THE ECONOMIC SYNTHESIS

A STUDY OF THE LAWS OF INCOME

LORIA

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A STUDY OF THE LAWS OF INCOME

BY ACHILLE LORIA

TRANSLATED FROM THE ITALIAN BY
M. EDEN PAUL

Ex aliis alias reparat Natura figuras
Nec perit in tanto quidquam mihi credite mundo,
Sed variat, faciemque novat . . .
. . . summa autem omnia constant.

Ovid, *Metamorph.*, xv. pp. 253, *et seq.*

UNIV. OF
CALIFORNIA

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TO

LIDIA

MY YOUNGEST DAUGHTER

I DEDICATE

MY LATEST THOUGHTS

CONCERNING ECONOMIC ENIGMAS.

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PREFACE

TO THE ENGLISH EDITION

THE present work, which now appears in a somewhat abridged form in English, may be said to sum up the researches of more than thirty years in the domain of economic science, and to form the complement and the theoretic crown of all my earlier writings. If, in fact, in my previous works upon Land Rent (1879), upon Capitalist Property (1889), and upon the Economic Constitution of To-day (1899), I have studied the specific laws of the individual historic phases of economic development, it has been my intention in this book to study the laws and the regular recurrences common to all the economic forms which have hitherto prevailed; to study, that is to say, the norms immanent in the economic order *per se*, independently of the different manifestations assumed by that order in the successive phases of history.

This simple statement suffices to show that the present book is in intimate correspondence with the acquirements of the economic thought of to-day, just as my earlier works reflected the prior phases of scientific mentality in the economic field. —If, in fact, in the past, economic research, dominated by the historical concept, loved to break up social evolution into its successive phases, and to throw the light of theory separately upon each of these, to-day, on the other hand, science aims at the attainment of a comprehensive grasp of the economic order in the totality of its integral manifestations, and endeavours to bring to light the universal and eternal substance underlying its varying developments. In other words, if, in the past, analysis and the historical method of treatment prevailed, to-day there tend to prevail synthesis and pure science. Now the present book belongs precisely to this more modern and philosophic scheme of thought, without, however, endeavouring to conform in every respect to the method commonly employed by those authors who have adopted that scheme, for from the work of these my book is distinguished by a fundamental difference. Whereas, in fact, the majority of the contemporary representatives of pure economic science ignore historical research and deduce their theories from certain more or less arbitrary logical premises—it is my aim to make use of historical studies of the precedent era, and to attain to the economic synthesis by means of the conscientious comparison of the economic forms hitherto traversed, in order to extract from these the *quid* common to them all, the essential element contained in each, ruling and controlling all.

But in another essential way my book reflects the actual and immediate position of economic science. If, in fact, we examine the leading aim of economic science in its successive phases, we find that in a first period the leading aim of economic investigation is the rent of land, that in a subsequent period it is the profit of capital, whilst to-day the principal object of economic research is income in its entirety.—This is easy to understand: for income, being the integration of all the specific rewards of the various productive and unproductive factors, can be studied only in succession to the specific study of these single rewards.—Now, if my previous books dealing with land-rent and profit were in correspondence with the economic thought of the period in which they were published, the present book, dealing with income, reflects very clearly indeed the actual position of economic science and is the faithful expression of that position.

It will be a very great pleasure to me should the characteristics thus explained and should the essential modernity of my book earn for it from English readers the like sympathy with which it has been favoured by readers in Italy and in France. I shall feel myself fully compensated for my long and arduous labours if England, the teacher of the world in economic science, should recognise that, in this field which she has sown with immortal doctrines, the author has harvested some not unworthy fruit.

ACHILLE LORIA.

TURIN, *September*, 1913.

UNIV. OF CALIFORNIA

THE ECONOMIC SYNTHESIS

INTRODUCTION

THE UNIVERSAL DATA OF ECONOMIC SCIENCE

The Egyptian statue, rigid in its outlines and with the hands attached to the knees, was succeeded by the Greek statue, animated and alive. Similarly in the field of abstract knowledge, the investigator begins with defective and meagre generalisations, concerning phenomena considered in their fixity; from this he proceeds to the more arduous study of the specific forms assumed by the phenomena in the course of their evolution; at length, in a final phase, and as the ultimate outcome of the researches thus begun, he attains to the positive study of the synthetic laws governing all the phenomena in their universal manifestations. Thus to a synthesis static, infantile, impulsive, and unscientific in character, there succeeds a profound dynamic analysis; from this, and from this alone, is born a synthesis scientific and positive in character, at once static and dynamic, which constitutes the crown and the seal of the investigation.

The science of mathematics presents a typical case of such a development as it proceeds from the differential to the integral calculus. Apart from this, the most notable example of the law under consideration is that of mechanics. By the Greeks, it was only the statical portion of this science which was studied; and its modern development dates from the investigation of dynamics, which alone rendered it possible to proceed to higher syntheses. The other disciplines of natural science exhibit a similar progress. In chemistry, the fantastic primordial synthesis was succeeded by a period of positive analysis, from which alone, in quite recent times, has arisen a scientific and fruitful synthesis.—In biology, the primitive and imperfect generalisations concerning the whole world of organisms gave place to particular researches dealing with single species of plants or animals, and with the gradual transformations of these ; to this there succeeded the development of the science in which Schleiden and Schwann were able to demonstrate the general identity in composition of the tissues and the analogous structure and development of animals and plants ; and the development in which Gegenbaur recognised the structural identity of the terrestial quadrupeds with fish, and that of man with the other vertebrata.

Similarly, sociology begins with the study of static phenomena —a study not at first very profound. John Stuart Mill pointed out that Comte's writings on social statics were poor and incoherent in comparison with the work of the same author in the dynamic and evolutionary fields.[1] Herbert Spencer frankly admitted how imperfect and erroneous were his first statical generalisations, and he found it necessary to correct them in essential particulars as a result of reiterated study of the dynamic laws of society and of nature.[2] But not until quite recently has there been manifest a tendency to pass from the dynamic researches, which up till now have occupied almost the whole field of sociology, to positive and more elevated synthetic studies.[3] Hence in sociology also a primitive and imperfect statical stage gives place to a period of dynamical study, and upon the foundation of this latter there arises, in a yet later stage of development, a scientific and profound synthesis.

Now such a process characterises the study of economics. Starting from more or less inaccurate generalisations concerning phenomena considered *sub specie æternitatis*, the investigation proceeds to the positive study of the forms which the economic order has successively traversed,[4] to attain at length

[1] J. S. Mill, *Correspondance avec A. Comte*, Paris, 1899, p. 260.

[2] Spencer, *Autobiography*, London, 1904, Vol. II, p. 154.

[3] Defourny, *La sociologie positiviste, A Comte*, Paris, 1902, p. 301 ; Limentani, *La previsione dei fatti sociali*, Turin, 1907, pp. 320–1.

[4] Patten blames the classical economists for having confined their studies to static economics (*The Theory of Dynamic Economics*, Philadelphia, 1892, p. 37). In actual fact, the studies of the classical economists relating to universal economic laws do not emerge from the sphere of void abstractions ; everything really alive in their discussions is reached by the positive analysis of the economy of the wage system, or refers exclusively to one historical phase of social dynamics. Hence, in political economy, scientific and positive

to the synthesis of these diverse phenomena, or to the discovery of a norm which comprehends them.[1] Unfortunately, however, it is in the special field of our study that the concept here discussed encounters at the outset, apart from easily answered technical objections, a direct and serious obstacle. For many writers contend that economic research must be confined to the study of the single concrete forms which the economic order assumes in the course of its evolution, without ever attempting to proceed from these relative and circumscribed studies to a unifying synthesis. Many years ago, John Stuart Mill pointed out that the only elements which the various historical forms of the economic order exhibit in common are the most generalised technical conditions of production; whilst the laws of exchange and distribution are radically different in different economic epochs.—"In the economic field," wrote Marx a few years later, "those researches alone are valuable and have a real content which are confined to some specific form of the relationships of production or of distribution. One who from such concrete researches aspires to rise to a general synthesis, one who desires to discover by force a common element in economic phenomena essentially distinct and belonging to successive social ages, will inevitably proceed to despoil these phenomena of everything which gives to them life and movement. The net outcome of his laborious process of reduction will be the emergence of a residuum altogether inanimate, or at best void and exsanguine."[2] Some decades later similar considerations were urged by Stammler, writing from the opposite camp. This writer distinguishes technical or natural economy from social economy. While he admits that the former is limited by immutable laws, he contends that it is essential for the latter to have reference to some determinate historical order, and he denies the possibility of subsuming under a single unifying formula the phenomena of different economic orders.[3]

research begins with the study of dynamics or with specific analysis, and from these alone is it possible to proceed to the further stage in which we attain to the idea of universal laws.

[1] Fontana, *Critica sociale*, April 16th, 1903.

[2] Marx, *Einleitung zu einer Kritik der politischen Oekonomie* (1857) "Neue Zeit," March 7th, 1903. Cf. also Engels, *Anti-Dühring*.

[3] Stammler, *Wirtschaft und Recht*, Leipzig, 1896, pp. 188, 191, 224–8, 298, *et seq.* Cf. also Diehl, *Jahrbücher für N.E.*, 1907, p. 107.

However worthy of respectful consideration may be the views of these eminent thinkers, the impartial student is unable to accept them without critical examination. It has already been pointed out that if we were to admit the impossibility of formulating abstract laws applicable to all periods of development, it would follow that biology, psychology, and abstract sociology were all equally impossible. It may be added that Marx was himself the first to give the lie to his own thesis, by the enunciation of universal laws, or formulas applicable to all times and to all nations. Take Marx's own formula, that every period of social life contains the germs of its own dissolution; his principle that the prevailing mode of production forms the basis upon which are built up, in any historical epoch, the system of moral, legal, and political institutions, and the prevailing ideas of that epoch; or, again, his principle that the whole history of mankind is the outcome of the class struggle—what are these but so many general laws tending to subsume the dispersed phenomena of history under a single master-formula?[1] The truth is, as Bernstein well expresses it, that Marx's study of economical theory is concerned with something more than the structure of modern society or the economy of the wage system; we find here and again in his work more or less definite indications of a profounder and more far-reaching investigation, concerned with the general theory of human society, and with the discovery of characteristics common to all the historical phases through which that society has passed.[2] The special task of the science of our own day is to effect a fuller development of this second and vaster group of investigations. Nor does the fact that the attempts hitherto made in this direction amount to mere logomachies justify the view that these loftier researches are impossible; for hitherto the ventures in this field have been mere logical speculations founded upon abstract premises and devoid of that positive basis which is rendered possible only by the effective comparison of successive economic orders.[3]

[1] De Greef, *La sociologie économique*, Paris, 1904, pp. 129.

[2] Bernstein, *Die Voraussetzungen des Sozialismus*, Stuttgart, 1899, p. 2, *et seq.*

[3] Effertz (*Arbeit und Boden*, Berlin, 1889, pp. 93, 144–5, etc.) declares with reason that the essential task of the economic science of our day is the study

The views of the most authoritative opponents of evolutionist relativism cannot countervail the necessity that from the analytical study of the single concrete forms of economic relationships we should proceed to a synthesis of their common and universal features. This synthesis must be one which reduces to a common denominator the economic forms hitherto partially investigated, one which searches out the *insignem generis humani similitudinem*, which discovers the kernel common to all the phenomena, and represents these as immediate or mediate expressions, quantitatively diverse, of a unique and essential element. Such research of a higher order constitutes the necessary integration and the most essential crown of that new and noble field of study which is known by the name of social morphology. This study, which finds its proper base of operations in the analysis of single successive economic forms, would yet inevitably remain imperfect and discordant if it did not proceed to the synthesis of the specific forms that have been studied, or if it failed to divine beneath the most multiplex and varied types of finished beauty, the primitive and indifferent brutality of the block of granite from which these have all been sculptured.

In the year 1889, in a short essay upon the importance of history in economics, I called attention to the existence of and to the necessity for this field of higher investigation. "Even though it be perfectly true," I then wrote, "that those generalisations which economists have dignified with the name of laws do not deserve that name, inasmuch as they are nothing more than more or less perfect abstractions from transitory phenomena, we must not for this reason deny to economic science the possibility of attaining to the discovery of a true general law, a law of laws, a regulative norm which shall take precedence of all such abstractions—a generalisation which shall subsume the common elements in the economic phenomena of all times.—The laws of the classical economy are

of those laws which regulate the economic order independently of its historical forms; and he reproaches Marx and all other economists, with the exception of Rodbertus, on the ground that hitherto they have confined themselves to the study of the specific laws of individual social phases. But Effertz forgets that it is only upon a foundation of such analytical studies that it is possible to proceed, in due course, to the formulation of universal economic laws.

nothing but the essential theory of the economy of the wage system; the analysis of medieval, classical, or primitive economic phenomena will lead us, perhaps at the expenditure of much labour, to the discovery of an essential theory of the phenomena of those epochs. . . . Now, when a profound study of successive economic relationships has enabled us to discover the *transitory laws* characterising the respective epochs, it only remains to institute a comparison between the various laws in order to bring to light the general law which governs them all. This will be the true economic law, immutable,[1] independent of space and time, and therefore fulfilling all the requirements of a scientific law. . . . The discovery of a general law from these transitory laws, of an economic law, that is to say, is thus the climax of scientific research in the economic field."[2]

It was impossible for me to devote myself to this more exalted study until I had completed the analytical investigation of the separate social constitutions. It was my endeavour to throw light on these matters: first of all, in their two chief forms, according as there does or does not exist free land[3]; next, in the disparate and multiplex subordinate forms they have successively assumed[4]; and, finally, in the more interesting and more highly evolved form which now prevails.[5] Having done my best to bring this first series of investigations to a conclusion, the time has at length arrived to pass on to a higher level, and to study, no longer the phenomena or the specific laws of the individual economic forms which appear successively in history; but to study the omnipresent lineaments, the general and sovereign laws which discipline and regulate all of these. Now that we have photographed the successive social stages and have reproduced their succession with the aid of the cinematograph, we have to superpose these images in order to extract their common type; we have to initiate that *analysin situs* which awaits

[1] It must be understood that such immutability is eminently relative. We have to do with a law derived from a synthesis of all the forms past and present, and for this very reason it cannot possess an absolute value in respect to the future.

[2] *La storia nella scienza economica,* "Giornale degli economisti," March–June, 1889.

[3] *Analisi della proprietà capitalista* (1889), Vol. I.

[4] *Analisi,* Vol. II.

[5] *La costituzione economica odierna,* 1898.

its Riemann, to study the continuous amorphous substratum common to all the economic forms and categories previously considered ; to write, in a word, were it only as a preliminary sketch, the supreme drama whose subject matter is man, whose scene is the world, and whose time is eternity.—However difficult this investigation may be, its pursuit is at the present moment the most essential object of economic study, and it is to this that we invite the benevolent attention of the dispassionate truthseeker.

CHAPTER I

THE PRODUCTION OF INCOME

In the conditions of exuberant productivity of the soil which characterised the dawn of human society, individual labour, employed for a time varying according to the vigour, the inclination, and the technique of the labourer, and employed either without technical capital or with a cellular technical capital,[1] furnishes produce largely exceeding the subsistence required by the producer and his family. This is the economic phase of *spade-culture,* in the hands of isolated labourers without ploughs or domesticated animals, which is none the less able to yield a notable product.[2] Thus, it is recorded that in New Spain, in the days of Humboldt, one hundred square metres of land, cultivated with the aid of very little capital or none at all, gave an annual yield of bananas containing more than two thousand kilograms of nutritive substances, that is to say a yield largely in excess of the individual requirements of the worker for his subsistence. Even to-day the indigens of New Guinea and those of German Africa, and the settlers of Santa Fé or Cordoba in Argentina, produce by isolated labour, and with very moderate exertion, much more than they need for their own consumption.[3]

In such conditions, the producers, inasmuch as by isolated labour they obtain a subsistence, have no motive to associate

[1] In the following investigations the author will follow a different course from that adopted in his earlier works, and will admit that labour is always employed in association with technical capital, thus excluding the hypothesis of pure labour, which is met with only in the very earliest phases of economic development, so that considerations relating thereto are hardly applicable in a study of universal and constant economic phenomena.

[2] Hahn, *Die Hausthiere, in ihre Beziehungen zur Wirtschaft des Menschen,* Leipzig, 1896, pp. 33, *et seq.*

[3] Humboldt, *Essai politique sur le royaume de la Nouvelle Espagne,* Paris, 1811, III, pp. 28–9.—[*The Colonial Policy of Germany*], in the "Russkaia Müssl," August, 1906, p. 72.

their labour, since this would involve more or less limitation of their independence; in other words, the free association of labour is impossible.—On the other hand, the producers, obtaining by means of their isolated labour something more than a subsistence, are economically in so strong a position that they can set at defiance any authoritative attempts to force upon them the association of their labour; in other words, the coercive association of labour is impossible. In such conditions, therefore, labour, for the simple reason that it produces a subsistence, cannot be freely associated; while, for the simple reason that it produces more than a subsistence, it cannot be coercively associated; therefore it must of necessity remain isolated. In other words, isolated labour constitutes in such conditions the normal and lasting foundation of production and of economic life.

As the population increases, however, and the need thus arises to undertake the cultivation of land less and less fertile, isolated labour gives an ever smaller yield, and hence provides a continually slighter excess over and above what the producer requires for his subsistence. For such a decline in yield, the producer may for a time compensate in one of several ways. He may extend his hours of work beyond the normal limits; he may perfect his technical equipment; he may limit his production to a single commodity, rendering his work more continuous and more productive, and may then procure the other articles of consumption that he needs from other producers who have specialised along other lines. To put the matter in another way, to obviate a lessened yield, or to produce something more than the worker's subsistence, it is necessary that there should, to a certain extent, arise the *complex association of labour;* that is to say, each producer must confine his energies to the production of a single commodity, while each must receive a portion of the produce of the work of others. This exchange of products may either result from spontaneous individual initiative, or it may be imposed from without by some regulative authority. In the latter case (which in ancient times was the commoner), such a regulative authority may itself appropriate the produce collected from the respective undertakings and allot this produce to individuals in predetermined rations. Such was the practice among the ancient Greeks, among the Suevi as described by Cæsar, and in precolonial Peru; and such is the practice at the present day among the African Marea. But when the exercise of central authority is limited to the assignment to each individual of some particular field of production, and equally when such specialisation is the outcome of individual initiative, the commodities produced by such isolated individuals cannot be distributed among these in any other way than by means of exchange. Thus, in the absence of a despotic intervention on the part of a centralised authority, the complex association of labour, or the specialisation of production, has as its correlative and as its necessary consequence a system of exchange.

How is the exchange between dissociated producers to be regulated? In other words, how are they to decide upon the relative values of their products? We have to distinguish several cases.

1. If the supply of the various products is unrestricted, and if the quantity of the products offered in exchange is likewise unrestricted, the value of the various commodities is that which is determined by the reciprocal absorption of the quantities produced. Now, in the case where there exist two products only, the value which is established by this process is evidently unique and determinate; for it is clear that if one individual produces 100 A and another produces 120 B, the relation of value can only be that 100 A=120 B.[1] But if we assume, in conformity with the actual facts of experience, the coexistence of more than two products, it would seem at first sight as if the value must in such conditions be indeterminate; for, supposing the quantities produced to remain constant, and therewith constant also the supply of the respective commodities, changes may continually occur in their redistribution among the various buyers, with consequent changes in value among the various products. If, for example, we suppose that there are three products, 100 A, 105 B, 90 C, they may have the

[1] This, the simplest of all cases, is the only one to which the theory of value in its oldest forms refers. Two famous theories, the quantitative theory of money and the theory of the wages fund, revolve round the presupposition, expressed or implied, of a two-sided unrestricted supply, and they deduce from this a value equal to the quotient of the two quantities produced. Naturally, if the premises are abandoned both theories are invalid.

following values, which absorb the total amounts of the respective commodities :

$$40\ A = 60\ B$$
$$60\ A = 60\ C$$
$$45\ B = 30\ C$$

But it may also happen that the producers of A demand a smaller quantity of B, offering in return a smaller quantity of A; and this may give rise, although the total quantity of A produced remains constant, to a relative increase in the quantity of A that is offered in exchange for C.—There results, therefore, a different value, not only as between A and B, but also as between A and C and as between B and C.—Inasmuch as the offers of A as against B may vary to an infinite degree, it would seem that in the stated conditions an infinite variation of values is possible.

A simple consideration will, however, show that this is not the case. For, as a result of the change in the offer of A for B, it does not only follow that there must be a change in the relative values of all the products, but it also follows that all these values vary correlatively—or that the new value which is established between B and C must be the exact resultant of the two new values A–B and B–C. If, for example, there be offered 30 A for 50 B, there will remain 70 A on offer for C and 55 B on offer for C. Now the new value established as between A and C and as between B and C is rigorously determined by the following equations :—

$$30\ A = 50\ B$$
$$70\ A = (90 - x)\ C$$
$$55\ B = x\ C$$

From this it follows that, since $70\ A = 116{\cdot}66\ B$,

$$90 - x : x = 116{\cdot}66 : 55$$
$$x = 28$$
$$70\ A = 62\ C$$
$$55\ B = 28\ C.$$

Thus the new equilibrium between A and B becomes possible only on condition that it is possible to determine new values as between A and C and as between B and C. If it should happen that the desires and the tastes of the consumers are such as to render the determination of these particular values impossible, the indicated variation in the relationships of exchange as between A and B will prove unattainable. Hence the possibility of this variation in the relationships of exchange as between A and B is subordinated to a condition whose fulfilment is far from probable.

Indeed, the fulfilment of such a condition is more than improbable, for it is actually impossible. If the producers of A offer a smaller quantity of their commodity, in order to obtain in exchange a smaller quantity of B, there results an increase in the quantity both of A and of B which is available and on offer as against C. If there is an increase in the quantity of A offered as against C, this may evidently be the outcome simply of the intention to obtain a larger quantity of C, and thence there necessarily follows an increase in the quantity of C offered as against A. No less necessarily there follows a correlative diminution in the quantity of C elsewhere available, available, that is to say, in offer as against B. Hence, while the quantity of B offered for C *increases*, the quantity of C offered for B *diminishes*. Now it is rationally impossible that there should be offered a *larger* quantity of the product B in order to obtain in exchange a *smaller* quantity of the product C, when the buyer is well aware that the whole quantity of C is necessarily offered, whatever may be the actual quantity given in exchange, or without any increase in its unitary value.—Thus the producers of B will offer, not a larger quantity of their product than at first, but a lesser quantity; whence there will remain at their disposal a certain quantity of B, which will be necessarily offered as against A, thereby rendering impossible the value just established. Thus, in our example, the result of the mutation of the system of initial values would be, that the producers of B, who at first gave 45 B to obtain 30 C, would now give 55 B to obtain 28 C; which is absurd, for evidently the producers of B, knowing that they can obtain 28 C without any increase of unitary value, will give, to obtain this quantity of C, not more than 45 B, but less; hence there will remain available more than 10 B, which will afresh be on offer as against a new quantity of A, thus rendering impossible the value 30 A=50 B.

If, in the place of the producers of A, it is the producers of B who obtain a larger quantity of C, by giving in exchange a larger quantity of their own product, there recurs the before-mentioned incongruence in the relationships between A and C; for, if a larger quantity of C is exchanged against B, there remains a lesser quantity to exchange as against A; for which the producers of A would be offering a larger quantity of their product in order to obtain a smaller quantity of C; which is absurd. To put the matter in general terms, if there is a diminution in the quantity offered of A as against B, and hence of that of B as against A, there must be an increased quantity both of A and B remaining available, and on offer as against C. But inasmuch as the quantity of C is constant, and the whole amount is necessarily on offer, it is impossible that the producers of A and B should offer a larger quantity of their respective products in exchange for C; from which it results that the portions of A and B temporarily withdrawn from the mutual exchange of these two products, will necessarily once more be on offer one against the other.

Therefore, given a plurality of commodities, it is necessary that the value as between any two commodities should be equivalent to the relationship between their values measured in terms of a third commodity; and it is further necessary to the maintenance of these values that the total quantity of the commodities produced should be effectively sold. Now there is only one system of values which satisfies both these conditions; for every alteration in value between two commodities diminishes (or increases) the quantity of them reciprocally exchanged, and hence increases (or diminishes) the quantity of them which can be exchanged for a third commodity presumed to be constant in quantity. Hence it results that an *increased* (or *diminished*) quantity of the two first commodities comes to be on offer to obtain a *constant* quantity of the third. But this is absurd, because the producers of the first and second will never be willing to give a larger quantity of their own commodities in order to obtain a constant quantity of the third commodity necessarily offered in exchange; or, conversely, the producer of the third commodity will not give a constant quantity of this in order to obtain in exchange a lesser quantity of the two others. Hence any mutation of initial value is impossible so long as the quantity produced of the various commodities remains constant. It follows, where there are several commodities, that the value of these is always that which is determined by the reciprocal absorption of the quantities produced, and this value is unique and determinate.

2. If the supply of a product is unrestricted, or if the whole quantity produced must be sold, whilst the demand for it is restricted, or the quantity of the product available in exchange can be restricted, there is established that value in accordance with which the whole available quantity of the former product, neither more nor less, finds purchasers.

Thus, let us suppose that there are in the market 1000 units of A and 1000 units of B, and that

when the value of 1 measure of A=	there will be sold measures of A	in exchange for measures of B
10 measures of B	20	200
1 ,, ,,	500	500
0·6 ,, ,,	**1000**	600
0·3 ,, ,,	1500	450
0·2 ,, ,,	2200	440

it is evident that the only value which satisfies the conditions supposed is that in which one measure of A=0·6 measures of B, because, at this valuation, there can be sold precisely 1000 measures of A, or the whole quantity produced; whereas at a higher valuation the quantity sold is less than the quantity produced, which is excluded by hypothesis; whilst at a lower valuation the quantity sold is greater than the quantity produced, which is absurd.

If, however, it is the intention of the buyers, or if the buyers have agreed, not to increase their demand for the product even should its value fall below the level thus established, and if in addition they combine to exclude the new buyers whom the fall in price of the product cannot fail to attract, the value may fall below the point at which it would be established in conditions of free competition among the buyers. But inasmuch as the number of would-be buyers increases with the decline in the value of the product, there arrives sooner or later the moment in which the number of new buyers brought into the field by the decline in value is so great, that it is no longer possible to exclude them; or to exclude them may involve an expense exceeding the advantage that would be derived from their exclusion. Now it is evident that the value can never descend to this level. In other words, the value is established at that point below which an exclusion of new buyers is anti-economic or impossible.

3. If the supply of a product is restricted while the demand for it is unrestricted, or if the whole quantity produced of another commodity must in any case be devoted to the acquisition of the former, that value is established at which the whole quantity produced of the second commodity is effectively disposed of in order to obtain the first. Let us suppose, for example, that there are in the market 1000 units of A and 1000 units of B, and that

when the value of 1 measure of A=	there will be disposed of for A measures of B	obtaining in exchange measures of A
10 measures of B	200	20
8 ,, ,,	800	100
5 ,, ,,	**1000**	200
4 ,, ,,	1200	300
1 ,, ,,	400	400

it is evident that the only value which satisfies all the conditions supposed is that in which one measure of A=5 measures of B, because this is the value at which all the measures of B produced (1000) are disposed of in exchange for A; whereas at the higher value 8 there would be disposed of in exchange for A a lesser quantity of B than the total quantity produced, which is excluded by hypothesis, and at the lower value 4 there would be disposed of in exchange for A a quantity of B greater than the total quantity produced, which is absurd.

If, always supposing the supply to be restricted, the demand is not only unrestricted, but capable of indefinite increase, there is established that value at which the quantity of this product disposed of in exchange for the product offered reaches the maximum; or, in the example given, there is established the value 1 A=4 B, in accordance with which the product A obtains in exchange 1200 B, which is larger than the quantity of B that could be obtained on the basis of any other valuation. In fact, leaving out of account, for the sake of simplicity, the cost of production of the commodity A which is given in exchange, this is the value which gives the maximum return to the producers of A, and this is the one necessarily preferred by them; nor have the producers of B any way of resisting this, inasmuch as to do so would be to restrict the supply of B, which by hypothesis is impossible to them.

If the supply of a product can be restricted only to a certain figure, and such a restriction of the supply increases the gain of the producers, there is established the particular value which effects the sale of that particular quantity of the product.—Thus, in the first example, let us suppose that the supply of A can be restricted to 800 measures, but not below this figure. In this case, if the value which effects the sale of 800 measures of A is 1 A=0·8 B, this value brings in return 640 B, or more than would be obtained by selling the whole 1000 A. This, then, is the value that will be established.[1]

4. If there are various products, the supply of which is restricted, while the demand for them is capable of indefinite increase, the relative value of any two of these is equal to the mean of their relative values of maximum gain; or, to put the matter in more precise terms, it is equal to half the sum of the quantities of the two products sold at the respective relative values of maximum gain.[2]

Thus, where there are any two products, if there be an unrestricted supply, bilateral or unilateral, as the case may be, the value which is established is that which effects the mutual absorption, bilateral or unilateral, as the case may be, of the quantity produced; if there is a restriction of supply, unilateral or bilateral, as the case may be, the value which is established is that of maximum gain, or the mean of the two values of maximum gain. But the values thus established

[1] Another and intermediate case is that in which, whilst the demand is capable of indefinite increase, the supply is capable of restriction by some only of the producers. In this case there will be established the value which gives the maximum gain to those producers who can restrict the supply, or that value which (putting the cost of production out of consideration) gives the maximum integral value to the quantity they can sell, and which is equal to the total quantity that can be sold at the price thus fixed, less the quantity, which is constant, sold by the other producers. Cf. Forscheimer, *Theoretisches um unvollständiges Monopol*, "Jahrbuch für Gesetzg.," 1908, pp. 3, *et seq.*

[2] Loria, *Il valore della moneta*, 2nd edition, Turin, 1902, pp. 58–60.

can be realised only on condition that their sum-total does not exceed the value of the total quantity of products available in exchange for the products to be purchased; for, if it were otherwise, it would be necessary to effect a proportional reduction of the respective values until their total value became equivalent to the total quantity of the products constituting the demand.[1]

Such is the current or immediate value which is established between the products; and if among the respective producers there does not exist free competition, this value is normal and definitive.—If, however, there is open competition among the producers, the value may be established at this level for the time being, but such a value cannot be a lasting one, cannot become normal, unless it is proportional to the cost of production of the various commodities. If the value of the products is out of relation with their respective costs of production, those producers who obtain a value less than the cost of production will transfer their energies to the production of commodities which obtain a value superior to that cost. Hence the supply of these latter products increases while the supply of the former products diminishes; whereupon the value of the former rises in proportion to that of the latter, and this process continues until the quantities of the various products which are exchanged for one another vary inversely as their cost. At this point, and at this point alone, the current value becomes normal. This does not exclude the possibility that in place of such a gradual change in the supply of the various commodities, and a general correlative change in their respective values, there may be a more abrupt and decisive change which speedily renders the value equivalent to the cost of production, or establishes a normal value. For, if there exists free competition, it is against the producer's interest to raise the value of his commodity above the cost of production,

[1] Some writers affirm that the value of each product depends upon the demand for it, and that this in its turn depends upon the value of all the other products consumed by the buyer. If this were true, the value of one product would be determined by the value of a number of other products; in other words, one value would depend upon another value in an endless circle. The truth is that in the case of each product its value is determined independently of the values that are established for other products; but the integral value of all the products must not exceed the available wealth of their buyers. If it does exceed this, it is necessary that there should be effected a proportional reduction in the value of all the products.

since this would invite the entry into the market of rival sellers, and would consequently depress the value of his product to a ruinous extent ; for this reason, even if it is within his power sensibly to limit the supply of his commodity, he will prefer from the first, to offer all the quantity requisite to bring its current value to the level of the cost of production, or to a normal value.

In any case, if the supply determines the current value, as regards the normal value, the opposite of this is the truth ; for this latter value is determined by the cost of production, independently of the supply—and the normal value, in its turn, regulates the supply. In other words, there is produced and there is offered that quantity of each commodity which can be disposed of at a value determined by the cost of production.

The cost of production, to which, in such conditions the value of the products adapts itself, may or may not be reducible to the quantity of labour effectively employed in the production of these. In the former case, the value, inasmuch as it is proportional to the cost of production of the various commodities, is proportional to the quantity of labour employed upon them ; in the latter case, these two elements are disproportionate.

Such are the phenomena that occur as long as isolated labour, or labour integrated only through complex association, continues to produce an excess over and above what is required for the subsistence of the producer.—But as the population increases, and as the productivity of the soil concurrently declines, the time ultimately arrives in which the whole or a part of the isolated labour, even if this be rendered more productive by improvements in technical capital and by the complex association of labour, becomes hardly equal to the task of producing, over and above what is required for the replacement of the technical capital consumed, the producer's own necessary subsistence. When technical development is backward it may happen that all isolated labour will find itself in this situation. It has been shown that the reason why the institution of slavery is impossible to a people living by the chase, is that in this economic phase the slave consumes as much as he produces, and is therefore unable to earn any profit for his master. This depends simply upon the fact that in this economic phase labour is usually isolated and therefore has but slender productivity.[1] When technical productive powers are in a more advanced state of development, it may happen that a part of isolated labour produces more than a bare subsistence; but in any case the larger moiety of such isolated labour will be unable to produce anything more than a subsistence. Thus at the present day, although there are a few small proprietors, agriculturists or manufacturers, who produce by their isolated labour something over and above a subsistence, it is none the less true that in the great majority of cases the labour of the petty manufacturer or agriculturist, as long as he remains totally isolated, or at least as long as his labour is not supplemented by the co-operation of other members of his own family, hardly succeeds in providing the worker's own necessary subsistence, and even furnishes a product inferior to that of the wage-worker.[2] Thus arises the industrial misery which characterises dissociated enterprise.

Now inasmuch as isolated labour, even if it limits itself to the production of a single commodity, is for the most part altogether incapable of producing more than the labourer's subsistence, it evidently follows that an excess over and above such a bare subsistence can be obtained only by the association of a number of individuals for the production of a single commodity, or in other words by the institution of an association of labour no longer *complex* but *simple*.[3]

[1] Spencer, *Principles of Sociology*, London, 1896, Vol. III, p. 459; Nieboer, *Slavery as an Industrial System*, The Hague, 1900, pp. 190, 256–7. None the less Petrucci, *Les Origines naturelles de la propriété*, Brussels, 1905, pp. 188–9, 221 (as also Linguet) refers to certain rare examples of co-operation even among hunting tribes.

[2] Leroy Beaulieu, *Traité d'économie politique*, Vol. II, p. 298; Booth, *People of London*, Vol. I, pp. 60, 202, etc.; and Loria, *Costituz. Ec. odierna*, p. 663, note.

[3] "The strongest impulse to association arises out of the contest with nature. The production of food-stuffs brings about association, or social cohesion, and this leads to the redemption of mankind from the total isolation which characterises the lowest grades of our race" (Ratzel, *Völkerkunde*, Leipzig, 1885, p. 89).—The need for the association of labour, which manifests itself in an urgent form even in the most ancient economic phases, makes it consonant with the interests of human society to preserve even weakly individuals as necessary elements of productive association. Herein, in the field of social phenomena, we see a further exception to the Darwinian theory. Consult in this connexion Karl Pearson, *The Grammar of Science*, 2nd edition, London, 1900 pp. 364, *et seq.*

The simple association of labour is *homogeneous* when the associated labourers all perform an identical task, or a series of identical tasks. Sometimes these labourers have no other nexus than that they live together in the same locality; in other words, there does not exist any co-ordination of labour, but only an environmental agglomeration.—In other cases, the labourers are associated by a more intimate nexus, dependent upon the existence of some central motive power which drives their instruments, these latter being in some cases in a single place, but in other cases in separate habitations. As examples may be mentioned, sewing-machines, knitting-machines, and the like, connected with and driven by a single electric motor; small private steam laundries driven from a central power-house, etc.—More commonly the identical operations, effected by the different workers, are co-ordinated by some concentrating technical instrument; as when a number of workmen, each pulling on a rope, and all the ropes passing over a single pulley, raise the weight of a pile-driver, to release it simultaneously, that it may drive the pile by its fall.—Finally, in a more advanced stage, in place of or in addition to the homogeneous simple association of labour, we have the *heterogeneous* simple association, in which the various workers or groups of workers contribute by means of diverse operations to the production of the desired object. In some cases, the different portions, or the successive phases of elaboration, of a single product are produced or effected by workers living apart, these portions or phases being subsequently assembled, or subjected to the final stages of manufacture, in a central workroom; in other cases, these portions or phases of elaboration are produced or effected by workers brought together in a single place, thus avoiding the cost of transport of the fragmentary or incomplete products. The degree of association may be more or less considerable, the number of the workers thus associated may be larger or smaller, and the complexity of their co-ordination may vary.—We may have homogeneous simple association in the absence of heterogeneous association, and vice versa: on the other hand, the two may coexist; or the various phases of heterogeneous association may be effected by so many different groups of co-operating workers.

The simple association of labour, homogeneous or heterogeneous, presupposes in its turn the existence of a series of factors which may be reduced to the following :—

(*a*) Labour. The first condition requisite for the organisation of the association of labour is that within a given area there should exist labourers sufficiently numerous to constitute the association.—It may be that for the creation of the association of labour the workers who have hitherto been producing separately exist in sufficient numbers. On the other hand, there may not be enough of these to undertake the association of labour, and in this case such an association cannot be begun without an influx of additional labour.

(*b*) Capital—the capital requisite to provide the maintenance of the associated workers and to furnish the instruments with which they work.

(*c*) The Technical System. The association of labour cannot be effected unless the technique of production has attained a certain degree of co-ordination and of organic complexity. It may, of course, happen that a number of producers associate their labour without needing to make any changes in the technical appliances which they have hitherto used as isolated labourers. More commonly, however, the association of labour involves a correlative transformation of the technique of production, or a replacement of the separate and cellular instruments hitherto employed by a system of technical appliances more or less intimately connected, this being at once the corollary and the condition of the association of labour. Even in the first phase of the simple association of labour, the instruments used by the labourers engaged upon the various parts or stages of the product, although physically disunited, and it may be situated in diverse localities, are none the less ideally connected as integral and inseparable elements of a single system of production. But the association of labour at a higher stage of development brings about a more decisive revolution in technique, inasmuch as it involves the replacement of a plurality of technical appliances physically dispersed by a system of technical elements physically interconnected and utilised by so many groups of labourers.—In other words, at this stage, dissociated instruments give place to the machine, and owing to this the association of the co-operating labourers is no longer ideal merely, but finds a concrete materialisation and a visible nexus in the single system of machinery to which their work is subordinated.

If in normal cases the amplification and intensification of the technical system is the outcome of advances in the association of labour, we must not for this reason exclude the possibility that the technical system may also undergo amplification and perfection whilst the intensity of the association of labour remains unchanged—this being the outcome simply of the spontaneous progress of invention. The perfection of technique, however, is possible only as a result of the existence of associated labour, owing to the fact that this alone creates the base of operations for advances in machine production. On the other hand, while secondary technical advances may occur in the absence of any precedent change in the degree of association of labour, it is none the less true that great transformations in the technique of production are always rendered possible and are always preceded and stimulated by changes and advances in the association of labour.

In broad outline, we may distinguish between three forms of industry which arise as corollaries of as many progressive stages in the association of labour, and which severally correspond to the varying complexity of the technical system. (1) *The craft*, carried on by an isolated individual worker with the aid of a unitary technical appliance ; (2) *manufacture*, consisting of an extensive association of labour, occupied with the aid of a system of technical appliances which are co-ordinated but physically disjoined ; (3) *machinofacture*, consisting of an intensive association of labour, occupied with the aid of a system of technical appliances which are co-ordinated and also physically conjoined. But each of these forms of industry presents numerous and significant gradations, these varying (in the case of the two last named) according as the association of labour is more or less elaborate, and in correspondence with the more or less perfect development and the greater or less complexity of the productive mechanism.[1]

[1] See Riekes, *Jahrbücher für National. Oekon.*, 1902, pp. 185, *et seq.*—Sombart, *Der moderne Kapitalismus*, Leipzig, 1902, Vol. I, pp. 26, 48, *et seq.*, makes the perspicuous observation that the successive forms of industry are distinguished by a progressive socialisation of labour, and that machino-

(*d*) Land. It may happen that the land on which the individual producers have hitherto employed their dissociated labour suffices for the utilisation of their associated labour. In other cases, however, the association of labour cannot be effected unless the workers who have previously been isolated acquire a further extension of land, which is thus to this degree a necessary factor in the association of labour.

(*e*) The Work of Organisation or Direction. There is need for a non-material kind of labour which is concerned with the organisation and co-ordination of the respective operations effected by the associated producers and with the employment of the various productive elements ; hence this kind of labour is the integrating element requisite to bring about the association of labour.

The simple association of labour cannot, however, be effected without involving a number of restrictions upon the liberty and independence of the producer. Now the producer, if he obtains by means of isolated labour the necessary subsistence, will not spontaneously submit to such restrictions, nor spontaneously determine to initiate the association of labour. In such conditions, therefore, the free association of labour remains impossible.—On the other hand, in so far as isolated labour produces but a bare subsistence, the isolated producers are so weak economically as to be unable to resist a force tending to impose upon them the association of their labour ; nay more, owing to this same economic weakness, they are

facture involves a more intense socialisation of labour than any pre-existent technical forms of production. (On this point consult also Seligman, *Principles of Economics*, New York, 1906, p. 293.) Sombart writes : " The factory, and hence the machine, which is its technical expression, is the instrument of collective labour by means of which such collective labour can develop strength, freedom, safety, and rapidity, exceeding what is possible to the individual organism." In other words, the association of labour, when it has attained a certain degree of development, calls into existence a technical system corresponding to that stage, which replaces the hand-tool by the machine. Hence this last, instead of being the cause of the association of labour, as Marx contends (*Le Capital*, Vol. I, p. 167), is its result. A special study of industrial evolution in Great Britain justifies the following conclusion : " The essential factor of economic evolution is the division of labour, and the various phases of economic development correspond to the progressive stages in the division of labour. From this point of view, machinery itself is no more than a derivative phenomenon. Before it attained the position of one of the most potent factors in the moulding of modern society, it arose as the resultant and as the expression of the division of labour and of exchange " (Mantoux, *La révolution industrielle au XVIII siècle*, Paris, 1906, p. 19).

exposed to the possibility of such an interference.[1] Hence, in such conditions, labour, since it produces a subsistence, cannot be associated freely ; but since it produces nothing more than a subsistence, it can be associated by coercion. Certainly this coercion, inasmuch as it has to employ material means, presupposes that the producers are securing more than a bare subsistence ; but the excess over and above a bare subsistence, which hitherto they have been able to provide by means of their isolated labour, constitutes the foundation of the power which intervenes at this point to impose the forced association of labour. In any case, at this stage of economic development, while, for the reasons previously explained, the free association of labour is impossible, the coercive association of labour becomes possible and necessary.[2]

Whereas the complex association of labour may be either free or coercive, the simple association of labour is always and necessarily coercive. The coercion which brings about and disciplines the simple association of labour is of two kinds or degrees. First of all, there is the initial coercion which compels the workers to associate despite their instinctive aversion to cohesion. But even after the workers have been constrained to association, their dispersive individualism makes them reluctant to co-ordinate their forces, renders each man unwilling to discipline his own labour in correlation with or in dependence upon that of his fellows. Thus the initial coercion by which the producers are forced into association, is necessarily succeeded by a persistent and continuous coercion, compelling them to labour in conformity with a unitary plan or in accordance with a concentrating design.

