine that opinions become venerable by their age. No probability can rise higher than its first original, and every remove from this weakens its force.

In matters of speculation the only ground of probability is *analogy*, since they are not capable of testimony,

being never the subjects of experience of ourselves or others. Such are

1°. The existence, nature, and operations of finite material beings without us, as spirits, angels, devils, &c. or the existence of material beings not perceivable, by reason either of their remoteness or minuteness.

2°. Concerning the manner of operation in most part of the works of nature, wherein, although we see the sensible effects, yet their causes are unknown, and we perceive not the way whereby they are produced.

There is but one case where contrary experience does not diminish the force of the testimony, and this is the case of *miracles*. These, when well attested, not only command our assent for themselves, but also prove other propositions, which it would be vain to attempt to demonstrate by human reason.

The testimony of revelation has a force equal to demonstration, because he who gives the testimony *cannot err*; it is necessary, however, to be certain that it is revelation, and that we understand it rightly.

LECTURE XXVI.

Of Reason and Faith.

THE word *reason*, in the English language, has four different significations:

1°. It signifies true and clear principles.

2°. Clear and fair deductions from these principles.

3°. The cause, and particularly the final cause.

4°. That faculty by which man is supposed to be distinguished from beasts, and wherein it is evident he much surpasses them.

There are two faculties employed in reasoning, sagacity and illation.

Sagacity is the faculty of discovering the intermediate ideas necessary to establish the connexion between any two ideas proposed. Illation is that faculty by which we perceive the connexion in each step of the deduction.

In reason Locke distinguishes these four degrees:

1°. The highest is the discovery of proofs.

2°. Disposing them so as to make their connexion plainly and easily perceived.

3°. The perception of their connexion.

4°. Drawing a right conclusion.

In treating of reason Locke takes occasion to refute the received opinion, that the syllogism of the old logicians is one of its most efficient instruments.

His reasons for thinking this opinion unfounded are as follow:

1. Because syllogism serves our reason but in one of the forementioned parts of it; and that is, to show the connexion of the proofs in any one instance, and no more: but it is of no great use even in this; since the mind can conceive such connexion where it really is, as easily, nay, perhaps better without it.

2. Men who are ignorant of syllogistic rules reason clearly and rightly without them.

3. Although syllogism has been supposed the best method of exposing a fallacy hid in a rhetorical flourish, or cunningly wrapt up in a smooth period, yet the artificial form into which the argument is put, only shews its fallacy to those who are acquainted with the rules of mode and figure.

4. If syllogism be the only instrument of reason, how did men who lived before Aristotle reason, and also the large portion of the world since his time, who know nothing of his rules? As an example of reasoning more clearly without the form of syllogism than with it, Locke proposes to infer the proposition, "that men can determine themselves;" from this "that men shall be punished in a future state." And he asserts that a simple arrangement of the terms in succession, "God the punisher—just punishment—the punished guilty—could have done otherwise—freedom—self-determination," is much less confused than the train of syllogisms in which it would be necessary to arrange the same reasoning.

The only case where Locke acknowledges the syllogistic forms to be of use, is in the schools where men are allowed without shame to deny the most manifest truth; or out of the schools, to those who from thence have learned shamefully to deny the connexion of ideas which is visible to themselves.

5. He gives, as a further reason for the inutility of syllo-

gism, that before the ideas can be reduced to a syllogism their connexion must be perceived, and then it is useless.

6. Another reason for concluding syllogism not to be the proper instrument of reason, is, that it is quite as liable to fallacies and sophistry as any other species of reasoning, and therefore it often happens, that when men are baffled and silenced in this way, they are seldom or never convinced. They perhaps acknowledge their adversary to be the more skilful disputant, but rest satisfied that the truth is nevertheless on their side.

Syllogism, in determining the degrees of assent, is of still less use than in demonstration; for the assent being to be determined by the preponderancy, after due weighing all the proofs, with all the circumstances on both sides, nothing is so unfit to assist the mind in that as syllogism; which running away with one assumed probability, or one topical argument, pursues that until it has led the mind quite out of sight of the thing under consideration; and forcing it upon some remote difficulty, holds it fast there, manacled in the chain of syllogisms, without allowing it the liberty, much less affording it the helps requisite to show on which side is the greater probability.

Locke objects to the syllogistical reasoning, because it requires that in every syllogism there must be at least one universal proposition, whereas we principally reason about particulars. He seems, however, to mistake a particular proposition for a singular. He prefers the order of the reasoning in a sorites to that of the propositions of a syllogism in the first figure.

However extensive and powerful human reason may be, yet it comes far short of the real extent of even corporeal being; and there are many instances wherein it fails us:

1°. It perfectly fails where our ideas fail.

2°. It fails when our ideas are obscure and imperfect.

3°. It fails when intermediate ideas, or proofs are wanting.

4°. It fails where false principles are adopted.

5°. It fails where doubtful terms are used.

The last two are, however, abuses, rather than defects in our reasoning, and are our own faults, and not those of our faculties.

There are four sorts of arguments used to supply the place of demonstration :

1°. The *argumentum ad verecundiam*, which is quoting the authority of men of parts and learning.

2°. The *argumentum ad ignorantiam*, which is a challenge (according to Locke) to admit what is alleged as a proof, or assign a better. It is however more properly requiring your adversary to admit your principles, or prove the contrary.

3°. The *argumentum ad hominum*, which is pressing a man with consequences drawn from his own principles or concessions.

4°. The *argumentum ad judicium*, which is an argument drawn from the foundations of knowledge or probability. This alone, of all the four, brings true instruction with it. For,

1°. It argues not another man's opinion to be right, because out of respect I will not contradict him.

2°. It argues not that I should adopt the opinions of another, because I am too ignorant to refute them.

3°. It argues not that another is right, because he has shown me I am wrong.

Propositions are either above, according, or contrary to reason. As instances ; the resurrection of the dead is above reason, the existence of one God according to reason, and the existence of several gods contrary to reason.

Reason, as contradistinguished from faith, is the discovery of the certainty or probability of such propositions

as the mind arrives at by deduction made from such ideas as it has got by its natural faculties.

Faith, on the other hand, is the assent to any proposition not made out by the deduction of reason, but upon the credit of the proposer, as coming from God in some extraordinary way of communication. This way of discovering truths to men is called revelation.

Faith is not, as is sometimes supposed, opposed to reason, since reason must be used in determining whether any proposition should receive faith, and is therefore the foundation of right faith.

Ideas, which never before entered the mind, may be conceived to be conveyed by immediate revelation: thus St. Paul, when rapt up into the third heaven, describes the ideas he received as such as "eye hath not seen, nor ear heard, nor hath it entered into the mind of man to conceive." Traditional revelation cannot, however, communicate any new idea; nor can it give to propositions, which are within the scope of reason, the same certainty which they receive from demonstration.

Propositions which are *above* reason, are the proper matter of revelation. Nothing which contradicts reason can ever be the subject of revelation, for he cannot conceive that to come from God, which, if received for true, must overturn all the principles and foundations of knowledge he has given us, render our faculties useless, and wholly destroy the most excellent part of his own workmanship, our understandings.

LECTURE XXVII.

Of Enthusiasm and Error.

WHATEVER degree of assent is given to any proposition beyond that which the grounds of probability warrant, is to be ascribed to enthusiasm. This term, however, is most generally applied to religious feelings.

Immediate revelation being an easier way to establish opinions than the elaborate process of strict reasoning, it is no wonder that some have pretended to revelation, and have persuaded themselves that they were under the peculiar guidance of heaven. This is the origin of religious enthusiasm. The enthusiast may always be detected and exposed by stripping his language of the metaphors and figures of seeing and feeling, &c. and reducing it to plain terms.

Error is not a fault of our knowledge, but a mistake of our judgment, giving assent to that which is not true. The causes of error are fourfold:

1°. The want of proofs. This is two-fold: either those proofs which are beyond the reach of human reason, or those which we are prevented from obtaining by want of opportunity, industry, or inquiry.

2°. The want of skill to use the proofs which we possess. This varies with the different faculties and opportunities of improvement of different men.

3°. Want of will to use the proofs which we possess.

This is produced by the various prejudices of education and interest, as well as the violence of passions and indolence of disposition.

4°. Wrong measures of probability, which are fourfold:

1°. Doubtful or false propositions assumed as principles. To this the doctrine of innate principles has probably mainly contributed.

2°. Received hypotheses. The difference between those who adopt received hypotheses and hold doubtful principles, is this, that the former will admit matter of fact, but differ in assigning the reasons, and explaining the operation.

3°. Predominant passions obstruct the due exercise of our faculties in estimating probabilities. They induce us to evade plain probabilities, by alleging either a supposed fallacy in the reasoning, or supposed arguments to the contrary. An unprejudiced mind can, however, only suspend its assent either where no examination into the subject has been made, or where, upon inquiry, the grounds of probability are equally balanced.

4°. Authority is also a wrong measure of probability, which keeps more persons in ignorance than all the others together. By authority is meant, giving up our assent to the common received opinions, either of our party or country.

Division of the Sciences.

Locke divides the sciences into *Physica*, *Practica*, and Σημειωντικὴ.

Physica includes the knowledge of things (body and spirit) as they are in their own proper beings, their constitutions, properties, and operations.

Practica includes the skill of rightly applying our powers and actions to attain things good and useful.

Σημειωντικὴ, or the doctrine of signs, the most usual whereof being words, is aptly enough termed also Logic, is the consideration of the nature of signs the mind makes use of for the understanding of things, or of conveying its knowledge to others.

APPENDIX.

As it has been thought desirable by students who are subject to examination in the Essay, to know the principal questions which may be put to them out of the different parts of the Essay, I here subjoin a selection of those which correspond to the foregoing lectures. The answers will readily be found in the sections referred to. The most striking questions are marked thus (§). Those which may be considered in some degree indispensable are distinguished thus (†).

LECTURE I.

INTRODUCTION.

1. § What are the inducements to the inquiry?
   § In what consists its nobleness?
   § What is its utility?
   What are its object and end?
   What is the distinction between object and end?
   † In what consists the difficulty, and how is it illustrated?
2. § What is Locke's design?
   What does he mean by the *original* of our ideas?
   † In what respect does he decline the inquiry?
   What is "the physical consideration of the mind?"
   † Why does he decline this?
   † What error is the consequence of observing the contradictory opinions, &c.
3. § What is his method?
   § What is faith or opinion?
4. § What is scepticism?