Now the coercive element thus requisite to bring about the association of labour, adds a new factor to the series of general conditions essential to such association ; that is to say, in addition to the five elements previously enumerated as requisite

[1] Mandeville and Rousseau agree in laying stress upon man's instinctive aversion to association (they refer to political association only, but it is even more true of the association of labour), so that such association is effected comparatively late and under the influence of compulsion—the coercive force being the poverty that results from isolation (Mandeville), or a sequel of the unnatural passions of ambition (Rousseau). Cf. also, in this connexion, the remarks of Adam Smith, quoted by Bonar, *Philosophy and Political Economy*, London, 1893, pp. 181–2.

[2] See a typical example in Inama-Sternegg, *Deutsche Wirtschaftsgesch*, Leipzig, 1879, Vol. I, pp. 172–3.

to render associated labour possible, it is necessary that there should be a specific work for the coercion of the associated producers.

Thus it happens, that as soon as the fertility of the soil diminishes to such an extent as to reduce the product of a more or less conspicuous portion of the isolated labourers to the margin of subsistence, the resulting poverty of the producers brings into action a force of constraint which effects the association of these producers ; that is to say, the coercive association of labour is thus brought about. Thus the existence of the coercive association of labour affords a self-evident proof of the existence of that comparatively inferior degree of the fertility of the soil in which a great part of isolated labour (however well equipped with technical capital) is able to produce no more than a bare subsistence ; for, if there were producible an excess over and above the means of subsistence, the isolated producers would be in a sufficiently strong economic condition to prevent the development and intervention of a force tending to associate them coercively. In actual fact, whenever isolated labour effectively produces such an excess, this is either because it has access to a soil exceptionally fertile, or because it is equipped with an especially efficient technical capital, or, again, because its own intensity is supernormal—and there isolated labour manages its own affairs and persists, to the exclusion of any kind of association ; of this on all hands we see striking examples.—If, then, isolated labour is, in a larger or smaller area, replaced by labour coercively associated, this very fact demonstrates that within the area in question isolated labour is incapable of producing more than the labourer's own subsistence ; this fact and this fact alone it is which makes him economically weak, and forces him to submit to the coercion of an associating force. From this it follows as a consequence, that the domain of isolated labour is more or less extensive according as the number of workers is greater or larger who are able to obtain something more than a bare subsistence without recourse to association ; and the converse of this is true of associated labour.

This fact, that associated labour comes into existence where isolated labour is able to provide no more than a bare subsistence, explains why it is that the coercive association of labour makes its first appearance in comparatively infertile regions. Thus, from the earliest times, while in the more fertile regions of the south the methods of isolated production still prevailed; in the more sterile areas of the north, agriculture had already assumed purely collectivist characteristics. "The *fundus*, a form of property essentially individualist, soon showed itself unsuitable for the regions of the north, which required a collective organisation, as regards time, place, mode of production, the methods of feeding the various domesticated animals, and the use of water and of forests."[1]

On the other hand, the repugnance to the association of labour, inasmuch as it is dependent upon the high fertility of the soil which provides labour at least with a subsistence, is more intense in proportion as the fertility of the soil is greater. Hence even in our own day in Japan, where the productivity of the soil is exuberant, the indigenous population displays an invincible aversion to labour in common.[2] For the same reason, southern countries, where the land is comparatively fertile, are less suited to the forms of production that require the association and the complex co-ordination of the individual forces, whereas in these lands those artistic productions dependent upon isolated initiative thrive by comparison. It has been acutely observed that if the Italians succeed better in the production of sweets and cakes, and the English in the manufacture of biscuits, this is because the latter process needs a very rigid and precise association of labour, while for the former process individual and undisciplined labour suffices.[3]

Just as the repugnance to the association of labour is more intense where the productivity of the soil is greater, so also the coercion which associates labour is more intense in countries in which the soil is more fertile. It is for this reason that the coercion which associates labour always manifests itself in especially harsh forms in the regions of the south where the fertility of the soil is usually greater. In all countries and in all times, the scene of more marked constraint, of acts of repression, enslavement, acts of governmental violence, and of bureaucratic and military tyranny, has always been the south; the most cruel slave-owners of whom history makes

[1] Vinogradoff, *The Growth of the Manor*, London, 1905, pp. 85, 165, 183.
[2] Ono, *The Industrial Transition in Japan*, Baltimore, 1890.
[3] G. Ferrero, *L'Europa giovane*, Milan, 1897, pp. 192–3.

mention are two southerners, Damophilos of Enna and his congenial helpmate, Megallis. In correspondence with this fact, the southern labourers of all ages have been distinguished by their indomitable unrest, their inclination to violence, their spirit of latent revolt, wherein they exhibit a striking contrast to the more conservative and temperate character of their fellow-workers in the north. The disciples of Montesquieu, who regarded the thermometer as the arbiter of universal history, attributed this contrast to the influence of climate; but the true cause is to be found in the specific fertility of the southern soil, which, by accentuating the repugnance to the association of labour, renders necessary the employment of more tyrannical methods of coercion, and these, in their turn, provoke a fiercer and more formidable reaction.

Finally since the repugnance to the association of labour is dependent upon the fertility of the soil, it will be obvious that this repugnance will necessarily diminish in proportion as the increase in population leads to the cultivation of land of less and less fertility. Now, as the repugnance to the association of labour declines, there is a correlative decline in the degree of coercion necessary to enforce such association; and from this it follows that, other things being equal, with the progress of the economic order the constraint to the association of labour undergoes a progressive diminution in intensity, without, however, completely disappearing.

In any economic phase, the constraint to the association of labour varies in intensity in different fields of production. For the various kinds of production coexistent in a single economic phase, may be characterised by progressive refinements of the association of labour, respectively requiring a more or less strict employment of constraint. Hence the intensity of the constraint to the association of labour varies not only in time, but also in space, according as that association varies in intensity in different coexisting industries.

Simple association, thus effected, does not exclude the coexistence of the complex association previously established; for groups of associated producers can continue to confine themselves to the production of a single commodity, obtaining by means of exchange the surplus products of other coexistent groups. Now, exchange between the various groups of producers coercively associated proceeds in accordance with the law before mentioned regulating the exchange between single producers; that is to say, the value of the products is in every case directly determined by the equivalence between demand and supply, and ultimately, if there is competition among the groups of associated producers, by the cost of production.

All coercion, however, involves *per se* a limitation of competition, and it follows from this that the necessary result of constraint to the association of labour is to limit, either the competition between the different productive associations, or the competition between the members of a single association, or both one and the other. In the former case, where there is lacking competition between the different productive associations, the value of the products is no longer equivalent to their cost of production; in the latter case, where there is lacking competition between the members of a single productive association, it is possible that some of these producers may include in the cost of production certain elements foreign to the quantity of labour employed in production, and hence the value, while it may be commensurate to the cost of production, is not commensurate to the labour expended.—In any case, the use of constraint to the association of labour necessarily involves a failure of equivalence between the value of the products and the quantity of labour which these products contain, unless the *imperium* whence the coercion proceeds intervenes to impose such equivalence. In other words, the coercive association of labour always and of necessity involves (in the absence of intervention on the part of the central power) a failure of correspondence between the labour-masses incorporated in equivalent products.

Precisely because it is the outcome of the coercion which imposes the association of labour, this failure of correspondence is more or less considerable in proportion as that coercion is more or less intense. Inasmuch as the constraint to the association of labour declines, other things being equal, as the productivity of the soil diminishes, the divergence between the value of the products and the effective quantity of labour contained in these products, tends also to diminish *pari passu* with the decline in the productivity of the soil; but so long as any constraint continues, this failure of equivalence cannot altogether disappear.

The coercive association of labour, thus effected, increases the product of each labourer to a degree altogether unattainable by isolated labour ; in other words, it enables the labourer to produce a surplus over and above what is required for his own subsistence and for the redintegration of the technical capital consumed.—A fraction of this surplus can find re-employment in the form of technical capital or of subsistence ; but there is always, in such circumstances, a quantity of product in excess of what is required for the redintegration or the increase of subsistence and of technical capital. Now, the surplus product of coercively associated labour, after there has been subtracted from that product what is required for the redintegration and increase of the subsistence of the labourers and of the technical capital, constitutes *income*. In essence, therefore, this is a phenomenon of production arising out of the enhanced productivity of coercively associated labour ; and, precisely because it is the specific product of associated labour, it reappears at the end of every productive cycle, or in other words it has an essentially periodic and recurrent character. Thus we see that, if the cases be excepted in which, more or less abnormally, isolated labour produces an excess over and above subsistence, subsistence and income differ in origin—for the former is the product of isolated labour, and the latter of associated labour.[1]

This throws light on the error into which John Stuart Mill falls when he refers the cause of the profit of capital to the fact that labour produces more than is necessary for the subsistence of the producer.[2] It is true that labour can produce

[1] James Steuart, *Principles of Political Economy*, Basil., 1796, I, p. 272, affirms that income [profit] is due to an increase of labour, of industry, of ability, or in more general terms, to anything which prolongs labour or increases its productivity. Marx, in his turn, *Kapital*, I, p. 476, III, 2, pp. 412–13, and *Theorien über den Mehrwerth*, Stuttgart, 1905, I, pp. 39, 422–3, observes that surplus-value, or income, makes its appearance as soon as the product exceeds what is required for the labourer's bare subsistence, and that it manifests itself in all the economic forms, however much these may vary in measure, kind, and method of application. "The surplus product, like the surplus value, is the quantity of the product, theoretically determinable, which remains after subtracting the necessary subsistence of the labourer" (Michlachewski [*Exchange and Political Economy*], Dorpat, 1904, p. 325).

[2] *Principes d'économie politique*, I, p. 479. What Mill says concerning profit, Malthus had previously said concerning rent ; for, according to this

more than is requisite for the subsistence of the labourer, but if labour is employed without the assistance of capital, this excess does not go to constitute a profit on capital, since there is no capital. The fact that labour produces more than is requisite for the labourer's own subsistence does not give rise, *per se*, to *profit*, but to *income*, which will be assigned to labour, to capital, or to land, according as other conditions or economic processes, which cannot be discussed here, intervene. In any case, income is always the result of a specific productivity of labour which is competent to produce more than the labourer's subsistence—a specific productivity due always and solely (if we except the primitive period in which the soil is exuberantly fertile) to the association of labour.

The coercive association of labour thus gives rise to an excess of product over and above the subsistence of the producer, theoretically or practicably separable from subsistence, and constituting a specific category known by the name of income. The formation of income, then, is not subordinated to any determinate process of distribution of the product; on the contrary, income is produced also in cases in which the product does not undergo distribution at all, but is integrally garnered and consumed by a single individual. Neither is the formation of income subordinate in any way to the existence of exchange, since this formation may perfectly well occur within a natural economy.[1] The formation of income is the necessary and spontaneous outcome of one single fact of production, the coercive association of labour. In this respect it differs markedly from some of its own subvarieties, which can be produced only upon the basis of a determinate historical process of distribution or redistribution of the product. Rent, for example, has as its first precondition the varying fertility of cultivated land, this condition being one of the facts of production; but its formation or appropriation demands in

author, rent is the outcome of the special characteristic of agricultural labour in accordance with which such labour always produces more than the labourer's subsistence. But this characteristic is purely imaginary, for as soon as the fertility of the soil declines below a certain level, isolated agricultural labour produces nothing more than the quantity of food sufficing for the nutrition of the labourer, and enabling him to obtain in exchange such non-agricultural products as are absolutely essential.

[1] *A Natural Economy.*—The author uses this term to denote an economic order in which exchange, even by way of barter, is unknown.—TRANSLATOR'S NOTE.

addition that there should exist a determinate system of appropriation of the land and a determinate general distribution of wealth. It is true, also, that the profit of capital has as its first presupposition that the product of labour should exceed the subsistence of the labourer ; but for its formation it is further necessary that there should exist determinate conditions of appropriation of the land. In any case, to the generation of individual kinds of income two fundamental factors contribute, the factor of production and the factor of appropriation. In its integral manifestation, on the contrary, income does not presuppose the existence of any phenomenon or any element of appropriation ; it is a phenomenon of production alone, the outcome of the original and primal fact of the coercive association of labour.[1]

In this way, an elementary fact of production, it may be the exuberant productivity of the soil, or it may be the coercive association of labour, gives rise *per se* to a process—ideal or actual, as the case may be—of distribution of the product (as subsistence, on the one hand, and as income, on the other), without there necessarily occurring any phenomenon of exchange, any abstract determination of value, or the assignment of a value to any of the respective elements of production. It follows, that the process of distribution is the immediate

[1] Adam Smith, who takes as the starting-point of economic analysis the association of labour, or the original, positive and universal datum, the undifferentiated matrix of all the forms and all the orders of economic development, thus attains an outlook much more comprehensive and much truer than that of Ricardo (and, indeed, of Marx) ; for Ricardo starts with the analysis of the essentially derivative phenomenon of exchange value. Adam Smith has the same advantage over the modern economists who take as a starting-point the subjective and extra-economic phenomenon of utility. Adam Smith, however, far from considering the association of labour in all its complexity, confines himself to the study of one fragmentary form, namely, simple heterogeneous association as it manifests itself in manufacturing industry in Scotland during the eighteenth century ; for this reason, his analysis of the phenomenon of associated labour was of necessity extremely incomplete. A recent writer, Effertz, who has endeavoured to formulate a general theory of economics, takes as the first elements of his analysis, labour and land. This is true, in this sense, that the coercive element implicit in the association of labour is in its turn dependent upon the conditions of productivity of the soil as displayed in all the historic phases hitherto traversed. But Effertz overlooks this : in his view, land moulds the economic order simply because the supply of land is limited in relation to the demand ; that is to say, his theory has reference to a fact which makes its appearance only when the density of the population has attained a comparatively advanced degree. From this we see that the latter of the two elements adduced by Effertz is essentially temporal, and therefore cannot be accepted as one of the premises of a universal economic theory.

and spontaneous outcome of the elementary fact of production, and of this alone, this displaying *per se* the effective interconnexion of economic phenomena, and the logical coherency of the theory formulated to elucidate them.[1]

Income, for the very reason that its occurrence does not presuppose any phenomenon or act of appropriation, and because it is the outcome of the general and most primal fact of coercively associated production, thus displays itself at the outset as the most universal and abstract category of the science of wealth. It reveals itself also as a phenomenon essentially integral in character: it may be, integral in space, in so far as it represents the conglomerate of a plurality of disparate rewards of the most varied productive and non-productive elements; it may be, integral in time, in so far as it represents the unifying synthesis of the most diverse economic forms.—The two aspects, when carefully considered, will be found to correspond. In fact, precisely because income comprises within itself all possible modes or varieties of reward as these successively appear in the various historical phases of the economic order, it is impossible that it should derive, as do these, from a fact essentially temporal and transitory such as the distribution of the product, but it must be the outcome of a fact common to all the ages—the fact of production. Thus, beneath its undifferentiated surface, income conceals the most diverse economic entities and the most diverse social forms. It may be added that income is the one among the economic elements which has the most eminent sociological value, since it is an attribute, not simply of a more or less limited fragment

[1] A state of affairs can be imagined, on the other hand, wherein a circulation occurs without there being manifest any phenomenon of distribution. Thus, if two isolated producers, precisely because they are isolated, are able to produce no more than a bare subsistence, income does not exist, and hence there is also lacking the primitive and ideal distribution of the product; but if each of the two workers produces only one or only a part of the commodities necessary for his own consumption, acquiring the other commodity or commodities from the other isolated producer, there does effectively exist a process of circulation and exchange. But the hypothesis under consideration, that isolated labour, or labour integrated solely by complex association, produces no more than a bare subsistence, is an irrational one; for the fact that the simple association of labour is lacking, suffices *per se* to show that the isolated labour, or the labour integrated solely by complex association, produces more than a bare subsistence; or, in other words, to show that, independently of and prior to exchange, there already exists income, that is to say, a phenomenon of distribution.

of human society, but of a notable proportion of that society, sometimes even of the whole. Finally, in contradistinction to the various specific forms of income (rent, profit, etc.), which are attributes of things, inasmuch as they have reference to land, capital, etc., income is an essentially human phenomenon, inasmuch as it is a direct attribute of, or has direct reference to, man himself. Now for all these reasons, by its character as an integral phenomenon throughout space and time, as a synthesis of all the specific attributes of economic factors, and of all the historical forms of economic development, as a frequent attribute of the majority of the population, and as an essentially personal and human attribute—income manifests itself as the phenomenon most relevant of all to the distribution of wealth, and as the fundamental and supreme object of the economic discipline.[1]

We need not, however, be surprised to find that the writers who proceed deductively, affirm with one voice that the discussion of income ought to come at the beginning and not at the end of the consideration of economics. Thus Storch treats of income in the proem of his text book; and D'Aulnis de Bourouill praises him warmly for this, observing that the theory of income is the preliminary study of economics, and that it throws light upon the fundamental concepts of the science.[2] The same view is taken by Roscher, Mithoff, and other writers. —But one who adheres to the positive method of the study of these phenomena cannot accept this view. It is, in fact, impossible to attain to the integral calculus, except by way of the differential calculus ; it is impossible to study the com-

[1] "National income" [in which Storch includes the subsistence of the labourers], "not national wealth, constitutes the true object of economic science. For the aim of political economy is to discover, not merely the cause of wealth, but also the cause of poverty, and poverty exists in inverse ratio to the quantity of national income" (Storch, *Corso di Econ. Pol.*, "Bib. Ec ," p. 828). An analogous idea will be found in Marshall, and also Fisher, *The Rate of Interest*, New York, 1907, p. 229. Cannan, also (*The Division oj Income*, "Quarterly Journal of Economics," 1905, pp. 341, *et seq.*), shows very well that it is time that to the theory of wages, profit, and rent there should be superadded a theory treating of income as an undifferentiated whole. The idea of the importance of the theory of income is gradually finding its way into the minds of enlightened lawyers. Thus, in a book which has had much influence in the preparation of the German Civil Code, we read : "without the notion of income it is impossible to understand civil law as a whole and impossible to understand the interconnexion between its various parts" (Petrazycki, *Die Lehre vom Einkommen*, Berlin, 1893, Vol. II, p. 458).

[2] *Het Inkome der Maatschappij*, Leyden, 1874, p. 205.

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plex and universal phenomenon, except as a sequel of a minute and accurate study of particular and specific phenomena. In the concrete case under consideration, it is impossible to study income with profundity and scientific rigour, unless we know the static and dynamic laws of the various kinds of income,[1] and those of the phenomenon which is complementary to income, namely subsistence; and it is further essential that we should first have investigated the specific manifestations of these laws in all the successive historical forms of economic development. This amounts to saying that the discussion of income must not precede, but must follow, the discussion of the various kinds of income and of their progressive manifestations. For the rest, the history of political economy furnishes the most eloquent testimony to this elementary truth; for, while economists have made a profound study of the various kinds of income, they have known and have been able to tell us nothing, or but little, about integral income, which has hitherto been the undisputed domain of useless classifications and petty vacuities.[2] It seems, therefore, entirely reasonable that, after having, as a preliminary, studied the laws governing the various kinds of income (differential rent, the reward of the entrepreneur, the interest on productive and unproductive capital, the rent of monopoly), no less than those of subsistence, and having studied them in the successive phases of the economic order, we should then proceed, and then only, to the study of the economic phenomenon integral in space and time, or to the investigation of income in its entirety.

[1] Cf. Cherbuliez, *Précis*, Vol. I, pp. 397–9.

[2] Marx is perfectly right when he finds fault with the classical economists for their failure to consider integral income; but he is himself in error in his failure to point out the impossibility of any integral analysis until the research of particular phenomena has been completed. Cf. Clark, *Essentials of Economic Theory*, New York, 1907, pp. 89–90.

CHAPTER II

THE DETERMINATION OF INCOME

§1 Determination of Income by the Real or Objective Method

In the domain of social wealth, income, thus produced, occupies an enormous field, which must now be accurately determined. Let us suppose that in any given period of time, in any single year, for example, a certain total product is obtained by the utilisation, in any society or in any particular country, of land, labour, and capital; in order to ascertain the proportion of this sum total which constitutes income, a series of deductions must be made. More particularly, it is necessary to deduct from the gross product:

(*a*) All that quantity of the product which is required for the redintegration of those objects of consumption which are not susceptible of indefinite reproduction. In fact, the essential character of income being its periodical reproduction for an indefinite term, no consumable wealth which cannot be indefinitely reproduced is income, nor do those products constitute income which serve to redintegrate what is consumed. Thus, a dwelling-house bought with part of a legacy, being an object which is not periodically reproduced, is not part of income; thus, also, the amount of wealth which is required for repairs to this dwelling-house constitutes no part of income;

(*b*) All that quantity of the product which is required for the redintegration of the technical capital, whether productive or unproductive, consisting of articles not directly consumable but partially used up in the process of production or in that of administration.[1] In the case of industries not liable to exhaus-

[1] *Fructus eos esse constat qui, deducta impensa, supererunt*, L. 7, D. *Soluto matrimonio, dos quemadmodum petatur*, XXIV, 3. In Roman law, the dis-

tion, this quantity is directly determined by the annual effective consumption of the technical capital. In the case, on the other hand, of industries subject to exhaustion, such as the mining industry, this quantity is equal to the sum total of the technical capital divided by the duration of the industry.[1]

The whole quantity of the product periodically renewed which remains after these subtractions have been made, constitutes the mass of the products of unproductive consumption, or of individual enjoyment, periodically renewed, in quantities varying more or less in different cases—or the total *net product*. Hence it follows that technical capital itself, where it consists of products of unproductive consumption, or of enjoyment, is part of the net product. Thus, articles of consumption on the premises of the trader are truly capital for

tinction is made between the *impensae necessariae* which are indispensable to the continuity of the enterprise, and the *impensae fructuum* "*quæ quaerendorum, cogendorum, conservandorumque fructus gratia fiunt*" (Petrazycky, *lib. cit.*, I, p. 150). This distinction is not very well grounded, inasmuch as what is expended for the redintegration of capital is expended with an eye to the yield; but the distinction affords a confused expression of the essential difference between the expenditure requisite for the redintegration of the technical capital consumed, and the expenditure requisite for the increase of that capital.

This is a suitable place in which to point out that the Roman jurists, who are not distinguished by the possession of precise ideas concerning the single specific categories of distribution (profit, rent, etc.), have nevertheless a very precise idea of income (*reditus*, a word employed for the first time by Julianus, L. 92, D. *De legatis et fideicommissis*, XXXI–XXXII, in place of the term previously employed, *fructus*, which related to an epoch of natural economy). This depends upon and confirms what we have already maintained, namely, the fact that income is a phenomenon manifested throughout all ages, whilst certain subspecies of income are peculiar to economic periods comparatively advanced in development.

[1] Since the mining capital allowed for amortisation, if employed elsewhere, can produce solely a profit, but not a rent, and could therefore provide only a total income inferior to the yield of the mine, the proprietor of this latter, if he wishes to insure the perpetuity of his actual income, must save, in addition to a portion of income sufficient for the reconstitution of the technical capital during the period of exhaustion of the mine, a further portion of income sufficient for the provision, at the expiration of this same period, of a capital which will furnish a profit equal to the actual rent of the mine. To put the matter more concisely, the proprietor who wishes to be guided by strictly economic principles must subtract from the income a proportion for redintegration which will be competent to furnish, when the mine is worked out, productive capital capable of giving an income equal to that which he now derives from the mine.

Given, then, a general decline in the level of profit, all industries will find themselves in the same conditions. That is to say, for each industry, if the income it furnishes is to be maintained intact, it does not suffice to redintegrate the capital actually consumed; it is further necessary to accumulate a new capital, the profit on which will compensate for the effective reduction in the profit on the pre-existent capital.

this latter ; but for the consumer and for society at large they are net product, inasmuch as, for these, they form part of directly consumable wealth. Or, better expressed, the products of consumption on the premises of the shopkeeper are net product in a preparatory stage, which will become actual as soon as they have passed into the hands of the consumer, or as soon as they have been divided between the shopkeeper and the consumer as the result of a process of exchange arranged between them.[1]

Leaving out of account, for the sake of simplicity, the wear and tear of durable objects of consumption, it may be said that the total or gross product consists of two parts ; the redintegration of the wear and tear of technical capital, consisting of objects not directly consumable ; and the mass of directly consumable products. Now this latter portion constitutes the net social product, which, for the moment, is substantially coincident with the income. This, if we put the question of exchange aside, is apparent from immediate evidence. If, in fact, certain workers, making use of a given quantity of technical capital, directly effect the redintegration of the wear and tear of technical capital and also the production of the objects of their own consumption, the product they obtain consists *per se* of two quite distinct portions : the redintegration of the technical capital consumed, consisting of articles not directly consumable ; and a quantity of consumable wealth. Now, the net product consists precisely of this second quantity, which is plainly separable from the first. But when exchange takes place, is the case substantially altered ? It is true that then the producers of articles of consumption do not produce technical capital, but only articles of consumption ; yet this happens solely on condition that certain other producers are exclusive producers of technical capital. Hence, in these conditions also, the total product obtained from the whole of the labourers consists of two clearly distinct parts : a quantity of consumable wealth (produced by the first group) ; and a

[1] Smith, *Wealth of Nations* (Stand. Ed.), p. 229.—Schmoller (*Die Lehre vom Einkommen* in the "Zeitschrift für die gesam. Staatsw.," 1863) erroneously opposes this conclusion, maintaining that the consumer does not consume the shopkeeper's capital, which remains unchanged, but consumes income proper. He fails, however, to recognise that this income is made up precisely of the commodities which have passed through the hands of the shopkeeper and have been transferred to the hands of the consumer.

quantity of technical capital (produced by the second group). The process of exchange between the former and the latter has no other effect than to enable the former, whose product consists exclusively of articles of consumption, to reconstitute by means of what they acquire from the workers of the second group that portion of their technical capital which has been consumed in the process of production; and to enable these latter, who have devoted themselves to the production of non-consumable articles, to procure the articles of consumption of which they have need by buying these from members of the former group. But all that this effects is the interchange of articles of consumption and of technical capital between the two groups of producers; it does not effect any change in the total composition of the product, which continues to consist of two distinct parts, incapable of fusion or of mutual transformation—to consist of technical capital, on the one hand, and of articles of consumption, on the other. Now the net product consists solely of this latter portion, and not in any degree of the former.[1]

That which remains of the gross product, after subtracting the technical capital, constitutes the *net product*, but it is not yet the *income*. For, since the income is the specific product of associated labour, it is evident that all that portion of the net product which is equivalent to the product of isolated labour must be subtracted from the total product in order to ascertain the income. Or, postulating normal conditions in which the labourer receives as his subsistence the whole product of isolated labour, in order to ascertain the income, it is proper to subtract, from the product of associated labour, the subsistence of the labourers. Thus the net product consists of two clearly distinct portions: subsistence, which represents the product of isolated labour (employed in connexion with a unitary technical capital); and income, which represents the surplus due to the association of labour. The first of these is an initial and quasi-fixed datum, which may be considered as

[1] Contrary opinions are maintained by the following writers: A. Smith, *Wealth of Nations*, p. 228; Say, *Traité d'économie politique*, 1860, p. 347; *Cours Complet*, Brussels, 1837, p. 319; note to Chap. XXVI of the French translation of Ricardo's *Principles;* Ferrara, Preface to Vol. II, Series I, of the *Bibl. dell' Econ.*, p. xx; Proudhon, *Résumé de la question sociale. Banque d'échange*, Paris, 1849, p. 31; Cannan, *History of the Theories of Production and Distribution in English Pol. Ec.*, London, 1903, 2nd edition, p. 77.

a postulate of production, for the continued application of labour is possible only on condition of the redintegration of the energy employed in the work of production. On the other hand, income comes into existence in proportion to the degree to which labour is associated; and it is produced in a quantity which varies according as the association to labour is more or less intense and more or less efficient.[1] Whilst, however, subsistence remains unaltered, or nearly so, under the most different conditions of prosperity and of civilisation, income makes its appearance to an extent which differs very conspicuously according as the society is more or less prosperous or progressive, and the quantity of income affords to that extent the most precise measure of the conditions of civilisation and well-being of the population. Hence, and for this very fact, income contrasts very strikingly with subsistence. But this is not all. Income not infrequently contrasts with subsistence in the field also of distribution, inasmuch as, in many economic phases, income is received by the members of different classes from those who receive subsistence, the former being sharply opposed to the latter in the social and political arena. Once more, income is very markedly contrasted with subsistence in the field of consumption, inasmuch as subsistence takes the form of products of prime necessity, whereas income largely takes the form of superfluous products, or of the enjoyment of luxuries. Finally, in the act of consumption income is sharply distinguished from subsistence, inasmuch as, in many cases, subsistence is consumed by day and income by night! Nothing, therefore, could be more erroneous than the arbitrary confusion of these two portions of the net product, which, as we have shown, present in all their manifestations diverse and contrary characteristics. No more logical demand can possibly be made than that we should distinguish clearly between subsistence and income, defining the latter as that part of the net product which remains after

[1] In truth, as we shall see later, there are cases in which an *increase* of income accompanies a *diminution* in the productivity of labour. But this happens only on condition, either that there is a diminution in individual subsistence (which presupposes that subsistence is no longer equal to the product of isolated labour), or else that there is an increase in the number of labourers employed. So long, on the other hand, as these two elements remain constant, the quantity of income is always a precise measure of the productivity of associated labour.

subtracting the subsistence of the labourers. This applies no less to unproductive than to productive labourers; for, if there are unproductive labourers who receive a bare subsistence, this also must be subtracted from the product in order to ascertain the income.[1]

From the fact that technical capital and subsistence are not income, it follows that the part of the net product which is saved, productively or unproductively, is not income. In fact, the quantity of wealth which is saved undergoes conversion *per se* into the subsistence of workers and into technical capital (productive or unproductive), that is to say into a kind of wealth which does not form part of income. It is indeed true that the quantity of the product which is converted into technical capital and subsistence will produce income in the future; hence the income which is transformed into technical capital and subsistence is diminished for the moment only, to increase its own amount in time to come—*il recule pour mieux sauter*. Yet this does not exclude the further possibility that the increment of the product which will mature in the future (thanks to the actual employment of the technical capital and subsistences), may in its turn be transformed into technical capital and subsistences, and therefore may not form part of income. In any case, the fact remains that, at any actual moment of time, all that quantity of wealth which is saved, or transformed into technical capital and subsistences, does not constitute part of income.[2]

It follows from this that if John Smith employs the whole or part of his income for the repayment of borrowed capital,

[1] Contrary opinions are maintained by the following writers: Mayer *Das Wesen des Einkommens*, Berlin, 1887, p. 195; Hermann, *Staatswirtschaftliche Untersuchungen*, Munich, 1874, pp. 596–8; Schmoller, *Die Lehre vom Einkommen*, "Zeitschrift für gesam. Staatsw.," 1863.

[2] For the adverse opinion, see Schmoller, *Grundriss*, p. 879.—Fisher (*Nature of Capital and Income*, New York, 1906, pp. 135, 248, *et seq.*) clearly recognises at the outset that that portion of the net product which is saved ceases to be income; but he goes on to confuse the argument and to contradict himself by introducing the needless distinction between *realised* income and *earned* income. For he says that the portion of the net product which goes to increase the capital is not realised income, but forms part of earned income; so that if, for example, the rate of interest is 5% and a capital of £10,000 gives an income of only £200, since £300 are devoted to the increase of capital, then the realised income is £200, but the earned income is £500 (*loc. cit.*, pp. 234, *et seq.*). But this is incorrect, since the earned income is in this case £200, while the £300 do not constitute part of income, but go to the increase of capital.

and if the creditor proceeds to reinvest the capital thus repaid, the wealth in question ceases to be income and becomes capital. The same considerations apply when a man inherits a piece of land with fruits ripe for harvesting, and capitalises these in place of consuming them; or when a husband receives as dowry a fund with accumulated interest, and saves this latter instead of spending it. Similarly, that portion of the new-born flock which is employed to increase the stock, or, again, overdue rent on which interest has to be paid, etc., constitutes a part of income which is transformed into capital, and *per se* therefore ceases to be income. The same considerations apply to the portion of wealth employed for insurance, for this is immediately converted into technical capital and subsistences; these produce wealth; this wealth, or its profit, will, after a certain lapse of time, accrue to the insured. Doubtless such profit will form part of income, but the premiums by which it is constituted do not form a part of income.[1]

To sum up, since the essential character of income is its periodical reproduction, it is evident that all that portion of the product which is not periodically reproduced is not part of income. Hence, if that part of the product which should go to redintegrate the technical capital and the subsistences, is produced and consumed instead in the form of articles of consumption which, from the nature of the case, are not periodically reproduced, it is not income. Similarly, if the sum total of the net product increases owing to the operation of some cause of a non-recurrent character, the additional product is doubtless an increase of capital, but it is not income, although it may give rise to an increase of income in the future. Thus, an increase effected in the net product of any area by inheritance or by winning a prize in a lottery, derived in either case from abroad, by the immigration of capitalists, by an aerolite, is an increase of property, national or social, but it is not income, since it lacks the essential character of periodi-

[1] Willett is therefore mistaken when he considers insurance to be a phenomenon of production, because it produces—safety. Ferrara is also mistaken in regarding insurance as a phenomenon of circulation; Seligman is mistaken in considering it a phenomenon of exchange; and Cossa is mistaken in considering it a phenomenon of consumption. Indeed, it is nothing more than a process of redistribution and of accumulation, or of a partial transformation of income into capital.

city.[1] Nor is this all; for that part also of the net product periodically renewed which goes to constitute casual accruements does not form part of income, and must therefore be subtracted from the net product in order to ascertain the amount of the real income. Hence all that part of the net product which passes into the hands of thieves, gamblers, or mendicants, constitutes no portion of social income; and the same is true of the wealth paid over at one time on account of insurance to the victims of accidents or to their heirs.

The totality of social wealth therefore consists of the following portions: a quantity of articles of consumption not indefinitely periodical, technical capital, subsistences, and a quantity of articles of consumption indefinitely periodical. Now, all the indefinitely periodical accruements comprising the fourth portion of wealth constitute income; whereas the non-periodical accruements, and those which are either non-periodical or but fugitively periodical, comprising the other portions of wealth, are not income. The unproductive consumption of technical capital or of subsistences will diminish the second or the third portion in order to increase the first; but there cannot thus be effected any increase in the quantity of the articles of consumption that are indefinitely periodical, nor therefore any increase in the income.[2] Accumulation increases the second and the third portions at the expense of the fourth, and thus directly diminishes income.

These are the only subtractions which have to be made from the product in order to ascertain the total income. The other subtractions which various authorities have proposed are irrational. For example, some writers propose that for the determination of the amount of real income there should also be subtracted from the total net product the subsistence of the recipient. Of course, where the recipient is himself at the

[1] The opposite view is maintained by Schanz, who includes in income all such increments of property. (*Der Einkommensbegriff und die Einkommenssteuergesetze*, "Finanzarchiv.," 1896, pp. 24, 71, *et seq.*).—On the other side, consult Gärtner, *Ueber den Einkommensbegriff*, *ibid.*, 1898, pp. 44, *et seq.*

[2] It may indeed happen that income increases at the expense of subsistence; but in that case we have no longer to do with the unproductive consumption of part of the subsistence capital, implying a diminution in the labour employed, and consequently a diminution in the product and in the income. In such a case, the same labour and the same product are obtained by a lesser subsistence, so that there is a relative increase of income.

same time a labourer, there can be no doubt that his subsistence, like that of any other labourer, must be subtracted from the income. What these writers, however, contend is, that in order to ascertain the income there should be subtracted from the total net product the subsistence also of a recipient who is not personally engaged in productive labour ; for, they say, subsistence is itself the condition necessary to the very existence of income, and therefore forms a part of the cost of its production.

But such a way of looking at the matter is radically unsound. In the first place, it is easy to show that, whilst the subsistence of the worker is a precise quantity, and one commensurate to the needs of existence, the subsistence of the recipient of income who is independent of the need to labour is, on the other hand, an elastic and ill-definable quantity, that the concept is one altogether hazy in its outlines and tending to include the most diverse and most dubious elements. Jung enumerates among these latter, in addition to food, clothing, and educational expenses, even the reasonable amusements of the capitalist and his family. Now since, in substance, all the accruements of the wealthy, in so far as they are not saved, are expended upon such things as food, clothing, education, and amusements, such a way of regarding the matter would soon force us to conclude that the accruements of the capitalist coincide with his subsistence, or, in other words, that income is non-existent. But nothing can be more absurd than to consider the subsistence of the idle recipient as an essential and necessary part of the cost of production of income. The product can be obtained perfectly well and the income can be generated, even if the recipient of income does not exist or is eliminated from consideration. This is proved every day in the case of unclaimed inheritances, which continue to produce an income although there is no recipient ; it is proved in the case of the property of the insane, of incapables, of idiots, of persons in their second childhood, which continues to produce an income although the personality of the recipient is virtually obliterated, so that he is unable to take any part in the administration of his possessions. Still commoner and less painful examples are found in the case of the property of absentees, rakes, and men of pleasure, for such property continues to produce income, while the owner ignores the sources of his income in pursuit of more agreeable occupations. The old argument which represents the subsistence of the recipient of income as a part of the cost of production is therefore nothing more than one of a number of anodyne forms of apology for property, which are employed in the vain hope of effacing the parasitic and otiose stamp of that institution, and of assigning to it by forcible means a productive and socially beneficent function. However pleasing this argument may be to the ears of the favourites of fortune, it is impossible to accept it under the white light of pure science.[1]

The question being mooted regarding the reward of the director or of the entrepreneur, it may be claimed that their subsistence at least ought to be subtracted from the product in order to ascertain the amount of the income. The answer to this contention is obvious. If the position of the entrepreneur is equivalent to that of the labourer who receives merely a subsistence, or to that of the working capitalist who receives both subsistence and income, his recompense, or that part of it which constitutes subsistence, ought to be subtracted from the income, precisely as is to be subtracted the subsistence of the simple labourer or the subsistence of the working capitalist. If, on the other hand, the entrepreneur's position is superior to that of the working capitalist, his state is

[1] "Certain authors assign to the profit and loss account of an enterprise the domestic expenditure of its proprietor. This method of calculation is evidently false. The profit and loss account, which represents the balance sheet of the conduct of the enterprise, must be charged with all the expenditure proper to that enterprise, but not with expenditure which has no necessary relation to this latter" (Gomberg, *La science de la comptabilité et son système scientifique*, Paris, *s.d.*, p. 66).

According to a well-known argument, what is expended upon the education and upbringing of children, even when these belong to the class of the recipients of income, constitutes a social capital, which the children, as soon as they attain the productive age, have to repay; it is held to be indubitable that wealth thus expended is a part of income which has been transformed into capital, that is to say, it has ceased to form a part of income properly speaking. But this argument is a forcible extension of capitalist relationships and capitalist phraseology to phenomena of a totally different character. The truth is that the wealth expended in the upbringing of children is not expended in order to obtain a profit, but simply in order to raise the mental and moral level of the young, and therefore it is not capital at all. Hence the conventional phrase, to the effect that the death of children or emigration deprives the nation of capital, is absolutely fallacious, and serves only to demonstrate the crass and irrational materialism of certain pundits who themselves condemn materialism precisely where it is most in place.—For the opposite view consult Thünen, *Isolierter Staat*, II, 2, pp. 146–9.

comparable to that of the pure recipient of income, and the entrepreneur's subsistence will then form a part of income precisely as does that of the pure recipient of income. For the rest, this conclusion approximates to that upon which for a long time past practical writers have been agreed. It is true that the earliest among these arrive at this conclusion, not so much on theoretical grounds, as on account of the insuperable material difficulties in the way of the determination and subtraction of the entrepreneur's reward.[1] But Thaer explicitly states that the director of an agricultural enterprise and his family must be considered apart from production; and in his view the wealth which they receive does not constitute a cost which ought to be subtracted from the product in order to ascertain the income, but is an integral portion of the latter.[2] Now, his conclusion ought not to be based upon mere difficulties of book-keeping, but upon rational arguments.

To obtain the total income, therefore, it is proper to subtract from the total annual product the redintegration of the technical capital, the subsistences of the manual labourers, and of the intellectual labourers upon a similar footing, and the quantity of the product which is non-periodical, or which is disposed of in non-periodical or fugitively periodical accruements; whilst the fractions of the residual mass of wealth which are consumed by single individuals directly, and in an indefinitely periodical manner, constitute the individual incomes of these. The quantity of wealth thus determined may take the form of products of immediate consumption, varying in different cases, and lasting for a longer or a shorter time; thus it may appear as food, or as objects of luxury which are immediately consumed in process of use, or it may appear as clothing, horses, motor-cars, or dwelling-houses; but in every case it consists of articles of consumption of a reproducible character, and thus retains the character of income. In every case, moreover, the enduring products of consumption, when they have been obtained by means of income, and therefore by means of reproducible wealth, are a part of income; whereas they are a part of capital when they have been acquired

[1] Waltz, *Vom Reinertrag in der Landwirtschaft*, Stuttgart, 1904, pp. 40, 44.

[2] Thaer, *Einleitung zur Kenntniss der engl. Landwirtschaft*, 2nd edition, Hanover, 1801, pp. 68, *et seq.*

with a portion of the capital of the recipient of income. For example, a dwelling-house which has been acquired with income (which naturally presupposes an income, and *a fortiori* a capital, considerable in amount) is itself income; whereas one acquired by capital is itself capital. Consequently, if the dwelling-house is income, the expenditure needed for the repairs to this house is a reconstitution of income, and is therefore itself income; whereas, if the house forms a part of capital, the cost of its redintegration effects a redintegration of capital, that is to say, it does not form part of income.

The income, thus determined, divided by the cost necessary for its production, or by the sum of the factors out of which it emanates, gives the rate of income.

It arises out of all that has been said that the determination of income presupposes a series of conditions which will be found to exist only in an advanced stage of civilisation. In the first place, in an economy of exchange, the individual income cannot be determined (and *a fortiori* the rate of income cannot be determined), unless we know the portion of the gross individual product which has to be exchanged for the technical capital and the subsistences consumed in the productive process and devoted to the work of redintegration; and this renders it necessary that we should determine the value of the product obtained by the recipient of income relatively to technical capital and to subsistences, or the value of all three of these products relatively to money. On the other hand, when we wish to compare the social incomes of different countries or different ages, consisting in great part of different commodities, it is necessary to reduce these incomes, or the commodities of which they consist, to the terms of a single commodity, whether this be itself an article of consumption, or money—(although this method can give unequivocal results only when the cost of the various products, including money, is constant, or when the respective costs of these have undergone proportional changes). This, however, is not enough; for, to render the determination of the income possible, it is further necessary that the theory and the practice of book-keeping should have been originated and should have become diffused. Now, this occurs only in comparatively advanced economic phases. A very early manifestation of book-keeping, in a form quite empirical, was to be found, it is true, under the slave-holding system, in Greece and in Rome, where Cicero and Plautus speak of account books kept by the farmers of the taxes as also by private proprietors ; and Pliny even refers to book-keeping by double entry.[1] Moreover, in the absence of book-keeping, the determination and accurate measurement of income, of which we find examples in Xenophon and among the Roman jurists, would have been impossible. From these imperfect beginnings, however, with the further development of income of the feudal economy, by which exchange was almost entirely excluded,[2] book-keeping fell into disuse, to reappear, this time in a methodical form, only with the development of income derived from the wage system. Yet everyone knows that this science, though it had been long in existence, and had been the glory of the Venetian Republic, was not introduced into the administration of the state until three centuries after its discovery, while four centuries elapsed before it was adopted in the management of industrial enterprises, and even then in an imperfect and sufficiently barbarous form. As late as the beginning of the nineteenth century, it took the form simply of a precise keeping of books, and did not in any way effect the determination of the net entry, which, it was said, would be self-evident at the end of the year from the state of the cash balance. As regards agriculture, conditions were still worse. In England, for a long time, the only known way of measuring the income from estates was by the size of these estates.[3] In Prussia, only in the time of Frederic William I (eighteenth century) did they learn to keep correct accounts[4]; but double entry did not become known till much later, and with regard to it the classical economists, including Thaer himself, retained extremely misoneistic and erroneous opinions. Now, so long as the book-keeping records of enterprise are so scanty and inefficient, there are insuperable obstacles to the material determination of income. Just as

[1] Oliver, *Roman Economic Conditions to the Close of the Republic*, Toronto, 1907, p. 130.

[2] Cf. Inama-Sternegg, *loc. cit.*, II, pp. 261–2. However, as early as the year 1152, in a contract of sale quoted by Anton (*Geschichte der teutschen Landwirtschaft*, Görlitz, 1799, *et seq.*, II, pp. 112–14), we find an estimate of the monetary income derived from an estate.

[3] Gneist, *Selfgovernment*, Berlin, 1871, p. 147.

[4] Ranke, *Preussische Geschichte*, III, Leipzig, 1874, pp. 160–1.

the temperature, which is a phenomenon common to all ages, could not be subjected to measurement until after the invention of the thermometer, so also income, a phenomenon common to all the ages of history, could not be measured until after the invention and universal adoption of the most advanced methods of book-keeping.[1]

Even after the invention and general adoption of book-keeping, the determination of income may present difficulties by no means easy to overcome. Thus, there are certain forms of income in which the economic system itself renders impossible exact methods of book-keeping. For this reason, for example, the slave-owners in the Southern States of the American Union, make no use of book-keeping. The same applies to the conduct of enterprise by serfs, and also to the management of the farms held by working tenant farmers in modern Russia.[2] But, putting these difficulties on one side, the determination of income remains difficult enough when there is lacking a correlation between the respective parts of the cost of production and of the income, or when there is lacking a coincidence in time between one and the other. There is in the first place that category of the general expenditure which cannot be assigned separately, or in ascertainable proportions, to the respective products, so that it becomes altogether impossible to distinguish with precision the portions of income appertaining to single sections of a given undertaking[3] Further, the general expenditure should not be wholly charged to current account, being partly incurred with reference to future accounts; whence there arises a new difficulty in determining the income in any given account.

[1] It must further be added (as is pointed out by Bücher, *Entstehung der Volkswirtschaft*, Tübingen, 1893, pp. 41, 63–4) that in former times income, inasmuch as it was hoarded, was difficult to distinguish from capitalised property. This, however, and the other analogous influences previously mentioned, though they might render it difficult to determine income in former times, could not cancel the existence of this fundamental category in earlier economic phases. Though sometimes more and sometimes less obvious, income has always existed wherever human labour has been associated.

[2] Von Halle, *Baumwollproduktion, etc., in der Nordamerikan. Sudstaaten*, Leipzig, 1897, I, p. 356; Tugan-Baranowski [*The Nationalisation of the Land*], Petersburg, 1906, p. 95; Thünen, *Isol. Staat*, II, 2, p. 237.

[3] Cf. Lecouteux, *Econ. rurale*, II, pp. 320–4.—In Roman jurisprudence, it had already been pointed out: "Quod in sementem erogatur, si non responderint messes, ex vindemia deducetur, quia totius anni unus fructus est" (L. 8, Dig., *Soluto matrim.* XXIV, 3).

For example, in agricultural accounts, it is not reasonable to debit to the product of one year, the entire cost incurred in manuring the land during that year, since the useful effect of this will last for several years.—A further difficulty arises from the fact that it is often impossible to estimate the expenses of production at the time of the sale ; where this estimation can only be effected at some subsequent period, or when the account is closed, it is impossible before this to determine the income.[1] But a more serious difficulty is dependent upon the fact that it is often absolutely impossible to determine the value of some of the elements from which the income proceeds. In fact, some among the elements of the technical capital consumed, which have to be subtracted from the value of the product in order to obtain the income, do not possess a market value. This phenomenon is especially frequent and conspicuous in agriculture, where stable manure, forage, and straw have in many cases no market price,[2] and where it is absolutely necessary to determine by various artifices the specific value of the nutritive elements (proteids, fats, and non-nitrogenous extractives) mixed with the food, but not previously existing in an isolated condition.[3] The like phenomenon was, however, exhibited to a notable extent in the manufacturing industry of former times,[4] nor does it tend to disappear altogether to-day. Some writers affirm that the value of those elements which are not priced in the market is to be determined in view of their utility or of the increment of product which results from their employment. Others are of opinion that it should be determined with reference to the cost of the articles that might be substituted for these elements ; thus, for example, in this view, the value of stable manure is equivalent to the value of the artificial manure which might be substituted for it. Others think, and more correctly, that the price at which the elements in question should be valued does not correspond to their cost of acquisition, nor yet to their current price, but to the effective price of subsequent realisation estimated

[1] Gomberg, *loc. cit.*, p. 68.

[2] Waltz, *loc cit.*, p. 103, *et seq.*

[3] Serpieri, *Intorno ad alcune più controverse valutazioni agrarie*, Conegliano, 1906.

[4] James Steuart (*loc. cit.*, II, p. 174, *et seq.*) already referred to this.

when the balance-sheet is made up.[1] This point of view was already expressed in more precise terms by Thaer, who said that, in the case of elements not susceptible of direct valuation, we must take into consideration the cost necessary for their reproduction at the time when the determination of income is effected.[2] In this case, therefore, the principle of cost, properly understood, also fully suffices to meet the need; but it is no less true that the concrete application of this principle may involve serious technical difficulties, which may postpone or render extremely difficult the determination of the income.

These difficulties cannot fail to become accentuated in proportion as the income becomes further evolved; in proportion, that is to say, as the association of labour is more complex, the technical capital more considerable, the co-ordination of the productive elements more intricate, the process of exchange vaster and more articulated—in a word, in proportion as there increase the number and the complexity of the factors upon whose co-operation the income itself depends.

§ 2. Determination of Income by the Personal Method.

Hitherto the determination of the total income has been effected by ascertaining in the first place the annual or periodical product, and by then subtracting from this a number of different elements. It is possible, on the other hand, to proceed by the inverse method, by addition, instead of by subtraction; to determine first of all the individual incomes, and by then adding these together to ascertain the total income.

The first thing which we have to observe is that the individual incomes which must be added together in order to arrive at the total income are constituted out of the surplus of the individual product over the technical capital and the subsistences necessary to produce it; that, in other words, all that quantity of wealth which is consumption of capital is not income. Thus, in a life-annuity, all that part of the annuity which exceeds the normal profit on the capital expended in the purchase of the annuity, is not income, but

[1] Pantaleoni, "Giornale degli Economisti," March and April, 1904.

[2] Thaer, *Principes raisonnés d'agriculture*, Paris, 1811, I, pp. 205–6.

consumption of the capital itself, unless the surplus in question is provided at the cost of the income of another individual, in which case we have merely one of many instances of the transfer of income from one person to another—a matter we shall consider very shortly.[1]

What, then, are the incomes which must be added together in order to ascertain the total income? Although a more or less considerable proportion of income may be directly received by persons-at-law or by corporations, its receipt by these is provisional merely, and it comes ultimately to be divided among single individuals. This is clearly evidenced in the balance-sheets of limited companies, wherein the assets are always equal to the liabilities, because the surplus, or the income, is itself a liability of the company towards the individual stockholders. Income is therefore essentially an attribute of individuals, and it is as appertaining to individuals that it has to be ascertained. Thus, the income of a limited company is equal to the dividends of the shareholders, the debenture holders, the directors, etc.; and it is only from considerations of expediency that we determine the income of the company as a whole, leaving out of account the individuals among whom that income is divided.

Let us suppose, in the first place, the simplest possible conditions, in which each individual produces his own subsistence, and produces in addition his own income, which he himself consumes; it is evident that here the total income is equal to the sum of the incomes produced by the single producers. If, on the other hand, one portion of the producers produces subsistences and the other portion produces income, which implies that a part of the subsistences produced by the members of the former group is exchanged for a part of the

[1] Fisher, the great accountant of political economy, affirms (*Income*, pp. 111, 249, 401) that the portion of a life annuity which exceeds the ordinary profit of invested capital, and which is not accumulated productively, is income, because it consists of articles of consumption. It appears to me that this view is unsound. For, in fact, these articles of consumption are not reproduced for an indefinite period, nor can they be consumed without affecting the integrity of the capitalised property; hence, since they lack the essential characteristics of income, they cannot form part of this category of wealth. It follows that the excess of the life annuity, over and above the ordinary profit of invested capital, consumed unproductively, and not furnished at the expense of another income, is not income, but part of estate or of stock.

income produced by the members of the latter group, the net result is precisely the same as if the members of one group and of the other produced in part subsistences, and in part income. Hence, in such a case, the total income consists exclusively of the incomes produced by the single individuals : it may be directly, in the form of income-products consumed by the producers themselves ; it may be indirectly, or in the form of products which are exchanged for income-products. Supposing, therefore, that there contribute to production capital and productive land in addition to labour, and supposing that the labour obtains nothing more than a subsistence, the total income will be equal to the sum of the individual incomes of the owners of the capital and of the productive land. For in truth, given three owners of capital or productive land, producing and consuming respectively quantities, 1, 2, 3, of income-products, either obtaining these directly, or obtaining them indirectly in the form of other products which they exchange for the income-products, it is evident that the total income is precisely equal to $1+2+3$, that is to say, to the sum of the income-products received by the respective individuals. If, now, these owners of productive elements are joined by new owners of productive elements, or, in more general terms, if they are joined by individuals who contribute in any way to the work necessary for the increase of the product, the income of these latter constitutes a positive addition to the income hitherto existent and previously determined. Therefore the income of those who lend to capitalist-entrepreneurs a part of productive capital, must be added to the total income. Thus, again, if to the owners and productive capitalists there be superadded a distributor, or a trader, whose work is necessary, the income of these constitutes a fit and proper addition to the total income. In fact, it is the intervention of the distributor, or of the trader, which renders it possible for each producer to limit his activities to the sole function of production, and to a specialised production, thus promoting the national and international division of labour, which determines a positive increment of social production.[1]

[1] Concerning this question, see Brentano, *Ist der Handel an sich Parassit ?* in "Die Nation," January 28th, 1905, and the controversy with Sombart, *ibid.*, February 18th and March 4th. But Brentano is in error in believing

The necessary distributor or trader therefore effects a positive increase in the product; in other words, if we subtract from the increment due to their activity the portion which constitutes their subsistence, the remainder represents the increase they have effected in the income-products. Hence, also, their income must be added to that of the owners of the productive elements, to determine the totality of the social income. Certainly it is not always easy to ascertain the respective individual incomes of those who thus effectively contribute to the total. Thus, if an industry obtain part of the requisite capital by means of a loan, it is possible to separate the income of the lenders from that of the capitalist-entrepreneur by means of the distinction between the debentures and the shares; but if a landowner borrows part of the capital necessary for the conduct of his undertaking, or if an owner or productive capitalist be assisted by a distributor or a trader, it is not always easy to distinguish the share of the income appertaining to those of the first group from that which appertains to those of the second group; and it is more convenient to specify without going further the income immediately received by the members of the first group, apart from the relations of credit or trade which may be established.

If then, we have under consideration an economy of barter, we may say that the social income is equal to the sum of the respective incomes of the owners of productive elements (capital and land) and of the distributors and traders necessary for the circulation and increase of social production.

If, however, we have under consideration a monetary economy, we must not pay attention to the income-products in kind, but to the monetary value of these. The total monetary income is made up of the sum of the monetary incomes of those who contribute to the creation of the total price of the income-products. In fact, supposing, as always, that the income is fully consumed by its producers, the total price of the income-products is divided exclusively among those who have contributed to its production, and goes to form their

that the productivity of commerce suffices *per se* to imply the legitimacy of the profit of commercial capital; since, although the productivity of commerce has never been in doubt, the necessity and the legitimacy of the profits of commerce are open to dispute, as also the assignment of these to the capital therein invested.

individual monetary incomes; for which reason, the sum of the monetary incomes of those who have produced the total price of the income-products is mathematically identical with that price. Hence, the income of every individual who contributes to increase the price of the income-products must necessarily be added to the sum of the individual monetary incomes in order to obtain the total monetary income. It is as if there were given to certain individuals, A, B, and C, a certain numbers of counters, 60 to A, 30 to B, and 10 to C, and we assume that the sum of these counters is equivalent to the total value of the products bought by A, B, and C. If, now, a fourth individual, D, succeeds in increasing by 10 the total value, it follows that the sum of the counters possessed by the individuals increases by ten, or, in other words, that the new-comer gets possession of 10 new counters without prejudice to those possessed by the other three. By parity of reasoning, whenever an individual contributes to increase the price of the income-products, his income in money must increase in like measure, without diminution of the income of the others, and the income of this individual must be added to the previously ascertained sum of individual incomes.

It follows from these considerations that the income of individuals who have nowise contributed to increase the product in kind must be added to the sum of the monetary incomes whenever the individuals in question have contributed to increase the price of the income-products. Thus, if the price of a given income-product rises in consequence of a deficiency in supply, or in consequence of increased demand, the total price of the income-product increases, and there must ensue in equal measure an increase in the other term of the equation, that is to say, in the sum of the individual monetary incomes. The increment of monetary income received by the producers whose product thus obtains a higher price, ought therefore to be added to the sum of the pre-existent incomes, notwithstanding the fact that this increment does not correspond to any increment in the total quantity of income in kind, but represents merely a change in the mode of its distribution among the respective holders, a dilution of the existing income among a larger number of participants, something taken away from the previous recipients of income for the benefit of the privileged recipient. To continue the example of the counters, if there be, *ceteris paribus*, an increase in the number of counters representing the value of a given income-product, there is an increase also in the total number of counters which represent the value of the total income-product ; and since the quantity of incomes is equal to the sum-total of counters allotted, it is necessary that these additional counters should be added to the sum of the individual incomes. This additional quantity of counters goes, then, to increase the income of the producers of the favoured commodity, whereas the quantity of counters possessed by the others remains constant ; and from this it follows that the former can get possession of an additional quantity of income-products, leaving a proportionately smaller quantity for the other producers.

Conversely, if a given product falls in price owing to excess of supply, the total price of the income-products, *ceteris paribus*, will also fall, and there will be a proportionate diminution in the sum of the individual monetary incomes. Whence the monetary income of the less fortunate producer diminishes, and may fall to zero, or become negative ; but if the quantity of income-products remains constant, or increases, the total income in kind remains constant, or increases ; and the only result is that the first producer will be able to get possession of a lesser quantity, or of none at all, and must leave for the other producers a proportionately larger quantity.[1]

From this it is evident that a producer who, in the absence of a process of exchange, would obtain no more than a subsistence, may very well obtain an income in consequence of exchange, since in this way it may happen that his product will increase in value so as to exceed the value of technical capital and subsistence. Conversely, a producer who, in the absence of a process of exchange, would obtain a positive income, may very well obtain, when exchange intervenes, no income at all, or a negative income, since it may happen that the value of his product may decline below the value of technical capital and subsistence.

From the previous considerations we may deduce, conversely, that every increase in the total monetary income must increase

[1] De Bourouill, *loc. cit.*, p. 186.

in like measure the total price of the income-products. Returning to the example of the counters, from the moment the sum of the counters representing the total income is equal to the sum of the counters representing the total price of the income-products, every increase of the former quantity must necessarily increase the latter. This is what actually happens in all periods of increasing speculation. In fact, in such periods, the owners of shares sell at increased prices and therewith increase their own purchasing powers expressed in money, without therefore diminishing, for the moment at least, that of the buyers of these shares. Hence the total monetary income rises, and proportionally there must rise also the total price of the income-products.[1]

An important consequence deducible from these considerations is that the monetary income of an individual ought or ought not to be added to that of the others in order to ascertain the total monetary income, according as the method varies by which is ascertained the value of the income-products. In fact, if we take into account only the wholesale price of the income-products, it is evident that the total monetary income will consist exclusively of the monetary incomes of the owners of the productive elements and of those of the wholesale traders. If, on the other hand, the retail price forms the basis of our estimate, in our calculation of the total monetary income we certainly ought to include also the incomes of the retail traders, inasmuch as their incomes, forming part of one term of the equation (the total value of the income-product) must also form part of the other term of the equation (the sum of the monetary incomes).

We may go further than this. The income of the State (an improper expression, since we have previously pointed out that income is an essentially individual attribute), in so far as it is derived from an increase in the value of the products, must be added to the total income. In other words, if in determining the price of the products we take into account the rise in their value resulting from indirect taxation, we ought to add the yield of these indirect taxes to the sum of the individual incomes in order to ascertain the total income. We have, in fact, seen that the total price of the income-

[1] Cochut, "Revue des deux mondes," December, 1883.

products is equal to the sum of the individual monetary incomes, and that for this reason in proportion as the first figure increases, the second must also increase. Now the State, by means of the indirect taxes, really plays the part of a retail trader who puts a higher price upon the products in which he deals, and therewith increases the total price of the income-products. Hence the income which the State derives from this increase of price ought to be added to the sum of the individual monetary incomes.

For this reason, according as the income-product comes under our consideration within the area of production, or is followed by us into the hands of the wholesale merchant, or further still into those of the various retail dealers, or finally in its passage through the customs or excise—so also do we find that the sum of the monetary incomes undergoes a progressive increase, although in the last two instances the quantity of income in kind remains unchanged. The number of counters which gives the right to a share in the total income-product increases, whereas the quantity of the product remains unchanged; hence the share in the product which remains for each of the participants is proportionately diminished. The addition of new monetary incomes effects a correlative diminution of the individual incomes in kind, or a dilution of the income in kind by its distribution among a larger number of participants.

But the sum thus variously determined does not yet constitute the entity of the total income, since in order to obtain this it is necessary to subtract from the sum in question all that quantity of the product, or the value of this quantity, which passes out of the hands of the recipients of income without creating an income for others. In the first place we have here to consider a fraction of that sum, more or less constant from one period to another, which is saved productively or unproductively, explicitly or implicitly, in the form of insurance. This quantity crystallises itself as technical capital and subsistences, and *per se* ceases to form part of income although it may produce a new income in future. The same may be said about that part of the sum previously determined which is employed by the recipients of income in the maintenance of servants or other unproductive labourers receiving subsistences, hence that wealth also which is converted into subsistence is for that very reason not income. Further, there is a part of that sum which goes to make up non-periodic accruements, namely, that which is taken from its immediate recipients by thieves, or is distributed by these recipients in charity, or used by them in gambling. It is evident that, if the wealth that is stolen consists of products of consumption, the theft diminishes precisely by this amount the income of the person robbed. But it cannot be said that this diminution in the income of the person robbed, effects conversely a correlative increase in the income of the thief, inasmuch as the gain of the latter lacks the characteristic of periodicity which is essential to income. Therefore the whole quantity of wealth which passes into the hands of thieves must be subtracted, not merely from individual income, but also from social income. What is said of theft applies no less to that officially organised theft which is known as war. Even when war does not involve the plunder of all the sources of income, and confines itself to taking from the vanquished a quantity of products of consumption, it effects a diminution, not only of individual income, but also of total income, for, during the period throughout which it acts, it diminishes the income of the vanquished without increasing the income of the victors. Similarly, gambling and charity deprive the losers or the donors of a portion of their income, without effecting for the winners or beneficiaries anything more than a casual and non-periodic gain which is not in itself income.[1] In this way all the fractions of the sum previously determined which undergo transforma-

[1] There are, indeed, certain cases in which the accruements of theft, gambling, and charity, present a periodic rhythm. Thus, without going so far back as the thieves' guild of Bagdad, which in the tenth century of our era effected regular and enormous earnings, certain Neapolitan pickpockets, certain fashionable sharpers of Nice and Spa, not to mention the gambling establishment of Monte Carlo, effect to-day periodic accruements. There are beggars in London who receive on the average as much as thirty shillings a day; in Paris, the mendicants outside the church of the Madeleine, when they retire, sell their pitches to their successors, just as a doctor sells his practice; in Turin, a beggar on the steps of the church of the Consolata has let his station on hire to a colleague for the sum of ten shillings a day. Still, the periodicity of such accruements is transitory and ephemeral. More strictly periodical is the income of charitable institutions; but the income of such institutions is merely a halting-place of wealth on its way into the hands of the beneficiaries. If, therefore, we consider, as we should, the wealth of the charitable institutions with an eye to its ultimate destination, we cannot fail to see that it is a non-periodic accruement which is not *per se* income.

tion into subsistence, technical capital, and non-periodic accruements, must be subtracted from the given sum in order to ascertain the total income. Thus only can be maintained the equivalence between the total monetary income and the total price of the income-products. In fact, for every segment of the income-products which ceases to be such, and undergoes a transformation into products which are not income, there occurs, *ceteris paribus*, a diminution in the total value of the income-products. Hence, in order that the equivalence may persist, it is necessary that the monetary value of the total income should diminish in equal degree. This necessitates that all the fractions of the income which are employed in providing subsistences, technical capital, and non-periodic accruements, should cease to form part of the total income.

Thus, the total income is equal to the sum of the accruements periodically and immediately received by those who contribute to the creation of the income-product or of its price, subtracting the part which is expended in technical capital or subsistences (productive or unproductive), or which constitutes non-periodic accruements. But there is another portion immediately received by these individuals which is disposed of by them in order to create, for the benefit of other persons, periodical accruements which are not subsistences. Of such a character is that part of income which goes to provide a pension or a life-annuity for the benefit of a third party. Thus, for example, when a life insurance company assigns a life-annuity to anyone, what happens is that a portion of the income of the society itself, or of its shareholders, is transferred to the assured. Such again is that part of income which provides the remuneration of the unproductive labourers whose position is superior to that of the working-capitalist; that is to say, of the clients or vassals of former times, and, in our own day, medical practitioners, engineers, go-betweens, confidants, lawyers, priests, officials, magistrates, journalists, courtiers. Now in all these cases we have merely the transference of certain *concrete quantities of income* from one person to another, and such transference neither diminishes nor increases the total quantity of income previously determined; hence we must take no account of it in our determination of the total income. If, indeed, the owner of a productive element, providing him directly with a certain income, spends a portion of that income upon a medical or legal consultation, or if, like one of the characters in Heine's *Ratcliff*, he exchanges banknotes for musical notes, or if he buys other immaterial pleasures, all he effects is the transfer of a part of his income, or of the wealth of which this is composed, to an unproductive labourer. The actual fact we have to recognise is merely the transference of a given portion of income from the owner of the productive element to the unproductive labourer—a transference which nowise affects the pre-existent total quantity of income. Undoubtedly, the owner of the productive element who thus deprives himself of a portion of his income does not do this gratuitously, but obtains in exchange immaterial pleasures sometimes more precious than those which material goods can provide. But since the income consists of material products, the acquirement of these immaterial gains by the recipient of income effects no increase in his income, and cannot cancel the subtraction which this has sustained. The income of the owner of the productive element remains diminished to the extent to which the income of the unproductive labourer is increased ; and therefore the existence and the reward of these, although it does not, as in the cases last considered, diminish the total quantity of income, nevertheless cannot in any way increase that quantity.

All that has been said applies to the income of unproductive labour, whatever the kind of that labour. Hence it applies to that unproductive labour whose function is ultimately essential to insure the persistence of the income. Similarly, it applies to that unproductive labour which is organised by collective entities or institutions instead of by private individuals. Thus the tax paid by the recipient of income to the State or to the Church, whether paid in the form of direct or of indirect taxes, represents merely a portion of the tax-payer's income which is taken from him either temporarily or permanently, and in the latter case may create an income for another. If the State or the Church pays back to the tax-payer, directly or indirectly, the amount of the tax, or its equivalent, in products of consumption, the income of the tax-payer undergoes no diminution, but simply a transformation. If the State or the Church makes periodical use of the yield of the taxes in the purchase of objects which are not objects of individual consumption (in the purchase of cannon, for instance), or in technical capital or subsistences, there results in reality a diminution, not only of individual income, but also of total income. If, finally, the State or the Church makes use of the amount raised by the tax to provide income for certain unproductive labourers, the process under consideration ultimately resolves itself into the transference of a portion of income from the owner of the productive or unproductive elements to the aforesaid unproductive labourers. It follows that the portion of income which the tax-payers hand over to the State (and the same may be said of the Church), and which remains income, merely traverses the State Treasury, soon leaving this to form the income of other individuals. For this reason, the very expression "the income of the State" is an improper one, since it applies only to wealth in a provisional stage, and does not follow it up to its ultimate end, which is always the individual. Therefore, if we have said that in calculating the total income we should take into account the income received by the State in the form of indirect taxes, it is necessary to point out that such an accruement constitutes State income only in a provisional sense, inasmuch as it ultimately undergoes transformation into a number of individual incomes. That is, it is essential to include as forming part of the total income the incomes also of unproductive labourers constituted out of the yield of the indirect taxes which raise the price of the income-products; whereas the part of that yield which is consumed by the State in products, represents a part of the income-product, or of its value, which ceases to be income; and that part which is restored to the recipients of income is an addition to their income in money, which thus increases in equal measure with the integral price of the income-products, leaving unaltered the income in kind.

All that has been said of unproductive labour applies equally well to unproductive capital and unproductive land. The owners of productive elements must certainly sacrifice a portion of their own income in the form of rent, or of the interest on public debt, on capital of consumption, or on trading capital; and they must further spend a portion of their own income in railway-tickets, that is to say in paying the interest on the capital invested in railways; but these payments merely represent a transference of a part of the income from its owner to the owner of the house, or of the capital lent to the State, or of the capital of consumption, speculative capital, or railway share capital, as the case may be, without the total quantity of income undergoing thereby either diminution or increase. What is paid to the owners of unproductive elements or to the unproductive labourers does not constitute an addition to the total income, except when such payments are effected at the cost of subsistence. Thus, the income of the owner of a house which is rented by labourers, the income of a retailer, a money-lender, or a doctor, being the incomes derived from the slender purses of the workers, represent a quantity of wealth taken from subsistence to be transformed into income; in other words, it no longer represents a simple transference of pre-existent income from one individual to another, but a positive increment to the total income. We have here, substantially, a process the reverse of that which occurs in saving; inasmuch as, whereas saving represents the transformation of a part of income into subsistence, in the cases now under consideration we have to do with the partial transmutation of subsistence into income.[1]

Putting aside, however, the case in which the unproductive elements obtain an income at the expense of subsistences, the income received by these unproductive elements is merely a part of the income previously received by the owners of productive elements, and this transference effects a proportionate diminution in the income of these latter, so that the total income remains unchanged. It follows from this that everything which diminishes or annuls the tribute paid to the owners of unproductive elements by those who have need of them, proportionately increases the income of these latter. Thus, if a co-operative credit society lowers the rate of interest payable by the borrowers, there is thereby lessened the subtraction which their income has to undergo for the benefit of

[1] Ricardo (*Works*, p. 87) wrongly includes in national capital the house rented to a workman, whereas this is in any case nothing but individual capital which obtains an income, not by way of production, but by the annexation of what is earned by another. Smith (*loc. cit.*, pp. 222–3) is nearer the truth, for he includes houses among stock.

the lenders, and the real income of the borrowers is consequently increased. A consumers' co-operative society, again, increases the total income of the members of the society by all that quantity of wealth which would otherwise be transferred to trading capital. A co-operative building society, diminishing and ultimately annulling the payment made by the tenant to the house-owner, increases the income of the former. One who buys wholesale has, *ceteris paribus*, an income greater than that of one who buys retail; and so on.

Making use of a distinction originally due to Hermann, although from an outlook somewhat different from his, it may be said that the income immediately received by those who contribute to create the product or the price of the product, in other words the income of the owners of productive elements, is *original* income; whereas the income assigned to the owners of unproductive elements, or to unproductive labourers, is no more than a *derivative* income, or a transference from the members of the former group of that which is directly received by them to the owners of unproductive elements. Now, the total income is equal to the sum of the original incomes; and therefore the quantity of the derivative incomes must be excluded from the calculation of the total income, or must be subtracted from this total in so far as it has been included in the calculation. As the outcome of these considerations, we can further distinguish the *apparent* or *nominal* total income from the *real* total income. The former is obtained by adding together the individual incomes directly received by all the owners of productive or unproductive elements and by unproductive labourers; the latter is obtained by adding together the individual incomes directly received by the owners of productive elements. (In both cases it is understood that we have to subtract that portion of income which is saved, and that also which is transformed into non-periodic accruements.) It is by this criterion that we can distinguish between the *apparent* individual income and the *real* individual income. The former consists of the quantity of wealth which is directly received by the individual proprietors of productive or unproductive elements; the latter is the income which they ultimately consume, or, in other words, that which remains to them after they have paid unproductive owners or unproductive labourers.

Now, if it be supposed that the various individual incomes are distributed in identical proportions as between products and the services of unproductive elements, the apparent individual incomes will bear like ratios to the real individual incomes. Thus if A and B, owners of productive elements, directly and respectively receive incomes of 10,000 and 8000 francs, whilst C, an unproductive labourer, receives an income of 7000 francs, the three nominal incomes bear the respective ratios 10 : 8 : 7, that is to say, A has $\frac{10}{25}$, B $\frac{8}{25}$, and C $\frac{7}{25}$, of the total income.—But if the incomes of A, B, and C are employed to the extent of 28% in the payment of the services of unproductive elements, A spends 2800 francs upon services and 7200 upon products; B spends 2240 upon services and 5760 upon products; C 1960 upon services and 5040 upon products. The three real individual incomes are, therefore, 7200, 5760, 5040 francs, respectively; that is, they respectively represent $\frac{10}{25}$, $\frac{8}{25}$, and $\frac{7}{25}$ of the total real income; in other words, their mutual ratios are the same as those of the respective nominal incomes. When, on the other hand, the different individual incomes are distributed in different ratios as between products and services, the inferiority of the real income in relation to the apparent income is greater in those incomes of which a larger proportion is consumed in payment for services. Thus, to continue the previous example, if A pays 3000 francs for services, and B 2040 francs, the real income of A is 7000 francs and that of B is 5960 francs; that is, the real income of A is 30% less than his apparent income, whereas the real income of B (who devotes a lesser proportion of his income to the payment of services) is only 25·5% less than his apparent income. Whereas, then, where consumption of income is similarly distributed as between products and services, the individual real incomes constitute like proportions of the total real income with those in which the corresponding apparent incomes stand to the total apparent income—where we have consumption of income diversely distributed, the real incomes, inasmuch as a larger proportion of these is consumed in payment for services, stand in a lower ratio to the total real income than that in which the corresponding apparent incomes stand in relation to the total apparent income; whereas, the converse is the case in regard to those incomes of which a larger proportion is consumed in payments for products. In fact, whilst the apparent income of A (10,000) represents $\frac{10}{25}$ of the total apparent income, the real income of A (7000) represents $\frac{9 \cdot 7}{25}$ of the total real income (18,000); and whilst the apparent income of B (8000) represents $\frac{8}{25}$ of the total apparent income, the real income of B (5960) represents $\frac{8 \cdot 3}{25}$ of the total real income. In this way it results that A, who consumes a larger proportion of services, participates to a less extent in the total real income, and B to a greater extent, than the comparative shares of each in the total apparent income.

Nevertheless, even where the individual incomes are employed in diverse proportions in the consumption of products and in the payment for services, this divergence is never, nor can ever be, so considerable as to make the proportions between the various apparent incomes diverge radically from the ratios between the various real incomes. Now the fundamental datum which it is necessary to know in order to attain to clear views regarding the distribution of wealth, is not the absolute amounts of the individual incomes, but the ratios between these, and since these ratios are substantially the same in the case of nominal incomes and in the case of real incomes, knowledge of the nominal incomes is sufficient to enable us to attain to a clear general view of the fundamental lineaments of the distribution of wealth. For this reason, the incomes statistically recorded, however erroneously inflated by all that part of income expended in payment for services, may without serious error be made the foundation of a study of the distribution of wealth or of the relative well-being of various individuals and of various classes.

We may sum up the argument by saying that the net product, after the subtraction of the part saved, or constituting non-periodic accruements, is directly received by the owners of productive elements, who then transfer a more or less considerable part to the owners of unproductive elements and to immaterial labourers, productive or unproductive, who in their turn transfer a part to others, and so on. The definite outcome of this series of processes is that the respective individuals become periodically possessed of a certain quantity of product which they consume integrally and personally. Now, that quantity of product which is periodically and definitely consumed by the respective owners of productive and unproductive elements, or by those engaged in immaterial labour, productive or unproductive, consumed by these individuals without injury to the integrity of their capital or without affecting the renewal of their remuneration, constitutes their individual income. The sum of the individual incomes thus determined, constitutes the total income.[1] Thus, to ascertain the total income it is proper, either to leave out of count the income of unproductive owners and unproductive labourers, or else to subtract at the outset from the income directly received by the owners of productive elements, the quantity of wealth which is transferred by them to the owners of unproductive elements and to the unproductive labourers.[2]

[1] It may be objected that according to this argument individual income becomes something altogether indeterminable, since we cannot ever know whether a given quantity of wealth actually possessed by any individual is income at all. There is no doubt that the calculation of individual income cannot be made, unless each part of the net product received by the individual has been definitively consumed. But this admission of the existence of practical difficulties cannot in any way change the theoretical view of the matter.

It may further be said, in the light of these considerations, that if all persons expended their own incomes in payment for services, there would be no more income at all. The answer to this is that the hypothesis that the social income should be totally consumed in payment for services, is *per se* an irrational one; for the very fact that there is a quantity of products of consumption which are not subsistence, and are required and consumed, effectively proves that income is ultimately consumed in products. At the most we may admit that the income of a given individual may hypothetically be consumed exclusively in payment for services, and thus become annulled; but this hypothesis is also irrational, for the recipient of income, if he wishes to live and to enjoy, must necessarily employ a part of his income in the buying of products.

[2] Of the opposite opinion are the following writers: Storch, *loc. cit.*, pp. 834, 854, *et seq.*; Marx, *Mehrwerth*, I, pp. 382–4; Hermann, *loc. cit.*, pp. 594–7; Schmoller, *Einkommen*; Marshall, *Principles*, I, II, 5, §3; D'Aulnis de Bourouill, *loc. cit.*, p. 182; Soetbeer, *Umfang und Vertheilung des Volkseinkommens*, Leipzig, 1879, pp. 67–71; Pantaleoni, *Ammontare probabile della richezza privata in Italia*, Rome, 1884, pp. 179–80; Jäger, *Die Grundlegung der theoretische National oekonomie durch Adam Smith*, "Zeitschrift für Volkswirtschaft," 1900; Kleinwächter, *Einkommen*, pp. 8, 12, *et seq.*; Valenti, *Principi di scienza economica*, Florence, 1906, pp. 111, *et seq.*, 207, *et seq.*, 419, *et seq.*; Seligman, *Principles of Economics*, p. 277; Davenport, *Value and Distribution*, London, 1908, p. 122; Fetter, *Principles of Economics*, New York, 1904, pp. 43, 403; Fisher, *Income*, pp. 105–6, 150, 165, *et seq.*; Kalinoff, *Ricardo und die Grenzwerththeorie*, Tübingen, 1907, pp. 104, *et seq.*; Liefmann, *Ertrag und Einkommen auf der Grundlage einer rein subjectiven Werthlehrer*, Jena, 1907; Smart, *The Distribution of Income*, London, 1899, p. 322, *et passim*; Carver, *The Distribution of Wealth*, New York, 1904, p. 123; Roscher, *System*, I, p. 327 (1877); Meyer, *Das Wesen des Ein-*

§ 3. Complications Arising from the Circulation of Income

The determination of income effected by the means which have been explained encounters at the very outset certain difficulties dependent upon the circulation of income. If the income is directly consumed in the product in which it is received, no complication arises. But, in actual fact, income is not necessarily consumed in the product in which it is received; on the contrary, in an economy of exchange, it is as a rule converted into other products, either of consumption or of reproduction; there results from this a process of exchange as between the different kinds of income-products or as between income-products and products of reproduction. The income-products (and with these the products necessary for their reproduction) are the very first, in order of time, to enter into the process of circulation, which only at a later epoch extends to subsistence-products.[1] For many centuries trade is confined to products of luxury, which, since they possess a high value in relation to their bulk, will bear better than other products a high cost of transport.[2] Further, production for exchange is for a very long time confined to objects of luxury, while the strict necessaries of life are produced under the immediate superintendence of their consumer. This amounts to saying that for a very considerable period exchange relates only to income, and does not concern subsistences.

Now the circulation of income, like that of any other portion of the social product, may encounter obstacles and difficulties.

kommens, Berlin, 1887, p. 166, *et seq.*; Wagner, *Grundlegung der Volkswirtschaftslehre*, 2nd edition, 1892, I, p. 418, and also *Zur Methodik der Statistik des Volkseinkommens und Volksvermögens*, "Zeitsch. des preuss. Statist. Bureau," 1904, pp. 41, *et seq.*; Lexis, *Wörterbuch der Volkswirtsch.*, v. "Einkommen"; Fellner, *Die Schatzung des Volkseinkommens*, Berlin, 1904; Marx, *Mehrwerththeorien*, I, pp. 259, *et seq.*; Nazzani, *Sunto di Economia politica*, 9th edition, 1903, p. 82; Pierson, *Leerboek der Staatshuishudkunde*, Haarlem, 1902, II, pp. 31, *et seq.*; Sax, *Grundlegung der theoretischen Staatswirtschaft*, Vienna, 1888, p. 241; Bela Földes, *Beiträge zur Einkommenslehre*, Berlin, 1906, p. 17; Dudley Baxter, *National Income*, London, 1868, pp. 67, *et seq.*

[1] Roscher, *System*, III, pp. 61, 495.

[2] Michlachewski [*Exchange and Political Economy*], p. 316.—The trade of the Venetian Republic was exclusively concerned with income-products; Venice imported from the East drugs and spices, and exported in exchange Russian furs, Spanish coral, Cyprus rugs (Fanno, *L'espansione commerciale e coloniale degli stati moderni*, Turin, 1906, p. 229).

First of all, the exchange of part of the income-products for products of reproduction or technical capital may meet with a hindrance if the technical capital is not in the market, or if it has not been produced at all, or not in the quality or quantity required by the recipients of income ; or, conversely, if the technical capital has been produced in excess of the quantity required by the recipients of income. Of this nature is the phenomenon which is apt to display itself towards the close of periods of increasing speculation (as in England in 1847, and of late years in the United States), wherein, as a rule, there is produced a quantity of technical capital in excess of that which the new portions of income successively saved are capable of absorbing.[1] Next it may happen that the quantity of circulating technical capital is inferior to that requisite to put in operation the fixed capital which has been too rapidly increased. In all such cases there inevitably results a state of inequivalence, a lack of equilibrium, and even a crisis —a subject discussed by Marx in the most subtle and masterly manner.[2] Thus, again, there may be a total lack, or a lack in the quantity and quality desired, of the products of consumption for which the recipients of income desire to exchange the income-products directly received by them, or the monetary equivalent of these. Further, it may happen that the recipients of income who have hitherto transformed their own income into certain determinate products, now suddenly change their views and prefer some other commodities. In this connexion it must also be pointed out that the fluctuations of fashion are far more frequent and far more extensive in respect of income-products than in respect of subsistence-products, inasmuch as, from the very nature of these latter, their consumption is far less exposed to the volatile fancies of the consumer. Last of all, it may happen that the recipients of income do not employ the entire monetary equivalent of the income-products directly received by them to the acquisition of other income-products, but hoard a part of this monetary equivalent. Now in all such cases we have, on the one hand, a theoretical inequivalence, in so far as the sum of the incomes

[1] Cf. Tugan-Baranowski, *Studien zur Theorie und Geschichte der Handelskrisen in England*, Jena, 1901, pp. 249–50.

[2] Marx, *Mehrwerththeorien*, I, pp. 190, 217, 221, etc.

expressed in money is not equal to the total value of the products acquired by the recipients of income; and, on the other hand, which is more serious, we have a gross practical inequivalence, in proportion as the supply of income-products is inferior or superior to the demand, leading to a tumultuous rise in prices, or to an extensive fall in prices and to a disastrous depression of trade.[1]

In any case, however, this inequivalence is merely temporary, and its importance must not be exaggerated. If we take into consideration a period of considerable duration in which the conditions are relatively normal, we ultimately find a necessary and permanent equivalence between the total purchasing power of the recipients of income and the total quantity of income-products existing in the market. Substantially, the total quantity of income-products is always necessarily equivalent to the sum of the real incomes immediately received by the individual recipients of income, or, better expressed, it is that sum[2]; and all that exchange effects is the transfer of single quantities of income-products from one owner to another without affecting the equivalence previously established. Every individual income, in so far as it is equivalent to another individual income, forms the outlet for the products of which the latter income is made up, or transfers itself to the owner of these products, who in his turn transfers his own products to the owner of the former; whereas those parts of income eventually remaining on hand, or those parts of the income-products which fail to find counterparts in other portions of the income-products of other individuals, must be consumed in kind by their owners. But in every case there always exists a perfect equivalence between the total purchasing power of the recipients of income and the totality of the income-products.

Utterly fantastical, therefore, are the fears of Sismondi, Meyer, and a hundred others, when they are afraid that the total purchasing power representing the quantity of private incomes, may not be devoted to the purchase of all the products existing in the market, but may be hoarded, or saved, or

[1] Thus, in England, in the year 1846, the rise in the prices of products of prime necessity induced by reaction a fall in the prices of products of secondary necessity (Tooke, *History*, IV, p. 69).

[2] Seager, *Introduction to Economics*, 3rd edition, New York, 1906, pp. 156, *et seq.*

diverted to the purchase of foreign products.[1] If we suppose that some of the recipients of income hoard a part of their income in the form of money, this may indeed give rise to a temporary depression of trade, by directly removing from the market the buyers of those commodities which these recipients of income would otherwise have bought ; but, in the long run, the only sensible result will be a scarcity of money and an increase in its value, which will enable the other recipients of income to buy a larger quantity of products, and thus to get possession of those products which the hoarders have failed to buy. Hence, in such a case, the equivalence between the total buying power of the recipients of income and the totality of income-products existing in the market will be nowise disturbed.[2] Leaving out of account, however, the antiquated phenomenon of hoarding, and supposing that the recipients of income save a great part of their incomes, the result will merely be that part of these incomes, instead of taking the form of products of consumption and undergoing exchange for other products of consumption, will take the form of products of reproduction, and will undergo exchange for other products of reproduction. Taking the extreme case in which the whole of the income is saved, the various producers, instead of producing the income-products in the form of products of consumption, a, b, c, will produce these in the form of products of reproduction, a′, b′, c′, proceeding then to a mutual exchange, in so far as each of them desires a product of reproduction different from that in which he has directly produced and received his own income. That is all ! This is the whole account of a phenomenon which has undeservedly given rise to so many erudite controversies and to so many anxious doubts.[3]

[1] Sismondi, *Nouveaux principes*, I, pp. 105, *et seq.*, 117, *et seq.;* Meyer, *loc. cit.*, pp. 249, *et seq.*

[2] Bailey (*Money and its Vicissitudes*, London, 1837, pp. 65, *et seq.*) believed that the discovery of a treasure and its entry into circulation immediately created a new demand for products, and thus gave employment to capital and labour otherwise stagnant. But this is a mistake. Just as the hoarding of money simply leads to a scarcity of money, raises its value, and increases the purchasing power of its other owners ; so, on the other hand, to throw the contents of a hoard into circulation, merely diminishes the value of money and lessens the purchasing power its owners previously possessed.