§ What is dogmatism?
† How does the latter produce the former?
† How does he illustrate the folly of scepticism?
When shall we use our understanding rightly?
What is the remedy for these errors?
5. † How does he illustrate the sufficiency of our faculties?
† How does he illustrate the limits of our faculties?
Why should we rest satisfied with these limits?
What is the most important species of knowledge?
6. § What is Locke's postulate?
What reasons does he give for assuming this?

LECTURE II.

1. † What are the principal arguments on which Locke founds his theory of sensation and reflection?
2. What secondary proofs does he adduce?
What is meant by an innate idea?
3. How does Locke subsequently depart from his "method"?
4. § To what single source does he trace our ideas?
§ What is sensation?
What discrepancy exists in these definitions?
5. § What is reflection?
† How is the term "operation" used here?
What coincidence with the common Logic is observable in the use of this word?
There are two objections to it, one of which only is answered by Locke.
6. What other names does he give to sensible ideas?
What is the difference between sensation and perception?
7. † Why do ideas of reflection come later than those of sensation?
8. What is the Cartesian division of beings?
What is the Cartesian definition of spirits?
What is the Cartesian definition of bodies?
What principles follow from these definitions?
9. † What relation has thinking to the soul, according to Locke?
How does the power of the soul over its thoughts differ from that of the body over matter?
How does this difference favour the Cartesian principle?
† What sophism does Locke ascribe to Des Cartes in establishing this principle?
What are the proper objections to Des Cartes' principles?
What are the absurdities which Locke professes to deduce from these principles?

LECTURE III.

1. § What is the first division of ideas made by Locke?
§ What is the second?
§ What is a simple idea?

† Why is "different" and not "several" to be used here?
2. How does Locke confound simple with complex ideas?
3. † In what respects does Locke compare the power of the mind over its ideas to that of the body over matter?
4. † How does Locke illustrate the passiveness of the mind in the perception of simple ideas of sensation?
Why does not this apply to simple ideas of reflection?
5. § What is a definition?
† Why are the names of simple ideas undefinable?
† How are their meanings made known?
6. Why is it absurd to suppose that there are not other beings with more senses than we have?
7. § How are simple ideas divided as they enter the mind?
† What are the principal ideas which enter by but one sense?
8. Why is it impossible to enumerate all our simple ideas?
† Which does he prefer to examine?

LECTURE IV.

1. § By what sense do we get the idea of solidity?
§ Why does Locke prefer this term to impenetrability?
2. † How does Locke *describe* solidity?
Is this quality peculiar to matter, according to Locke?
3. Shew that Locke ascribes to spirit qualities similar to what he calls the primary qualities of matter?
In ascribing extension to spirit, how does Locke contradict himself?
4. What defect in his hypothesis produced this absurdity?
What is the division of being, according to Locke?
5. What is the popular sense of the term solidity?
† In what does solidity differ from hardness?
6. What are "pores"?
What is compressibility?
What wrong view does Locke take of the Florentine experiment?
7. † What was the Florentine experiment?
† For what purpose was it instituted?
What would have been necessary in order that it should have effected this purpose?
† Why was a globe used?
Is water compressible?
8. What is the physical sense of "solidity"?
9. What is the mathematical sense of that term?
10. In what does Locke differ from Des Cartes as to extension? (See also 11.)
How does Locke vacillate in the use of the term extension?
From what passages does it appear that he uses it indifferently as space itself, or an attribute of space?
11. † According to Locke, how do we obtain the idea of pure space?
† How does he answer the objection "that motion in one body supposes motion in every other?
How does he illustrate the alleged absurdity of this objection?

What does he infer from the disputes about a vacuum ?
2. How may all this be replied to by a Cartesian ?
† What properties of body depend upon its solidity ?

LECTURE V.

1. § What ideas enter the mind by " divers senses " ?
2. § What are the principal ideas which enter by reflection alone ?
§ What is the understanding ?
§ What is the will ?
In what sense is the word " thinking " used in the definition of the understanding ?
3. § What are the ideas which enter the mind by all the ways of sensation and reflection ?
4. Give instances of pleasure and pain from reflection ?
5. § What are the uses of pleasure ?
§ What are the uses of pain ?
6. What would be the consequence if pleasure or pain was not attached to our thoughts and actions ?
7. † Prove that pain is efficacious in preserving the organs in their most perfect state ?
9. How manifold is power ?
How is the idea of active power obtained ?
How is the idea of succession obtained ?
10. † What are the three illustrations of the sufficiency of sensation and reflection as the source of our ideas ?

LECTURE VI.

1. In his theory of *qualities* how does Locke violate his prescribed method ?
On what hypothesis is this theory founded ?
2. What is the physical part of sensation ?
Can sensation be produced by the action of the mind on the body ?
What defect is there in the hypothesis of the existence of a material world ?
3. How is vision produced ?
What confusion is observable in the names of colours ?
How are ideas of sounds produced ?
4. How does the sense of touch differ from the other senses ?
† What is the distinction between primary and secondary qualities ?
† What is Locke's doctrine concerning these ?
† What are the principal arguments used by Locke to prove secondary qualities not resemblances ?

5. What are his arguments to prove primary qualities resemblances?
   What species of sophism are they?
6. Shew that his reasoning to prove primary qualities resemblances, would also prove secondary qualities so?
   † What is a quality?
   How does Locke divide ideas as qualities?
   What absurdity is in this division?
7. What is the cause of obscurity in Locke's theory of qualities?
8. What are the objections to the hypothesis of an external material world?
   What are the principles of Berkeley and Hume on this subject?
   What are those of Reid?
9. Why may privative causes produce positive ideas?
   How do powers differ from secondary qualities?
   † Why are powers not supposed resemblances as well as secondary qualities?