[3] Thus fall to the ground the encomiums of prodigality so dear to the ancients and not unknown to-day. It is asserted that the prodigal is a social

For the same reasons, yet more fantastical appears the thesis of Bernhardi, Rodbertus, Hertzka, Baker, Gunton, Issajeff, Hobson, Supino, and others, who attribute commercial crises to the fact that the greater part of the product accumulates in the hands of the recipients of income, who are unwilling and unable to devote the whole of it to the purchase of commodities, and in great part save it, or, worse still, keep it idle while awaiting fruitful employment for it, thus depriving of outlet the products offered in the market.[1] This view is erroneous, because these incomes, while awaiting employment, are simply deposited in a bank or other institution of credit, and are lent by these for use in production or trade, and thus increase the demand for products. If, on the other hand, the incomes are employed in speculation, if they do not immediately acquire products, they acquire securities, that is to say they transmit to the sellers of these securities a purchasing power which is employed in the purchase of products. In any case, the income must necessarily in the long run be completely transformed into products, so that it is categorically impossible that there should arise any permanent divergence between the purchasing power represented by income and the totality of the products existing in the market.

We need not take any more seriously the disturbance of mind of certain sociologists who fear that the realisation of income is surrounded by greater difficulties and embarrassments than the realisation of subsistence. In Russia, for example, Woronzoff has advocated the view that subsistence is expended upon national products and income upon foreign products, and infers from this that the realisation of income renders necessary a more far-seeing organisation of international commerce, and that it is exposed to the gravest

benefactor because he provides an income for the producers of the commodities which he buys. Nothing could be falser than this view. The producer draws an income from his own product, and not from its purchaser; and the fact that this purchaser is prodigal on the one hand, or thrifty on the other, merely affects the quality of the product, which in one case will be a product of consumption, and in the other case a product of reproduction.

[1] In addition to the well-known works of Rodbertus, consult Baker, *Monopolies and the People*, New York, 1890, p. 171; Hobson, *Imperialism*, London, 1902, pp. 89, *et seq.*, who considers imperialism as the result of the need for finding an outlet for that part of the national production which exceeds the powers of consumption of the income-taking class; Supino, *Le crisi economiche*, Milan, 1907, pp. 59–65.

dangers when international commerce declines or meets with obstacles.[1] This thesis, as anyone can see, is a purely arbitrary one, which may have a certain degree of applicability to Russia,[2] but is in opposition to the experience of other nations and more particularly to that of England, where, on the contrary, subsistence is realised above all in foreign products, whilst income is realised to a large extent in the manufactures and products of national luxury. Moreover, where income is consumed in foreign products, there do not result any of those terrible consequences anticipated by these ultra-theoretical economists ; for the only result is an increased demand for foreign products on the part of the country to which the recipients of income belong, and this exercises an unfavourable influence upon the international value of the commodities which that country exports.

The circulation of income, or the interchange of the products in the hands of the recipients of income, is facilitated, like any other process of exchange, by the intermediation of money. The very existence of money presupposes the existence of income ; for if the product is barely adequate to supply the subsistence of the labourer, he can never sterilise any portion thereof in a product incapable of consumption, such as money. Wherever, therefore, money makes its appearance, it is necessary that the product should exceed the subsistence of the labourer, that is to say, that it should include an income. Yet more, it is necessary that the income should attain a certain elevation ; for, where income is scanty, all that portion of it which can be withdrawn from the consumption of the recipients of income will be transformed into productive capital and not into unproductive wealth, such as money. The existence

[1] Woronzoff, [*The Future of Capitalism in Russia*], Petersburg, 1883. In essence these views, like so many other lucubrations of the Russian economists, are merely a tardy reproduction of the old theses of Western science. In fact, Adam Smith (*loc. cit.*, p. 347) affirmed long ago that the advantage of foreign commerce was that it effected the exportation of that quantity of products for which there was no demand at home. Therefore, still according to Adam Smith, since a portion of the national income is unemployed in the purchase of national products, a part of these must go abroad. Thus, both Woronzoff and Adam Smith affirm that a part of income is not consumed in national products, and deduce from this the need for foreign commerce—Woronzoff to render possible the realisation of the income, and Smith to render possible the realisation of the national products in which the national income is not consumed.

[2] Ilejin, [*The Evolution of Capitalism in Russia*], Petersburg, 1899, p. 6.

of income, and its existence at a comparatively high level, are therefore essential preconditions to the genesis of money.[1]

Now, given the institution of money, to effect the circulation of income a more or less considerable quantity of money is essential. In this connexion, a banker, imbued with all the peculiar economic prejudices of his caste, affirms that it is the circulation of income alone which necessitates the issue of bank-notes or of money, whereas the circulation of capital is accomplished without giving rise to any further issue of money.[2] But this assertion is unfounded. In fact, the sale of landed property, or of any other portion of capital, though the transaction may be carried out by means of cheques and book-credits, is often effected for money of which to that extent the transaction demands the issue. And, if the money thus obtained can be deposited, or otherwise employed, the same is or may be true of the money obtained in exchange for income or for any product. Further, the issue of bank-notes is regularly effected against bills of exchange; now, the bill of exchange represents a commodity in process of formation, that is to say, in part at least, realisable capital. If John Smith, who has bought my product, pays for it with a bill of exchange, this is because the capital which he has employed in his productive work is not yet realised in the product; the bill of exchange, therefore, precisely represents John Smith's capital which is in course of realisation, and the bank-notes issued on account of this bill of exchange precisely correspond to this capital. Hence it is not always true that the circulation of capital is effected without giving rise to a fresh issue of money. Nor is it true, conversely, that the circulation of income always necessitates a fresh issue of money; for it may well happen that the circulation of income may be effected by means of book-credits without giving rise to any additional issue of money. Thus the proposed distinction in this respect between capital and income has not a shadow of foundation; and the truth still subsists in the old thesis of Adam Smith and of Tooke, that the circulation of capital is effected to a greater extent by means of cheques and bills of

[1] Cf. Conant, *Principles of Money and Banking*, New York, 1905, I, pp. 36, 248, *et seq.*

[2] *Circulating Capital*, by an East India Merchant, London, 1885, p. 106.

exchange than is the circulation of income ; and that the money needed for the circulation of capital consists of bank-notes of a high figure and a slow rate of circulation, whereas the money needed for the circulation of income consists almost exclusively of bank-notes of a low figure and a rapid rate of circulation.[1]

[1] Smith, *loc. cit.*, p. 258.—Tooke, *Inquiry into the Currency Principle*, p. 34.

CHAPTER III

THE FORMS OF INCOME

§ 1. Fundamental Forms of Income

We saw in the first chapter that the coercive association of labour, the creator of income, itself demands the employment of a certain quantity of means of production (subsistences, technical capital, land). Now the means of production which are employed for the purpose of effecting the association of labour may be owned and supplied by the labourers themselves, or, on the other hand, by non-labourers, This difference exercises a notable influence upon social production and distribution.

If the means of production are owned and supplied by the labourers themselves, the individuals who participate in the work of production will be found in conditions of substantial economic equality, and this excludes the possibility of the supremacy or dominion of one over the others. Hence, in such conditions, the power effecting the coercive association of labour cannot be exercised by a more or less numerous fraction of the associates, but must emanate from the entire collectivity. In other words, in such conditions, the force constraining to the association of labour must necessarily be *collective*, or must originate in the entire aggregate of the labourers, in the *labour-collectivity*.

If, on the other hand, the means of production are owned and supplied by persons who are not labourers, there is created a primary inequality of conditions between the owners of the means of production and the labourers who do not possess these means, and an economic advantage of the former over the latter. Now this economic advantage renders it possible to the owners of the means of production to impose upon the labourers the association of labour, and for this reason the coercive force effecting the association of labour, which in the former case emanated from the collectivity of the workers, emanates in this case from the work of the private owners. Coercion by the *labour-collectivity* gives place to coercion by the *individual non-labourer.*

This difference between the methods of coercion by which the association of labour is effected, changes the character of the association of the other elements of production. When the means of production are owned and supplied by labour, the coercion effecting the association of labour effects also *per se* a coercive association of the means of production; for in such conditions labour, being intimately inter-connected with the means of production, draws these means also within the influence of the coercion by which it is itself disciplined. When, on the other hand, the means of production are owned and supplied by non-workers, the coercion which effects the association of labour does not necessarily involve a correlative coercive association of the means of production; and therefore, in such conditions, whilst the association of labour is necessarily coercive, that of the means of production is, or may be, free.

From the fundamental difference here pointed out, there arise, however, far more striking differences in the very structure of income. It is obvious that in all cases the owners of the means of production contributing to the creation of income can claim a part of this income. But if the means of production are owned and supplied exclusively by the labourers themselves, the part of the income assigned to the means of production is in actual fact received by labour, that is to say, by the same persons who receive subsistences. In other words, in such conditions income and subsistence are actually inseparable.

If, on the other hand, all the labourers, or a part of these, are persons who neither own nor supply the instruments of production, the income or that part of it assigned to the means of production, is not received by the labourers, or is not received by a part of these; that is to say, income is not received by those who receive subsistences. Therefore, in such conditions, the whole or a part of those who receive subsistence do not receive income, and conversely; that is to say, income is completely or partially divorced from subsistence.

Several cases are possible. It may happen that the income is exclusively assigned to the means of production, and that these are exclusively owned and supplied by non-labourers. In this case, the income is wholly received by the non-labourers, while the labourers are wholly excluded from it. In other words, income is totally divorced from subsistence, and the idle existence which the creation of income alone renders possible now becomes for the first time an actual fact. —It must be added, however, that to render possible the actual divorce of income from subsistence, it is necessary that the collective labour of the producers should produce, over and above their own subsistence, at least what is necessary for the support of one additional man; for if their labour produces less than this, no one can live without working, and for this reason the income as a whole will necessarily be affiliated to subsistence.

It may happen, again, that the income is exclusively assigned to the means of production, but that these are owned and supplied by a part only of the labourers. In this case, income is received by a part only of the labourers, to the exclusion of the remainder. Hence a part of the subsistence is connected with income, while the other part is disjoined.

It may happen that the income is exclusively assigned to the means of production, but that these are in part supplied by labourers and in part by non-labourers. In this case, income is partly received by labourers, partly by non-labourers; that is to say, part of income is connected with subsistence, while the other part is disjoined.

Finally it may happen that the income is partly assigned to the means of production and partly to labour, but that the means of production are exclusively supplied by non-labourers. In this case, part of the income is received by the labourers and the remainder by non-labourers; that is to say a part of the income is connected with subsistence, while the other part is disjoined.

Now, when the means of production are exclusively owned and supplied by labourers, so that these receive the entire income, and there is complete actual consolidation of income with subsistence, we say that the income is *undifferentiated.* When the means of production are wholly owned and supplied by non-labourers, so that these receive the entire income, and there is complete actual separation of income from subsistence, we say that the income is *differentiated.* When the means of production are exclusively owned by a part of the labourers, so that this part of these receives the entire income, and a part of subsistence is disjoined from income ; or when the means of production are partially owned by the whole of the labourers, so that the income is partially received by the labourers, and a part only of the income is disjoined from subsistence ; or when, although the means of production are wholly owned by non-labourers, a part of the income goes to the labourers, and therefore a part only of the income is connected with subsistence—in all these cases, in which there is a partial actual separation of income from subsistence, we say that the income is *mixed.* It will be readily understood that these three forms present varying difficulties in the way of the determination of income. This determination is comparatively easy in the case of differentiated income, that which is materially and actually detached from subsistence ; it is more difficult in the case of undifferentiated income ; and it presents the maximum difficulty in the case of mixed income.

There are thus three forms of income. In the first of these, *undifferentiated* income, labour is completely conjoined with the ownership of the means of production and with income. In the second, *differentiated* income, labour is completely disjoined from the ownership of the means of production and from income. In the third, *mixed* income, labour may be partially or wholly disjoined from the ownership of the means of production, but it is always partially conjoined with income. If we leave out of consideration that case of mixed income in which the labourer is completely deprived of the ownership of the means of production, we may say that the three forms of income are the product of as many different degrees of the association between labour and the ownership of the means of production, varying according as this association is *complete, non-existent,* or *partial.* Now, each of these forms of income constitutes the nucleus of a different form of economy.

We saw in the first chapter that there are three fundamental forms of industry, corresponding to as many degrees of the association of labour with labour; we shall see now that there are three forms of economy, corresponding to as many degrees of the association of labour with the ownership of the means of production. Let us add that each of these three forms of economy can perfectly combine with the three forms of industry, that is to say, that undifferentiated, differentiated, or mixed income may occur in association with the craft, with manufacture, or with machino-facture. Although, as we saw in the first chapter, isolated labour is normally incompetent to produce income, we cannot, all the same, exclude the occasional possibility of this occurrence. In this case, according as labour exhibits complete, non-existent, or partial ownership of the means of production, the income thus arising out of isolated labour will be undifferentiated, differentiated, or mixed. However this may be, in the subsequent discussion we shall leave out of account income produced by isolated labour, in view of the exceptional character of this income. To sum up, the three forms of income can be combined with the most various gradations of the complex association of labour, and also of exchange, which latter may be non-existent, local, regional, national, international, etc. For example, if one or more labourers produce for a non-labourer, there is always differentiated income; if they produce on their own account, there is always undifferentiated income; and this whether the non-labourer in the former case or the labourers in the latter case consume their products in kind, or sell them in the market.[1]

§ 2. Undifferentiated Income

Considering in the first place undifferentiated income, we find that in this form of income the labourer, employing technical capital, first produces and appropriates subsistence, which is precisely equal to the product of the labour and the unitary capital; and then, by means of the association of labour, he produces and appropriates income. In such con-

[1] Hence the distinction, upon which Marx insists so strongly (*Mehrwerththeorien*, I, pp. 399, *et seq.*, p. 417), and also Bücher, between production for the consumer by means advanced by this latter, and production for the capitalist, is an unsubstantial one; for in either case we have differentiated income, which in the former instance is consumed in kind, and in the latter case is exchanged for other objects of consumption.

ditions, therefore, the labourer, having obtained at a certain cost, the product of his isolated labour and isolated technical capital, proceeds to appropriate the product of the association of labour without incurring any further cost beyond the acceptance of the shackles imposed upon his independence by the very nature of the association; that is to say, the labourer obtains part of the product onerously and another part gratuitously.

Let us proceed. The essential character of undifferentiated income is that labour, the recipient of subsistence, is also the sole recipient of income. Now this fact implies that the labourer should be the owner, effective or virtual, of the means of production, since only in consequence of such ownership does he appropriate or can he appropriate the entire product, without having to divide it with anyone else. But the labourer cannot himself own the means of production unless it be possible for him, if he will, to produce these on his own account; and this in its turn is possible only if he has free access to the land. It may therefore be said that undifferentiated income presupposes that the land should be accessible to the labourer, or that he should be empowered to occupy a tract of land sufficient to produce the instruments of production. This, in its turn, presupposes two conditions: the effective existence of free land, accessible to the labourer; and that the labourer should possess legal freedom, and not be subjected to the power of another. Whence follows the consequence that, in such circumstances, the association of labour, when it brings together several producers upon the land belonging to a single individual, implies the existence of a further condition, in addition to those previously pointed out, namely, the deprivation of free land.

Where undifferentiated income is based upon the free association of labour, it presents a second essential characteristic which is a corollary of the first; this is, that all the producers shall be perfectly functional and mutually convertible, so that each one of them can always be transferred to the production or to the economic condition of any one of the others. In fact, in such conditions, every fresh addition to the population can always transfer himself to the free land and there produce the technical capital which will fertilise his labour; that is to say, he can always place himself in a position identical with that of the producers already established. Further, since the competition among the producers is unrestricted, each one of them has full power to devote himself to whatever production he prefers. This excludes the possibility that one producer can acquire a monopoly of any kind, or can permanently place himself in a privileged position. Finally, since each producer can employ his own capital only with his own labour, that economic advantage which may be the outcome of a superiority of intelligence or of environment is necessarily also kept within strictly circumscribed limits. For these reasons, in such conditions, the divergencies between the individual incomes are necessarily transient, in other words, the economy is, from the very force of circumstances, undifferentiated; and, in correlation with this, consumption also assumes characteristics of equality, because in the case of each individual his total receipts are distributed in practically equal proportions between the consumption of necessaries and that of luxuries.

But we have seen that in the conditions of the productivity of the land that have hitherto prevailed, the producers are averse to the association of labour, and that it is therefore necessary that this association should be imposed by some form of coercion—which, where the labourer is owner of the means of production, involves the coercive employment of technical capital, and emanates from the collectivity itself of the associated labourers. Now this coercive collectivity assumes, in the course of social evolution, three forms essentially diverse, which give rise to as many correlatively dissimilar forms of undifferentiated income—the *communistic*, the *corporative*, and the *co-operative* economy.

Even in the dawn of human society, an archaic form of productive association makes its appearance, the matriarchal family. The patriarchal family, which succeeds this, is simply an institution associating labour by force, and in its beginnings the *patria potestas* in nothing more than a primitive instrument for the coercion of the associated productive energies. At a later date, the association of the producers is imposed by the clan; and it is only at a still later epoch that association is imposed by the community, as in the Germanic mark, or by the state, as in the great Asiatic and African empires. At a subsequent period, labour is forcibly agglutinated in the craft-guild, and is under the rule of the directive authority of this body. In its first beginnings, the craft-guild was not clearly distinguished from the earlier coercive instrument, for the coercion was not exercised by the chiefs of the guild but by the state itself. Thus, the artisan guilds of Rome in the third century A.D. were organised and disciplined by the collective power of the state [1]; and the same thing happens in Peru under the rule of the Incas, where the natives are organised by the state in artisan guilds.[2] In a later phase, however, the guild imposes the association of labour by its own authority, having recourse to the collective power of the state merely as the executive instrument of the guild's own sanctions; and the medieval commune was substantially nothing more than an entity for the combination of productive forces, completing and fertilising the organising work of the craft-guild.

Finally, the coercive element is likewise found in connexion with that form of undifferentiated income which persists to-day, that is, in co-operation. Certainly, in this form of income—and herein consists one ground for its superiority over the others—there is absent the initial coercion, or coercion of the first degree, for in co-operation the producers spontaneously undertake the association of their labour. But we have in co-operation to a notable extent coercion of the second degree, which is permanent in character, inasmuch as it is necessary that there should be a directive authority to repress the individual and spontaneous initiative and the mutual distrust of the co-operators, to say nothing of the need to discipline and co-ordinate their forces for a common purpose.

Now the collective authority, thus constituted, will not as a rule be able to effect the coercive association of the producers, except by suppressing that primary freedom of access of the labourers to the land upon which undifferentiated income is

[1] Waltzing, *Étude historique sur les corporations professionnelles chez les Romains*, Louvain, 1895, II, pp. 10, 51, *et seq.;* Groag, *Collegien und Zwangsgenossenschaften im III Jahrhundert;* "Vierteljahrschrift für Sozial- und Wirtschaftsgesch.," 1904, pp. 481, *et seq.*

[2] Payne, *History of the New World*, Oxford, 1892, I, p. 354; II, pp. 501, *et seq.* (A notable work.)

founded. Thus, primitive communities, like craft-guilds, forbade their members to abandon the community to which they belonged in order to establish themselves on their own account upon an available piece of land ; that is to say, they effectively cancelled the primary accessibility of the soil, and shackled the producers to the collectivity.

Again, it often happens that the central power thus constituted, imposes by its own authority the complex association of labour ; that is to say, it inexorably confines the producers to a single field of production, thus suppressing that mutual interchangeability of the producers which is a primary and essential characteristic of undifferentiated income. We see this first of all in the communistic economy. Thus, the members of the Germanic mark are restricted by the community to one immutable field of production, or are confined to the perpetual repetition of one single kind of labour. The corporative economy acts in the same way ; and the medieval corporation (guild) defines by very strict rules the sphere of activity allotted to each master-craftsman. Thus, in France and in Germany, the manufacturer is forbidden to dye his own stuffs ; the dyer of thread is forbidden to dye silk or wool in the piece, and vice versa ; and the hat-maker is forbidden to retail his own products.[1] In the year 1297, Ghent, as also Ypres, forbids the manufacture of cloth within a radius of three miles from the walls of the town, and every year an armed force is sent out to destroy the crafts of the adjoining country.[2] A no less rigorous restriction of the individual producer's sphere of action is displayed in the co-operative economy. Further, the producers thus rigidly confined to a single field of production, are also subjected to every possible kind of restriction as regards the sale of their products. Already in primitive tribal communism the very faculty of individual exchange is suppressed, and the individual products are appropriated and distributed by the collective authority ; and in the collectivist economy of a later time, exchange, permitted to individuals, is governed by rigorous restrictions. Similarly, the craft-guilds (for example, that of the English clothiers

[1] Forbonnais, *Recherches et considérations sur les finances de la France*, Basle, 1758, I, p. 479.

[2] Vanderkindere, *Le siècle des Artevelde*, Brussels, 1878, p. 266.

in the time of Richard II) desire to have reserved to themselves the sole right to buy and sell the product to whose manufacture they are restricted.[1] Further, they wish that the importation of the products of foreign guilds shall be forbidden; that purchase and sale shall be effected in special markets; that if the raw material has been bought abroad, the product manufactured from that raw material shall also be sold abroad; and they further demand a rigorous taxation of the products. Finally, within the limits of the co-operative body itself, there is no lack of rules and restrictions to harass the sale of the merchandise. This rigid restriction of the producers within impassable limits of manufacture and sale suppresses competition among the producers, and therewith deprives the value of their products of all correlation with the cost of production.

Whether or not the central authority imposes in varying degrees the complex association of labour, in every case it imposes the simple association of labour, the co-ordination of the forces of those producing the same commodity. By the matriarchal family, the labour of men belonging to the various family groups is already forcibly concentrated upon a circumscribed area of land and around a single feminine nucleus; and the same thing is subsequently effected by the *patria potestas*, by the clan, and by the state. Thus, in America, where Columbus first had to impose the forced association of labour upon the recalcitrant Indians,[2] the Spanish colonising Mexico, and the English in their settlements further north were forcibly associated by the central authority.[3] In India, the great works of colonisation are possible only thanks to the forced association of labourers organised by the village community[4]; whilst the Germanic mark disciplines in like

[1] Herbert, *History of the Twelve Great Livery Companies of London*, London, 1837, I, p. 425.

[2] Prescott, *History of Ferdinand and Isabella*, Paris, 1842, p. 460.

[3] Sieber [*A Study of the Primitive Economic Civilisation*], Petersburg, 1883, pp. 46, *et seq.*

[4] In his work on *The Indian Village Community* (London, 1896, p. 325), Baden-Powell says that in the Madras province we have examples of co-operative villages founded by the spontaneous initiative of the cultivators. He adds, however, that these villages are always the product of a privileged colonising enterprise, effected under the patronage of chiefs, or as a fruit of conquest (*loc. cit.*, pp. 366, 543). Substantially, then, we have always to do with forced aggregations, and the same may be said of the ex-

manner and imperiously associates the labour of its members, and also enforces upon them the use of their instruments of production. In Egypt, at first the building of the pyramids, and later the great works of irrigation, were accomplished by labour coercively associated under the yoke of the Pharaohs, that is to say, of the state (which in this phase is always an emanation of the labourers); whilst the innumerable canals which intersect the Transcaucasian region, and the dykes of eastern Friesland, date from a time when the native population was subjected to an iron despotism, organising and associating their productive forces.[1] At a later date the medieval corporation (guild) imposes on the individual artisans the method of work and that of the use of the technical instruments, and co-ordinates and disciplines their forces ; and the same function is fulfilled in our own day by the directive organs of co-operative societies for production. Such authoritative coercion to the association of labour as a rule implies the permanent assignment of each producer to a given sphere or portion of the collective production.

However fully characterised by rigorous and vexatious restrictions may be the coercion which thus disciplines the producers, it must in the first place be noted that such coercion diminishes in intensity with every successive phase of undifferentiated income. If, in fact, in the communistic economy

amples given by Wakefield (*A View of Colonisation*, London, 1849, pp. 178–9), and by Chevalier (*Lettres sur l'Amérique du Nord*, Paris, 1837, II, pp. 286, *et seq.*), of free association among the first American colonists, or on the frontiers of the nascent American states, as also of the genius for co-operation which has been reported to exist among the workers of the island of Hawaii (*Bulletin of the Department of Labor*, July, 1903) ; whereas in Africa, on the other hand, a federation of the Kaffirs appears inconceivable (Bryce, *Impressions of South Africa*, London, 1896).

[1] Marx, *Le Capital*, I, p. 145 ; Sieber, *loc. cit.;* Metchnikoff, *La civilisation et les grands fleuves historiques*, Paris, 1889, p. 233 ; Hilgard, *The Causes of the Development of Ancient Civilisations in Arid Countries*, "North Amer. Rev.," 1902, pp. 109, *et seq.* In Rome, also, in very early times, the great public works are performed by the plebeians, forcibly associated under the despotism of the kings ; and according to Mommsen and certain recent historians, it was precisely the rebellion against this coercion which induced the coalition between the plebeians and the patricians, and led to the founding of the republic. A forced association of labour, disciplined by the collective authority, exists also in Old Japan (Fukuda, *Gesellschaftliche Entwicklung in Japan*, Stuttgart, 1900, pp. 32, *et seq.*) ; and the same thing exists to-day among the natives of Erythrea (Gioli, *L' agricoltura nell' Eritrea*, Rome, 1903, pp. 45–9). Other examples will be found in Beauchet, *Histoire de la propriété foncière en Suède*, Paris, 1904 ; and in Maitland, *Domesday Book and Beyond*, London, 1897, pp. 340, *et seq.*

the coercion is exercised by the public authority, and is therefore endowed with the maximum force and intensity, in the craft-guild it is exercised in part by the law, and in part by the master-craftsmen directing the production; and precisely on account of this composite character, wherein an individual element is intermingled, it already presents a less inflexible rigidity and a less harsh crudity. But the coercion is also less sensible and less acute in the co-operative economy, for here, in addition to being partial or restricted, this coercion has an exclusively private character. It may, therefore, be affirmed that the economy of the undifferentiated income proceeds from a state-economy to a contractual economy, inasmuch as coercion emanating from the state or organised by law is always advantageously replaced by coercion of a private character sanctioned by free contract; and to such an evolution there corresponds a diminishing intensity of the coercion displaying itself in such an economic form.

On the other hand, in this form of income, the coercion imposed on the producers, for the very reason that it proceeds directly or indirectly from the associated labourers themselves, is always exercised in their own interest, or for the better organisation of their labour, in order to increase the total and individual product. Above all, then, this coercion does not aim at creating a predominance of one over the others, or at the institution of economic privilege; on the contrary, it is directed towards the overthrow of any virtual privilege, at the elimination of any inequality; in sum, its purpose is to sanction and to defend that equivalence of incomes which free land itself produces.[1]

A constant phenomenon in all the forms of undifferentiated income is the energetic intervention of law or of the collectivity in order to create and jealously to maintain the average condition and the economic equivalence of the associates. Thus, in primitive Denmark, when a village is founded, each family is allotted an equal share in territory of a given fertility, while the lots that happen to be comparatively sterile are, in

[1] "The state is a power whose aim is enfranchisement (from the dominion of individual interests)" (Ratzenhofer, *Die soziologische Erkenntnis*, Leipzig, 1898, p. 203).

compensation, of larger extent.[1] In Sweden, specific arrangements are made in order to secure that the various owners may be placed in conditions of perfect equality [2]; whilst in Germany, in France, and in Wales, zones of land varying in fertility are divided into lots, and each owner is assigned a lot in every zone.[3] Yet more, we find a number of the most detailed regulations aiming at the elimination and prevention of every possible differentiation among the associates. Thus, the obligation of hospitality is imposed upon all alike; the passer-by is allowed the free enjoyment of the fruit of another's vines; the duty of rendering help to their neighbours is imposed upon the communists; the man whose wife bears no son must temporarily cede her to his brother or other near relative; etc.[4]

Prescriptions no less jealously detailed, aiming at the maintenance of economic equality among the associates, are met with in the craft-guild. This economic form is already found in many cases within an agricultural community, or as an emanation from such a community. Thus, in Belgium, the primitive nucleus of the industrial community is a rural corporation (guild); and again the Charter of Antwerp of the year 1291 secures for the inhabitants of the city the absolute enjoyment of free land in the neighbourhood. It is therefore not to be wondered at if the civic corporation of the early times thus presents obvious and intimate analogies with the ancient mark, and if, at the same time, all the decrees of such a corporation are inspired with the aim of maintaining economic equality among its members. But this aim persists at a later date when the guild has been completely separated from its primitive rural foundation. The purpose is, in fact, that no member of the guild shall have any advantage over the others. No one is allowed to buy for himself alone all the raw material brought to the market, but he is expected to leave a part for his fellows. The guild specifies the price of the raw material, which must be identical for all the manufacturers.

[1] Landau, *Die Territorien*, Hamburg and Gotha, 1854, pp. 30, 33. The same practice obtains among the natives of Erythrea (Gioli, *Bollettino dell' emigrazione*, 1906, No. 16, pp. 271–2).

[2] Beauchet, *Histoire de la propriété foncière en Suède*, Paris, 1904, *passim*.

[3] Seebohm, *French Peasant Proprietorship*, "Economic Journal," March, 1891.

[4] Maurer, *Dorfverfassung*, I, p. 340.

The master-craftsman must not practise more than one craft, he must not own more than a limited number of looms, and he must not keep more than one craftsman, journeyman, or apprentice ; and he is even forbidden to enter into association with another master-craftsman, or to work in the same house with another. Nor is this all. Those engaged in each of the successive stages of the industry, corresponding to the successive stages of elaboration of the product, must participate in the total product in proportion to the quantity of labour which they have respectively contributed ; and within each sphere of production, the distribution of the product is effected in accordance with the work done, in order to insure the economic equivalence of the producers. It frequently happens that the master-craftsman and the journeyman divide the product in equal shares ; and this mode of distribution is still found among the carpenters of Mulhouse in the year 1457, while at Basle it lasted till as late as 1711. Where there is any difference between the remuneration of the master-craftsman and that of the journeymen, the law intervenes to impose rigid limits upon this difference ; and as a rule the difference in remuneration which the master-craftsman may obtain by his work of saving and direction must not exceed one-fourth of the product. It is obvious, then, that this superiority of remuneration of the master-craftsman over that of the journeyman is precarious in character ; for the journeyman remains in that condition from thirteen to sixteen years only, then he becomes a craftsman, and in the course of a year (if he has, as is always the case, sufficient capital to establish an undertaking of his own) he rises to the condition of master-craftsman.

Great vigilance is exercised to provide that capital shall not be transformed into an independent means of acquisition, or become for its owner the source of a privileged or superior remuneration. If we often find in the Middle Ages that the worker is directly employed by the consumer with the aid of capital advanced by the latter, this is because it is not held desirable that the dead material should become a source of acquisition, or that the capital should continue to provide income increasing without end.[1] With like intent in England,

[1] Bücher, *Gewerbe*, in "Handwörterb. der Staatsw."

in France, and in Germany, it is forbidden to one who desires to found an independent enterprise to receive on loan from a private individual the sum primarily needed for the acquirement of the instruments of production. And it is prescribed that this sum shall be advanced to him exclusively by the guild or by the city, the loan being accompanied with the consecrated formula, *Si fortuna sibi arridebit, pagabit.*[1] The manufacturer can never gain any advantage for himself by lending to another his own looms or buildings. If it should happen that a loan is effected by contract, it is understood that the lender is not to be entitled to the benefit of any interest upon this loan; for, says Beaumanoir of interest, *Nul loi ne le doit faire payer.*—Thus, the most diverse laws combine in the supreme aim of maintaining economic equivalence among the associated producers.

A similar series of phenomena is manifested in relation to that form of undifferentiated income which flourishes to-day, however deformed and corrupted by the solvent influence of that antagonistic form of income in whose midst it is condemned to vegetate. In fact, the contemporaneous co-operative economy itself, where it is able to exist without being forced to pay tribute of exhausting dues to landlords and money-lords, succeeds in maintaining a comparative equality among its associates, or in preventing a too salient divergence among their incomes, either by forbidding the co-operators to contribute unequal quantities of capital, or else by equalising their shares in the distribution of profit. Thus the co-operative societies of Piedmont, which depart less than those of other regions of Italy from the typical form of undifferentiated income, maintain comparative equality among their members, and do not assign to capital any preferential share in the distribution of the profits.[2]

Thus, in the regime of undifferentiated income, in all its forms, the institution constraining to the association of labour brings into being a series of laws or prescriptions decreeing the economic equality of the producers. But this equality, imposed by authority, has to encounter a formidable obstacle

[1] E. de Girard, *Histoire de l'économie sociale jusqu'à la fin du XVI^e siècle*, Paris, 1900, pp. 128–9.

[2] Fenicia, *La cooperazione in Piemonte*, Turin, 1901, pp. 186, *et seq.*

in the individual egoism of the associates, who endeavour in every possible way to attain to a privileged and superior position. Therefore, in each of the three forms of undifferentiated income, sooner of later, though in various different ways, the original equality disappears, and inequality of incomes is established.

Even in the primitive community, inequality of incomes is not slow to manifest itself. In fact, the very cause which led to the constitution of the primordial associations, that is to say the increase of population, renders necessary the conquest of new territories, and therewith the destruction of the original equality of possessions. Vainly does the legislator attempt to ward off the danger, by forbidding or restricting the alienation of the land; for the very shackles thus imposed can only serve to accentuate the inequality. For example, in the Burgundian laws (tit. 84, c, 1): "Quia cognovimus Burgundiones sortes suas nimia facilitate distrahere, hoc praesenti lege credidimus statuendum, ut nulli vendere terram suam liceat, *nisi illi, qui alio loco sortem autem possessiones habeat*."[1] By thus forbidding the sale of land to persons who do not already possess it, the law evidently succeeds in accentuating the existing inequality in the matter of landed property; and the inequality in landed property involves inequality in common rights, since the measure of these is proportionate to the extension of landed property. Economic inequality, thus initiated, then enables the more favoured members of the community to exempt themselves from labour, or to procure a genuine differentiated income of their own, as happens in the most striking way in Wales. Here, in fact, the richer members of the community contribute to the work by lending oxen, or the plough, or the greater part of these, but contribute no labour; while the poorer ones provide a lesser part of the instruments of labour and furnish the labour itself; the product is divided among them in predetermined proportions. In this way the richer members of the community obtain an income without labour. But from this hybrid form, in which the community permanently loses its character of equality, there develops a more definite form, owing to the fact that the wealthier members leave the community altogether. In fact,

[1] Maurer, *Einleitung in die Frohn, etc., und Markenverfassung*, p. 209.

those who have been able to get possession of a larger area of land are not slow to leave the community more or less abruptly, or to segregate their own possessions, forbidding their former associates to pasture their animals on these lands, and gaining for themselves the right to cultivate them according to their own pleasure, without having to regard the vexatious sanctions of the social authority.[1] In this way, economic inequality is plainly and definitively established.

A similar evolution occurs within the corporative economy. In this, in like manner, the primitive equality of incomes is gradually undermined, for the master-craftsman eventually reduces his former fellow-workers and comrades to a sort of tempered slavery, and thus procures for himself *per fas et nefas* a higher remuneration which enables him to withdraw from labour and to confine himself to the receipt of income.

Finally, the same phenomena recur in the co-operative economy. Everywhere co-operative associations, initiated under the auspices of democratic equality, degenerate into institutions of privilege, and become characterised by the most marked inequality.—The capital passes into the hands of a small minority of the associates, who, thanks to this, give up working, whilst the great majority of the associates do not contribute any portion of the capital, and are therefore reduced, in substance, to the receipt of subsistence alone.[2]

In all the forms, therefore, of undifferentiated income, the original equality of incomes, sanctioned by the coercive action of the social authority, does not long resist the solvent influence of individual egoism ; for this, in defiance of the equalising sanctions of the organising power, effects, sooner or later, the differentiation of individual incomes, thus digging the grave of this economic form, and effecting the inevitable passage to that categorically opposed form which we shall now proceed to study.

§ 3. Differentiated Income

The characteristic features of differentiated income are absolutely contrasted with those we have just been considering

[1] Maurer, *Dorfverfassung*, p. 155.

[2] Bourguin, *Les systèmes socialistes et l'évolution économique*, Paris, 1904, p. 111.

as proper to undifferentiated income. In the first place, in differentiated income, the labourer, though he contributes nothing but labour, must obtain precisely as much as he obtains in undifferentiated income with labour and unitary technical capital—that is to say, subsistence. We shall see later that sometimes he obtains less ; but in normal conditions, such as we are now considering, the labourer must obtain the entirety of subsistence, that is to say, the integral product of labour and of unitary technical capital ; and further, since he does not possess any store of the necessaries of life, he must receive this subsistence prior to the completion of the product. —In such conditions, therefore, the labourer, providing a given quantity of pure labour, receives in exchange, and in advance, the product of this same quantity of labour and in addition that of a technical capital ; that is to say, he receives more than he gives, or obtains a part of the product onerously, and a part gratuitously. On the other hand, the product of the association of labour, income, no longer goes to the labourer, but to another individual, namely to him who advances the labourer's subsistence. In such conditions, therefore, the product of the association of labour is no longer, as in the case of undifferentiated income, a gratuitous surplus accruing to the domain of labour, but is a more or less extensive remuneration for the advance made to the labourer by another individual, which advance enables the labourer to obtain a gratuitous increment to the product of his pure labour. Whereas, then, in the case of undifferentiated income, the product of the association of labour is in its integrity a gratuitous accruement received by the labourer ; in the case of differentiated income it goes, at least in part, to compensate for a gratuitous advance made by the non-labourer to the labourer.[1]

[1] In his *Analisi* (I, p. 32), the author has previously pointed out that where the labourer who contributes to production nothing but his labour receives in advance more than the anticipated equivalent of the product of pure labour (which anticipated equivalent is already less than that product), his wage includes a surplus-payment. *A fortiori*, therefore, his wage includes a surplus payment, if the worker receives in advance the product of pure labour ; and all the more is this the case if the worker receives in advance the product of labour and of unitary technical capital.

Nor can it be said that the labourer who, in the case of undifferentiated income, contributes labour and unitary technical capital and obtains a subsistence, will find himself in an inferior position as compared with the labourer

The fact that in differentiated income the labourer contributes nothing but his labour, implies *per se* the fact that in this economic form the productive labourer never owns the means of production. Now, if the labourer neither has nor can have ownership of the means of production, this implies that it is impossible for him to produce these means on his own account, or to transfer himself on his own account to land without value. It follows that the essential fact underlying differentiated income is that the productive labourers are categorically excluded from access to the land.[1]

Now the denial to the labourer of access to the land, which is the essential foundation of this form of income, is obtained, first of all, by denying to the labourer gratuitous access to the land, or to an area of land sufficient to furnish the means of production. But access to the land may be direct or indirect. It may be that the land is accessible only to those who have the power of directly occupying it, on the other hand, it may be that the land is always accessible to all those who have free access to another productive element, and in this case, access to this last element is indirect access to the land.—Hence the denial of access to the land implies the denial to the labourer either of direct access or of indirect access ; this meaning in the latter case that the labourer is denied access to the element which *per se* gives access to the land.

But the denial to the labourer of gratuitous access to the land, does not suffice by itself to exclude the labourer from the ownership of land ; for that which is not gratuitous may be bought, and it is not excluded from possibility that the labourer

in the case of differentiated income, who obtains as much when contributing labour alone, and that the former will transfer himself to the condition of the latter. For, in the other scale, we must place the desire for independence (*Cost. Ec. od.*, p. 663, note) ; and we must also remember that the former can always increase his product by means of the association of labour, in virtue of which he can gratuitously effect an increment of the product, whereas the wage-labourer must hand over the product to him who has advanced the capital. If the independent labourer does not associate his labour with that of others, this is due simply to the reluctance which he experiences with regard to the association of labour, is due, that is, to his own will alone ; and to him alone is due the scanty nature of the product he obtains.

[1] "It is, indeed, a gift of nature that men can raise more food than the lowest quantity that they could maintain and keep up the existing population on but surplus produce generally means the excess of the whole price of a thing above that part of it which goes to the labourers who made it ; a point which is settled by human arrangement and not fixed by nature."—*Observations on Certain Verbal Disputes in Pol. Ec.* (Anon.), London, 1821, pp. 74–5.

may save upon his subsistence (which does not of necessity coincide with the strict necessaries of life) sufficient wealth to buy the land, or to buy the productive element which will give him access to the land. Now, to avoid this dangerous eventuality, it is necessary that the maximum saving possible to the labourer out of his remuneration should be inferior to whatever may be the value of the area of land cultivable by the labour of a single man, or to the value of the productive element which will give him access to that area; or, to put the matter more concisely, that it should be inferior to the value of access to the land. Let R represent the maximum saving of the worker, and V the value of access to the land, the persistence of differentiated income demands as a primary and necessary condition the permanence of the equation:

$$V = R + x$$

Now this equation, when it is not the spontaneous outcome of the economic order (for in this case we have the *spontaneous* economy), can be obtained in two ways only; either by diminishing R, the savings of the worker, which can only be effected by lowering his remuneration (the *systematic* economy); or by raising V, the value of access to the land (the *automatic* economy).

Whichever of the two methods here specified is employed to maintain the equation under consideration, this artificial action involves in any case a certain expenditure, a sterilisation of a part of capital and a part of labour, which are diverted from production and are confined to the technically unproductive function of effecting a supervaluation of direct or indirect access to the land, or to that of lowering the value of labour. The necessary result of such a proceeding is to depress income below the figure which it would otherwise attain, and it will be obvious that the recipients of income, whose direct wish is to elevate income to its maximum figure, will not spontaneously have recourse to a process which leads to the opposite result.—It is true that this process is essential to ensure the vitality of differentiated income; but this function is dependent upon the working of a mechanism that forms too recondite a part of the social machinery for it to be known and felt by the recipient of income or to constitute the immediate incentive to his economic conduct. Hence, the recipient of income first of all organises the factors of production in such a way as to obtain the maximum income, without paying any attention to the fact that the value of access to the land is, or may become, inferior to the maximum saving of the labourer. But as soon as the value of access to the land becomes inferior to the accumulated saving of the labourer, a part of the labourers transfer themselves on their own account to the land, abandoning the capital which has hitherto employed them, and depriving it of income. Now part of this capital, thus deprived of income, devotes itself to production, and therewith increases the demand for the productive elements, and hence increases also the demand for that element which concedes access to the land, and therefore increases the value of such access ; whilst the other part of this capital stagnates in the form of unproductive capital, which either, by diminishing the rate of profit on productive capital, slackens saving and thus ultimately effects a diminution in subsistence, or else directly seeks for profit at the expense of subsistence, and in any case diminishes the savings of the labourer.—Thus the violation of the equation $V=R+x$ sets in motion in two different ways, independently of the will and the conscious purposes of the recipient of income, forces which inevitably tend to the re-establishment of that fundamental equation, and therewith of the equilibrium of differentiated income.

In this way, the denial of free land, the foundation of differentiated income, is maintained by a twofold process : the exclusion of the labourer from gratuitous access (direct or indirect) to the land, and his exclusion from onerous access to the land, this latter being secured by the maintenance of a permanent superiority of the value of such access over the accumulated savings of the labourer.—This twofold process presents itself in economic evolution under three forms very clearly distinguished one from another, corresponding to as many clearly distinguishable forms of differentiated income, namely, *slavery*, *serfdom*, and the *wage system*.

As long as there exist lands of high fertility and unrestricted in quantity, and as long as the total appropriation of the territory is therefore physically impossible, the producer, if he is legally a freeman, that is to say, if he belongs to himself, always has the power of establishing himself on his own account upon an available area of land. In other words, in such conditions, the labourer is the productive element whose ownership *per se* throws open access to the land. If, therefore, in such conditions, it is wished to deny to the labourer ownership of the land, it is necessary to deny to him the ownership of himself; he must, that is to say, be reduced to slavery. But the slave receives a *peculium,* and as soon as his peculium has been saved to form a sum equivalent to the value of the slave, this latter hastens to buy his freedom, thus annihilating differentiated income. Thus the persistence of differentiated income can only be assured by seeing to it that the value of the slave shall exceed the quantity of his savings, whatever this may be. This may be effected, either by means of an artificial rise in the value of the slave, or by means of an artificial reduction in his peculium. The former method is the one usually employed in the ascendent and more prosperous period of the slave-economy, whilst the latter method is commoner in periods of decline and retrogression. In any case, the adoption of either method is the outcome of the working of inevitable necessity: for capital, being deprived of labourers and of income, either devotes itself to production, which increases the demand for slaves, and hence sends up their value; or else stagnates as unproductive capital, which diminishes the profit of productive capital, slackens productive accumulation, and depresses the subsistence of the labourer.

Such is the sequence of phenomena in the slave-economy, alike in its earliest and classical manifestation in the Græco-Roman world, and in its recent transient appearance in the young society of the new world.—Referring the reader in this connexion to the circumstantial account we have elsewhere given of these interesting phenomena, it will suffice to add here that the most recent researches furnish incontestable proof of our proposition. In the southern States of the American Union, according to the report of a conscientious investigator, during the slave-holding regime, the price of a slave ultimately rose to 2000 dollars, yielding to the slave-traders from 33 to 50% profit.—Between 1845 and 1860, while the peculium of the slave rose to as much as 150 and even 200 dollars per annum, the price of slaves increased by 100% causing great distress to the planters.[1] Further, the value of the slaves rises while the price of cotton declined, so that the value of the slaves increases to an extent disproportionate to the advantage which can be derived from them. This shows that an element of speculation enters into the value of the slave, or that there is a hypervaluation of the slave. *This is the central phenomenon of slavery;* and it is to this, far more than to the indolence of slave labour, that is due the low productivity of slave-states, the perennially unstable equilibrium of the slave-holding enterprise, the decline of the system, and its inevitable ruin.[2] Similarly in Rome, where the purchase of freedom is regulated by law, and is not infrequently effected, the slave-owner speculates upon the desire of his slaves to gain their freedom; arranging that those who succeed in freeing themselves can do so only by means of privations and hard work. One of the reasons for the inefficiency of slave-labour, is that efficiency on the part of the slave only serves to raise his market price, and therefore to render it more difficult for him to obtain his freedom. During the ascendent period of the Roman economy we see the price of a slave attain fantastic figures; from 1260 francs in the time of Cato, and 2000 francs in the time of Columella, it rises to as much as 12,000 francs in the case of the finer and more intellectual labourers.[3] When, then, in the declining period of the Roman economy, the price of the slaves falls, the slave-owners set themselves vigorously to work to reduce to the lowest possible level the subsistences of the labourers, by defrauding them of their peculium. Thus in Sicily, the enormous number of the slaves reduces their value to a minimum, and this leads the slave-owners to diminish the peculium and gives rise to horrible misusage of the labourers, and this leads at length to the fearful revolt of Eunus.—In Rome itself, the abnormal depreciation of the slaves, the outcome of the wars of conquest which brought so many slaves to the

[1] Collins, *The Domestic Slave Trade of the Southern States*, New York, 1904.

[2] Philipps, *The Economic Cost of Slave Holding*, "Political Quarterly," 1905.

[3] Feuerherd, *Die Entstehung der Stile aus der Politischen Oekonomie*, Brunswick, 1902, p. 128; Lemonnier, *Étude historique sur la condition privée des affranchis aux trois premiers siècles de l'empire romain*, Paris, 1887, pp. 94, *et seq.;* Oliver, *loc. cit.*, pp. 78, 131.

Roman market, leads the slave-owners to reduce the peculium, and to treat their slaves abominably, circumstances which play no little part in provoking the servile war. Thus slave income oscillates with an invariable rhythm between two opposite poles—the supervaluation of the slave, and the arbitrary reduction of his peculium.

But these processes become continually less efficacious in proportion to the decline of the slave economy ; for, while the diminution of income opposes increasing obstacles to the process of hypervaluation of the slave, the increasing resistance of the slaves renders always more difficult a proportionate reduction of their peculium. Thus the moment inevitably arrives in which the value of the slave becomes less than that of his accumulated peculium ; and the immediate consequence of this, operating through the redemption of the labourer, is the irreparable destruction of the slave-income.[1]

The problem now arises as to how differentiated income may be effectively transformed, without, however, being radically dislodged from its previous foundation. In fact, inasmuch as the unrestricted supply of land persists, the productive element which opens access to the land remains always the man himself; and therefore the persistence of differentiated income can be secured only by maintaining the value of the man in excess of his accumulated savings. But it is at the same time necessary that this excess of value should be attained without having recourse to that process of supervaluation of the man which has proved itself incompatible with the normal continuance of the economic order. Now, how can this be effected ? Very simply : by making the labourer inseparable from the land which he cultivates, in such a way that he cannot alienate himself from the land, nor buy himself except in connexion with the land. Thus it becomes impossible for the labourer to redeem himself unless he simultaneously buys the land which he cultivates ; and thus the value of the man's redemption is in actual fact maintained at a high level, without its being necessary to have

[1] Philipps has been good enough to send me an old number of the newspaper "Federal Union," of Milledgeville, Georgia, dated December 30th, 1844, in which the prophecy is made that as the population increases the employment of slave-labour will cease to be profitable, the value of the slave will decline, and the persistence of slavery will necessarily become impossible.

recourse to the costly and injurious process of supervaluation of the labourer. It amounts to the same thing as if a commodity which has hitherto been maintained at a high price, and a prohibitive one to many of the buyers, by means of an artificial limitation of supply, or by means of some other more or less costly and arbitrary methods, now comes to be on supply in the market at a normal value, but at the same time there is imposed as one of the conditions of sale the concommitant purchase of another commodity more or less connected with the first. In this way, it is evident, the first commodity, although the supply may have increased, or no longer be restricted, remains beyond the powers of acquisition of those with slender purses ; in order words, it is successfully prohibited to the lesser buyers, without any need for recourse to artificial restrictions or to positive destruction of commodities. Such is, substantially, the artifice which secures the persistence of differentiated income during the regime of the serf-economy ; for, whilst that economy permits the value of the man to fall to its natural level, it at the same time makes it impossible for him to redeem himself, except in connexion with the land which he cultivates, and thus effects in actual fact a rise in the value of the man's redemption ; that is to say, indirectly, and without imposing harmful shackles upon the productive process, it attains the same result which, in the previous economic regime, was attained more directly and brutally by the supervaluation of the labourer.

An extremely noteworthy fact (since it shows that at one and the same time nature poses a problem and provides the means for its solution) is that such a method of indirect supervaluation first becomes possible at this precise instant in economic evolution, and would not have been realisable before. In fact, in the slave-owning period, in which cultivation is restricted to comparatively fertile lands, differential rent has not yet made its appearance, or, if at all, only to a trifling extent, and for this reason no cultivated land possesses a sensible value independent of the labour or capital employed upon it. Hence, in such conditions, a law subordinating the purchase of a man to the purchase of the land which he cultivates would not effect any notable elevation in the price of redemption of the slave, since the value of the land which he cultivates is nil, or infinitesimal. But when, with the rise of serfdom, it is necessary to cultivate land of inferior quality, and when, consequently, there appear for the first time notable differences in the fertility of cultivated lands,[1] the more fertile areas acquire a specific value considerably higher than that of land *per se;* this increases to a sensible extent the purchasing price of such lands; and the result is that the obligation to take over at the same time the land and the man who cultivates it, now involves for the labourer a notable increase in the price of his redemption. In this way the decline in the productivity of cultivated land, at the same time that it renders necessary the replacement of the direct supervaluation of the man by his indirect supervaluation, this latter being effected by the association of the value of the man with the value of the land—creates the very possibility of the said association, because this decline now for the first time assigns to land a specific and considerable value.

It may however happen, and usually does happen during periods of decline, that the normal value of the man, however much increased by the addition of the normal value of the land which he cultivates, becomes inferior to the maximum accumulated savings of the labourer, and in such cases the persistence of differentiated income is once more compromised. In order to guard against this eventuality it is therefore necessary to have recourse to the usual complementary method of reducing the remuneration of the worker. In this economic phase, such reductions are not practised by the violent methods proper to the previous age, but more roundabout and less forcible means are employed: it may be through private or public regulations which raise the labourer's quit-rent; it may be by increasing the taxes and feudal dues that press upon him; it may be by exacting donations and benevolences. In this way it happens that the persistence of differentiated income is secured by the two fundamental methods of raising V, and lowering R, the former method being the usual one in periods of expansion, while the latter preponderates in periods of decline or retrogression.

[1] "Serf-land (*mansus servilis*) pays a quit-rent which varies according to the quality of the land. Even the faculty given to the serf to accumulate a peculium depends on several circumstances, the chief of which is the quality of his

This theoretical result is evidenced with admirable precision by all the best-known facts. In America, as soon as the supervaluation of the slave attains harmful proportions, and towards the close of the Roman economy, many slave-owners, to escape the injury inflicted upon the working of their estates by the abnormally high value of the slaves, demand free tenant-farmers for their lands.[1] In Europe, from the ninth century A.D. onwards, these relationships, hitherto uncontrolled, are regulated by law; whilst the cultivators of the soil are allowed full ownership of their peculium, the law forbids them to leave the land which they cultivate and prohibits the sale of them apart from the land.[2] The same applies to Russia up till the sixteenth century,[3] and in the West Indies after the abolition of slavery.[4] Everywhere the sale of men is nothing more than the sale of the lands which these men cultivate and of the services which they must provide.[5] Not only is it forbidden to sell the peasant, but even to enfranchise him, apart from the land which he cultivates; you may *dimittere colonos cum terra*, but not *sine terra*.[6] Now, since the peculium of the serf is usually much inferior to the total value of the man and of the land which he cultivates, the practical effect of all such regulations is to prohibit the redemption of the serfs. Those who wish to make use of their peculium to redeem themselves without the land, hardly succeed in attaining to a virtual or ineffective freedom, for they remain always bound to their lord's land.[7] Thus, in England, the personal manu-

land" (Wergeland, *Slavery during the Middle Ages*, "Journal of Political Economy," 1902, pp. 230, *et seq.*)—In the Flemish cities during the Middle Ages, the rents paid for agricultural lands and for urban lands varied according to their fertility and their distance (Des Marets, *Étude sur la propriété foncière dans les villes du moyen âge*, Paris, 1898, pp. 307, 329, *et seq.*).

[1] Cf. Seek, *Die Pachtleistungen eines römischen Gutes in Afrika*, "Zeitschrift für Sozialgeschichte," 1898, pp. 333, *et seq.*; together with Philipps (*loc. cit.*), Seek quotes an apposite example from the period 93 to 96 A.D.

[2] Leicht, *Studî sulla proprietà fondiaria nel medio evo*, Padua, 1903; Segre, *Sulla origginine e sullo sviluppo storico del colonato romano*, "Archivio Giuridico," 1891; Rodbertus, *Geschichte der agrarischen Entwickelung Roms*, etc.

[3] Nowitzki [*History of the Agricultural Classes in South-Western Russia from the Fifteenth to the Eighteenth Century*], Kiew, 1876, p. 64.

[4] Loria, *Analisi*, II, p. 125.

[5] Delisle, *Études sur la condition de la classe agricole au moyen âge*, Evreux, 1851, p. 23.

[6] Savigny, *Vermischte Schriften*, Berlin, 1850, II, pp. 40, *et seq.*

[7] Lamprecht, *Deutsches Wirtschaftsleben im Mittelalter*, Leipzig, 1886, p. 1192; Id., *Deutsche Geschichte*, 2nd edition, Berlin, 1894, V, I, p. 84, *et passim.*

mission of the serf did not bring about any substantial change in his lot, for he passed from the condition of serfdom to that of *villeinage*, wherein he was still always forbidden to abandon the soil.[1] In the same way, the *aldio* of Lombardy and the *frjalsgrafi* of Norway are serfs who have redeemed themselves, but who have no means of redeeming the land on which they are settled, to which therefore they remain bound. They cannot become free until the fifth generation, nor be admitted into a free family until the eighth generation. Nor does enfranchisement effected by *charter* do more than create semi-freemen, still bound to the soil.[2] Conversely, if the serf redeems the land, but not himself, he ceases to be bound to the soil, but remains always bound to the lord to whom he owes the feudal dues ; he is no longer a *manens*, or a *colonus*, but a *fidelis*.[3]

During periods of decline in this form of income, however, leading, on the one hand, to a fall in the value of the land and of the man who cultivates it, and on the other hand to an increase in the accumulated peculium of the labourer, his redemption, together with the land, which he has hitherto found it impossible to effect, now becomes more and more practicable. Further, the legal inseparability of the man from the land, which is rigidly decreed during the ascendent period of serfdom, becomes less strict during the declining phase of that institution, in which the sale or enfranchisement of the serf apart from the land which he cultivates becomes continually more permissible.[4] For this reason, the positive method of inhibiting access to the land by elevating the value of such access, becomes less and less practicable. Income thereupon makes zealous use of the negative method of reducing the peculium of the labourer. Whereas during the first centuries of the serf-economy the condition of the producer was relatively prosperous and easy, the last and more disturbed period of that economic order is characterised by a terrible degradation

[1] Vinogradoff, *Growth of the Manor*, p. 335. Similarly in France, Voltaire, *Essai sur les mœurs* (1829, p. 439).

[2] Wergeland, *loc. cit.*

[3] Palmieri, *Sul riscatto dei servi nel Bolognese*, "Archivio Giuridico," November–December, 1906.

[4] Lamprecht, *Deutsches Wirtschaftsleben*, p. 1230 ; D'Avenel, *Histoire de la propriété*, III, pp. 164–70 ; Vinogradoff, *loc. cit.*, p. 44.

in the condition of the labourer. In Germany, during the thirteenth century, when the sale of serfs apart from the land first became permissible, upon the peasantry of that country fell the weight of the extraordinary taxes of the sovereign, as well as that of the corvée, or baronial dues. The consent of authority for the marriage of the serfs, hitherto granted without fee, had now to be paid for in hard cash. All these exactions from the peasants continue to increase throughout the fourteenth century and even until the close of the Hussite War (fifteenth century), to end by provoking the tremendous reaction which finds an explosive outlet in the Peasants' War.[1] A similar course of events may be traced in France, where the condition of the serfs becomes much worse during the latter half of the Middle Ages[2]; in Italy, where the condition of the peasantry also becomes sensibly worse from the thirteenth to the fifteenth century[3]; and in Russia, where the serfs, whose burdens are at first comparatively slight, become subject during the middle of the sixteenth century to a corvée of 356 days of forced labour, and upon whom in the eighteenth century is imposed the terribly harsh system of collective responsibility for feudal dues in arrear.[4] This reduction in the peculium of the serf renders it impossible for him to redeem himself, with or without the land: hence we find in France in the year 1298 that the serfs refuse the grant of their liberty, because it is offered at a price which exceeds their savings.

But with the progress of the serf-economy, the barrier which excludes the labourer from access to the land becomes continually slighter and less resistent. On the one hand, the

[1] With reference to the progressive worsening of the lot of the serfs towards the close of the Middle Ages, see Maurer, *Frohnhöfer*, IV, pp. 499–510, 522–3; Inama, *Deutsche Wirtschaftsgeschichte*, III, pp. 420–1; Grimm, *Deutsche Rechtsalterthümer*, Göttingen, 1854, pp. 394–5; Langethal, *Geschichte der teutschen Landwirtschaft*, Jena, 1854–6, III, pp. 27, *et seq.;* Lamprecht, *Deutsche Geschichte*, V, 1, pp. 79, *et seq.;* Nitzch, *Geschichte des deutschen Volkes*, Leipzig, 1883, III, pp. 359, *et seq.;* Loria, *Analisi*, II, pp. 182, *et seq.* On the other side, see Nieboer, *loc. cit.*, pp. 384, *et seq.*

[2] Dom Calmet, *Preuves de l'histoire de Lorraine*, Nancy, 1748, II, cvi.; Jaurès, *Histoire Socialiste*, Paris, undated, 1303.

[3] Kovalewski [*The Economic Development of Europe until the Rise of the Capitalist Economy*], Moscow, 1898–1900, II, pp. 466, *et seq.;* Pohlmann, *Die Wirtschaftspolitik der italienischen Renaissance*, Leipzig, 1878; Mondolfo, *Terre e classi in Sardegna nel periodo feudale*, Turin, 1903, p. 76.

[4] Nowitzki, *loc. cit.*

inseparability of the labourer from the land, which forbids variation, in accordance with special technical needs, in the number of the labourers employed upon any given area of soil, deprives the economic enterprise of all elasticity; this, by diminishing the income, continually increases the number of the recipients of income who are forced to sell their undertakings, or to offer for sale the serfs and the lands which these cultivate. On the other hand, this very decline in the serf-economy leads to a diminution in the number of those who are inclined to buy the enterprises which are offered for sale. Hence, since the supply of serfs and of land offered for sale increases, while the demand for these things diminishes, there follows a progressive decline in the value of the serfs and of the land to which they are bound; until at length the moment arrives in which the value of the serf superadded to that of the land which he cultivates, falls below that of his peculium, however much diminished the latter may be by seigniorial exactions, and it now becomes possible for the serf to purchase his freedom.

When, in such conditions the legal indissolubility of the labourer from the soil persists, the attempt is made to juggle with the price of redemption by raising the cost of the land, so that the serf remains indebted to the landowner. This form is met with in its clearest development in Germany and in Russia. More often, however, the law which binds the labourer to the land does not survive this period of crisis, and is decisively annulled.[1] Where this happens, the attempt is made to impose upon the serfs a price of redemption which totally deprives them of all peculium, as occurs, for example in England and in Italy, or even to a worse extent in France, where this eventuates in despoiling the redeemed serfs of all their possessions.[2] However this may be, if the serf has redeemed himself by the sacrifice of the whole of his peculium, or if he has redeemed himself together with the land by contracting

[1] Thus, in Russia, the law of June 18th, 1840, permits the landowners to redeem their labourers apart from the land to which they are bound; and in more than forty-two *possessional factories* (employing serfs assigned to the industry by governmental decree) the labourers were thus effectively redeemed because serf-labour had proved unproductive (Tugan-Baranowski [*The Russian Factory in the Present and the Past*], Petersburg, 1898, I, pp. 151–4).

[2] Vinogradoff, *loc. cit.*, p. 87; Walker Page, *The End of Villainage in England*, New York, 1900, p. 41; D'Avenel, *loc. cit.*

a debt to the landowner, in either case there results his transformation from the condition of a serf possessed of a peculium, and for practical purposes possessed also of land, into that of a proletarian dispossessed alike of personal and of real property, and compelled henceforward to sell his working powers to capital for whatever remuneration he can obtain; there is thus created the human material upon which at length can be erected the superior and modern form of differentiated income.

From this time onwards, all the land capable of being successfully worked by pure labour now being occupied, the only workers who can establish themselves on their own account upon the land are those who possess the capital requisite for its cultivation. In such conditions, therefore, the productive element which gives the worker access to the land is constituted by those still unoccupied areas of land incapable of being worked by pure labour, the value of these being equivalent to the capital needed for their cultivation. In other words, V, or the value of access to the land, is, in such conditions, constituted by the capital requisite for the working of unoccupied land; hence the equation $V=R+x$ can be realised only by arranging that the capital necessary to bring under cultivation that area of available land which is cultivable by a single man, shall exceed the accumulated savings of the labourer. To attain this end (where the conditions in question do not arise spontaneously), the owners set themselves in the first place to occupy as much land as possible, thus pushing back cultivation to less productive areas, which consequently require a larger capital to work them. If this method does not suffice, they have recourse, as usual, to the complementary method of reducing the savings of the labourer by means of the systematic reduction of his remuneration. In this connexion, an important difference must be indicated between this form of differentiated income and the others. Whereas in the case of the other forms, the fundamental method of insuring the persistence of income is to raise the value of access to the land, and the other method, that of reduction of subsistence, is employed only by way of supplement and in periods of crisis—in this form of income, on the other hand, the elevation of the value of access to the land, or the appropriation of the land upon which that elevation depends, are not permanently possible to the requisite degree, and for this reason, the first place must be given to the other method of exclusion, namely, to the reduction of wages.—However this may be, in this, as in the other forms of differentiated income, the twofold process here indicated is automatic in its working. For, as soon as the capital requisite for the cultivation of the unoccupied areas of land is inferior to the accumulated savings of the labourer, a certain sum of capital is left without income. Now, a portion of this capital will devote itself to production, and will thus claim the occupation of the land, pushing back the margin of cultivation, and increasing the capital requisite for the cultivation of unoccupied areas; while the remainder will stagnate as unproductive capital, thus diminishing the rate of profit, and diminishing therefore productive accumulation and wages.

Such are the two fundamental methods which arise and have free play in the first phase of the economy of the wage-system. On the one hand, there occurs the systematic occupation of a great part of the available land incapable of being successfully worked by pure labour, thus pushing back the margin of cultivation and increasing the amount of capital requisite to bring land under cultivation; on the other hand, there is effected the vigorous and systematic reduction of wages, through the depreciation of the circulating medium, through the use of technical or unproductive capital, etc.

When the continued increase of population has at length led to the full occupation of the land, the productive element which gives access to the land consists of the occupied land which is offered for sale. Hence, in such conditions, V, or the value of access to the land, is constituted (leaving out of consideration the capital of cultivation) by the value of the lands offered for sale, and this is in its turn equivalent to the capitalised rent of these. Hence the equation $V=R+x$ can only be realised by arranging that the value of the land shall exceed the labourer's accumulated savings, whatever the amount of these may be. This, once more (where it is not the spontaneous outcome of the social conditions), can be effected, either by artificially diminishing the subsistences of the labourer, or by artificially raising the value of the land. As always, the first method is in operation during periods of social decline, while conversely the second method is in operation during the ascendent periods of the economy. It is the latter method, in fact, which at the present day displays itself in an endemic or chronic form in all the countries of the old world, whilst from the reports of consuls and commercial agents we learn that among the new nations of the antipodes the like manifestations are acute and increasing.

Thus, to sum up, the denial of free land which is the foundation of differentiated income, is always effected by means of the direct appropriation on the part of the recipients of income of the productive element which gives access to the land, and by an elevation of the value of this element to a figure which exceeds the accumulated savings of the worker. In every case the persistence of differentiated income demands that the value of access to the land should always maintain itself at a level exceeding the accumulated savings of the worker. This is effected, either by raising the value of access to the land, or by diminishing the subsistences of the labourer. Such is the fundamental equation of differentiated income—an equation which manifests itself in various forms in relation with the specific varieties of this income. In broad outline, we may distinguish two principal forms of differentiated income. In the first of these, the productive element which must be monopolised by the recipients of income, and which must exceed in value the savings of the worker, is man ; in the second form, it is the land. The first of these forms may again be subdivided into two, in one of which (slavery) the excess of value of the productive element, man, is directly produced (supervaluation of the man), while in the other form (serfdom) it is indirectly produced (forced association of the purchase of the man with the purchase of the land). The second form may also be subdivided into two, in the first of which (systematic wage-system) the productive element that is monopolised is the land capable of being worked by pure labour, and the productive element whose value must exceed the worker's savings is the land not capable of being worked by pure labour, whose value is measured by the capital necessary for its cultivation ; whilst in the second form (automatic wage-system) the productive element which is monopolised, whose value must exceed the worker's savings, is the land offered for sale, whose value is measured by capitalised rent.—The two typical forms of differentiated income are the first sub-species of the first form (slavery) and the second sub-species of the second form (automatic wage-system), for in both of these, differentiated income depends upon the ownership and direct supervaluation of a single fundamental element—the man or the land; whereas in the two other forms, the supervaluation is either indirect (serfdom) or has reference to an element not precisely identical with that which is the object of exclusive ownership (systematic wage-system).

Such is the complicated and manifold process giving rise to differentiated income, or to the division of the population into two classes, endowing one class with the ownership of the means of production and with income, and excluding the other class from both of these.—Now the labourers, being deprived of the means of production, and therefore dependent, are unable in any case to associate their labour on their own initiative, but must yield to the influence of an external constraint; that is to say, in such conditions the association of labour is necessarily coercive. On the other hand, the owners of the means of production and of income, being endowed by the very fact of ownership with an economic force enormously superior to that of those who are excluded from such ownership, can control and discipline these latter as they will; thus the coercion bringing about the association of labour assumes a purely individual and capitalist character, because this coercion is effected by the private owners under the stimulus of their egoism.—In the slave-economy, the coercion to the association of labour is effected by the slave-owners; in the serf-economy, it is effected by the feudal lords, lay or ecclesiastical (as Chateaubriand has pointed out, the monasteries themselves were substantially nothing more than institutions for the coercive association of labour, forcibly combining the working powers of the monks under the rule of abbot or prior); whilst in the wage-economy, the workers are rigorously associated under the dictatorial rule of the capitalist or manufacturer.

The coercion thus exercised by the owners of the productive elements may take the form of imposing the complex association of labour, that is, of assigning to different labourers the production of a different commodity; but in every case it enforces the simple association of labour, that is, it forcibly disciplines the labour of the coproducers of a single commodity. But such coercion to the association of labour presents a declining degree of intensity in the three successive forms of differentiated income, proportional to the correlative decline in the intensity of the servitude which it inflicts upon the labourer, and to the increasing resistance offered by the latter to any brutal compulsion.—The coercion to the association of labour, unspeakably severe in the case of the slave income, becomes less marked in the case of the serf income (where the owner is a kind of constitutional sovereign, exercising a mitigated rule over the association of producers), and becomes still less considerable in the case of the wage-system, to attain its slightest limits under the automatic wage-system.

The fundamental and irremediable separation thus effected between the labourers and the recipients of income, suppresses any kind of competition between the members of these two classes, that is to say, between the coerced and the coercers, components of one and the same productive association[1] ; and this fundamental barrier to competition, the element of monopoly thus insinuated into the economic process, suffices *per se* to cancel all possibility of equivalence between the value of the products and the effective quantity of labour aggregated within them. But in the two first forms of differentiated income, to the absence of competition among the components of a single productive association, there is superadded the absence of all competition among the different productive associations ; for the ownership of men characteristic of these two forms of income excludes the possibility of the transference of the labourers from one sphere of production to another. The non-existence of competition among the productive associations has as its result that the value of the products diverges, not only from the quantity of labour effectively contained in these

[1] It follows from this that nothing can be more erroneous than the customary assertion that the wage-system is the system of free competition, in contradistinction to all previous economic forms, which were dominated by monopoly. In the wage economy, in fact, there is lacking the fundamental competition between the labourers and the owners of the means of production ; so that the truth is that all the forms of differentiated income are permeated by monopoly, though in varying degrees. Apart from this it must be remembered that the existence or non-existence of free competition is in any case an extremely extrinsic criterion, so that it cannot serve as the foundation of a rational and profound classification of economic forms.

products, but in addition from the more general measure of the cost of production, and becomes subject to the less precise and more elastic rule of monopoly value. In the third form of differentiated income, on the other hand, based upon the appropriation of land, while there is an absence of competition among the components of a single productive association, there is persistent competition among the various associations; for this reason the value of the products, while diverging from the measure of the effective labour, is normally equivalent to the measure of the cost of production.

The normal inconvertibility of the labourers into recipients of income which is thus brought about gives rise to a fundamental difference between the economic conditions of one class and of the other.—On the other hand, since the recipients of income are able, in such conditions, to make their means of production bear fruit through others' labour, there is no limit to the quantity of income which each one of them can seek to obtain, and hence also the difference between the individual incomes is subject to unlimited increase. Thus it comes about that the economy of differentiated income presents most conspicuous variations in income; and, in correlation with this fact, there occur extreme variations in the matter of consumption, which, in the case of the recipients of small and medium incomes is limited to the more modest products, while in the case of the recipients of the larger incomes consumption runs up the scale to the use of the most dainty and luxurious objects. This reacts upon the distribution of the work of production among the various objects of consumption, leading to an increase in the production of useless objects, and to a corresponding diminution in the production of those objects that are capable of providing for humanity a solid and enduring well-being.[1]

From all these considerations it becomes apparent that differentiated income presents characteristics absolutely opposed to those of the form of income previously considered. Whereas undifferentiated income may in the abstract

[1] "In so far as in any nation effort is applied to the improvement of goods for the wealthy, to the same extent there must follow a worsening of the goods for the poor, for it is not possible that anyone shall consume goods of a better quality, without others having to consume goods of a worse quality" (Ortes, *Economia nazionale*, Custodi P.M. XXII, pp. 247, *et passim*).

be founded either upon free or upon coercive association (although hitherto it has in fact always been founded upon the latter), differentiated income is always and necessarily founded upon coercive association. Moreover, and here we have a difference far more significant, in the case of differentiated income, the coercion to the association of labour presents a far more conspicuous intensity than in the case of undifferentiated income; for, whereas in the case of the latter the coercion is effected in the personal interest of the labourers who are coerced, by an instrument which emanates from themselves, and which cannot derive therefrom any egoistic advantage, where differentiated income is concerned, the coercion is effected altogether regardless of the interest of the labourers who are coerced, and in the egoistic interest of the coercers. Hence, each of the three successive forms of undifferentiated income presents a coercion less intense in degree than the corresponding and contemporaneous form of differentiated income. That is to say: the communistic economy exhibits a less intense form of coercion than slavery; the corporative economy, a less intense form than serfdom; the co-operative economy, a less intense form than the wage-system. And it is not impossible that a form of undifferentiated income may present a less intense coercion than is presented by a form of differentiated income belonging to a subsequent social phase: for example, the corporative economy may be less coercive than the wage-system, etc. Further, whereas undifferentiated income founded upon coercive association regularly excludes competition among the coerced, differentiated income may suppress such competition, but necessarily suppresses competition between coerced and coercers; whereas this cannot be said of the former (undifferentiated income), in which the coercion is not exercised by private individuals standing in opposition to the coerced, but is exercised by an authority which emanates from the coerced themselves. Finally, whilst undifferentiated income is essentially equalising in character, differentiated income brings about the extremest degrees of inequality, introducing every possible kind of divergence in the lot and in the income of individuals.

Now between these two forms of income thus categorically opposed, there is carried on a struggle without quarter, a struggle which ends only when one of them remains victor on the field. However, if one of the two forms of income succeeds in any case in gaining the mastery of the economic order, it need not therefore succeed in effecting the total suppression of the representatives of the opposed form, which may survive more or less miserably beside the representatives of the victorious form. Thus, instead of bringing about the absolute domination of differentiated income, or of undifferentiated income, as the case may be, the struggle results in the preponderance of one or other form of income, while confining the defeated form to a surreptitious and subordinate existence. Thus, in the medieval city, while undifferentiated income prevails in the craft-guild, differentiated income nevertheless persists and tries its strength in the turbid manipulations of usury, or in the ventures of the mercantile companies. Conversely, in the classical economy, in which differentiated income flourishes victoriously in the *villae* of the slave-owners, differentiated income does not wholly pass away, *non omnis moritur*, but persists in rural petty proprietorship and in the independent craft. Similarly, the modern economy, essentially based upon differentiated income, none the less presents certain modest and neglected manifestations of undifferentiated income upon the foundation of associated labour (co-operative enterprise), or of isolated labour (petty proprietorship, independent craftmanship).

But the predominant form of income, if it does not succeed in extirpating the rival form of income from the economic field, yet exercises a notable influence upon the manifestations of this subordinate form, for these manifestations are possible only within the orbit of the dominant form of income and along the lines traced thereby.—Thus, in an epoch in which differentiated income has secured complete predominance, the sporadic manifestations of undifferentiated income are forced to obey the rules prescribed by differentiated income. Do we not see every day that co-operative associations are constrained, in order to live, to follow methods essentially capitalistic, raising capital at interest, and employing wage-earners just like the purely capitalist enterprises? Conversely, in an epoch in which undifferentiated income prevails, differentiated income, when this makes an exceptional appearance, must obey the rules formulated by the prevalent undifferentiated income. Thus, during the Middle Ages, the capitalist or the trader must be inscribed as members of a guild, and are not entitled to employ wage-earners, because a fundamental obstacle is imposed to this by the predominant undifferentiated income.

Nor is this all, for the prevalent form of income exercises in addition a decisive influence in moulding the ideological representation of the oppressed and inferior form of income. In fact, in every historical epoch, the whole economic order is fashioned with sole regard to the dominant form of income, which alone claims universal attention, and with reference to which theoretical conceptions are solely directed, as also the positive regulations of the civil law. The result of this is that public opinion and science itself are loath to consider the subordinate form of income as something different from and opposed to the dominant form, and are accustomed to regard the former simply as a variety or sub-species of the latter, or, in other words, to describe the atypical income in the terms of the typical income.—Thus, in the Middle Ages, the economic relationships most foreign to the feudal organism, namely monetary relationships, become clothed in feudal trappings; there are created *fiefs en l'air*, rights to quit-rents having no connexion with landed property; there is given in fief the office of letter-carrier, or water, or wind, or faith; nay more, it comes at last to be affirmed that the petty proprietor holds his farm in fief. In the medieval city, where undifferentiated income preponderates in the guild, this gives the stamp which is forcibly imposed upon the most heterogeneous and disparate phenomena, and there is thus figured under the aspect of a guild, not the church alone, but even trade, in which, however, the corporative element disappears to give place to the most purely individualistic developments of differentiated income.—Conversely, in our own epoch, in which differentiated income predominates, science figures all economic manifestations as variations of this form of income. Thus, not a few economists conceive of the petty proprietor as a labourer-capitalist simultaneously receiving wages, profit, and rent.[1] Others

[1] John Stuart Mill, *Principles*, p. 282; for the contrary view, see Marx, *Mehrwerththeorien*, II, 2, pp. 130–31.

demonstrate with some heat that the co-operative economy does not differ substantially from the capitalist economy, and that the members of a co-operative society are merely wage-earners employed by that society, which gives them, in addition to remuneration, a share in the profits.[1] Finally, we have the economists who succeed in figuring the socialist state of the future as a capitalist Briareus, who advances a wage to the labourers co-operating under his discipline, granting them, as might any individual capitalist, a more or less considerable share in the profit.[2]—Such a way of regarding matters is, we need hardly say, radically vicious, since it forcibly ignores the essential opposition between the two forms of income, and involves a glaring falsification of life and of reality. Yet it is the inevitable corollary of the social empire exercised by the prevalent form of income, and of the power therewith associated to mould the economic world and its ideological representation.

§ 4. Mixed Income

Hitherto we have seen the two fundamental forms of income, undifferentiated and differentiated, able to exist side by side in the social organism, but themselves giving life to specific organisms substantially disparate. There are, that is to say, certain undertakings founded upon undifferentiated income which exist within a single social aggregate side by side with other undertakings founded upon differentiated income; but in each particular undertaking the income is either wholly undifferentiated, or wholly differentiated. Nevertheless it may happen that within a single undertaking, side by side with certain labourers who have income, there are non-labourers who have income, or labourers who do not have income; that is to say, within a single undertaking, beside undifferentiated income there appears, either differentiated income, or subsistence divorced from income.—Now, in all such cases we have *mixed* income. This may, in its turn, give rise to two sub-forms, according as

[1] Leroy-Beaulieu, *Traité d'écon. pol.* II, pp. 238, *et seq.;* Spencer, *Principles of Sociology,* III, London, 1896, pp. 560, *et seq.;* Pantaleoni, *Esame critico dei principî teorici della cooperazione,* "Giornale Economisti," 1898.—Cf. Marx, *Kapital,* III, II, pp. 412–3.

[2] See, for instance, Offermann, *Das fictives Kapital,* Vienna, 1896, pp. 177–8.

the labourers sharing in the income, share or do not share in the ownership of the means of production.—In the first case, mixed income manifests itself in a series of composite economic forms, which may be classed in two fundamental groups.—In fact, in this connexion, two eventualities are possible: either that the totality of the means of production is owned by one portion of the workers, or that one portion of the means of production is owned by the totality of the labourers. The former type manifests itself in the workshops employing paid labourers. Thus, if a capitalist-labourer (such as a master-craftsman during the declining period of the guild-system, or such as a comparatively well-to-do independent artisan in our own day) possesses sufficient capital to employ a certain number of wage-earners, but continues to contribute his own labour to the undertaking—side by side with the labourer who has income (the master-craftsman, or the independent artisan), there are the labourers without income (the wage-earners); hence, one portion of the subsistence is personally connected with income, while the other portion is divorced therefrom.—We have, therefore, to do here with mixed income.—The second type manifests itself in home-industry under capitalist conditions, in which the capital is partly advanced by the capitalist and partly by the labourer; also in the case of working tenant-farmers, and small holders; in collective ownership and in the craft-guild during the period of their decline, when they have become permeated by inequality and privilege; and, finally, in the spurious co-operatives of our own times, in which the associated labourers own as a rule but a small fraction of the social capital and receive but a proportionately small share of the income. In all these economic forms, the labourer receives in addition to subsistence a share of income, most of which, however, accrues to the non-labourers; that is to say, in such conditions, the income is mixed.

When, on the other hand, the labourer who participates in income has no share whatever in the ownership of the means of production, the mixed income does not give rise to any specific economic forms, but grafts itself upon differentiated income, without in any degree altering the external characteristics of that income. This happens whenever the remuneration of the labourer rises above the subsistence evel, whether in the form of profit sharing, or in that of bonus, or simply through a rise in wages above a certain rate ; for any such excess, involving as it does that the worker receives a share of income, effectively transforms differentiated income into mixed income, without however leading to any definite modification in the external configuration of the income.[1]

The case just examined shows us that the form of income does not necessarily and *per se* reveal the substance ; for here we see an income which does not differ formally from differentiated income, and yet differs from it substantially, or is in fact a mixed income.—But the incapacity of the form of the income to reveal its substance is no less apparent in the case previously examined in which the labourer shares in the ownership of the means of production. In fact, these composite economic forms, constituting the mould within which mixed income makes its appearance in these particular manifestations, may always conceal the presence of differentiated income. Thus, for example, the small farm is certainly a form of mixed income when the tenant-farmer obtains anything more than subsistence. But when, on the other hand, as in Ireland and in Russia, the working tenant-farmer hardly succeeds in procuring a bare subsistence, and indeed often does not succeed in doing this, so that he is obliged to work as a day-labourer for neighbouring owners,[2] we are substantially in face of a form, however deceptive and insidious, of differentiated income, in which the whole of the income is received by non-labourers.—The same may be said of the modern craft, which often fails to provide the craftsman with more than a bare subsistence, whilst the whole of the income is secured by those who advance capital and land ; the same may also be said of most modern co-operatives, whose associates are effectively reduced to the most wretched wages.—Thus, whereas in the former case, that of a wage in excess of a bare subsistence, we have mixed income masquerading as differentiated income, in this case we have differentiated income masquerading as mixed income.—To put the matter in more general

[1] Ricardo (*loc. cit.*, pp. 210, 256), when he says that the net income is equal to the product minus the *necessary subsistences*, implies that any excess of wages over subsistence constitutes income in the strict sense of the term.

[2] Bonn, *Archiv für soziale Gesetzgebung*, 1904, pp. 166, *et seq.* [*Russian National Economy*], August, 1904, p. 3.

terms: the essence of mixed income is the participation of the worker in income, which may or may not be accompanied by his participation in the ownership of the means of production. If the former kind of participation is not accompanied by the latter, the income preserves the form of differentiated income, but is in reality mixed income; whereas, if there is participation of the second kind, but not of the first, the income assumes the form of mixed income, but is in reality differentiated income.

In contradistinction from undifferentiated and differentiated income, which are fundamental economic forms, occupying in turn almost the whole of the economic field, mixed income is a subsidiary form of income, occupying merely a secondary place in that field.—Now, just as, given the social coexistence of the two fundamental forms of income, the subordinate form is constrained to develop within the appointed orbit of the dominant form; so also, given the social coexistence of mixed income with the two pure forms of income, the first-named is constrained to subordinate its own development to the rules prescribed by that pure form of income which is at the time predominant. Thus, the workshop employing paid workers, if it develops within the capitalist economy, exhibits essentially capitalist characteristics; whereas, if it makes its appearance within the corporative economy, its characteristics are corporative.

Nor is this all. Of the two pure forms of income coexisting with mixed income, that which in the period under consideration is subordinate cannot develop unless in subjection to the rules and to the shackles imposed by the dominant form. Thus, if the normal form of income is differentiated income, the undifferentiated income which is intermingled with mixed income is strictly limited alike in its quantity and in its development by the fundamental conditions of existence of the differentiated income. We already know that the fundamental rule of differentiated income is, that the savings of the labourer must be less, by however little, than the value of access to the land. If, then, the predominant form of income is differentiated, the undifferentiated income intermingled with mixed income must be such that the maximum saving it renders possible shall be inferior, by however little, to the value of access to the land.

If the maximum saving R is equal to n times the undifferentiated income r, so that $R=nr$, it is necessary that the value of access to the land, V, be equal to $nr+x$, or that $r=\frac{V}{n}-x$. This is the maximum limit of undifferentiated income in this form of mixed income. Now, given this limitation, the owner of undifferentiated income cannot employ his savings in order to found an economy of undifferentiated income ; for his income is insufficient to provide access to the land, and he must employ his savings within the circle of differentiated income, within the limits, that is to say, of the predominant social form. Thus, the slave, the serf, and the wage-earner cannot make use of their peculium in order to found independent undertakings, because this does not suffice to purchase freedom, or to purchase the land, but they must use it in the employment of slaves (as in the case of the *servus vicarius*) or of wage-earners (as in the *sub-contract* [*sweating*] *system* and the *apprenticeship* of our own times), or else in undertakings pecuniarily dependent upon the owners of the differentiated income ; thus in every case the employment of the undifferentiated income which forms a part of mixed income is effected within the circle and according to the modality of the predominant differentiated income.[1] Conversely, if the predominant form of income is undifferentiated, the differentiated income which forms a part of mixed income can be employed only in subjection to the rules imposed by the predominant undifferentiated income. Thus, in the Middle Ages, the master-craftsmen or the capitalists

[1] These phenomena are seen with especial distinctness in the slave-holding regime. Thus, in Babylon, until 800 B.C., and in classical Rome, the slave can buy or hire other slaves, or may contract at his own risk (without any responsibility being incurred by his master) relations of debit and credit with freemen, offering to the contracting parties the guarantee of his own peculium, sometimes considerable (even exceeding five *minae*, equivalent to 675 francs) and always beyond the control of his master. In Egypt and in Greece, on the other hand, where the master maintains a legal right over the peculium of the slave, the former is responsible for debts contracted by the latter. But in any case the use of the peculium, that is to say of the undifferentiated income intermingled with mixed income, is, as always, effected within the orbit of capitalistic relationships or of differentiated income. On these matters, consult Kohler and Peyser, *Aus dem babylonischen Rechtsleben*, Leipzig, 1890, I, pp. 1–7; III, p. 8; Revillout, *La créance et le droit commercial dans l'antiquité*, Paris, 1897, pp. 143, *et seq.*, pp. 176–8; Sayce, *Babylonians and Assyrians*, London, 1900, p. 71. The same considerations apply, in conclusion, to the economy of the wage-system, when the worker devotes his savings to the employment of other wage-earners, or lends these savings out at interest, but must always use them within the orbit of differentiated income.

who succeed in obtaining a differentiated income, or a profit, are unable to employ their savings in the payment of wage-earners, and thus to found a capitalist undertaking properly so-called, or a differentiated income, since this is rendered impossible by the corporative form, that is by the undifferentiated income, which rules dictatorially over the general order of the economy of that epoch.