LECTURE VII.

1. † Why cannot perception be defined?
   § Why is it the first idea of reflection?
   What are the different senses in which Locke uses "perception"?
2. † How is perception distinguished from "thinking"?
   † Why must the mind always be passive in perception of sensible ideas?
   Why must it be active in the perception of ideas of reflection?
3. § What are the requisites for perception?
   Why is it difficult to determine the perfection of an organ?
4. † What is a sufficient impression?
   What ideas does he conjecture to have precedence?
6. Prove that the eye is no judge of distance nor motion?
7. Nor of space or extension?
8. Nor of figure?
9. § What is Molyneux's problem?
   What objection has been made to his solution?
   How is this answered?
10. What inference has Berkeley drawn from the difference of visible and tangible figure and magnitude?
11. † What objection is there to Locke's theory of alteration by judgment?
    † How does he answer these?
    What relation subsists between the visible and tangible idea?
12. What is his reason why this is not usual with our other senses?
    How is this reason defective?
    † What is the essential difference of animals?

LECTURE VIII.

1. § What is contemplation?
   How is it limited in man?

§ What is memory?
Why is it inadequately accounted for by impressions on the brain?
2. † How does Locke illustrate the memory?
† Why is this an inapposite illustration?
How far is Locke's account of memory figurative, and how far literal?
What is Reid's objection to Locke's supposed "revival" of our ideas?
How is it inconsistent with Locke's own doctrine of identity?
3. In what do the systems of Berkeley and Hume differ?
What is Hume's account of memory?
4. § What are the helps of memory?
5. § What are the causes of ideas fading from the memory?
6. † What example is given of ideas lost for want of repetition?
† How is the survival of the mind over its ideas illustrated?
7. † How does he illustrate the different retentive powers of men?
† What instance is given of ideas lost by disease?
8. † What ideas are least likely to be forgotten?
9. How does memory differ from perception?
What are the different modes of memory, according to Aristotle?
10. What mode of memory did Aristotle deny to brutes?
How does Locke shew that the apparent memory in birds learning tunes cannot be either mechanism or instinct?
11. § What are the defects of memory?
Shew that memory itself is a defect?
What are the differences between an idea of sensation and one of memory?

LECTURE IX.

1. † What is discerning?
What error had men fallen into from overlooking it?
2. † What are the causes of imperfection in discerning?
§ How are judgment and wit defined in contradistinction?
3. What further than mere similitude of ideas is necessary to wit?
Why is wit so generally acceptable?
Why is it to be consistent with truth and good reason?
4. † What class of ideas depends on comparing?
† How far do brutes compare?
Why is their power thus restricted?
5. What is the simplest species of compounding?
† Do brutes enlarge?
† Do brutes compound?
6. † Have they complex ideas?
7. § What is the definition of abstraction, according to Locke?
What occasions abstraction, according to Locke?
What would be the consequence if men could exhibit their ideas without words or signs?
How does Locke make the same distinction between men and spirits, and between men and brutes?
8. Does Locke suppose an abstract existence?
What ancient sect of philosophers does Locke borrow his doctrine of abstraction from?
In what did Plato and Aristotle differ as to abstraction?

9. What are the opinions of Berkeley and Hume on abstraction?
   What are the distinguishing tenets of the conceptualists, the nominalists, and the realists?
   To which of these sects is Locke to be assigned?
   What are the contradictions and absurdities which Locke himself acknowledges to be involved in his doctrine of abstraction?
10. † What is Locke's proof that brutes do not abstract?
11. § What is the distinction between idiots and lunatics?
12. Why has Locke illustrated the operations of the mind by considering them as employed about simple "ideas"?
13. How does Locke illustrate our perception of visible objects?
    From what ancient philosopher is this borrowed?

NOTE ON LECTURE VII. § 6.

As the dissimilitude between the ideas of space, figure, and motion, derived from the senses of sight and touch, seems to be a principle not easily conceivable at first view, the student will probably be desirous of having more positive evidence of it than could be found in abstract reasoning; I therefore subjoin the particulars of an experiment made upon "a young gentleman who was born blind, or lost his sight so early that he had no remembrance of ever having seen, and was couched between thirteen and fourteen years of age."

"When he first saw, he was so far from making any judgment about distances, that he thought all objects whatever touched his eyes (as he expressed it) as what he felt did his skin, and thought no objects so agreeable as those which were smooth and regular, *though he could form no judgment of their shape*, or guess at what it was in any object that was pleasing to him. *He knew not the shape of any thing, nor any one thing from another however different in shape and magnitude;* but upon being told what things were, *whose form he before knew from feeling*, he would carefully observe, that he might know them again; but having too many objects to learn at once, he forgot many of them. * * * * * We thought he soon knew what pictures represented, which were shewn to him, but we found afterwards we were mistaken; for about two months after he was couched, he at once discovered they represented solid bodies, when to that time he considered them only as party-coloured planes, or surfaces diversified with variety of paint; but even then he was no less surprized, expecting the pictures would feel like the things they represented, and was amazed, when he found those parts, which by their light and shadow appeared now round and uneven, felt only flat like the rest, and asked which was the lying sense, feeling or seeing?"