§ 5. Coexistence and Succession of the Forms of Income

Thus labour coercively associated with labour may be, according as it has or has not access to the land, fully associated, altogether dissociated, or partially associated with the ownership of the means of production, these variations giving rise to the three correlative forms of undifferentiated, differentiated, and mixed income, wherein the income is respectively assigned in full, or not at all, or partially, to the labourer. Thus, income, a phenomenon of production, is differently assigned according as variations occur in the conditions of the accessibility of land to labour.—These three forms of income can perfectly well coexist within one and the same social state; but one of the two first-named will necessarily occupy almost the whole of the economic field, restricting the rival form to a subordinate position; whilst the mixed form has an altogether secondary importance, and can exist only within the interstices of the two fundamental forms of income.

These coexistent forms of income, together with the subsistence which is the complementary element of income, constitute the foundation upon which are erected the coexistent social classes. Beyond question, if we take for examination an economy of undifferentiated income, and one in which this is the only form of income, we find that the society is absolutely undifferentiated, that is to say, that social classes do not exist. But as soon as we emerge from these conditions of primitive homogeneity, there soon appear four clearly distinct zones, that of differentiated income, undifferentiated income, onerous subsistences (received by the labourers), and gratuitous subsistences (received by the destitute); whilst mixed income, a category which is hybrid and indecisive in its nature, does not as a rule constitute an autonomous zone, but is affiliated to one or other of the zones previously enumerated. Thus, when mixed income is dependent upon the participation of the labourer in the ownership of the means of production, it tends to be affiliated with undifferentiated income; when, on the other hand, mixed income implies no more than a participation in income, it fraternises rather with the onerous subsistences, which, for the rest, are associated by affinity of interests with undifferentiated income.—Now, the four fundamental zones of income and of subsistences thus delineated form the bases of the four fundamental classes: the recipients of income who are not productive labourers (differentiated income), the productive labourers who receive the totality of the income (undifferentiated income), the labourers who do not receive any portion of income (onerous subsistence), and the non-labourers destitute and without occupation, who are reduced to beg a subsistence from the charity of others (gratuitous subsistence); to these must be added the auxiliary class or sub-class of the productive labourers who receive a part of the income (mixed income).[1]

Labour, associated with labour, and totally associated with or totally dissociated from ownership of the means of production, thus producing the two fundamental forms of income, undifferentiated or differentiated, is subject to a coercion which, in each of the two cases, declines in intensity by three successive grades, giving birth to as many progressive sub-forms of income; these are, in the former case, the communistic, the corporative, and the co-operative economy, in the latter case, slavery, serfdom, and the wage-system. Labour partially associated with the means of production, and developing side by side with any one of the various sub-forms of labour totally dissociated from or totally associated with the ownership of the means of production, generates as many correlative sub-forms of mixed income; these ramify in those spurious forms of communism, of the craft-guild, and of co-operation which admit non-labourers to membership, and in the

[1] In the writer's *Economic Foundations of Society*, p. 212, to the four fundamental classes indicated in the text, there is superadded a fifth, that of the unproductive labourers; but these, on close consideration, will be seen to belong substantially to the general category of the recipients of income who are not productive labourers. It should, however, be added that within this category, these represent a sufficiently striking sub-class, which is distinguished and contrasted in many respects from those sub-classes constituted by the owners of productive or unproductive elements.

workshops of the slave economy, the serf-economy, and the wage economy.[1]

Now these various forms of income, or these sub-forms of the two fundamental categories of income (undifferentiated and differentiated), succeed one another in the course of economic evolution in accordance with a rule which can be precisely determined, that is to say in accordance with the progressive degrees of their productivity. In fact, a given form of income, and therefore the process of the coercive association of labour which gives rise to that form, is possessed of a determinate productive efficiency, rendering possible the cultivation of land of a given degree of fertility; hence, as long as cultivation is restricted to land endowed with this degree of fertility, the given form of income and the given form of the coercive association of labour are possible and necessary. But as soon as the increase of population enforces the cultivation of additional and less productive land, this form of income, and correlatively this form of the coercive association of labour, which have hitherto sufficed to make use of the relatively fertile land under cultivation, prove inadequate to fructify the less fertile land now of necessity brought into cultivation, and it is therefore necessary for the existing form of income to be replaced by a more productive form.[2] The new form of income which now makes its appear-

[1] It follows from this that the customary distinction of economic forms into the two great categories of collective property and private property, does not go to the root of the matter, for this distinction separates economic forms substantially identical, and assimilates economic forms essentially disparate. In fact the communistic economy is not substantially different from certain forms of the individualistic economy, such as the corporative and co-operative economies; whereas the corporative and co-operative economies are substantially different from the other forms of individualistic economy, from slavery, serfdom, and the wage-system. More correct is the distinction made by Tugan-Baranovski (*Theoretische Grundlagen des Marxismus*, Leipzig, 1905, pp. 220–1) between the harmonic social forms (economy of the isolated labourer producing for direct consumption or for exchange, and the socialist economy) and the antagonistic social forms (slavery, serfdom, and capitalism). This distinction coincides on the whole with that between undifferentiated and differentiated income, but it wrongly includes in the series an economic form which has never yet existed (the socialist economy); and it erroneously institutes between direct production and production for exchange an essential distinction which is altogether unnecessary.

[2] "I think we may ascribe the source of all human improvement to the pressure of population on subsistence," Cooper, *Lectures on the Elements of Political Economy*, 2nd edition, Columbia, 1830, p. 295; "The increase of population exercises upon human evolution the same function as the mainspring of a watch" Fahlbeck, *Der Adel Schwedens*, Jena, 1903, p. 35.

ance is undifferentiated or differentiated according to circumstances. It may happen that, in order to lessen the cost or the labour of the social transformation, there arises a form of income homogeneous with that which is destroyed, even when a heterogeneous form would be more productive; in other words, it may happen that the new form of income is differentiated or undifferentiated according as that which has hitherto existed has itself been differentiated or undifferentiated. But if the form of income opposite to that which has hitherto prevailed, or if the process of the coercive association of labour correlative with that form, be endowed with a productivity markedly superior to that possessed by any form homogeneous with that which has hitherto existed, it is the heterogeneous form that will gain the victory. It may happen that the new form of income presents a coercion to the association of labour less intense than that which has prevailed under the previous form; and as a rule this is actually the case, inasmuch as, *ceteris paribus*, the productivity of any form of income being inversely proportional to the intensity of the coercion which prevails thereunder, the new form of income can only in normal circumstances prove more productive than the form it replaces in virtue of the fact that it involves a less rigorous coercion. Moreover, the succeeding form of income corresponds to a lessened degree of productivity of the soil, and therefore to a diminishing reluctance to the association of labour, which by itself implies that a less intense coercion is needed. Whence it follows that the decline in the productivity of the land, at the same time that it renders necessary a lesser degree of coercion to the association of labour in order to endow labour with greater productivity, renders this possible, inasmuch as it correlatively diminishes the reluctance to the spontaneous association of labour. Nevertheless, it may very well happen that a particular economic form, in virtue of the powerful coercion to which it subjects labour, may present a superior potency in respect of the organisation of labour; and in that case the economic form which involves a more energetic coercion of the associated labourers is that which will present the higher degree of productivity, and will consequently triumph. But in any case it is necessary that the new form of income shall present a superior productivity to that presented by the precedent form, because upon this superior productivity depends the victory of the new form over the form hitherto dominant.

If, on the other hand, we study the succession of the forms of income in the course of economic evolution, we see that this evolution begins with undifferentiated income in the primitive communist economy, passes then to differentiated income in the slave-holding system, and that this form of income persists in the subsequent serf-economy, to lead back, however, to undifferentiated income with the rise of the guilds; under the wage-system we return to differentiated income, and only sporadically is this system contrasted by a more evolved form of undifferentiated income, the co-operative economy. Now we see here, in this succession, that as a rule the new income is heterogeneous to that which it replaces; but this is not invariably the case, for in the transformation of slavery into serfdom, one variety of differentiated income is replaced by another variety of differentiated income. We see, further, that as a rule the new income involves a less intense coercion than that which it replaces; but this does not occur in every case, for slavery involves a more intense coercion than did primitive communism, and the wage-economy imposes upon the labourers coercion and discipline far more rigorous than were imposed by the craft-guild or by the patriarchal industry out of whose ruins the wage-economy has arisen.[1] But whether homogeneous or heterogeneous to the preceding form, whether involving a slighter or a more intense degree of coercion, every-one of the successive forms of income in the series here indicated exhibits a process of the coercive association of labour endowed with a productive efficiency superior to that of the form which it replaces,[2] that is to say this progressive increase in productivity constitutes the invariable feature of the succession of the forms of income.

[1] Notable proofs of this are given by Mantoux, *loc. cit.*, pp. 388, *et seq.*

[2] Hence the inevitable impotence of all attempts at the revival of an earlier form of income. Thus, the omnipotence of Charlemagne does not succeed in organising a communistic economy on the royal estates, whilst at this very time the corporative economy is successfully organised by the monasteries—the reason being that income upon a communistic foundation has now become inefficient, and has been superseded by income upon a corporative foundation, which is technically more productive. For another example, see Loria, *Il capitalismo e la scienza*, p. 226.

But side by side with the fundamental variations in the degree of productivity of the land which succeed one another at considerable intervals of time, we have the secondary differences in this productivity which manifest themselves at one and the same time in different regions of the globe. Now, just as the fundamental variations in the productivity of the land in time give rise to the creation of forms of income substantially disparate, so also the secondary differences in the productivity of the land in space give rise to different manifestations, national or local, of each form or sub-form of income. In other words, if the fundamental variations in the degree of productivity of the land create as many economic species clearly distinguished one from the other, the secondary differences in the productivity of the land which are insufficient to effect a complete change of economic type, nevertheless create simple varieties of or partial deviations from the dominant economic type. Thus, for example, if we find that the communistic economy and the slave economy of early times exhibit in Germany characteristics divergent from those which the same economies exhibit in Rome ; these differences are solely dependent upon the lesser fertility of the German soil.

Ordinarily the productivity of the land varies only in consequence of a correlative change in the density of population, and in this case the analysis of the changes in the former phenomenon is *per se* an analysis of the changes in the latter. But it may happen that the density of population varies without giving rise to any corresponding variation in the productivity of the land, or that the productivity of the land may vary without any variation in population ; and in this case the density of population has an economic influence *per se*, developing side by side with that of the productivity of the land and independently of the latter, so that this influence of population requires independent examination. Thus, given two countries, each of which exhibits a series of areas of land possessing different degrees of productivity, that which has a greater abundance of fertile land, or that in which the fertile land is more productive or is susceptible of more intensive culture, attains to a determinate margin of cultivation with a population denser than that which will coexist in the other country with the same margin of cultivation. Now, in such conditions, income, while assuming forms substantially equivalent in the two countries, presents none the less partial divergences; and these, it is evident, cannot be attributed to the productivity of land on the margin of cultivation, which is equal in both countries, but are exclusively the outcome of the variations in the density of population. Or, conversely, that one of the two countries which has a greater abundance of fertile land, exhibits, if the density of population in the two countries be equal, a margin of cultivation which is more productive than that of the less fertile country. Now, in such conditions, the structure of income in the two countries will certainly be different on account of the different productivity of the margin of cultivation; but the difference will be attenuated owing to the fact that the density of population in the two countries is equal. Thus, in every case, when the productivity of the margin of cultivation varies independently of the density of population, the latter exercises its own independent influence upon the forms or sub-forms of income.

Denoting by the term *economic density* of population the pressure of population upon the means of subsistence measured by the fertility of the margin of cultivation, and by the term *geographic density* of population the simple numerical relationship between the population and the area of the territory under consideration, nations may be classified in four fundamental groups. There are countries in which all the land presents a high degree of productivity and which are thinly populated, that is to say in which the density of population is low alike in the economic and in the geographic sense of the term. To this type belong many Asiatic countries, and the countries of Eastern Europe, such as Russia and Hungary. There are countries in which all the land is extremely productive and which are thickly populated, which exhibit, that is to say, a low density of population in the economic sense, but a high density of population in the geographic sense. Such are, in varying degrees, the countries of Southern Europe including Italy. There are countries in which the land as a whole is extremely sterile, and where land of better quality is rare, and comparatively infertile, and in which therefore there is attained a margin of cultivation of low productivity with a very sparse population; such countries, that is to say, exhibit a high economic density but a low geographic density. To this type belong the countries of the extreme north of Europe, such as Sweden and Norway. Finally, there are countries in which there is extremely sterile land, but where fertile areas of land are also numerous and extremely productive, and which therefore exhibit a margin of cultivation of comparatively low productivity together with an extremely dense population, so that they present a high density of population alike in the economic and in the geographic sense; to this group belong the countries of Central and Western Europe, France, Germany, and England.

The most superficial observation shows that the income substantially identical in form (since it is always differentiated income upon the foundation of the wage-system) flourishing to-day in these diverse social groups, presents, nevertheless, extensive differences in proportion to the composite influence of the varying economic and geographic density of the population. Thus, in the countries of the first group—parts of Asia, and Eastern Europe—thanks to the twofold involutive influence of the low economic and geographic density of population, we find the maximum reluctance to the association of labour, and therefore the maximum coercion to that association, the minimum efficiency of labour[1] and the minimum rapidity of circulation. These deficiencies are found also in the countries of the second group—those of Southern Europe—but are here notably diminished by the differential factor of geographic density, which in these countries is far more considerable. In the countries of the third group—those of Scandinavia—the evolutive influence of the high economic density is partially counteracted by the involutive influence of the low geographic density; and for this reason the economic order, whilst more advanced than under the conditions previously considered, nevertheless exhibits in many respects a torpid and inert development. Finally, in the countries of the last group—those of Central Europe—the twofold evolutive factor of

[1] "To the Asiatic to stand still is better than to walk, to sit is better than to stand, to lie down is better than to sit, to sleep is better than to be awake, and death is best of all" (Much, *Die Heimath der Indo-Germanen*, 2nd edition, Jena, 1904, p. 367).

economic density and geographic density of the population, impresses upon the type of income the highest possible degree of complexity and productive efficiency.

Thus, to limit ourselves to a single example, if we consider the economic system of contemporary Norway, we find that it presents specific lineaments by which it is very sharply differentiated from the economic system that obtains in other European countries. In Norway, in fact,[1] the economic order retains to-day a strictly patriarchal character: sons, to a large extent, continue in their fathers' occupations; the landed proprietors, small or great, live dispersedly and remote one from another, producing commonly for their own consumption; the great proprietors exercise as a rule much influence over the numerous peasants and manufacturers living on their estates; the number of professional men is minimal in proportion to the extent of territory; minimal also is the birth-rate—and further this rate undergoes spontaneous restriction as soon as the production of subsistences diminishes; the death-rate is lower than in any other country in Europe or at any rate extremely low, being only 16 per 1000, and the same is true of the consumption of alcohol (2·45 litres per unit of population). In Norway, as an unprecedented fact, the only bank with a legal right to issue bank-notes, which is simply a shareholders' company, is administered by the National Assembly; and in contradistinction to the tendency which is so conspicuous to-day to the formation of great political agglomerations, we note a decentralising tendency which has resulted in the formation of an autonomous state. Here we have a world of artisan individualism, industrial or agricultural, puritan, monotonous, pessimistic, despising to an equal degree rapid accessions of wealth and undisciplined hardihood—as we see reflected in indelible characters in the writings of Ibsen. Now these differential characteristics of the Norwegian economic order are not dependent upon the economic density of the population, which is substantially identical with that of the countries of Central Europe; they are the outcome of the geographic density of the population, which is in Norway so greatly inferior to that of other European countries.

But the national differences in the geographic density of the

[1] *La Norvège*, Christiania, 1900, pp. 211, *et seq.*, pp. 323–5, pp. 401, *et seq.*

population do not only modify the structure of income, but they afford also the only explanations of technical and economic activity, for these forms of activity are more or less intimately connected with the geographic density of the population. Thus, the spirit of invention is far more vigorous and far more intense in proportion as the population is dense and the contacts between men are frequent.[1] We find, in actual fact, that the relative frequency with which in different countries patents are taken out is, *ceteris paribus*, in inverse ratio with the average distance between man and man, and this latter, it is evident, is itself in inverse ratio with the density of population; that is to say, the frequency of patents varies directly with the density of population.[2]

No less remarkable is the fact that the relationship between the quantity of bills of exchange discounted and the general trade returns is in inverse ratio to the density of population. This is explained by the fact that as the population increases and contacts between individuals become easier and more frequent the balancing of debits and credits becomes easier and commoner and therewith there is proportionately a smaller need for the issue of bank-notes. With this is associated the other fact that the average life of bills of exchange is in inverse ratio with the density of the population. This is readily explained by noting that as the population increases, exchange becomes more active, and therewith business becomes brisker and settlements are more promptly effected. It would be easy to give other analogous examples.

Thus, then, income assumes forms and sub-forms fundamentally different at different times, on account of the essential diversities in the degree of productivity of the soil; whereas the form of income, substantially identical among the various peoples living at any one time, and therefore in conditions where the productivity of the land is substantially equal, presents in each case divergent characteristics dependent upon the secondary variations manifested by the productivity of the land—or the economic density of the population—and by its geographic density. But however dissimilar may be the forms and the sub-forms and the varieties of income in different

[1] Ravenstone, *Thoughts on the Funding System*, London, 1824, p. 43.
[2] Dubois-Reymond, *Erfindung und Erfinder*, Berlin, 1906, p. 197.

times and in different places, these are always and solely manifestations and materialisations quantitatively diverse of a single fundamental fact — the coercive association of labour.—*Eadem sed aliter.*[1]

[1] Galton, *Natural Inheritance*, London, 1889, pp. 22, *et seq.*—"Underlying all the metamorphoses there are fundamental forces, which do not undergo any change in substance in the course of centuries, but are handed down from generation to generation. All that changes is their phenomenal external form" (Schurtz, *Altersklassen und Männerverbände*, Berlin, 1902, p. 6. See also Bastian, *Der Mensch in der Geschichte*, 1860.

CHAPTER IV

THE KINDS AND DEGREES OF INCOME

§1. Kinds of Income

The complex association of labour, which is the first associative method employed to produce or to increase income, involves *per se* that different individuals or different social groups should be restricted to different spheres of production. From this fact is derived a primary subdivision of the total income into a series of incomes which differ one from another, agrarian income, manufacturing income, and trading income ; and these are in turn subdivided, the first into the incomes from agriculture, pastoral life, etc., the second into the incomes from textiles, filatures, metal-working, etc.

Side by side with and in succession to the complex association of labour, there arises the simple association of labour, which, as we know, demands for its constitution the coexistence of several factors.—Now these factors which are essential to productive association may well demand a participation in the product of association, or in the income ; hence there arises a new segmentation of the total income into further parts, each of which is assigned to a different economic factor.

If the association of labour were free, so that the producers were always mutually interchangeable, the incomes possessed by individuals of equal capacity would necessarily be equal. Now, in such conditions, the diversity of the economic factors owned and contributed by the individual members could never give rise to quantitative differences in their income ; that is to say, it would in practice be impossible to ascertain the share of individual income attributable to one factor or to another. Hence the subdivision of the total income into various parts assignable to the respective factors of the productive association, would remain purely virtual in character, and it would never become possible to translate this subdivision into the realm of positive calculations. But we know that the association of labour is always and necessarily coercive. Now, in the coercive association of labour, since the mutual interchangeability of the producers is lacking, differences of individual income are possible, and hence it is practicable to attribute the differential income received by an individual to his differential possession of this or that economic factor. Thus the very fact of the coercive association of labour renders practicable the segmentation of the total income into a number of specific incomes assignable to as many different economic factors.

The factors of the coercive association of labour are, above all, material and immaterial labour, capital, and land, or, in more general terms, the productive elements, to which, in the case of undifferentiated income, may eventually be superadded the lack of free land; hence the total income may first of all be divided into a number of parts assigned to these different elements. But other elements, in addition, which do not contribute to the coercive association of labour may eventually claim a share in the product; one of these is unproductive labour, in which must be included that specific element constituted by the work of the state, and also unproductive capital. In this way income, the total product of the association of labour, comes to be subdivided into a number of species or sub-species, the most important of which are: remuneration, over and above subsistences, received by labour, material or immaterial, productive or unproductive; interest on productive or unproductive capital; and the rent of land, or the surplus-income due to the monopoly of either productive or unproductive elements.

These different kinds of income can be classified in two fundamental groups as *fluctuating* incomes and *consolidated* incomes. The former are exposed by their nature to perennial oscillations, and cannot expand, or even persist, except in virtue of an incessant struggle against the rival incomes; whereas the latter are by nature more constant and less exposed to conflicts, and therefore demand from their owners less jealous watchfulness. To the former group belong the interest of productive capital and the interest of the hazardous forms of unproductive capital (capital employed on the stock exchange); to the latter group belong rent (especially urban rent), and the interest on the less hazardous forms of unproductive capital (public debt).[1]

Precisely on account of the fact that the subdivision of income into different kinds is the outcome of the extremely general phenomenon of the coercive association of labour, this subdivision makes its appearance in all the forms of income, since all these emanate from the coercive association of labour —alike in the case of differentiated and of undifferentiated income. Even in the case of undifferentiated income, a part may often be distinguished constituting the interest of productive capital, for this latter manifests itself sporadically within the communistic, the corporative, and the co-operative economies. Yet more clearly, in undifferentiated income, does interest on unproductive capital make its appearance; for we see usury and trading enterprise thrusting parasitic tentacles into the system of the medieval craft-guilds, and robbing these of their best fruits.[2] Unproductive labour may also manifest itself in this form of income, if only as administrative and legal labour, and to this extent there must exist remuneration for unproductive labour. Nor, finally, is differential rent absent from this form of income; for differential rent makes its appearance wherever the different communistic, corporative, or co-operative undertakings are established upon lands of varying degrees of fertility.

It is no less true, however, in the case of undifferentiated income, that the individual kinds of income are ordinarily confounded in such a way as to render it difficult to distinguish between them.—It is part of the very nature of this economic form that only in the ideal sphere are the individual kinds of income separable from subsistence, whereas in the concrete they are fused with subsistence, and are all received by the

[1] Thus in England it has been observed that the gross income recorded in the Income Tax returns under Schedules A and B (agricultural), schedule C (interest on public debt), and E (remuneration of unproductive labour), remains almost unaffected by commercial crises; whereas the income returned under schedule D (manufacturing and trading incomes) presents a notable decline at every period of crisis (Lescure, *Des crises générales et périodiques de production*, Paris, 1907, p. 397).

[2] Cf. Bücher, *Die Entstehung der Volkswirt.*, p. 238. Hence, the assertion of Ricardo (*loc. cit.*, p. 150, note) that capital is always employed productively, whilst completely erroneous as regards differentiated income, is not altogether true even as regards undifferentiated income.

productive or unproductive labourer. Moreover, on the other hand, the various kinds of income are received by one and the same person, for the owner of capital is at the same time owner of the land. Hence, in such conditions, the distinction between the respective kinds of income is to a large extent obscured.

In addition, it often happens that in this economic form one or other kind of income does not succeed in establishing itself. Thus, the interest of productive capital is absent from the normal corporative economy, or from the typical form of the medieval craft-guild; whilst differential rent is suppressed or eliminated in the communistic economy, in which those whose land is comparatively infertile are compensated by the grant of larger areas.

But the distinction between the specific kinds of income is manifested far more decisively in the case of differentiated income. Undoubtedly it may happen, even in this form of income, that certain kinds of income are lacking; for we find examples of the economy of differentiated income in which profit of any kind fails to make its appearance (for example, in ancient Egypt, and in the earliest days of classical Rome, loans receive no interest); whilst differential rent may be wanting in consequence of the uniform fertility of the cultivated lands. Speaking generally, however, in the economy of differentiated income, there is established and normally developed every kind of income, and those in especial are developed which undergo enduring suppression in the rival form of income, such as the interest of unproductive capital, and the rent of landed property; whilst those particular kinds of income which are common to undifferentiated and differentiated income, exhibit in the case of the latter a fuller and more striking devolopment. Finally, the complexity of the kinds of income attains a maximum degree in the case of mixed income, where, in addition to all the kinds of income hitherto mentioned, we find also the undifferentiated income of the productive labourer who is employed by the non-labourer.

Differentiated income, therefore, or mixed income, may be immediately received in its entirety by productive capital; but this latter cannot retain the whole of it for itself, for it must eventually allot a portion to productive labour, and must necessarily allot other portions to the land taking part in the association of labour, to capital, and to unproductive labour.[1]

Not only do the individual species of income display plainly dissimilar manifestations in the different forms of income, but they also display manifestations differing in certain respects in the successive phases of the same form of income, undifferentiated or differentiated. Thus, the remuneration of the labour of superintendence differs in character and in extent in the corporative and in the co-operative economies, in the slave-system and in the wage-system.—The interest of unproductive capital assumes different characters in the various sub-forms of differentiated income, in accordance with differences in the function and extent of unproductive capital. Whereas, in fact, in the ascendent phase of every form of income, the function of unproductive capital is to secure that supervaluation of the productive element upon which the persistence of income depends, in the declining phase its function is to depress subsistence.—The interest of superfluous capital, that is of capital which is unable to find a profit in normal fields, has different characters in the different forms of income; whilst, in the various forms of income, when the character and the extent of unproductive labour undergo changes, there occur correlated variations in the extent and the nature of the remuneration assigned to such labour.[2]—Finally, as the total income, in each successive form of income,

[1] Ramsay makes a sound distinction between the capitalist entrepreneur as the distributor of national income (and it must be understood that this applies only to differentiated income) and the individuals having claims on income—lenders, owners, etc. (*Essay on the Distribution of Wealth*, Edinburgh, 1836, pp. 218–9). This view is a much juster one than that of Walras, that this function belongs to the entrepreneur simply as such.

[2] The remuneration of unproductive labour differs in character and in extent according as it is based simply upon a participation in income, or in addition upon a participation in the ownership of the means of production. Thus, when Cæsar divides up the large landed estates, to distribute them among the proletarians, diminishing correlatively the distributions of corn in the city, the unproductive labour of the clients, hitherto sharing solely in income, now comes to share in the ownership of the means of production; and the same things occurs, on a vaster scale, in the Middle Ages, when the ecclesiastics obtain, in place of an endowment payable in products or in money, a definite assignment of landed property. In such conditions, however, the clients and the ecclesiastics become in substance the owners of the means of production, and differ from other owners only in respect of the way in which they obtained possession of their property.

becomes more refined and more complex, so in each successive form do there appear more numerous species or sub-species of income, the more complex is each of these in itself, and the more delicate and complicated are the relationships which prevail among them.

If it happens, in this respect, that the form or sub-form of income exercises an influence upon the existence and upon the number of the varieties of income, it is also true, conversely, that the kind of income may react upon the form. Thus, when incomes have newly been obtained by speculation, independently of labour or of diligence on the part of the recipients, these are likely to renounce labour, so that the income will be transformed from undifferentiated into differentiated income.

If, now, we enquire according to what measure income is distributed among the sub-species previously enumerated, we find that the laws of such distribution are substantially different according as there does or does not exist mutual interchangeability among the owners of the productive and unproductive elements. For, if each one of these can at any moment exchange his condition for that of any of the others, the income is distributed among them in proportion to the *cost* borne by each; whereas, if this complete mutual interchangeability among the owners is lacking, the income is distributed among the various productive and unproductive elements in proportion to the varying degrees of *limitation* inherent in these elements themselves.

Thus, putting out of consideration for the sake of simplicity the unproductive elements, if the owners of the labour, the capital, and the land contributing to the production are mutually interchangeable, the income is distributed among these elements in proportion to their cost. Therefore, since the cost of the land *per se* is zero, this has no share in the income, which is distributed exclusively among the other productive elements, in proportion to their cost.—If, on the other hand, the owners of these elements are not mutually interchangeable, these same elements participate in the total income in proportion to the different degrees of limitation they exhibit. Hence, in such conditions, the land, an element without cost, participates in income as soon as the supply of it is limited; whereas labour, an element endowed with cost, is excluded from all share in income, or reduced to an evanescent share, as soon as the supply of it is unlimited or insufficiently limited.—In this way, according as the owners of the productive elements are or are not mutually interchangeable, the conditions of land and of labour are radically inverted; for in the former case the land is excluded from any share in the income, and labour obtains a share; while in the latter case the conditions are reversed.

If the two fundamental factors regulating the distribution of income are cost and limitation, it is obvious that all the influences effecting a change in one or other of these factors must indirectly effect a change in the distribution of income.—Thus, the number of the unities composing a given element, productive or unproductive, or its total quantity, do not *per se* exercise an influence upon the division of income among the various kinds, but they exercise an indirect influence when they act or may act upon the cost or upon the limitation of these elements. In fact, it is evident that the greater the total quantity of a given element, the greater as a rule is the cost therein contained, but the less proportionately is its limitation. Therefore, in conditions of mutual interchangeability, this share of income assigned to the individual productive and unproductive elements, being commensurate with the cost of these, is in direct ratio with their quantity; whereas, on the other hand, where mutual interchangeability does not exist, the share of the individual elements in the income, being commensurate with the limitation of these, is in inverse ratio with their quantity.

It may happen, however, that the two laws regulating the division of income operate conjointly, or that the division is effected in accordance with cost and with limitation at one and the same time.—For example, even in conditions of normal mutual interchangeability of the productive elements, such as exclude in normal circumstances the participation in income of the elements which are without cost, land of exceptional fertility, since its supply exhibits special conditions of limitation, obtains, or may obtain, thanks to these special conditions, a share of the total income.

It may generally be said that income is divided among the individual productive and unproductive elements in proportion to their value, which, in conditions of complete mutual interchangeability among the owners of these same elements, is commensurate with their cost; whereas in the reverse conditions it is commensurate with their limitation, and may rise to that level beyond which the remuneration of the other necessary elements is insufficient to secure the continuity of their supply.[1] But this duplex method of regulation is valid only with respect to the remuneration of the individual elements in their totality; it does not apply to the division of the total income received by a single element, productive or unproductive, among the sub-species of that income. In so far as the owners of the various sub-species of a single productive or unproductive element are mutually interchangeable one with another, it follows that in every case the total income received by a given element, as determined by the rule of cost or by that of limitation, is distributed among its sub-species in accordance with their respective cost.—For example, if the total capital or the total immaterial labour participate in the total income in a measure determined by the rule of cost or by that of limitation, the allotment of the various kinds of capital (agrarian, manufacturing, trading, etc.), or of immaterial labour (productive, unproductive, etc.), is in every case proportional to the cost, or to the entity of the respective capitals invested, or of the respective labours furnished.

Now, inasmuch as the coercive association of labour excludes the complete mutual interchangeability of the owners of the various productive or unproductive elements, so, given the coercive association of labour, the division of the income in accordance with the absolute principle of cost can no longer be effected.—Since, however, the interchangeability of the various owners is greater in the case of undifferentiated income than in the case of differentiated income, it follows that undifferentiated income is distributed among its various kinds chiefly according to the principle of cost, and differentiated income chiefly according to the principle of limitation, without

[1] Compare the observations of Stoltzmann (*Die soziale Kategorie in der Volkswirtschaftslehre*, Berlin, 1896, pp. 41, *et seq.*), who endeavours to show that the quota of product received by the individual productive factors is measured solely by their relative force, and not by their productivity. But this *force* is in its turn commensurate with cost or with limitation, according as the owners of the various productive and unproductive elements are or are not mutually interchangeable.

excluding the possibility, in each of these forms of income, of the exceptional intervention of the opposite principle of distribution. Thus, in the regime of undifferentiated income, if the land of the different productive undertakings is unequally fertile, the more fertile area participates in the income to a greater extent, corresponding precisely to the degree of its limitation; so, conversely, under the regime of differentiated income, there may, in exceptional cases, result the assignment of a part of the income in proportion to the labour furnished.—But it always remains true that the fundamental subdivision of income into its sub-species is, in the case of undifferentiated income, effected chiefly according to the rule of cost, and in the case of differentiated income, chiefly according to the rule of limitation. Whereas, therefore, in the case of undifferentiated income, the land, an element without cost, does not share in income, and labour, a costly element, shares in eminent degree —in the case of differentiated income, the land, being a limited element, shares in income, whereas labour shares only when limited in supply. And whilst, in undifferentiated income, the remuneration of the labourers is directly proportional to their number, in differentiated income, this remuneration is inversely proportional to their number.

But the distribution of income, besides being subject to laws diametrically opposed in the two fundamental forms of income, presents also different characteristics in the successive phases of one and the same form of income, according as changes occur in the quantitative proportions among the various kinds of income, and according as there are differences as to the kind of income which prevails in the form in question. It is a well-known fact that income from immovable and income from movable property prevail alternately in the economic system of the nations, and that to a period characterised by abnormal expansion of the income from real property, there succeeds, as it were by reaction, a period characterised by the advance and prepotency of the income from personal property, and conversely. Thus, to the economic omnipotence and reactionary tendencies of the landed proprietors, which persisted down to the opening of the modern age, there succeeds the luxuriant and vigorous expansion of industry, of trade, and of speculation (as examples of the last-named may be mentioned the Tulip Mania in Holland in 1634, and the South Sea Bubble in England in 1720), which finds its appropriate theoretical exposition in the Mercantile System.—Conversely, in classical Rome, during the last days of the Republic, the wasteful extravagance of the farmers of the taxes, the monopolists of unproductive capital, at the expense of the unfortunate provinces, arouses aversion to bankers' profits, and leads to the widespread idealisation of rural life; and it is then (37 B.C.) that Varro writes his *Treatise on Agriculture* and Virgil his *Georgics*. The same considerations apply to France, where the insane speculations of Law give rise by reaction to a frenzied admiration of rural life; and the luxuriance of the physiocratic school of economics is nothing more than the reflex and the outcome of this return to agricultural industry.[1] However, these alterations notwithstanding, the general course of economic evolution is constantly towards the progressive pre-eminence of movable wealth over immovable wealth, as is clearly proved by statistics.

If from the crude distinction between the income from immovable property and that from movable property, we proceed to the more minute and scientific distinction between incomes of various kinds, we soon perceive that the ratios among these are subject, in the evolution of a single form of income, to the most energetic oscillations, for there are unceasing changes in the cost or in the limitation of the individual productive or unproductive elements, that is to say, in the factors upon which the subdivision of the income depends.[2] Thus, turning our attention to differentiated income, which, owing to its complexity, better lends itself to this investigation, we find that in ascendent periods, in which technique is evolved and progressive, the decline in the productivity of the soil is correlatively slight, and for this reason the limitation of land is also little marked.—On the other hand, an increase in savings and in population, and still more the growth of urban agglomerations, increase the limitation of one kind of

[1] Blanqui, *Histoire de l'économie politique*, Paris, 1859, p. 139; Karejew [*The Peasants and the Agrarian Question in France*], Moscow, 1879, p. 217.

[2] Adam Smith, *loc. cit.*, pp. 212, *et seq.*; Ganilh, *Systèmes d'économie politique*, Paris, 1821, II, pp. 345, *et seq.*; John Stuart Mill, *loc. cit.*; Roscher, *Grundlagen*, pp. 345, *et seq.*—have drawn attention to the varying prevalence of the different kinds of income in periods in which an economy is respectively advancing, stationary, or in a state of decline.

land, that is, of building land, thus increasing the share of this element in the total income; whilst proportionately there occurs an increase, owing to the very exuberance in the production of wealth, in the numerous forms of unproductive labour and of unproductive capital. Since, however, in these ascendent periods, there is an abundance of safe openings for the employment of unproductive capital, it results, in this economic phase, that secure incomes are more prevalent than speculative incomes; or, to put the matter in other words, during ascendent periods, consolidated incomes tend to prevail, or to occupy a share of income relatively and absolutely greater than that occupied by fluctuating incomes. But in conditions in which technique is backward or in a state of decline, since the diminution in the productivity of the soil, or of the capitals successively employed in working the soil, is more marked, the limitation of land becomes accentuated; on the other hand, while saving increases, the limitation of capital diminishes; hence there results a constant rise in the rent of agricultural landed property and a fall in the rate of profit and interest, which may ultimately lead to a diminution in the total quantity of profit notwithstanding the increase of saving.[1]—In such conditions, then, agricultural rent tends to represent an increasing proportion, and the profit of capital a decreasing proportion, of the total income. But it is precisely the low rate of profit earned by capital solidly invested which invites, in these periods of decline, the employment of capital in speculative investments; and this gives rise to a prevalence of fluctuating incomes over consolidated incomes.

In this way the territory of the total income, which at the first glance appears compact and homogeneous, divides itself, like the territory of the primitive community, into a plurality

[1] Cf. Ricardo, *loc. cit.*, p. 69, and John Stuart Mill, *Principles*, p. 433. Unquestionably at first sight it seems irrational that capital should continue to be saved when this leads to the diminution, not only of the rate of profit, but also of the real or total profit accrueing to the capitalists; and it would seem at first sight more reasonable for these latter to discontinue saving as soon as saving leads to a diminution of the real profit, or even when saving no longer causes an increase in such profit. But the saving of new capital diminishes the total profit, for the reason that it diminishes the profit of the capital already in use by a quantity greater than the equivalent of the profit of the capital newly invested. This does harm to the capital already invested, but creates for the newly saved capital a profit that would not be received had this new capital not been saved—and this suffices to lead to the incessant saving of new capital.

of zones, each representing or comprehending a different kind of income. But just as the individual members of the primitive collectivity receive each a portion of land in each of the different zones of territory, so that their landed property consists of a plurality of different lots—so also the recipients of income are not confined, or are not necessarily confined, to a single one of the zones into which the entire territory of income is subdivided, but may occupy ground in several of these zones, or even in all. In other words, the income of a given individual need not necessarily consist of rent alone, or of profit alone, etc., but may be a mixture of several kinds of income, consisting at one and the same time of the rent of landed property, the interest of productive or unproductive capital, the remuneration of unproductive labour. Indeed, as a general rule, each individual receives several incomes of different kinds, whereas the reduction of the recipient of income to a single kind of income is a phenomenon altogether exceptional in character, occurring rather in the light of a simplifying hypothesis than in the actual light of complex reality. In truth, the landowner, the capitalist, the simple entrepreneur, these individuals whom the classical science of economics assumes as objects of study, and who constitute the monotonous *dramatis personœ* of the intellectual dramas of that science, are creations of pure fancy, whom we do not encounter in real life. The man who lives beside us, the man whom we meet in the street, when he is not a labourer, has at one and the same time a corner of land, industrial shares, and securities in the bank, and perhaps practises simultaneously some lucrative profession. That is to say, in actual life we do not find capitalists or landowners, entrepreneurs or unproductive labourers, but simply recipients of income—who draw receipts at one and the same time from some or all of the sources of income.[1]

From this twofold series of facts, the subdivision of income

[1] Ferrara, whose aim it appears to be to cancel every kind of distinction in the field of economic science, for he endeavours to annul the most widely accepted distinctions between gross product and net product, between material and immaterial wealth, material and immaterial labour, precious and non-precious metals, labour and capital, capital and land, agricultural industry and manufacturing industry, profit and rent, Ricardo and Carey—has nevertheless reason on his side when he denies the existence of a rigid distinction of persons as between the possessors of the various kinds of income (*Introduzione alla Bib. Ec.*, series II, Vol. III, p. 128). Cf. also Fisher, *The Rate of Interest*, p. 230.

into many species, and the agglomeration of many species of income into the hands of a single individual, it follows that it is necessary to distinguish *income* from *net-produce*. In truth, this distinction is superfluous where social income is concerned [1]; for this is precisely equal to the total net-produce of the productive elements (capital and land), just as the social income of a given kind is equal to the total net-produce of a given specific element, productive or unproductive. But there is excellent reason to draw such a distinction where individual income is concerned; for the net-produce of a certain quantity of a given element, productive or unproductive, may very well furnish several different incomes to as many different persons—for example the net-produce from a landed estate may give rise to two different incomes, going severally to the landowner and to the mortgagee; just as, conversely, the net-produce derived from several different masses of productive or unproductive elements may furnish the income of a single individual—for example, the income of an individual may consist of the rent of a portion of land and of the profit of a quantity of capital, etc.

This subdivision of individual income among the various kinds of income is not, for the rest, the outcome of a capricious love of variety, but is imposed by the most elementary rule of wise administration, which teaches that personal well-being and independence should not be hazarded upon a single venture. In fact, since the rent of land and the profit of capital vary inversely, one increasing as the other declines, it follows that the distribution of individual income between the two fundamental kinds of income, that from landed and that from movable property, constitutes the simplest method of self-insurance, for this compensates for the lesser yield of one venture by the more abundant yield of another.—Nor is this enough; for the income from movable property itself must not be concentrated in a single kind or derived from a single security, but rather distributed among many such, in order to compensate for the deficiencies that may arise in some of these, by the possible greater success of the others.[2]

[1] Lexis, *Wörterbuch der Volkswirtschaft*, v. *Einkommen*.

[2] Leroy-Beaulieu, *L'art de placer et gérer sa fortune*, Paris, 1906, pp. 89, *et seq.*

Further, it is advisable that there should be an intelligent geographical distribution of movable property, or its subdivision among the securities of different countries, since this will often provide, for equal safety, a notable superiority in the income. Thus, in the *Times* of September 12th, 1904, we are told that of two equal capitals, one of which is invested exclusively in national concerns, whilst the other is invested without any regard to such restrictions, the latter furnishes, with little less security, a much more considerable income.[1] Always, then, we find that uniformity of income is injurious, whereas multiformity is profitable; and therefore it will be readily understood that with the general diffusion of economic knowledge, individual income tends always to become more multiform and differentiated.

Moreover the proportions in which individual income is subdivided among the various kinds of income is not a matter of arbitrary judgment and caprice; but we find that these proportions are regulated by strict rules. The Talmud already advises the investment of one-third of a man's property in land, one-third in movable wealth, and one-third in loans. Without yielding to the trinitarian superstition, we may recognise that there is here a reasonable proportion, which should be maintained between the different kinds of income in order to secure its amount and its stability. But it must be added that this rule is subject to continued exceptions and transgressions, due to the influence of national character and to that of the economic system. Thus, in France, where the inclination to industrial investments is slight (probably because the birth-rate is low and families are small), there is less general desire for an increase in individual wealth, and on all hands there is less disposition to run the hazards of industrial speculation in order to obtain a greater income; hence a large proportion of individual property is invested in the public funds, and above all in foreign securities, since the national securities are insufficient; whereas the converse phenomenon manifests itself in countries more inclined to industrial investments. Thus, again, in periods of crisis, many hasten to dispose of their securities in order to buy land, or to deposit money in the banks; so that the income of the sellers

[1] E. Catellani, in the "Rivista di Sociologia," 1905.

of securities tends, in such periods, to be crystallised in the rent of lands, whilst the income of the buyers of these securities is crystallised in movable values. That is to say, the crisis exercises an influence towards the complete separation of the individual kinds of income, tending to convert incomes from a composite into a uniform condition.