This case has been extracted from Cheselden's Anatomy. The author states, that he has had many other instances of persons who, after the same operation, all made observations to the same effect. I have been informed by Mr. Crampton (the Surgeon General) that in the case of Mr. Pringle, a young gentleman of ten years of age, upon whom the operation for congenital cataract was performed by him, he tried the celebrated question of Molyneux, and the result was, that the patient not only could not distinguish the sphere from the cube by sight, but actually did not know the things to be the same which he had before touched.

Mr. Crampton's experience also fully confirms what I have stated in the text, that the abstract idea of a straight line or curve, acquired by the touch, bears no similitude to the abstract ideas of these lines acquired by the sight; at least, if it does not establish this point, it overturns the existence of these abstract ideas altogether. It is much to be desired that the faculty would thus, when suitable cases occur, direct their attention to the metaphysical effects produced, as facts like these are the only sure foundation for theory, and are valuable in proportion to their infrequency.

LECTURE X.

1. Whence do complex ideas receive their unity ?
2. § What are the classes of complex ideas ?
   What are Locke's Categories ?
   § What are modes ?
   § How manifold are modes ?
   § What are simple modes ?
   § What are mixed modes ?
   † What is Locke's apology for his use of the word "mode?"
   § What are substances ?
   † Into what classes does he divide our ideas of substances ?
   † What is the difference between single and collective substances ?
   § What are relations ?
3. § By what senses do we receive the idea of space ?
   † In what three respects does he consider space ?
   † What is distance ?
   † What is capacity ?
   † What is extension ?
4. How do we get the idea of immensity ?
   § What is figure ?
   How is its variety showed to be infinite ?
   † What is place ?
5. What proves the necessity of fixed points to determine place ?
   What are the arguments against the Cartesian principle, that extension and body are inseparable ?
6. What is the Cartesian definition of space ?
   What is the defect of this as a definition ?
   How does Locke illustrate its absurdity ?
   Why cannot space be defined ?
   What dilemma has been brought to prove space and body the same ?
   What is the defect of this proof ?
7. Why must body be considered infinite if pure space be denied ?
   What proves the *possibility* of a vacuum ?
   What, according to Locke, establishes the existence of a vacuum ?

LECTURE XI.

1. Whence arises the difficulty of explaining what duration is ?
   † What is the translation of "si non rogas, intelligo ?"
   § How do we get the idea of succession ?
   § How do we get the idea of duration ?
   † What is meant by *distance* between the parts of succession ?
   † What proves that succession is necessary for the idea of duration ?
   † How are we sensible of duration elapsed during sound sleep ?
2. † Why is succession not necessarily derived from motion ?
   Why are motions very slow or very quick not perceived ?
3. † Whence does it appear that the rapidity of the succession of ideas is limited ?

† What examples does Locke give of real successions not perceived?
4. † What power has the will over the succession of ideas?
5. § What is time?
† Why is it more difficult to measure than space?
§ What are the requisites for a good measure of time?
† Why are these qualities necessary to a perfect measure of it?
Why are the revolutions of celestial bodies good measures of time?
6. † Why can no two parts of duration be known to be equal?
† Why is time not a measure of motion?
In what two senses may "motion" be taken?
Are days, years, &c. necessary to duration?
How do we obtain the idea of eternity?

LECTURE XII.

I.

1. § Why does Locke prefer the term "expansion" to "extension?"
§ Why does he prefer it to space?
Does he adhere to the use of this term?
Where in the present chapter does he depart from it?
2. § What are the six congruities or analogies of the ideas of expansion and duration?
§ What are the two differences?
† What is meant by being capable of greater and less?
3. Of what simple idea are expansion and duration modes?
† What ideas do not admit of unlimited increase?
† What is the moral objection to limiting space to matter?
† Why do men more readily allow of infinite duration than infinite expansion?
Does Locke consider space as merely a quality of matter?
4. § In what two respects is time analogous to place?
5. † What are the simple ideas of space and duration?
† What is a moment?
† What is a sensible point?

II.

1. § What is our most simple idea?
Which are the most simple modes?
3. † Why are the modes of number the most distinct?
† By what example does he show that the modes of extension are not so distinct?
† Why are the demonstrations in number most precise?
§ What are the requisites to perfect numbering?
Why do not children number earlier?

III.

1. † Of what idea are "finite" and "infinite" modes? (of quantity)
   § To what ideas are they primarily ascribable? space duration & number.
   § To which of the divine attributes does infinity *literally* belong? duration & ubiquity
   § To which of them is it *figuratively* ascribed? power wisdom & goodness
   † In what senses may it be literally ascribed to these? ... number & extent of his acts ...
2. † How do we obtain the idea of infinity? by enlarging or addition
   † To what simple ideas may it be ascribed? simple ideas of parts & rest of degrees
3. † What absurdity is there in supposing an idea of an infinite space? 94
   † Whence do we obtain the clearest idea of infinity? from number
   § How does Locke illustrate our different conceptions of the infinity of number, duration, and expansion? 94
   † How does matter give the idea of infinity? by its divisibility
4. § By what argument has the idea of infinity been concluded to be positive? 1 Inf is negation of an end. End is negative & Inf is positive
5. § How does he refute this? 95
   † What is his analysis of our idea of infinity? (So much space is quite clear (finite) more than this is also clear beyond this not clear ∴ by negative

LECTURE XIII.