§ 2. Degrees of Income

The income thus multiform in character, or consisting of a number of heterogeneous accruements, is received by individual owners according to a very different measure or in very different quantities. Undoubtedly, if there existed the free association of labour, which involves the complete mutual interchangeability of the producers, there would be excluded *a priori* any divergence of individual incomes such as might arise from the possession of more efficient means of production; for, as soon as any such difference made its appearance, the less-favoured producers would hasten to transfer themselves to the condition of the others, or to demand an equal share in the better means of production. But since, on the other hand, there now exists the coercive association of labour, which excludes the mutual interchangeability of the producers, the possibility arises that certain producers may monopolise the more efficient means of production, and in this way obtain a larger income.—And this possibility becomes a necessity as soon as the increase in the population renders it no longer possible that cultivation shall be limited to land of maximum fertility. In fact, as soon as it becomes necessary to engage in the simultaneous cultivation of lands varying in productivity, the coercive associations of labour which are producing on the more fertile areas of land obtain, for the same quantity of capital and labour, a larger product, and therefore a higher income, than those on the less fertile areas can secure; and in this way there come into existence different zones of income, corresponding to as many gradations in the productivity or efficiency of the land, or of the other productive elements which are privately owned; that is to say, there is created a number more or less considerable (according as is larger or smaller the number of zones of land varying in fertility) of progressive degrees of income, so that there arises income of the first degree, consisting of the lowest incomes, that is, of those produced on the less fertile areas of land, and from this we pass to income of the second degree, of the third degree, and so on. But the entity of the respective individual incomes of one and the same degree may vary, either owing to varying capacity on the part of the recipients of income in the management of their undertakings or in the improvement of the productive process, or else on account of their varying inclination to save, or again by their varying good luck, or owing to the annexation more or less considerable in extent which they succeed in effecting of the incomes of others, and so on. Thus, the varying degrees in the fertility of the natural elements privately owned, determine the various degrees of income ; whereas differences in capacity, or in individual conditions, subjective or objective, determine the divergences of the individual incomes of one and the same degree.

In this way, after the total income has been subdivided among its various species, forming as many heterogeneous blocks, the unities of product which constitute the various blocks are aggregated into a series of other groups or blocks of income, in each of which the minimal individual income exceeds, by however small an extent, the maximal individual income of the group immediately beneath ; whereas the various individual incomes collocated in each group present, within the limits thus assigned, more or less significant differences. Thus, subsequently to the formation of kinds, we have the formation of degrees of income ; or, in other words, to the segmentation of income in the vertical sense, there succeeds its segmentation in the horizontal sense. And since this formation of a plurality of degrees of income originates in the most widely generalised phenomenon of the contemporaneous cultivation of unequally productive areas of land, it follows that it must manifest itself whatever may be the form of income—provided that this is founded upon the coercive association of labour—and we therefore find it in undifferentiated income as well as in differentiated income.

Given a series of incomes of increasing degree, the average divergence between the various degrees of income is equal to the mean of the divergences of the respective maximal and minimal degrees of income from the degree of the average income.—Or taking, instead of the two extreme incomes, the upper and the lower *quartile* (as Galton would say), that is, the mean of the incomes in the upper and the lower quarter, respectively, of the scale—the average divergence among the incomes is equal to the mean of the divergences of the two quartiles from the average income; whilst the maximum divergence of the incomes is equal to the difference between the income of maximum and that of minimum degree.

For the very reason that the income of a given degree is not a precise figure, but varies between two limits more or less remote, the mass of products included in the income of a given degree affords us *per se* no absolute information as to the number of its owners. For example, if the income of the first degree ranges from 1000 to 2000 francs, and I know that the total income of the first degree amounts to 100,000 francs, I cannot from these data determine the number of the recipients of income of the said degree, since this number may be 100, or 50, or some intermediate figure. For the same reason, the quantity of the income of a given degree gives us no information as to the average individual income of the said degree, since this is further determined by the number of the recipients of income; seeing that the total income of a given degree may increase, and yet the average individual income of the same degree may diminish, if there occur a proportionate increase in the number of the recipients of income. For the same reasons, the total quantity of the income of a given degree may increase or diminish without any change in the degree of the income, since it may happen that the result of the change in the total quantity may simply be to approximate the individual income, or a part of the individual incomes, to the upper or the lower limit of the incomes of that degree; or the change may be accompanied by a change in the like direction in the number of the recipients of income, so that the measure of the individual incomes undergoes no change. Thus, to follow up the figures previously given, if the total income of the first degree increases from 100,000 francs to 150,000 francs, and if the number of the recipients of income remains 100, the individual income increases from 1000 to 1500 francs, but remains always income of the first degree;

whilst if the number of the recipients of income simultaneously increases from 100 to 150, the individual income undergoes no change whatever. In any case, the alteration in the quantity of income under consideration does not in any way affect the degree of the income.

The correlation of the different degrees of income with the varying fertility of the zones of land simultaneously cultivated, does not, however, last beyond the early stages of economic evolution, and is soon annulled. In fact, incomes are found to be disturbed by a process of incessant mutation, it may be by saving or wastage, it may be by expansion or contraction to the detriment or to the advantage of other incomes, it may be by chance enrichment or impoverishment; so that the incomes of each degree are to be found, after a certain time, elevated to a superior or depressed to an inferior degree. Thus, after a shorter or a longer interval, new degrees of income are formed, which have no longer any perceptible connexion with their original territorial base, but present themselves simply as the resultant of all the multiplex factors of individual enrichment.

But these manifold reasons tending to change the entity of the respective individual incomes, inevitably result in the increase of the quantity of wealth which attaches to the higher degrees of income. If, in fact, in certain forms of income, and particularly in undifferentiated income, the larger income cannot be indefinitely saved to a larger degree; if even in differentiated income it may sometimes happen that the larger income is saved to a lesser extent than the others; it is none the less true that the greater income definitely increases in a greater degree, either in consequence of the greater productivity which it impresses upon the association of labour, or in consequence of the greater facility it possesses for the annexation of rival incomes or for profiting by fortuitous enrichments; and therefore the portions of income which accrue to the incomes of higher degree increase (determining or not, as the case may be, an elevation in the degree of income), whilst what is left over for the incomes of minor degree diminishes. In other words, the incomes of higher degree tend to appropriate to themselves the greater part of the tota income.

§ 3. Mutual Relationships between the kinds and Degrees of Income and the Consequences of these Relationships

Just as the two fundamental forms of income (undifferentiated and differentiated), and of subsistence (onerous or gratuitous) which is the complementary term of these, constitute the base of the four fundamental social classes—so also the various kinds and the various degrees of income are the base of as many sub-classes into which is subdivided the substantially unique class of the recipients of income.—There exists, indeed, a series of sub-classes upon a qualitative foundation, distinguished one from another by the different kinds of income owned by the members of the respective classes (or, it would be better to say, preponderantly owned, since we have seen that it is exceptional for income to be received in only one kind). Such are the sub-classes of landowners, of productive capitalists, of unproductive capitalists, and unproductive labourers, etc., and these sub-classes are in their turn subdivided into owners of building land, of agricultural estates, of mines, into capitalist manufacturers, wholesale traders, retail traders, bankers, speculators, into professors, lawyers, dancing-masters, etc. On the other side there exists a series of sub-classes upon a quantitative foundation, distinguished one from another by the differing entity of the income in the case of the various recipients ; and these are the sub-classes of the minimal, average, high, maximal, etc., recipients of income.

Two incomes may be of the same degree and of different forms, or conversely. Thus, for example, if a non-labourer receives an income equal to that received by a labourer, the two incomes are indeed of equal degree, but differ in form, for the former is differentiated, the latter undifferentiated. Similarly, two incomes may be of the same degree and of different kinds, or conversely. For example, if, of two incomes, each of 1000 francs, one is derived from a mine and the other from a filature, they are equal in degree, but of different kinds.—If of two incomes from landed estate, one is of 1000 francs and the other of 10,000 francs, they are of identical kind but differ in degree. There is, therefore, no necessary connexion between the kind of income and the degree. Yet it is none the less true that, among the forms, the kinds, and the degrees of income, there is a very close correlation, in so far as the incomes of a single degree tend to assume the same form, and to condense themselves within a single kind.—First of all it is clearly manifest that an income of minimal degree is one in which it is impossible for the recipient of income to withdraw himself from labour, and for this very reason minimal incomes necessarily present themselves in the form of undifferentiated income.—Hence, again, the influences which diminish income, or a determinate income, increase the numerical proportion of the owners of undifferentiated income. Thus, in recent years, in England and in America, the fall in the price of grain, and the consequent depression of the income from landed estates, have effected a radical change in the landowner's position; the capitalist-owner (gentleman farmer) has more and more been replaced by the labourer-owner (working farmer).[1] Conversely, an income of high degree tends to take the form of differentiated income.—But if, in this respect, the degree of income influences the form, it is no less true that the form of income, in its turn, influences the degree; for differentiated income gives rise to degrees of income higher than those which prevail in the case of undifferentiated income, since in the case of the latter stricter limits are imposed upon the increase of individual income.—Thus the higher degrees of income give rise to differentiated income, and this in its turn gives rise to yet higher degrees of income.

But the degree of income, in addition to determining the form, has an influence also in determining the kind of income. —We have already seen that in undifferentiated income certain kinds of income cannot make their appearance; now, inasmuch as income of minimal degree is necessarily undifferentiated, it follows that such income cannot manifest itself in certain determinate kinds. On the other hand, income

[1] Levy, *Zur Geschichte der Agrarkrisen*, Jahrb. für N.E., 1904, p. 485. [The English terms, "gentleman farmer" and "working farmer," are used by the German author.—Translator.].—Bourne (*Trade, Population, and Food*, London, 1880, p. 263) already pointed out that the decline of income changed the standard of life of many owners, and forced them to choose a trade or profession.

of minor degree tends predominantly to manifest itself as professional income, or as the income of immaterial labour, productive or unproductive. This is true, above all, of minimal income. It often happens, in fact, that the earnings (including income) of independent artisans or independent producers are inferior to those of employees; as occurs in Austria, where the majority of independent artisans earn from 1200 to 1300 krones, whilst the majority of employees receive from 2000 to 2400 krones.[1] Now, in consequence of this, there are always many minor recipients of income who renounce the idea of founding an independent enterprise, or who abandon an enterprise they have already begun, in order to seek employment as managers or subordinates in a capitalist undertaking; whence their income, which has hitherto been an attribute of capital and productive labour, now becomes the remuneration of immaterial labour. Thus the lowest class of the recipients of income tends always more and more to become constituted of two dissimilar fragments, one of which, made up of the minor industrials (handloom weavers and other independent artisans) and small proprietors, has undifferentiated income and is independent, whilst the other class, made up of employees and agents, is dependent; and the interests of these two classes, being in many respects antagonistic, give rise to enduring conflicts. The increasing numerical and economic prevalence of the dependent recipients of income necessarily leads to an increase in the economic and political power of the major recipients of income, or to the predominance of these over the lower and middle strata of society.[2]

Moreover, when from income of minimal degree (undifferentiated income, or income quantitatively comparable to undifferentiated income) we pass upwards to incomes of higher degree, usually differentiated, we find that in the more modest spheres of such incomes professional income prevails, whilst in the case of still higher incomes, those from capitalised property predominate. When, in the year 1680, Charles XI of Sweden effects a forcible reduction in the landed property of the nobles, these latter immediately enter the employment

[1] Leiter, *Die Verteilung des Einkommens in Oesterreich*, Vienna, 1907, p. 234.

[2] Potthof, *La Situation actuelle de la classe moyenne en Allemagne*, "Revue Ec. Intern," November, 1904.

of the State.—But this is simply one manifestation of a universal phenomenon; for always and everywhere those who receive incomes from capitalised property are compelled, when these incomes are insufficient, to add to them by professional labour; whence it happens that professional income comes to represent a considerable fraction of their total income, it may be in consequence of the scantiness of their income from capitalised property, or it may be from the great increase they are able to effect in their income by professional labour. Conversely, in proportion as we ascend to the higher degrees of income, the larger is the entity of the income from capitalised property, and the rarer becomes the exercise of professional labour on the part of the recipient of income; and hence it happens for a twofold reason that professional income comes to represent a lesser percentage of the total individual income. This explains the well-known statistical fact that income does not increase proportionately to the increase in capitalised property, simply because the higher incomes are not swelled by the confluence of the professional incomes.

With the fuller development of economic relationships, these phenomena tends always to become more conspicuous. We have seen, in fact, that certain kinds of income tend, as economic progress continues, to a fatal decline; we shall see in the next chapter that each form of income traverses, towards its close, a descendent phase, in which the total income diminishes; and we shall see in Chapter VI that other influences combine to diminish individual incomes or a part of these. Now the owners of diminishing incomes are constrained, sooner or later, to make up for the decline in their income from capitalised property by the practice of one of the liberal professions, so that their income, which has hitherto been exclusively derived from capitalised property, now becomes composite in character from the admixture of a professional element. Income, therefore, tends more and more from the simple to the complex in type, so that there is a continual increase in the number of complex incomes, and a correlative reduction in the number of incomes derived solely from capitalised property. Thus, in Italy, the heads of families living exclusively upon independent means, who numbered 886,954 in the year 1881, were no more than

511,279 in the year 1901.[1] Further, as the decline of the lesser incomes proceeds, the element in these incomes derived from capitalised property continues to decrease in importance in proportion to the professional element, until the latter becomes almost exclusively dominant. In Prussia, for example, the greater incomes tend always to become more and more incomes from capitalised property, whilst the lesser incomes, those from 900 to 9500 marks become more and more incomes purely professional in character; indeed, the statistics of that country show further that the ratio between the number of those affected by property tax and by income tax, respectively, decreases among the lesser recipients of income, and increases among the greater recipients of income.

Leaving professional income out of the question, and turning our attention to the income from capitalised property alone, we can readily show that the subdivision of this income into various kinds, and the proportions of such subdivision, are strictly correlated with the degree of income. In fact, a wise proportion among the various kinds of income can be maintained only by means of a complicated and diligent work of administration, which is sometimes effected by the recipient of income in person, but is more often entrusted to a paid agent. Now, if the recipient of income does not possess the capacity for the discharge of this delicate function, or if he lacks the necessary time, and if he is not sufficiently wealthy to pay someone else to do the work for him, his income will not be administered according to the proper rules, and will no longer maintain the due proportion among the various kinds. It may even happen that the narrow limits of the income ultimately force the owner to condense it upon a single kind, and this renders necessary a far more watchful scrutiny to guard against loss.

Whilst, therefore, the supplement of income from capitalised property by professional income is dependent upon the insufficiency of the former, the subdivision of the income from capitalised property is due to the magnitude of such income and is proportional to such magnitude. This is why it is that in Austria 46% of the earned incomes derived from the conduct of banking business, incomes already fairly high, rise, thanks

[1] *Censimento della popolazione*, 1901, p. cvi.

to subsidiary income from capitalised property, into a higher sphere of income; whilst no more than 25% of the earned incomes of minimal degree rise, thanks to subsidiary income from capitalised property, to a higher degree of income.[1] If we compare different countries, we find that those in which the average income is comparatively high present more complex and multiform incomes.

But the degree of income, in addition to determining the proportions of its distribution among the incomes of various kinds, determines also the manner of distribution, or the kinds of income to which it is chiefly allotted. Just as the owner of a moderately large income withdraws himself from professional labour, and thus comes to have an income derived solely from capitalised property, so the owner of a more considerable income withdraws himself from the troubles of business and from association with mercantile affairs, in order to concentrate upon kinds of income which are more regular and more stable. Hence the incomes of a higher degree derived from capitalised property, originally received in the form of agricultural or industrial incomes, tend sooner or later to become transformed into consolidated incomes, abandoning the fluctuating kinds of income to the incomes of lower degree; or, in other words, the major incomes become massed in urban rents, or in the interest of the safer public securities (whence the prevalence of movable wealth in the case of the larger capitalised properties), whilst the minor and medium incomes are mainly drawn from agriculture, manufacture, or commerce.

This conclusion receives notable support from the association of two facts previously recorded. We saw that the mass of total income tends to become condensed in increasing proportions in urban rent and in the interest of the more secure kinds of unproductive capital—that is to say, in the two principal kinds of consolidated income; and we have also seen that the mass of total income tends to become condensed in increasing proportions in the superior degrees of income. Now the simultaneous increase of the mass of wealth condensed in the species of consolidated income and in the higher degrees

[1] Philippovich, *Das Einkommen nach dem Berufe und nach der Stellung im Berufe in Oesterreich,* "Zeitschrift für Volkswirtschaft," 1906, pp. 476, *et seq.*

of income gives good ground for the assumption that these kinds of income nourish in particular the more elevated degrees of income.[1] In fact, the truth of this affirmation is demonstrable by definite statistical data; hence, while the incomes of minor degree are, above all, fluctuating incomes, the incomes of major degree are, above all, consolidated incomes.[2]

It follows from this that whereas the quantity of the various consolidated and fluctuating incomes *produced* in each nation is determined by the quantity of capital productively employed, by the quantity and productivity of the land, by the quantity of public or private securities issued; the quantity of the various consolidated and fluctuating incomes *received* by each nation is, on the other hand, determined exclusively by the distribution of its total income among the recipients of income of various degrees. For the nations in which the larger incomes prevail tend to concentrate to themselves a larger quantity of consolidated incomes, that is to say, to exchange a part of their own fluctuating incomes for the consolidated incomes of those nations in which incomes of medium size prevail. Holland in the eighteenth century, whose citizens are to a large extent supported, not by foreign trade, but by the interest upon the public debt of foreign countries, furnishes us with a typical example of a country with concentrated wealth which exchanges a part of its own

[1] It cannot indeed be said that such is in every case a necessary sequence. In fact, let us suppose that the rent from landed property is received especially by the lower degrees, and profit by the higher degrees, of income. If the mass of income constituting rent increases, while the mass of income constituting profit remains constant but the number of the recipients of this latter diminishes, the individual income of the capitalists increases, and may eventually rise to a higher degree of income. Hence, in such conditions, the mass of wealth received in the higher degrees of income increases although there has not been any definite increase in the mass of wealth received in the kinds of income constituting the superior incomes, whilst there has, on the other hand, been an increase in the kinds constituting the inferior incomes. But this depends upon the neutralising factor of the diminution in the number of the recipients of the greater income. If we put this fact aside, we find that the increase in the wealth received in one given kind of income increases the mass of wealth received in the degree of income constituted by that kind, and that therefore the simultaneous increase in the mass of wealth agglomerated in the incomes of a given kind and of a given degree, shows that this degree is constituted out of that kind.

[2] This result may, however, be affected by peculiarities of national character. In France, for example, the minor recipients of income gladly invest in French national securities, which are pre-eminently consolidated income.

fluctuating income for the consolidated income of countries with diffused wealth, and thus comes to concentrate in its own possession a mass of consolidated income exceeding that which is directly produced within its own frontiers.[1]

The kind and the degree of income whose mutual relationships have thus been traced, affect in addition the species of consumption, or the object upon which income is actually employed. In fact, the income of the unproductive labourers must be devoted to saving in a larger proportion than the income of the owners of property, owing to the special need which presses upon the unproductive labourers of providing a capital which they can hand on to their children. Moreover, while the rent of land is, as a rule, chiefly devoted to unproductive consumption, profit, on the other hand, is chiefly devoted to saving. Hence there arises a different method of consumption of income, imposed upon income by differences in kind. Incomes of differing degrees are also consumed in different ways. Incomes of minor degree must be devoted to insurance in a more notable measure, either because, as we have seen, they cannot have recourse to the more efficient method of self-insurance by means of distribution among several species of income, or else because, for the very reason of their inferiority, they are more subject to oscillations and losses. For example, in Germany it has been established that the harvest is more constant where culture is more intensive and where the yield per acre is greater, precisely, that is to say, where the farms are larger.[2] But this is not all; for the incomes of minor degree must in addition be devoted to an increasing extent to buying the services of unproductive capital and unproductive labour. Thus, for example, it has been observed that the cost of housing, that is to say the mass of income which is consumed in payment for house-rent, increases by no means proportionately to the increase in income; and, moreover, that when we reach a certain point, this cost remains constant notwithstanding a considerable increase in the amount of income. Thus the proportion of income which is expended upon house-rent diminishes as the degree of income

[1] Sartorius von Waltershausen, *Das volkswirtschaftliche System der Kapitalanlage im Auslande*, Berlin, 1907, pp. 367, *et seq.*

[2] A. Mitscherlich, *Die Schwankungen der landwirtschaftlichen Reinerträge*, Tübingen, 1903.

increases. From the Silesian weaver, who spends upon rent 70% of his wages,[1] to the wealthy man, who spends thereon at most 25% of his income, the proportion of the individual income which is spent upon housing forms a decreasing scale[2]; and with economic progress the ratio between the proportion of the minor incomes spent upon rent and the proportion of the major incomes similarly expended tends continually to increase. Again, medical services are far more often required by the families of the less well-to-do than by those of the rich, who live under more hygienic conditions and are therefore better safeguarded against disease; thus, it was cynically remarked by an Austrian governor that cholera never visits the houses of the well-to-do, and the same may be said of other serious and deadly diseases. Even the cost of education is often less for the families of those who are comparatively well-to-do, among whom the parents, being themselves possessed of some degree of culture, can impart to their children the rudiments of knowledge, thus to some extent escaping the payment of tribute to the unproductive labourers. It may, indeed, be affirmed that the fraction of income expended in payment for the services of unproductive capital and unproductive labour becomes greater in proportion as the degree of income becomes less,[3] and that in the lower degrees of income, it tends to exceed the fraction spent upon products. This is immediately evident when we study the subsistence of the labourer, which is spent in larger proportion upon services than upon products; and the *Fabian Society* calculates that the English workers, while they consume 33% of the value of the total products of the country,

[1] Mombert, *Das Nährungswesen*, Jena, 1904, p. 4. For additional data, referring to England, consult Higgs, *Workmen's Budgets*, "Journal Stat. Soc.," 1893, pp. 281–3.

[2] Seligman, *Principles*, p. 485; Pohle, *Die Entwickelung des Verhältnisses zwischen Einkommen und Miethe*, "Zeitschrift für Volkswirtschaft," 1905, p. 26.—See also, for further developments, Bresciani, *Il rapporto fra pigione e reddito secondo alcune recenti statistiche*, "Giornale degli Economisti," July, 1906.

[3] In truth the remuneration of unproductive labour is sometimes proportional to the entity of the income by which the payment is made. Thus, in the year 1863, in the city of Glasgow, an elected medical committee established a scale of fees proportional to the wealth of the patients. But even when this takes place (and such cases are in fact sufficiently rare), it always remains true that the total fraction of an income of minor degree transferred to unproductive labour is greater, owing to the larger quantity of unproductive labour which the recipient of such an income is forced to buy

consume 40% of the value of the total services. The same result would be obtained by the comparison of incomes quantitatively diverse; from which we may conclude that the inferiority of the real income in proportion to the apparent income becomes more marked according as the degree of income decreases.

§ 4. Influence of the preceding Phenomena upon Taxation

We have seen that the total income is subdivided into a number of different kinds, consisting of the incomes from land, from productive or unproductive capital, and from material or immaterial labour, productive or unproductive. But among the various kinds of unproductive labour which participate in income, there is one whose participation in the total income is of especial importance and gives rise to peculiar complications, namely, the unproductive labour exercised and represented by the state. It is by the taxation of income that the participation of the state in the total income is secured. The possibility is, of course, not excluded that the state may procure in addition a part of its revenue at the cost of subsistence, and this usually happens where subsistence is not reduced to the barest necessaries of life; in such cases we have an expansion of income at the expense of subsistence, that is to say, a conversion of a portion of subsistence into the income of unproductive labour. Limiting our consideration here, however, to the levies made by the state upon income, we may point out that income may be affected by three kinds of taxes, which constitute as many progressive phases of the evolution of taxation: taxes upon the commodities of which income is made up; taxes upon net-produce; and income tax.

A tax which falls upon the producers of the commodities in which income is consumed is necessarily transferred to the recipients of income who buy these commodities, and thus ultimately resolves itself into a tax upon income. But in order that such a tax may take the form of a general tax levied upon incomes *pro rata*, it is necessary that it should apply to all the products of consumption of the recipients of income in exact proportion to their value; for otherwise the result will be a total or partial exemption of those incomes which are employed in the consumption of products escaping taxation, or of products less heavily taxed than others.

These considerations apply to the simplest hypothesis, that income is actually consumed in products different from those in which subsistence is consumed. But in view of the fact that certain commodities form part alike of income and of subsistence, if we do not wish that the tax should fall also upon subsistence, it will be proper to exempt these special commodities from the *ad valorem* tax which is imposed upon the other commodities of consumption. But if these commodities are consumed by the various recipients of income to an equal extent, or, at least, to an extent which is not proportional to the entity of their incomes, the exemption of these commodities from the tax gives an advantage to the minor recipients of income, because a larger proportion of their income is exempt from taxation. Thence arises the necessity to compensate the recipients of the larger incomes by the slighter taxation of the commodities especially consumed by these—a measure involving calculations of a complex character and which it is not always possible to carry out. Finally, even where all these conditions are respected, such a tax has always the very grave defect of affecting income by indirect means, creating and generalising undesirable processes of repercussion.

A proportional tax upon net-produce is levied upon the total income as ascertained by the real or objective method of determination previously considered, and is levied upon the persons of those who immediately receive it, the owners of the productive elements; but such a tax does not take into account the subsequent transference of part of the income of these to unproductive capitalists and unproductive labourers. If there is free competition among the various recipients of income, the owners of the productive elements are able to transfer a part of the tax levied upon them to the unproductive capitalists and unproductive labourers, thus effecting a corresponding reduction in the share of income the former have to transfer to the latter in return for the activities rendered by these, or, in other words, thus diminishing the interest of unproductive capital and the remuneration of unproductive labour.—If, however, the owners of the unproductive elements have a monopoly, and have not hitherto made the fullest possible use of the power this gives them, the owners of the productive elements are unable to pass on the tax to the owners of the unproductive elements, and these latter therefore profit by an undeserved immunity from taxation. Thus the tax upon net-produce may give rise to unjust exemptions; and in any case such a tax exhibits, though to a less marked degree, the same vice as the one last considered—namely, that it renders repercussion inevitable.

As long, however, as the various incomes are uniform in kind and in degree, or as long, at any rate, as the individual differences are inconsiderable, taxes upon the products of consumption of the recipients of income and taxes upon net-produce, notwithstanding their intrinsic vices, may be levied without doing serious harm.

But when income is subdivided into a greater number of kinds, and when the amount accrueing to the individual recipients varies more considerably, indirect taxes and real direct taxes show themselves ill-adapted to affect the individual fractions of the total income in just measure and with the necessary precision, and the imposition becomes inevitable of a specific tax essentially personal in character, one which follows income itself through all the meanders of its distribution, affecting the sub-species and subdivisions of income in the hands of its ultimate recipients. In other words, the differentiation of the kinds and of the degrees of income, generates *per se* the need for an income tax, which is, moreover, preferable to any other mode of taxation, in that it exclusively affects the individual tax payer, without giving rise to repercussions properly so-called.—Now, since income tax is a product of the differentiation of income, it makes its first appearance in countries whose economic development is advanced, and where the differentiation of income has become considerable and acute; and this is why we find that whereas in England and in Prussia the income tax has now long been in force, in Russia it is only in our own day that proposals to impose such a tax have been put forward,[1] and why the

[1] Ozeroff [*Economic Russia and her Financial Policy*], Moscow, 1905, p. 259. The Government has announced to the Duma its intention to introduce a project for the progressive taxation of income.

income tax forcibly introduced by the English Government into India in the year 1886 was accompanied by exemptions and transformations which made it altogether atypical.

But with this problem there arise the means for its solution; for economic evolution, while creating the need for levying a specific tax upon income, creates at the same time the possibility of a book-keeping determination of income, and therewith for the first time renders such a tax possible. If, in fact, the insuperable obstacles which, as we have seen, so long faced attempts at the determination of income rendered it necessary to levy taxes on capitalised property, not only in the case of personal property, but also in the case of the so-called income taxes which were established in England from the fifteenth to the seventeenth centuries—in the eighteenth century, these difficulties of book-keeping at length yielded before the progress of that science, and it then became possible to institute an income tax properly so-called. But the determination of income, even when this becomes feasible, presents considerable difficulties, which were pointed out in Chapter II. In a country such as France, in which the income tax has not yet been instituted, the recipients of income, who are naturally averse to such a tax, are never tired of laying stress upon these difficulties, and of declaring them to be insuperable; whereas, in those countries such as England, where the income tax is an established institution, the technical difficulty of the determination of income gives rise to increasing conflicts between the recipients of income and the revenue authorities, the former being careful to declare their incomes as low as possible, while the desire of the latter is to exaggerate the amount of incomes. Hence arise, on the one hand, the partial concealment of income, as is proved by the anonymous payments of income tax previously withheld by fraud [conscience money], and on the other hand the serious inequalities which vitiate all systems of taxation, however well designed, and however nearly approaching perfection.

The material difficulties which surround the application of income tax render it more than ever pressing to establish with precision the characteristics and the rules of income tax, to determine its subject, its object, and its method of rational application.

Since income is an essentially individual attribute, a tax upon income should be directly applicable to the individual who receives that income ; in other words, it is the individual alone who should be subjected to income tax. It follows from this that in a rational system of taxation, the earnings of a limited company or of a co-operative society, which go to augment individual income, ought to be taxed through the individual shareholders or members who receive such income, and that these earnings should not be taxed while in the hands of the society which collects and distributes them.[1] It may be admitted that, for convenience in raising the tax thus imposed upon the dividends of the members or shareholders, payment may very well be asked from the society ; but it must be understood that in such cases these dividends can no longer be included in the calculation of the taxable income of the members or shareholders without giving rise to the injustice of a double taxation.

As far as concerns the object upon which income tax is imposed, it is hardly necessary to point out that there are excluded from it all those elements which do not form part of income itself. Hence all the immaterial enjoyments deriving from income, which, as we have seen, are not income, ought to be excluded from the operations of the tax. With justice, therefore, the Prussian Income Tax Law of June 24th, 1891, the Austrian Law of October 25th, 1896, and others, exclude from taxation "enjoyments deriving from permanent consumable wealth." By parity of reasoning, income tax should not apply to those accruements, or realisations of capitalised property, which lack the essential character of income, namely periodicity ; such, for example, as the entrance-fee to a club, the fines levied by a club upon its members, or fines imposed by an employer on his workmen. Thus, again, if an entrepreneur sell to others a machine, a building, a plant, an area of land, or a security, or if, retiring from business, he sells to his successor his good-will or his practice, the price he receives for this sale is not income, and it must therefore be exempt from income tax ; it is merely a realisation of capital, which

[1] Biermer, *Die Mittelstandbewegung und das Warenhausproblem*, Giessen, 1905, pp. 65, *et seq.* (Biermer quotes also from Fuisting, *Grundzüge der Steuerlehre*, Berlin, 1902).

can and should pay income tax only upon the accruements which it may subsequently yield.[1] Hence the Prussian and Austrian laws just mentioned, whilst worthy of approval in so far as they exempt from income tax accruements of capitalised property by deed of gift or by inheritance, must be blamed in so far as they tax those variations of value in the productive sources which are realised as gains and losses in the purchase or sale of property.[2] Even more blameworthy are the Italian courts, which persist in declaring subject to the tax upon the income from personal property the sum realised by the sale of a good-will, taking the strained view that this sum constitutes a realisation of income not previously taxed. Finally, exempt from income tax should be the various kinds of non-recurrent gain, such as those derived from gambling, or from charitable gifts, or such as a sum paid in one single payment on the realisation of an insurance policy. Hence, strictly speaking, the incomes of charitable institutions ought to be exempt from income tax, since these either go to provide the incomes of those employed by such institutions, and in that case are taxed in the hands of these latter, or else they go to form non-periodic accruements received by the beneficiaries of the institutions, and must as such be exempt. Hence, in Holland, during the eighteenth century, it is in error that charitable receipts are taxed; and the Court of Appeal at Rome, in its decision of September 1st, 1903, is wrong in holding subject to taxation oblations made by the faithful to the coffers of the Church; since these are employed wholly or in part in the form of charity, thus constituting non-periodic accruements.

[1] Toesca di Castellazzo, *L'ammortizzazione del prezzo di avviamento di una azienda e l'imposta di ricchezza mobile,* Turin, 1906.

[2] Altogether wrong, again, is the decision of the Italian Central Commission of Direct Taxation, dated Nov. 6th, 1906 (since reaffirmed by the Tribunal of Pavia, Jan. 3rd, 1908, and by the Court of Appeal of Rome, Dec., 1908), to the effect that the premium or surplus-price of new shares issued by a limited company already established is subject to the tax upon the income from movable wealth. If, indeed, the surplus-price of the shares is due to an increase in the income of the undertaking, this increase of income should be subject to increased taxation upon the income of the company or of its shareholders. But it is not right that income tax should be imposed upon the capitalisation of this additional income, inasmuch as this capitalisation lacks the characteristic of periodicity which is essential to the concept of income. This does not exclude the right of the revenue authorities, when there is manifest an increase in value of an element of capitalised property, to tax this by means of legacy duty, or by means of a tax (imposed on one occasion only) upon a fortuitous access of wealth, or upon gratuitous enrichments, or upon stock for immediate consumption.

Income tax should not apply to any part of the expenses of production, for these are not income; hence it must never be levied upon what is called gross income. In fact, a proportional tax upon gross income affects the various incomes proportionately only on the hypothesis that the expenses of production form a constant fraction of the product. If we suppose, however, that there are different kinds of production which obtain by equal expenditure different quantities of product, a tax proportionate to the gross income is disproportionate to the true income, and (since the differential product constitutes rent), it effects a differential taxation of profit. Thus, if three undertakings, A, B, and C, at a cost of 100, produce commodities to the respective amounts of 160, 170, and 180, this means that A yields a profit of 60, B in addition a rent of 10, and C in addition a rent of 20. Now a tax of 10 % on the product takes from the undertaking A 16, or $\frac{2.66}{10}$ of the profit; from the undertaking B, the tax takes 17, or the same amount of the profit and $\frac{1}{10}$ of the rent; from the undertaking C, it takes 18, or proportionately the same as from B. Hence this tax affects one part of income, the profit, to a greater degree than it affects the rent, which is essentially inequitable.[1] Thus, again, if the gross income of a part of the tax-payers increases less than proportionately to the cost of production (as occurs in any industry subject to the law of diminishing returns), the tax proportional to gross income, precisely because it falls preferentially upon rent, takes the form of a preferential tax upon the more extensive kinds of production, in which rent represents a larger fraction of the total income, and it thus becomes transformed into a progressive tax upon net income. Conversely, if the gross income increases more than proportionately to the cost of production, as happens where the law of increasing returns applies, the kinds of production less affected by the tax are those which are more intensive, since, in these, rent predominates, and therefore the tax upon gross income takes the

[1] The observations of Ricardo (*Works*, p. 112) have no precise application to this case; for these observations refer to a specific tax upon the gross agrarian product, which tax repercusses upon the consumer, and leaves unaffected income, profit, and rent in money; whereas here we are concerned with a general tax upon income, by which all repercussion is *per se* excluded.

form of a regressive income tax.[1] One way or another, in such conditions, it is possible to avoid unequal incidence of taxation, by imposing on the gross income a regressive tax where we have to do with diminishing returns, and a progressive tax where we have to do with increasing returns. But no measure of readjustment is possible when the various tax-payers obtain the same gross income by means of varying cost of production; for, in such conditions, a tax upon gross income, whether it be proportional, progressive, or regressive, necessarily and irreparably affects in varying measure the different net incomes, and more particularly (since the greater income takes the form of rent) effects a preferential taxation of rent. Thus, given three kinds of production A, B, and C, each of which produces 1000, the cost of production being respectively 800, 500, and 300, A gives a profit of 200, B gives a profit of 125 and a rent of 375, C gives a profit of 75 and a rent of 625. Now a tax of 10 % upon the product 1000 takes from each of these undertakings 100: that is to say, it takes from the undertaking A, 50 % of the profit; from the undertaking B, it takes 50 % of the profit = 62·50, + 37·50 or 10 % of the rent; from C it takes 50 % of the profit, = 37·50, + 62·50 = 10 % of the rent. Hence, whilst profit is taxed to the extent of 50 %, rent is taxed only to the extent of 10 %. For this reason, we cannot approve of the practice, in accordance with a decree in former times of Joseph II, or in accordance with the Bavarian method to-day, of taxing the gross income derived from buildings and from the profit of capital, without deductions for the expenses of production; nor can we approve the practice of certain American states of taxing joint-stock companies (for example, the railroads) upon gross income, however much they may endeavour to justify the method by

[1] Thus, in Wisconsin, it is calculated that in the case of those railroads which furnish a gross income of $3000 per mile, the expenses amount to 59·58% of this income, whilst in the case of those railroads which yield a lesser income the percentage of expenses is higher, until, in the case of those which yield a gross income of less than $1500 per mile, the expenses rise to the figure of 74·34%. Therefore the tax upon the gross income of the railroads, which was in force in that State from 1854 to 1903, and which until 1876 was proportional, was in actual working a regressive tax; and it was in order to repair this defect that in the year 1876 the tax was made progressive. Consult Snider, *The Taxation of the Gross Receipts of Railways in Wisconsin*, New York, 1906, pp. 58, *et seq.*

alleging technical difficulties in effecting the requisite deductions from gross income.

If it is improper for income tax to be levied upon any part of the cost of production, it is evident that it must not affect, either directly or indirectly, the quota of the product which redintegrates the wage capital or the technical capital used up during the process of production.—With good reason, therefore, the English law on income tax provides that in the incomes in Schedule A there shall be subtracted from the taxable income the cost of repairs, and that in Schedule D subtractions shall be made for depreciation of machinery and buildings.—Altogether wrong, on the other hand, is the Italian revenue authority, which applies the tax on the income from movable wealth to agricultural plant and live-stock, and to that part of the gross income of limited companies which is devoted to amortisations, and does not even exempt amortisations for depreciation on account of decline in value of raw materials or of manufactured articles deteriorated or damaged, nor yet those for bad debts unless a formal judgment has shown these to be irrecoverable. Nor can the subtraction permitted to limited companies, after an arduous contest, of an annual allowance for depreciation of 5 to 6 % upon machinery, and of 2½ % upon the channels and conductors used for the transmission of force, be regarded as an adequate allowance for wise industrial management. For the same reason, the wealth expended by the buyer of an undertaking in the purchase of a good-will, or wealth devoted to a fund for the replacement of the capital spent in acquiring such a good-will, cannot properly be subject to income tax, since this quantity of wealth goes to make up or redintegrate the cost of the plant, and therefore does not form part of income. As far as payment for good-will is concerned, this is now admitted by our jurisprudence. Thus also there should be subtracted from taxable income, annual insurance premiums against loss from fire, hail, etc., since these also are redintegration of technical capital.—For the like reason, there should be exempted from income tax that part of capitalised property which is consumed ; hence the portion of a terminable annuity which exceeds the normal interest upon the capital employed in the purchase of the annuity, where unproductively consumed, should be exempted from income tax, since it is part of capital. Precisely such is the practice in England.[1] This does not exclude the taxation of such wealth by a tax upon capitalised property or upon consumption.

Nor should be subject to income tax that part of income which is saved; for this, by the very fact of saving, becomes transformed into technical capital or into subsistence, that is to say, it ceases to form part of income, individual or social. Indeed, it is now admitted by financial experts that accumulated wealth may well be taxed in the form of the incomes which it will produce in the future, but that it cannot be directly subjected to income tax without giving rise to a double taxation. This idea inspires the Austrian law of the year 1869, and the law of Baden of 1886, which exempt forests from income tax for the first twenty-five or twenty years of their existence; for in actual fact forests, during the period in which the trees are not yet ripe for felling, are accumulated wealth, not income. Indeed, the taxation of new forests, as practised in America, is really a tax upon saving, and leads to premature felling.[2] For the same reason, the Italian law errs in taxing the income from movable wealth, for this law (Art. 30) taxes the annual incomes of trading companies even when these incomes are employed in the improvement or the increase of capital.[3] It is obvious that we should exempt from income tax, annual premiums for life-insurance, as is done in England under schedules D and E of the income tax returns, and also in Austria and in some of the states of the American Union, for such premiums constitute substantially a quota of wealth which is saved.[4]

[1] Fisher, *Income*, p. 401. It must be understood that Fisher, in accordance with his thesis, which includes in income the whole of the life annuity, affirms that the whole of this should be liable to income tax. But here I cannot agree with him, for the reasons explained in the text.

[2] Fisher, *l.c.*, pp. 253–4.

[3] It is true that some joint-stock companies, in order to avoid the taxation of their dividends, ostensibly capitalise these, in order to distribute them, after a certain time, among the shareholders in the form of capital. In such cases, naturally, these fictitious capitalisations should be taxed as part of income. In contradistinction with such a case, we have that which is common in the cotton manufacturing industry in England, of companies which, in order to swell their dividends, neglect to redintegrate the capital used up (*Royal Commission on Labour*, London, 1892, No. 1817).

[4] Kinsman, *The Income Tax in the Commonwealths of the United States*, New York, 1903, p. 103.

But all that part of the product which remains, after the subtraction of technical capital and subsistences redintegrated or newly saved, is properly subject to income tax. Hence the thesis of certain financiers who would like to confine the incidence of income tax to *free* income, that is, to the income which remains after the necessary consumption of the recipient of income has been effected, cannot be sustained, for, as we have seen, that quantity also of the product which satisfies the consumption of the recipient of income is itself income, and ought therefore to be subject to income tax.—For the same reason, also, all that part of income which the recipient of income distributes among the members of his family, or assigns to them in the form of enjoyment, should be taxed as an integral part of his own income.[1]

The tax should apply to income whether it be differentiated, undifferentiated, or mixed. Hence, if the subsistences of the labourer are exempt from income tax, none the less taxable is the undifferentiated income received by the labourer, whether in the form of undifferentiated income strictly so-called (the income of the independent artisan), or in the form of mixed income (the income of the metayer, the working tenant farmer, the profit-sharing workman, and so on).

But income, as we have seen, after having been immediately received, whether it be undifferentiated in the hands of the productive labourer, or differentiated in the hands of the owner of productive capital, is then broken up into a number of different kinds of sub-income, which are not infrequently assigned to as many different persons. Now the tax should not be levied on the owner of productive capital except in respect of that portion of income which definitely remains his, after the detachment of all the portions transferred to other recipients of income (lenders of productive and unproductive capital, landowners, unproductive labourers), for these portions ought to be directly taxed in the hands of their

[1] Art. 19 of the Italian law of August 24th, 1877, for the taxation of the income from personal property, lays it down that gifts in kind made to sons or daughters living in the paternal house after marriage are subject to the said tax only when these gifts have the character of emoluments and assigns and are at the free disposal of the taxpayer. But when these conditions are not fulfilled, the law states that this mass of wealth shall be subject to the tax upon the income from movable wealth in the hands of the assignee. Thus in any case it is subject to income tax.

holders or beneficiaries. It follows that income tax always lowers the rate of profit in a less proportion than its own amount, or only in a measure corresponding to that portion of it which actually falls upon profit.