1. † Why would it be impossible to enumerate the simple modes of all ideas? a good many have not names .. this generally of degrees
   Why do the names of the modes of those ideas which admit of degrees in general want particular names? 1 from want of measure to discriminate 2 bec their distinct not much use

Modes of thinking

I.

2. What are the most considerable of the modes of thinking? sensation remembrance recollection contemplation reverie &c
   † What is sensation? actual entrance of an idea by senses
   † What is remembrance? recurrence of an idea without operation of senses
   † What is recollection? recalling an idea with exertion & difficulty
   What is contemplation? retaining an idea under attentive contemplation
   What is reverie? reading ideas without much volition at all
   What is attention? careful notice of ideas & register them in memory
   What is study or intention? earnestness of attention
   What is dreaming? having ideas in the mind outwards senses stopped
   What is ecstacy? dreaming with their eyes open...
   § What is inferred from the degrees of intention and remission in thinking? thinking is the act & not the essence of the mind

Modes of pleasure & pain

II.

3. † What is a natural good and evil? only in ref to pleasure & pain good produce pl. — bad pain
   What is Love? is the thought of the delight which a present or absent produces
   What is Hatred? pain
   What is Desire? uneasiness produced by the absence of pleas. giving object

What is Joy? *pleasure for good gained*
What is sorrow? *uneasiness for a good lost*
What is Hope? *pleasure arising from thought of a future good.*
What is Fear? *uneasiness caused by thought of future evil, ...*
What is Despair? *thought of unattainableness of good*
What is Anger? *is pain produced by receipt of an injury*
What is Envy? *pain produced by seeing one get things*
† How do anger and envy differ from the other passions? *not caused by pleasure & pain simply ... but have in a mixed consideration of ourself & others*

POWER

III.

4. † How do we obtain the ideas of active and passive power? *99.*
† What being is incapable of passive power? *God*
† What being is incapable of active power? *bodies or matter*
† What being is capable of both? *finite spirits intermediate beings*
† What is objected against classing powers amongst our simple ideas? *are complex include a relation to act or change*
† How is this objection answered? *...99....*
5. † Show that we can only acquire the idea of active power from reflection? *100 of the production of the motion*
† In what respect only can motion give the idea of active power?
† How does he illustrate the absurdity of supposing the continuation of motion and action?
6. † What are the will and understanding? *They are two powers...*
† What are their acts called? *volition or willing & perception or thinking ...*
What is voluntary and its opposite? *voluntary — command dictate of the will; involuntary — not dictate of the will*
Can the same action be voluntary and necessary? *yes (Locke)*
† How many fold is perception? *1. perception of ideas in the mind 2. the signification of signs 3. agreement or disagreement of ideas*
7. † Enumerate the principal simple ideas which are the elements of all others. *101*

LECTURE XIV.

Mixed I. *Modes*

1. † Why have mixed modes been called notions? *are made exclusively by the mind without reference to patterns 102...*
† Whence does a mixed mode derive its unity? *from the act of the mind in compounding them*
† What is the mark of unity? *the name of the complex idea*
What is the cause of making mixed modes? *easy & rapid change of ideas ...*
What is the cause of obsolete and untranslateable terms? *when the names of them is lost*
2. § What are the ways whereby we obtain the ideas of mixed modes? *observation, invention, explanation*
3. § What ideas have been most modified, and why? *thinking motion power all actions in these*
† What terms appear to contradict the principle that all action consists in thinking or moving? *such terms as freezing which tho seemingly active is really only the effect*

Substances ....

1. † What is substance in the abstract? *substratum in which coexistent qualities unite*
What are the sorts of substances? *the complex idea of these coexistent qualities*

2. † How does he show the absurdity of defining substance in the abstract to be the support of accidents ?
3. How do we obtain ideas of the sorts of substances ?
4. † How does it appear that we have as clear an idea of body as of spirit ?
† What are the simple ideas that compose our complex ideas of substances ?
† What would be the probable consequence if our organs of sense were much more obtuse than they are ?
† Show an example of this ?
What does he infer from this ?
What does he conjecture relative to the powers of perception in spirits ?
† How do we obtain the idea of God ?

LECTURE XV.

1. † How do we obtain the idea of relations ?
† What are external denominations ?
Does a change of subject infer a change of relation ?
Does a change of relation infer a change of subject ?
What does Locke observe of relations in general ?

I.

1. † What are cause and effect ?
† What is creation ?
2. † What is generation ?
What is making ?
What seemingly absolute terms are relations ?

II.

1. † How do we get the idea of identity ?
On what axioms do our notions of identity depend ?
What are the criterions of identity ?
2. † What are the classes of substances ?
† How is the unity of God proved ?
† How is the identity of spirits determined ?
† How is the identity of a particle of matter determined ?
† How is the identity of a mass of matter determined ?
3. † By what is the identity of living things decided ?
† How does he illustrate the identity of an animal ?
4. What is a " person ?"
In what does personal identity consist ?

III.

1. § What are proportional relations ?
2. § What are natural relations ?
   † What is peculiar to these ?
3. § What are instituted relations ?
   § Why are they frequently overlooked ?
   § In what do they differ from natural relations ?

LECTURE XVI.

4. § What are moral relations ?
   † What is natural good and evil ?
   † What is moral good and evil ?
   § What is the sanction of a law ?
   † What are the requisites for an efficacious law ?
   § Why should the sanction not be the *natural consequence* of the action ?
5. § What are the laws prescribed to men ?
   § How is the divine law promulged ?
   § How is God qualified to legislate ?
   § How are actions denominated in respect to the divine law ?
6. § What is the civil law ?
   § How are actions denominated in respect to it ?
   § What is the right of the civil legislature ?
   § What is the sanction of the civil law ?
7. § What is the law of opinion ?
   § How are actions denominated with respect to it ?
   § What proves this to be the proper sense of virtue and vice ?
   § By what authorities does he prove this ?
8. § Why does the law of opinion generally coincide with the law of God ?
9. § What are the sanctions of this law ?
   § Why is it more rigidly observed than the other ?
   § Why is the law of God so frequently transgressed ?
   § Why is the civil law so frequently transgressed ?
10. § Moral actions are to be considered in two points of view ?
    † When does the denominations of actions mislead us ?

LECTURE XVII.

I.

1. § When is a simple idea clear ?
   § When is a complex idea clear ?
2. † What are the causes of obscurity ?
   † How does Locke illustrate these causes ?

II.

1. † What is the first definition given of a distinct idea?
   † What is objectionable in that definition?
2. † In what sense only can ideas be said to be confused?
3. † What are the causes of confusion?
   † Why are complex ideas so often made up of too few simple ones?
   † How does he illustrate the second cause of confusion?
   What ideas are partly distinct and partly confused?

III.

1. † How are ideas divided in reference to their archetypes?
2. † What is a real idea?
3. † Why are simple ideas real?
4. † When are mixed modes real?
5. † When are substances real?

LECTURE XVIII.

I.

1. § What is an adequate idea?
2. § Why are simple ideas adequate?
3. § Are modes adequate?
4. § In what respect may modes be inadequate?
5. § Prove that substances are always inadequate?
6. What ideas are ectypes, and what archetypes?

II.

1. Are truth and falsehood affections of ideas?
2. In what sense only can they be said to be so?
   To what are ideas referred as tests of their truth?
3. In reference to other men's ideas, which are least liable to falsehood?
   Which are most so?
4. In reference to real existences, what ideas can be false?
   When are substances false in this sense?
5. In general when are ideas said to be false?

III.

1. What is the cause of the prejudices and extravagancies of men?
   How many fold is association?
   What is the cause of our sympathies and antipathies?

LECTURE XIX.

1. § What proves that man was designed for society ?
   § What are the requisites for language ?
2. § What is the signification of negative terms ?
3. § What argument is derived from the structure of language to prove that sensation is the original of our ideas ?
4. § What is Locke's method of treating of language ?
5. § Why are words a fit instrument of communication ?
   § What proves that there is no *natural* association between words and ideas ?
   What is the proper signification of words ?
   † To what are they tacitly referred ?
   † What words are referred to other men's ideas ?
   † What words are referred to the reality of things ?
   † Whence arises the facility with which words excite ideas ?
   † Why might it be expected that words should be particular ?
   † Why are they not so ?
   § Why is it not possible to have particular names for all particular things ?
   § If it were possible, would it be useful ?
   § What things only have particular names ?
6. § How do ideas become general ?
   § How do words become general ?
   § Is definition by genus and difference the best method ?
   § Why did the old logicians use it ?
   § Why is it not always possible ?
   † What is the best method ?
7. † Whence have species and genera derived their existence ?
   † Prove that the abstract idea is the essence of the species ?
   † How manifold are essences ?
   † What is the real essence ?
   † What is the nominal essence ?
   † What opinions have been held respecting the real essences of corporeal substances ?
8. In what ideas are the nominal essences the real essences ?
   † What conclusion does Locke draw from the maxim that essences were ingenerable and incorruptible ?
9. § What are the six peculiarities of the names of simple ideas ?
10. § What examples does Locke give of the absurdity of attempting to define simple ideas ?
    † What is the defect of the Atomist's definition of motion ?
    † To what test does he propose to bring the peripatetic definition of light ?
    † How does he show the absurdity of attempting to acquire a simple idea of which we have not the proper organ ?
11. † Why are the names of simple ideas less doubtful than those of mixed modes and substances ?
12. What is the peculiarity of the names of mixed modes ?

LECTURE XX.

§ How manifold are words?
§ What is a term?
§ What is a particle?
† On what does perspicuity of style depend?
What is necessary to think well?
What instance does Locke give of the different senses of a particle?
† How manifold are terms?
§ What is a concrete term?
§ What is an abstract term?
† What analogy is there between a concrete and abstract term and an adjective and substantive?
† What conclusion respecting essences does he deduce from the nature of words?
§ How manifold is the use of words?
† What is necessary in recording our thoughts?
§ What is the civil use of words?
§ What is the Philosophical use of words?
§ What is the imperfection of words?
† What are the causes of this imperfection?
† What particular classes of words do each of these causes affect?
† Why is propriety an insufficient remedy?
† In what science is the imperfection most felt?
What instance is given of dispute occasioned by this imperfection?
§ What names are least doubtful in their signification?
§ What names are most doubtful in their signification?
§ What are the abuses of words?
† The first abuse is two-fold?
† How does he illustrate the difficulty of refuting men whose notions are unsettled?
† To what does he compare the unsteady use of words?
† The third abuse is three-fold?
Where has this most prevailed?
† How does he illustrate the difficulty of refuting men who practise this?
How does he show their want of ingenuity?
Where has the fourth abuse most prevailed?
What instances does he give of this abuse?
What is its worst effect?
What instance does he give of the fifth abuse?
Why do men refer different ideas of substance to the same species?
Why do they admit a change in the subject without a change in the species?
What is the cause of this abuse?
† What false suppositions does it include?
What instance does he give of the sixth abuse?
In what cases only does he allow figurative speech?
Where does he violate this rule himself?
§ What are the ends of language?
Where do our words fail in these?
§ What are the remedies for the abuses and imperfections of words?
§ What are the ways of making known the meaning of the names of simple ideas?
† Why may the names of mixed modes be always defined?
† How are the names of substances explained?
§ Show that morality is capable of demonstration?

LECTURE XXI.

§ What is knowledge?
§ How manifold is the agreement or disagreement of ideas?
N. B. These are sometimes called Locke's predicables.
§ What is actual knowledge?
§ What are the two kinds of habitual knowledge?
† On what principles does the certainty of the second species of habitual knowledge depend?
† To what species of ideas is this knowledge only applicable?
§ What are the degrees of knowledge?
§ What is intuitive knowledge?
§ What is demonstrative knowledge?
§ What is sensitive knowledge?
† What is sagacity?
† How does he illustrate the inferior clearness of demonstrative knowledge?
† Whence arose the mistake that all reasoning was "ex præcognitis et præconcessis"?
† Is the clearness of knowledge a consequence of clearness of ideas?

LECTURE XXII.

† What is the most obvious limit to our knowledge?
† Why cannot intuitive knowledge extend to all our ideas?
† Why cannot demonstrative knowledge extend to all our ideas?
† What are the limits of sensitive knowledge?
† What examples does he produce to show that clearness of ideas does not infer clearness of knowledge about them?
§ What is the extent of our knowledge of identity and diversity?
§ Why is our knowledge of co-existence very confined?
† Why is repugnancy to co-existence more easily perceived?
† Why is our knowledge of relations the most extensive?
† Why does he think that if proper methods were taken morality would become a demonstrative science?
† What examples of this does he give?
† Why has it been thought incapable of demonstration?
What is the extent of our knowledge of real existence?
§ What are the causes of ignorance?
† What of ideas is two-fold?
In what ideas is the second cause most apparent?
What most frequently produces the third cause?
How far is our knowledge universal?
† How far is our knowledge real?

LECTURE XXIII.

§ What is truth?
What is meant by joining or separating signs?
† How manifold are signs?
† How manifold is truth?
† Why is it difficult to treat of mental truth?
† What are maxims?
† Why have maxims little effect upon other parts of knowledge?
What use does Locke admit maxims to have?
What example does he give of their leading to error?
What ideas should they be most cautiously applied to?

LECTURE XXIV.

What are the classes of trifling propositions?
† What is the proof the existence of a God?
What is the species of knowledge of external things which we have?
What are the reasons why the certainty of this knowledge is to be depended on?
What kind of propositions only can we know of existence?
How is the existence of spirits known?
What is the method of improving our knowledge?
† How far is knowledge necessary and how far voluntary?

LECTURE XXV.

† In what senses does Locke use the word "judgment?"
§ What is probability?
How manifold is the matter of probability?
§ What are its grounds in matter of fact?
What false ground is sometimes used?
§ What is the ground of the highest degree of assent?
§ What is the ground of the second degree of assent?
§ What is the ground of the third degree of assent?
† What is the ground of probability in matter of speculation?
Give examples of matter of speculation?
† Does contrary experience *always* lessen probability?
What is to be examined in matters of revelation?

LECTURE XXVI.

§ What are the significations of the word *reason?*
† What faculties are employed in reasoning?
† What are the degrees of reasoning?
§ What are Locke's objections to syllogism?
What instance does he give of reasoning without syllogism?
Where does he admit syllogism to be useful?
† Why is syllogism of less use in probability than demonstration?
What error does Locke fall into about "particular" proposition?
What form of syllogism does he prefer?
† When does reason fail us?
† What are the four arguments used to supply the place of demonstration?
Why is the last the best?
What instances does he give of propositions above, according to, and contrary to reason?
† How are reason and faith distinguished?
Is faith *opposed* to reason?
Can *new* ideas be conveyed by immediate revelation?
Can *new* ideas be conveyed by traditional revelation?
What is proper matter for revelation?
Can propositions be proved by traditional revelation as certainly as by reason?
Can revelation contradict reason?

LECTURE XXVII.

What is enthusiasm?
What is its origin?
How is it detected?
What are the causes of error?
† What are the wrong measures of probability?
What is the difference between those who hold doubtful principles and received hypothesis?
† What is Locke's decision of the sciences?

The Students having complained that the former part of the Lectures on Locke contained much extraneous matter, which, under the existing method of examining, would not be available, the Compiler has in this part strictly confined himself to what will be useful at the quarterly examinations. The following pages will be found to contain every thing in which the students are liable to examination, and *nothing else*. It is presumed that it is some advantage that the subject is altogether contained in forty-eight pages, in place of four hundred.

Errata in former part.

Page 12, line 6, *for* back, *read* book.
App. p. i. line 7, 8, *for* § *read* †, *and* vice versa.

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