Hence all that part of income which goes to pay the interest on borrowed capital should always be subtracted from the taxable income of the borrower, and should be taxed in the hands of the lender[1]; whence it follows that anything which diminishes the amount of interest payable by the borrower increases his taxable income. Thus a co-operative credit society increases the taxable income of its members simply owing to the fact that it diminishes the interest they have to pay, and this without taking into account the income that the member may receive as his share in the gains in the society.—What has been said applies no less to the interest of unproductive capital than to that of productive capital. Thus, the quantity of wealth of the tax payer which goes to pay the interest on public debt, does not constitute part of the income of the tax payer himself, and therefore (leaving out of account a limitation which we shall introduce below) ought to be taxed in the hands of the creditor of the state, who receives the interest. To put the matter in substantial terms, if we suppose that there exists a direct relationship between the owner of productive or unproductive elements and the creditor of the state, it resolves itself to this, that the former transfers a part of his income to the latter, and that subsequently the tax is applied separately to the two masses of income as they

[1] L. 9 c. *de agr.*, 11, 48, justly prescribes that if the *quaestus*, or the gains derived from the *operæ* of the *colonus fugitivus* accrue to the landowner with whom he has taken refuge, the personal tax upon the slave shall be payable by his master. If, however, they accrue to the *profugus*, as happens when this latter works as a wage-earner, the tax must be paid by the labourer himself. It is alleged against the exemption from income tax sanctioned in England in the case of incomes below £150 (or since, 1894, below £160), that this exemption enables large capitalists to elude taxation by lending to persons enjoying incomes inferior to £160; since these. not having to pay income tax, cannot deduct the amount of the tax from the interest they pay to the lenders (Vocke, *Geschichte der brit. Steuern*, Leipzig, 1866, p. 580). But when the tax is levied upon the lender, this difficulty does not arise; for in this case the great capitalist is taxed in proportion to the total interest which he receives from borrowers large and small, and he derives no advantage from the exemption of the small borrowers from taxation. It is true that if the lender receives from the totality of his loans less than £160, this sum is not taxed under schedule C, but it goes to increase the return under schedule D, and if the total income of the lender exceeds £160 it is subject to taxation.

exist in the hands of the two recipients. Thus, again, the part of income which goes to form the profit of the capital of retail trade ought not to be taxed in the hands of the capitalist or of the consumer who pays it, but in the hands of the trader who receives it. It follows from this that everything which diminishes or annuls the profits of the capital of retail trade increases the taxable income of those who consume the products handled by that capital. Thus, given two recipients of incomes primarily equal, one who buys the products he consumes from a wholesale trader transfers to trading capital a lesser quota of his income than one who buys his products from the retail trader, and must therefore pay this trader's profit.—Hence, though the two incomes appear identical, the former has a larger taxable income than the latter.—Thus, again, if up to a certain time a given quantity of products has been supplied to the consumers by means of a retail trader who has retained a part thereof in the form of profit, but now there is instituted a consumers' co-operative society, there results an increase of taxable income among the members of the society, rendering it possible to increase the amount of income tax payable by them. For convenience of collection this tax may be levied upon the co-operative society (as is done in Saxe-Weimar); but it may just as well be levied on the individual members. This last is what happens in the kingdom of Saxony, where the consumers' co-operative society is exempt from the industrial tax, but the members have to pay the tax upon the sums refunded in partial repayment of the price of their purchases, this refund being an increment of income.[1] A similar practice has been sanctioned by the Court of Appeal at Rome (February 2nd and April 1st, 1897).

That part also of income which is transferred to the owners of unproductive elements ought not to be taxed in the hands of those who pay it, but in the hands of those who receive it. Thus the part of the income of the tenant which is paid to the landlord in the form of house-rent should not be taxed in the hands of the tenant, but in the hands of the landlord. Precisely for the same reason, one who inhabits his own house ought not to be taxed upon the presumed rent of his dwelling,

[1] Cf. Ortloff, *Die Besteuerung der Konsumvereine,* "Jahrbücher N.E.," 1906, p. 153.

since this does not in reality bring in any income; whereas one ought to be taxed who rents his house to another, since the owner in this case derives a real income from the house.[1] These conclusions, as we know, conflict with the ordinary method of calculation, which taxes the tenant upon the part of his income spent upon rent, and the owner on account of the house he himself lives in.[2] But it is none the less true that such a method of imposing the tax effects a fictitious dilatation of the taxable area, by creating incomes where they do not really exist. Assuredly, if the estimated rent of the house-owner who lives in his own house bears the same ratio to his income as that borne by the rent actually paid by a tenant to the residual income of the latter, the enlargement of the two taxable incomes is exactly proportional, and therefore there is no variation in the incidence of taxation in the two cases. But wherever the estimated rent of the owner who lives in his own house bears a lesser ratio to his total income than is borne by the rent actually paid by the tenant to the latter's residual income, the method of calculation, which includes also in the income the rent, real or presumed, as the case may be, effects a disproportionate enlargement of the income of the tenant, that is to say, it disproportionately increases the tax payable by the lesser incomes, which is altogether oligarchic and inequitable.[3]

[1] Lotz regards as doubtful the propriety of a tax upon rented houses, since such a tax is not applied to the original income but to the derived income, or to that which one class receives at the cost of another. To this Malchus justly objects that, from whatever source the rent of the house may ultimately be derived, for the landlord this rent always constitutes an income, and therefore ought to be taxed; whereas the tax ought not to be levied upon the tenant who pays the rent and for whom the house does not produce any income. But this writer goes on to say that the owner ought to pay the tax when he lives in his own house. This is wrong; for if the tenant, to whom the house is not a source of income, ought not to be taxed, no more should he who lives in his own house, who is in the same condition. (See Malchus, *Finanzwissenschaft*, Stuttgart, 1820, I, pp. 230, *et seq.*). It is further worthy of note that the very persons who contend that the owner ought to pay the tax upon the estimated rent of his own house, deny this, with manifest inconsistency, where public affairs are concerned, as, for example, in the case of charitable institutions, which they wish to be exempt from all taxation upon the buildings occupied by these.

[2] Italian law on the taxation of buildings, January 26th, 1865; Income Tax Law of Saxony, July 2nd, 1878; Prussian Law, July 24th, 1891, sect. 13; etc.

[3] Thus, for example, if the tenant, A, has an income of 2000, of which he pays 1000 in rent, and the owner, B, living in his own house, has an income of 3000, and his house could be rented for 1000, the real income of A is 1000, and that of B is 3000, so that A's income is $\frac{1}{3}$ of B's. Now, according to the

The justice of these considerations will appear even more clearly when it is pointed out that the payment of a higher rent is not infrequently the outcome of causes which *per se* also lessen the effective income of the tenant, as, for example, when he has a large family. Now if the tax be levied also upon that part of income which is spent on rent, the less well-to-do recipient of income must pay just as much as if he were better off, simply because he directly receives an equal income; whereas this inequivalence is avoided when the rent is considered as a subtraction from income, and when the taxable income of the tenant is therefore diminished by the amount of his rent. It is not suggested that in this way all inconsistency is obviated; for, even by this method of calculation, of two individuals enjoying equal incomes, the megalomaniac who desires a sumptuous habitation disproportionate to his means will correspondingly reduce the taxable extent of his income, and will pay a comparatively small tax, whilst the gourmand, who spends little in rent but much upon salmon or truffles, has a larger taxable income and pays a comparatively high tax. But in such cases there is not properly speaking any inequivalence, for he who consumes the larger part of his income in rent creates a new income for the benefit of the landlord, whilst he who consumes his income in products leaves unchanged the income of him who sells these. Hence, in the former case the consumption of income creates in the hands of the one who sells the product in which this income is consumed a new object upon which the tax may be imposed, whereas in the latter case this does not occur. Hence in the former case the state can exempt from taxation this expenditure on the part of the recipient of income without diminishing the quantity of material wealth placed at its own disposal,

ordinary method of calculation, A's income would be estimated at 2000 and B's at 4000, so that the first would be ½ of the second. In the former case, therefore, the tax payable by A is ⅓, while in the latter it is ½, of the tax payable by B, so that the second method of calculation taxes the tenant more heavily than the owner. This happens because the part of income spent by the tenant in rent (1000) bears a ratio to his residual income (1000) of 1:1, which is less than the ratio borne by the estimated rent of the owner (1000) to his real income (3000), the latter ratio being 1:3. Only if the estimated rent of the owner were 3000, would it bear the same ratio to his real income, as is borne by the rent actually paid by A to the latter's residual income—and then only would the two methods of calculation furnish similar results; for then our method would tax A upon 1000 and B upon 3000, whilst the customary method would tax A upon 2000, and B upon 6000.

whereas in the latter case it cannot do this without diminishing the public revenue.

From these considerations it follows that anything which diminishes or annuls house-rent increases the income of the tenant, and to that extent increases his taxable capacity. Hence a co-operative building society renders its members susceptible of further taxation, which may be effected directly by taxing the members, or indirectly by taxing the society. The grounds for this additional taxation must not be sought, as Feitelberg wishes, in the fact that the society definitely secures to its members the ownership of a source of income; for if, as commonly happens, the member himself lives in the house thus obtained, this house is not the source of any income. But the ownership of the house exempts the member from the need for transferring a part of his income to a landlord, and in this way it effectively increases his real income and enlarges his taxable capacity.

Finally, that part of the income of the owners of productive or unproductive elements which is transferred to the unproductive labourers diminishes to that extent the income of the former to create or to increase the income of the latter, and therefore ought not to be taxed in the hands of the owners who transfer it, but in the hands of the labourers who receive it. Hence (however unreasonable this may appear at first sight), all that part of income which is spent in the payment of medical or legal fees, upon theatres, light women, the hire of servants, engineers, go-betweens, teachers, or even in free or charitable allowances,[1] ought not to be subject to taxation in the hands of those who make these disbursements, but only in the hands of those who receive them, provided that they take the form of periodic accruements. Here also we have, in substance, to do with a different method of calculation, which in the greater number of cases will not effect any essential

[1] The Austrian Law of October 25th, 1896, lays down that charitable contributions in favour of private individuals which are the outcome of contract, must be subtracted from the taxable income of the donor, and taxed in the hands of the recipient, provided that they increase the latter's income up to 1200 krones, at which level the tax first becomes payable. On the other hand, allowances which are not the outcome of contract cannot be subtracted from the taxable income of the donor. Holland, with greater consistency, during the eighteenth century, exempts from taxation in every case the part of income expended in charity.

change. At first sight, certainly, the method of calculation we suggest seems to create a special advantage for those who buy unproductive labour, since they are exempted from taxation upon all that part of their income spent in this way. But since, in reality, all the recipients of income, whether owners of productive or unproductive elements, or unproductive labourers, must devote a part of their income to the purchase of unproductive labour, their relative condition is in fact equalised. The substantial result is a general reduction of all the taxable incomes by the amount spent upon unproductive labour ; but this reduction does not *per se* modify the mutual ratio between the taxable capacities of the individual recipients of income, so that the distribution of the burden of taxation among them can give rise neither to pre-eminence nor to injury.[1] It is true that a disadvantage or an advantage may in some cases result, when the portions of income expended upon unproductive labour vary as between the different recipients of income. It cannot, in fact, be denied that the exemption from taxation of the portion of income expended on unproductive labour gives immunity from taxation to those incomes which are entirely devoted to the purchase of unproductive labour, and in any case (leaving out of account this imaginary hypothesis) gives a positive advantage to those incomes which are devoted in greater proportion to the purchase of unproductive labour ; hence, of two possessors of equal income, the one who spends more upon law-suits and mistresses will be less heavily taxed than the one who spends more upon food and furniture.—Here may be repeated what has previously been said regarding house-rent,

[1] Thus, for example, if A, an owner of productive elements ; receives an initial income of 1000, and spends 300 of this in the purchase of unproductive labour, his taxable capacity is $1000-300=700$, while that of B (the unproductive labourer) is 300 ; whilst if we tax also that part of A's income expended upon unproductive labour, the taxable income of A will be 1000, and that of B 300. Therefore our method of calculation seems to secure an advantage for A. But in reality B in his turn must also divide his income as between products and services, and we may assume that he does so in the same proportions as A, spending 210 on products and 90 on unproductive labour ; hence the taxable capacity of B will be 210 only. On the ordinary method of calculation the taxable incomes of A and B will be 1000 and 300 respectively, whilst according to our method they will be 700 and 210 ; but the ratio between the two taxable incomes is equal in both cases, so that the burden of taxation remains identical, as between the two, whichever method be adopted.

that the first recipient of income chooses to employ his income in a way which creates a new income for the benefit of those who would not otherwise have received it, and therefore gives rise to a new taxable portion of income, whereas this does not result from the use made of his income by the second recipient. Hence the state, which has need of a given sum of wealth, can abstain from levying a tax upon that part of income which is expended by the first recipient of income on unproductive labour, without for that reason losing the revenue which taxation of this portion of income may bring in, since it can tax this in the hands of the unproductive labourers for whom he has created income; but the state cannot refrain from enforcing its demand upon the second recipient of income without losing a portion of revenue, inasmuch as the expenditure of the second recipient of income does not create a new income which the state can tax.

The part of income spent upon unproductive labour ought to be exempt from taxation, not only in the case of private unproductive labour, but also in the case of unproductive labour carried out by the collectivity. In fact, all that part of income which is employed in the purchase of public services is income which is withdrawn from the tax-payers to be transferred to the state or to its functionaries; and therefore, once this transference has been effected, this portion of income ought no longer to be taxable in the hands of the tax-payer. In other words, when a new tax is established, this tax ought to be applied to the income which remains after the subtraction of the taxes previously established; for the part of income disbursed in the payment of these taxes no longer constitutes part of the effective potentiality of the tax-payer, but has been transferred so as to form part of the economic potentiality of the state.[1] This rule, however, is glaringly violated in certain kinds of taxation formally different from income tax, but which effectively taxes income; for, in order to determine the basis of new taxes of

[1] Marsilj Libelli (*L'imposta e la sovraimposta sui terreni del regno d' Italia*, Atti dei Georgofili, 1906. p. 358) justly points out that in order to determine the agrarian income taxable by the state, it would be proper to subtract from the total agrarian income the quota of the local taxes on the land. In Prussia and in Austria, to ascertain the net income, subtraction is made, in addition to that for other liabilities, for the direct taxes imposed by the state and even for certain indirect taxes.

this kind, not only is *no subtraction* made from the initial income on account of the mass of income levied by the old taxes, but this sum is even *added* to that mass, thus increasing the basis of the new tax in proportion to the entity of the pre-existent taxes. In this way every fresh tax effects *per se* an increase in the taxable area, and furnishes a justification for yet more taxation; so that by such a method of calculation it would be theoretically possible to proceed with taxation until there had been effected the complete absorption of the tax-payer's income.

We conclude, therefore, that the tax, when assessed in the proper manner, should be levied upon the various kinds of income in the hands of their effective possessors, and not in the hands of the immediate recipients of total income, those from whom the various kinds of income are successively detached. Only on the ground of convenience of collection is it permissible that the tax should actually be levied upon the original recipients of the total income, who will then transfer a correlatively diminished quantity of the incomes of various kinds to their secondary recipients.[1] When a single individual receives several incomes of different kinds, income tax may be levied separately on each kind; but it may happen, conversely or in addition, that the tax is levied on the sum of the different kinds or upon the total income. This necessarily happens whenever the tax upon the individual kinds of income is insufficient to make up the financial estimate, and the deficit must therefore be supplied by a tax upon the total income.[2]

If, then, the question be asked in what measure should be taxed the various kinds or the various degrees of income, the

[1] Thus in Germany there prevails the practice of the *Kassenabzug* ("collection at the source"), that is to say the tax is levied upon those through whose hands pass the incomes of a person before that person actually receives them, so that the temporary holders have to declare the income. For example, the banks are taxed upon the incomes of private depositors, joint-stock companies are taxed (as we have already seen) upon the dividends they pay to their shareholders, and so on (Ozeroff [*Development of Direct Taxation in Germany*], Petersburg, 1890, pp. 48–50). Similar methods are prescribed in Italy by Art. 15 of the Law of August 24th, 1877, and are proposed in France for the taxation of the interest on the public debt.

[2] Thus in France the purpose of the income tax bill brought forward in the year 1906 was to create simultaneously a tax by schedule upon the individual kinds of income, and a tax upon total income; and the same proposal was made in England by the Extra-Parliamentary Commission that sat under the presidency of Dilke.

reply differs substantially according as the incomes of varying kind or of varying degree are or are not mutually convertible. In the former case, the tax should be levied proportionally on the different incomes ; for, as soon as one of them is taxed at a higher rate than the others, those who receive any of that particular income will hasten to disembarrass themselves of it by transferring their holdings to more favoured kinds of income, thereby diminishing the rate of income in these, and leading to a rise in the rate of income in the more highly taxed varieties of income ; and this process will terminate only when the rate of income of the two kinds of income, less tax, shall have become precisely equal. Thus, in certain of the States of the American Union, the exemption from taxation of money advanced on mortgage gives rise to a great influx of capital seeking investment in mortgages, and this induces a marked fall in the rate of interest on mortgages. At Baltimore we find that many new houses are built and offered at very low rents precisely in consequence of the great amount of capital advanced on mortgage at an exceptionally low rate of interest owing to the immunity from taxation of money thus advanced.[1]

When, however, the various kinds of income are not mutually convertible they may be taxed according to different measures without therefore giving rise to any loss of equilibrium, or provoking any reaction. Hence the rent of land, whether urban or agricultural, can be taxed more or less than the profit of capital, since the landowner cannot transform himself into the capitalist, nor the capitalist into the landowner.

But the possibility of taxing according to different measures two kinds of income that are mutually inconvertible is rendered a necessity by two fundamental considerations.

In the first place it may happen that a particular kind of income can come into existence only on condition that it attains a certain quantity, and in that case, if this kind of income is socially necessary, it should be taxed only in such a measure as will permit it to reach the requisite figure, and this measure may be lower to any extent than the measure in which incomes of other kinds are taxed. This consideration applies with

[1] Ely, *Taxation in American States and Cities*, New York, 1888, pp. 350, *et seq.*

especial force to the taxation imposed upon the holders of public debt.

The state, when it procures by taxation the means by which to pay the interest on public debt, effects, in substance, the withdrawal from the owners of productive or unproductive elements of a part of their income, in order to transfer it to its own creditors. If, however, after this transference has been effected, the residual income of the proprietors and the income of the creditors of the state are taxed in proportional measure, the income of the former is subjected to enhanced taxation, inasmuch as it has previously been taxed by levying the interest of the public debt. If, therefore, we wish to effect a rigorously just taxation, it is necessary that the creditors of the state should be taxed at a higher rate. But this is possible only on condition that the creditor of the state is satisfied with the interest thus diminished by the enhanced tax. For, if the creditor of the state finds that he is able to lend his capital to the state only at the rate of interest which remains after the proportional tax has been deducted, enhanced taxation of the interest of the public debt will merely cause a rise in the rate of interest upon public borrowings, at any rate upon those effected subsequently to the imposition of the tax; that is, in such a case, the specific burden upon the owner of productive and unproductive elements is effectively increased, notwithstanding the measures intended to diminish it. Nay more, it mayhappen that the creditor of the state succeeds in indemnifying himself, owing to the rise in the rate of interest, even for the proportional taxation, thus wholly transferring his burden to the other taxpayers ; and in that case the tax is in reality levied exclusively upon the income of the owners of productive and unproductive elements, leaving altogether immune from taxation the accruements of the creditors of the state.

In any case, the tax upon the income of the creditor of the state, even if it be established at a measure equivalent to that which affects all other kinds of income, cannot effect a reduction of the interest upon the public debt below that rate which the lender considers an indispensable condition for making the loan, without uselessly provoking a twofold transference of wealth, from the creditor to the state in the form of a tax, and from the state (or from the owners of productive or unproductive elements) to the creditor in the form of a rise of the rate of interest. The effect is even worse than this, for taxation of the interest of public debt, reducing the interest upon that debt below the rate regarded as essential by the lenders, makes it impossible for the state to issue its own securities at par, and it is therefore under the necessity of returning to its creditors, when the debt comes to be paid, a capital greater than that which it received from them, and in any case the possibility of conversion is postponed, thus inflicting a loss upon the state. Hence, in such a case it is much simpler to exempt from taxation the interest of public debt, since this enables the creditor to stipulate at the outset that the loan shall be issued at that rate of interest at which he is disposed to advance his capital when he is certain that that interest will not be subjected to deductions of any kind. We see, therefore, that what we said above to the effect that the part of income transferred to the creditor ought to be taxed in the hands of this latter, is true only where the creditor does not make the payment of a given interest the condition of the loan.

What has been said of the creditors of the state is no less valid of the creditors of private individuals. It is, in fact, certain that the mortgager, in so far as he is taxed in a differential measure, or (as happens when the tax falls upon net-produce) in so far as he is constrained to pay the whole tax upon the interest with which he is burdened, will never be able to relieve himself of this charge by demanding a corresponding reduction in the rate of mortgage, if the mortgagee makes the maintenance of this rate an absolute condition of the loan. Similarly, it is evident, that if a tax be levied upon the mortgagee, as soon as this diminishes the effective interest below the rate he requires, he will pass on the burden to the debtor by raising the rate of interest on the mortgage. Thus the annual mortgage tax imposed by the State of New York is regularly passed on to the debtors by raising the rate of interest, and for this reason it was found necessary in the year 1906 to replace it by a registration-duty.[1] Now in such

[1] "Quarterly Journal of Economics," 1906, p. 614. In California, on the other hand, the tax upon money borrowed on mortgage is partially transferred to the creditor; and in New England the tax imposed on the Savings Banks on account of their advances on mortgage is transferred to the debtors

conditions, it is far more logical and straightforward to exempt mortgages from taxation at the outset.

Putting aside the cases just analysed, the need for taxing in different measure the various kinds of income is imposed by considerations of strict justice.—In fact, a tax which takes an equal amount of wealth from equal incomes (even where applied according to all the rules hitherto analysed) is precluded by the fact that these incomes may be obtained at varying capital outlay, and may therefore present a different rate of income. Now, to avoid such inequivalence, it is necessary to take into account the ratio between the income and the capital outlay of the individual taxpayers, and to regard as surplus income all that part of individual income which exceeds the minimal rate of income, and then to apply differential taxation to the surplus income thus determined. For example, given a number of taxpayers who receive an income of 1000, derived in the respective cases from a capital (or, in more general terms, obtained at a cost, which may be constituted by capital, intelligence, labour, etc.) of 20,000, 15,000, and 10,000, the income of the first, which bears to the capital outlay the minimal ratio of 5 % is all normal income ; but the income of the second is normal income to that extent which corresponds to 5 % upon the capital of 15,000 (750), while the remainder (250) is surplus income ; and the income of the third is normal to the extent of 500, the remaining 500 being surplus income. Now the tax should not be levied in equal measure upon the normal income and the surplus income, but the latter should be taxed at a higher rate, for it is substantially a gratuitous income, or is obtained without any increase of capital outlay. This is why the rent of land, and the surplus income due to monopoly or to the ownership of a greater capital, ought to be subject to differential taxation.[1]

But equal incomes, having an equal rate, must sometimes

only in part (Spahr, *Present Distribution of Wealth*, New York, 1896, p. 155, note). This proves that in these cases the taxes leave to the mortgagees a sufficient rate of interest, or a rate very little inferior to what is regarded as sufficient.

[1] From this point of view the analytical method of the *schedule* which is employed in England for the determination of the taxable income is better than the synthetic method in use in Germany, since the former renders it possible, by varying the mode of assessment, to vary the rate of taxation levied upon different kinds of income. In France, too, notwithstanding the

be taxed in different measure on account of the different ways in which they are employed. In fact, we have seen that that part of the initial income which is saved, ceases to be income and is converted into technical capital and subsistence, and therefore should not be subject to taxation. It follows from this that those kinds of income of which a larger proportion is devoted to saving, offer, *ceteris paribus*, a smaller taxable area. Now, as we have seen, the unproductive labourers, since they do not possess a capital to transmit to their children, are compelled to save—it may be directly, or it may be indirectly in the form of life-insurance—in much greater proportion than are the owners of productive and unproductive elements. Hence, when the initial or apparent incomes are the same, the unproductive labourers have a real income smaller than that of the owners of productive and unproductive elements, and their income therefore possesses a smaller taxable area. Unless, therefore, we exempt from taxation that part of income which is saved, it is a matter of plain justice that incomes from capitalised property shall be subject to differential taxation, in excess of the taxation levied upon professional incomes ; this may be effected by taxing incomes from capitalised property at a higher rate, or by instituting a tax upon capitalised property in addition to the general income tax (Prussia), or by both these methods at the same time (Holland).

As with the various kinds of income, so also with the various degrees of income, there may be imposed on these taxation at varying rates. In fact incomes of lesser degree are, in the case of differentiated income, permanently inconvertible, and in every form of income are not immediately convertible, into incomes of higher degree ; and therefore the latter may be taxed at a lower rate without this immediately giving rise to any conversion of minor incomes into incomes of superior degree.—Conversely, the greater income may be subjected to differential taxation, without this giving rise to the splitting up of that income into a number of incomes of lesser degree, for the advantages derivable from the large size of the income are

non-existence of income tax, land rent is subject to differential taxation—whilst in Italy, in the case of the incomes of labour, taxation is levied upon 0·375 or 0·25 of the income ; in the case of mixed incomes of capital and labour the tax is levied upon half the income ; and in the case of the incomes of capital it is levied upon 0·75 or upon the whole of income.

always so considerable as to outweigh any injury that may result from the differential taxation.

The possibility of differential taxation of superior incomes becomes an inevitable necessity, by the rules of the most simple justice, when we take into consideration the different modes of employment and of consumption of incomes of varying degree. We have previously seen that in order to ascertain the real income, and therewith the taxable income, it is necessary to subtract from the mass of wealth received by the recipient of income what is transferred by him to the owners of unproductive elements and to unproductive labourers. It follows from this that in the case of the recipients of income who transfer a larger part of their income to owners of the unproductive elements or to unproductive labourers, the ratio of real income to apparent income is lower than that which obtains in the case of other recipients of income. We have seen above that the fraction of income expended in payment for unproductive elements and unproductive labourers is greater in proportion as the degree of the income is lower; that is to say, the lesser the degree of the income, the greater is the excess of the apparent income over the real income, or, in other words, as we descend in the scale, the real incomes decrease more than proportionately to the apparent incomes. Hence proportional taxation of real incomes can be obtained only by means of the progressive taxation of apparent incomes. Therefore, in the modern system of taxation, which deals with apparent incomes, progressive taxation is absolutely essential to the attainment of elementary justice.

All this follows when we accept the view which commonly prevails, that for the tax-payer the tax is an uncompensated sacrifice. But when we consider the tax in accordance with that elevated modern conception, in which the tax is regarded as the counterpart or the equivalent of services rendered by the state to the tax-payer, the quantity of individual income which should be transferred to the state is rigorously determined by the total value of the public services consumed by the respective tax-payers, and is therefore regressive, proportional, or progressive, according as this value increases in a ratio less than proportional, proportional, or more than proportional, to the real income of the tax-payer.

CHAPTER V

THE QUANTITY OF INCOME

§ 1. Absolute Quantity of Income

1. *The Product of Associated Labour.*

Income being the specific product of the coercive association of labour, the quantity of income is in the first place determined by the quantity of the product of associated labour. In its turn, this quantity is a function of two factors, the quantity and the productivity of associated labour.

a. The Quantity of Associated Labour.

In the first place, the quantity of associated labour is more or less considerable according as the duration and the intensity of that labour are greater or less. The duration of the labour depends, it may be upon physiological reasons (the physical endurance of the labourer), it may be upon psychological reasons (the inclination of the labourer to work), it may be upon technical reasons (for example, the greater or less possibility of artificial illumination), it may be upon legislative reasons (the existence of legal restrictions upon the hours of labour, and the strictness with which these limitations are enforced). The intensity of the labour depends, it may be upon the spontaneous energy of the labourer, it may be upon the irresistible pressure exercised by the mechanical instruments to which he is subordinated, and finally it may be by the composition of the labouring population in the matters of sex and of age—for it is evident that of two numerically equal groups of labourers, that group in which women and children prevail to a greater extent will present a lesser total intensity of labour than is presented by the group in which adult males are more numerous.—Now the composition of the labouring population in the matter of sex and age depends upon a demographic factor, the composition of the total population in the matter of sex and age, and upon a legislative factor, the legal regulation of labour.—If, in a given population, women (in consequence of a higher death-rate among the men) or children (in consequence of a higher birth-rate) are found in higher proportion than in another population, it is probable that the ratio of women and of children to adults employed in productive labour will be greater in the case of the former population than in the case of the latter. But this possibility is subordinated to another condition, namely, that the employment of the labour of women and children is legally permissible. —If these two conditions are found in association, the country in which women and children prevail to a greater extent will exhibit, for any given number of labourers employed, a lesser intensity of labour.

But the duration and the intensity of the labour accomplished being constant, the quantity of labour may vary in accordance with the variation in the number of the labourers. First of all, the population remaining unchanged, this number may vary through an increase or a diminution in the prevalence of disease, which diminishes or increases the number of days of labour provided by the working population. Putting this aside, it is certain that in the case of undifferentiated income, in which the number of the productive labourers is coincident with the totality of the population competent for labour, the quantity of labour cannot increase unless there occur an absolute increase in the quantity of the population. If, on the other hand, the income is differentiated, the number of the labourers is dependent upon the number of individuals competent for labour who are not owners of productive or unproductive elements, or who are not unproductive labourers effectively employed by such owners. It can therefore increase, the total population remaining unchanged, through the conversion of a part of the owners of productive or unproductive elements, or of the unproductive labourers, or of unoccupied persons, into productive labourers. But in any case, an increase in the labouring population, whether or not accompanied by an increase in the total population, can occur only on condition that a part of income is productively saved.

Hence the total quantity of labour productively associated which a given population is able to furnish, is a function of three variables: the duration of labour; the intensity of labour; and (in the case of differentiated income) the economic composition of the population, or the distribution of population in varying proportions among productive labourers, unproductive labourers, owners, and unoccupied persons.—Now do these three factors tend to increase or to diminish in the successive forms of income? First of all, as regards the duration of labour, this inevitably undergoes an increase whenever undifferentiated income is replaced by differentiated income; for in the case of this latter the arbiters of production, the recipients of income, cannot fail to derive advantage from an increase in the hours of labour, whereas in the case of undifferentiated income, the arbiters of production suffer, from such an increase, injury alike physiological and moral. The immoderate extension of the hours of labour which arises under the regime of differentiated income, soon demands legal intervention for the limitation of these hours; hence, with the further development of differentiated income, the duration of labour diminishes. The automatic intensity of labour increases in every successive phase of income, owing to the gradual increase in the potentiality of the technical capital with the aid of which labour is employed; but the spontaneous intensity of labour diminishes when undifferentiated income is replaced by differentiated income, for this latter removes from the labourer all stimulus to accurate and intense labour. On the other hand, *pari passu* with economic progress, there occurs an increase in the numerical ratio of women to men (in consequence of a fall in female mortality), and hence there is an increase in the proportion of women labourers; whilst the proportion of children employed must in any case rise when undifferentiated income is replaced by differentiated income, since in the case of the latter, the worker, under pressure of need, devotes his children in addition to the work of production —but the proportion of children employed tends necessarily to fall with a fall in the birth-rate. In view of all these considerations, the intensity of labour furnished by a given population does not necessarily increase, and may diminish, as the evolution of the income and of the economy proceeds.

Finally, the numerical ratio of the labouring to the non-labouring population exhibits a sensible diminution as the change occurs from undifferentiated to differentiated income; for, whereas in the case of the former the whole of the population works, in the case of the latter a part only works. But this fraction of the total population which, in the case of differentiated income, is devoted to labour, undergoes a progressive diminution in the course of any ascendent phase of that income, for (as we shall see) a characteristic feature of such a phase is the steady decline in the numerical ratio between the non-recipients and the recipients of income.

Whilst, therefore, the total quantity of associated labour unquestionably exhibits an incessant increase, owing to the continuous increase in the total population, it is no less true that the mass of labour furnished by a given quantity of population tends to decline, owing to the operation of a series of factors which diminish the duration and the intensity of labour and the proportion of the labouring population to the total.[1]

b. The Productivity of Associated Labour.

a. Technical Productivity and Virtual Economic Productivity.

The mass of associated labour is not the only factor upon which the quantity of the product depends, for this is determined, in addition, by another element, namely, the productivity of the labour. The productivity of associated labour exhibits an ideal maximum, exclusively determined by the efficiency of that labour and of the elements in conjunction with which it is employed; and this maximal productivity constitutes the *technical productivity* of the associated labour. This productivity, as we know, is greater in every successive phase of the association of labour, it may be owing to the very fact of the unceasing increase in population, which by itself renders possible an ever more ample and elaborate association of labour, it may be by the developing aptitude and the increasing education of the labourer, and by the advancing evolution of technical capital.—In fact, however diverse the influences which may hinder or promote the

[1] It is the Russian economists (Karitchew, Janson) whom we have to thank for the first attempt at the elucidation of the factors which determine the total mass of work done in a nation. Previously this subject had merely been treated superficially in connexion with a discussion of the theory of population.

employment of technical capital in different times and in different places,[1] it is certain that technical capital always tends to increase in quantity and in efficiency in every successive stage of the association of labour. It is true that, in proportion as the productive technical capital is greater, greater also is that part of it which is used up in the process of production, and which must therefore be subtracted from the product in order to ascertain the income; but since productive technical capital always gives a product in excess of its own wear (since otherwise it would not be employed), the progressive development of technical capital ultimately increases the productive potency of associated labour.—To all this series of influences is due the fact that the technical productivity of associated labour progressively increases in all its successive forms.

But coercively associated labour never attains to that maximum which constitutes its technical productivity. In fact, the coercion to the association of labour can only be effected through the employment of a certain quantity of capital and labour exclusively devoted to the function of coercing the productive forces. The capital and labour thus immobilised in a purely coercive and disciplinary function, are thereby divorced from the productive function to which they could otherwise have been devoted; hence to that extent production is diminished.—If the quantity of labour (and of capital) sterilised in this way is precisely equal to that which is required to nourish a productive undertaking, or a certain number of productive undertakings, the result of this is a diminution of the total mass of labour and of product, without however there resulting any diminution in the relative productivity of the labour effectively employed.—But if the quantity of labour (and the same may be said of the capital) thus divorced from production is greater or less than that which is required to nourish one or more productive undertakings, this renders it impossible for the undertaking, or for

[1] Thus, for example, in the United States, where—in contrast with what happens in Europe—the piecework rate of wages does not diminish proportionately as the productivity of labour increases, the workers are stimulated to make new inventions and to perfect the existing technical equipment. Herein lies one reason of the greater frequency of such inventions in the Great Republic.

the undertakings, to obtain the quantity of labour necessary to endow this, or these, with the maximum productivity; and therefore, in such a case, the productivity of labour, or the product of unitary labour, is injuriously affected.

Again, if the coercion to the association of labour absorbs labour in greater measure than technical capital, or, conversely (diminishing, that is, in greater measure the supply of one productive factor), it may happen that the undertakings which have an especial need of this factor, find it impossible to obtain all that they require, and are therefore unable to institute that due proportion between the productive factors upon which the maximum productivity of labour depends. Herein we see a new reason for the fact that the productivity of labour falls below the limit ideally attainable in the actual conditions of technical and economic development.

But the coercion to the association of labour does not merely render unrealisable that proportion between the productive factors which would endow labour with its maximal productivity; this coercion, in addition, limits the efficiency of the productive factors even when these are combined in rational proportions, and therewith attenuates the productive potency of the association of labour.

Now these negative influences which coercion exercises upon the process of production have the effect of reducing the product of associated labour below the limit which would correspond to its technical productivity. That is to say, associated labour can attain only to a productivity equal to the technical productivity diminished by the limiting influences of the coercion that is employed, and this we shall term the *virtual economic productivity* of coercively associated labour.

In normal conditions, the limitation imposed upon the productivity of labour by the coercion which disciplines it, is directly proportional to the intensity of that coercion.—Now, as a rule, the intensity of the coercion diminishes in the successive forms of income, either (as we have seen) owing to the decrease in the productivity of the land, whereby is diminished the reluctance of the producers to associate their labour, or else owing to the perfectionment and increasing potency of the organs effecting the association of labour, which render possible the attainment of the same result with a continually diminishing expenditure of force. The family, matriarchal and patriarchal, the *fratria,* the clan, the sovereign (in Oriental monarchies), the slave-owner, the feudal lord, the guild, the commune, the territorial area, the state, the capitalist, these are the organs effecting the coercive association of labour in the successive phases of income, and they present an increasing scope and an increasing potency.—It sometimes happens, indeed, that legislative hindrances are imposed upon the potency and efficiency of associated labour; but, speaking broadly, it is none the less true that the work of associative institutions, during the successive periods of evolution, has become always more and more adapted to promote the expansion of the productive forces. On the other hand, to diminish the intensity of the coercion to the association of labour there is added, in an advanced phase of evolution, the trade union which brings the workers together outside the factory, and which renders it easier, without the employment of serious coercion, to discipline associated labour. Thus it is an established fact that it is to the interest of the capitalist to employ trade unionists, for the very bond which associates them renders it easier to co-ordinate their forces to a common end.[1] Hence the successive economic forms, for the very reason that they involve, as a rule, diminishing coercion, exhibit a progressive productivity.

Yet it is none the less true, as was pointed out on page 123, that the efficiency of the association of labour sometimes increases owing to an increase in the intensity of coercion. In fact, the coercion to the association of labour cannot fulfil its proper function of effecting the co-ordination of the productive forces, unless it attains a certain degree of intensity; and it follows from this that until this degree has been attained, every increase in the intensity of the coercion increases the productive potency of labour, or diminishes the limitation imposed by the coercion upon the productive efficiency of associated labour. Hence, within certain limits, the negative influences exercised by the coercion may be inversely proportional to the intensity of that coercion, or, to put the matter in other terms, the virtual productivity of coercively associated labour may be directly proportional to the intensity of the coercion.

[1] Hobson, *Problems of Poverty*, London, 1891, p. 116.

Thus, for example, differentiated income, for the very reason that it involves a more intense coercion than undifferentiated income, determines a more extensive sterilisation of the productive forces ; and to this result there contributes in addition the fact that in the case of differentiated income the coercion to the association of labour is brought about in virtue of the fundamental equation $V=R+x$, which can only be attained by the further withdrawal from production of capital and labour. Yet it may happen that, notwithstanding the lesser waste of capital and labour owing to the less intense coercion, the association of labour founded upon undifferentiated income may be less productive than that founded upon differentiated income, for the very reason that in the case of the former the insufficiency of the coercion diminishes the co-ordination and the efficiency of labour. This explains why it is that in the course of evolution we sometimes see forms of undifferentiated income replace forms of differentiated income, the replacing form involving a higher degree of coercion than that which it replaces, as when the communistic economy is replaced by slavery, or the corporate economy by the wage-system. This occurs because these forms of undifferentiated income present, precisely on account of the deficient intensity of the coercion they exercise, an inadequate productive efficiency, less than that which is inherent in the form of differentiated income by which they are replaced.[1] More generally, within certain limits, one form of income may present a technical productivity superior to that of another form which involves a lesser degree of coercion, and for this reason the former may victoriously replace the latter in the succession of social forms.

[1] As to the deficiency of the centralising force of the communistic economy of primitive times, consult Vinogradoff, *The Growth of the Manor*, p. 32. As to the analogous phenomenon in the case of the corporative economy, see Schmoller, *Jahrbuch für Gesetzg.*, 1884, pp. 641, 660. Regarding the analogous phenomenon in connexion with modern co-operative institutions, see David, *Sozialismus und Landwirtschaft*, Berlin, 1903, pp. 540, *et seq.*, and Bernstein, *Voraussetzungen des Sozialismus*, pp. 96, *et seq.*, p. 108. James Long, in the "Annals of English Co-operation for 1900," expresses the view that co-operative agriculture in England is a failure, owing to the lack of directive ability and energy. A large proportion of the co-operative societies founded in the United States by the "Knights of Labour," from 1882 onwards, failed owing to lack of experience in the direction of these enterprises (Holländer and Barnett, *Studies in American Trades Unionism*, London, 1906, p. 367).

Now, since normally every form of the association of labour is less coercive, and for that reason more productive, than the precedent form—or, if the successive form is more coercive, it is so only in those exceptional cases in which the greater coercion involves a greater productivity—the conclusion necessarily follows that in every case, either through diminishing coercion or through increasing coercion, the coercive association of labour must present, in everyone of its successive phases, increasing refinement and increasing efficiency.

This is what we find in actual fact. Emerging from the prehistoric period in which labour is completely dissociated, we find in primitive times the complex association of labour, or the specification of production, effected forcibly and with inflexible rigour by means of the institution of caste; and we find also a more or less crude simple association of labour; but we do not find any trace of the co-ordinated association of labour within the individual spheres of productive activity. Even the association of labour which appears in the communistic economy of the earliest days is limited to the disciplining of the labour of individuals under a concentrating authority, without there occurring any co-ordination of the activities of the different labourers or any correlation of their forces to a common end. Even if such co-ordination arises, it does not pass beyond the limits of homogeneous simple association, wherein the individual labourers contribute to the collective production by means of identical operations.—Nor is it otherwise in the succeeding phase of income, the slave system, in which technical development is meagre and coercion is intense, for here complex association and homogeneous simple association are the only forms we encounter of the association of labour.[1] Thus, upon the slave plantations of the southern states of the American Union, the only culture practised was spade-culture, merely agglomerating upon a single area of land a number of isolated labourers[2]; just as the association found by Xenophon among the slave miners of

[1] Feuerherd, *loc. cit.*, pp. 79, 91–2; Blümner, *Technologie und Terminologie der Gewerbe, etc., bei Griechen und Römer*, Leipzig, 1875–9.

[2] Cairnes, *The Slave Power*, pp. 47, 73; Hahn, *loc. cit.*, p. 397. It is true that certain tentative attempts towards the heterogeneous association of labour occasionally occur. Cf. Philipps, *The Origin and Growth of the Southern Black Belts*, "American Historical Review," July, 1906.

Attica,[1] and the association upon the Roman *villae*,[2] were simple homogeneous associations. But even if in these cases the product passes through several distinct phases, the raw material being first produced, and then transformed into manufactured articles,[3] the phenomenon with which we have to do is always the complex association of labour, or the specification of the productions, which is unaffected by the fact that the individual specific productions are concentrated in the hands of the same proprietor, or in a single undertaking. In other words, all this has nothing to do with simple heterogeneous association, which, in the case of the income of the slave-system, has no means of coming into existence.

The heterogeneous association of labour exhibits certain slight beginnings towards the close of the corporative economy, for in many of the more advanced artisan industries of the Middle Ages it was the practice to assign the individual labourers to different and co-ordinated occupations ; but we have to do here with a phenomenon altogether exceptional, and it remains exceptional also in the opening stages of the income of the wage-system. It is true that in Florence, the precocious cradle of the modern economic system, the woollen industry at the beginning of the fifteenth century displays the heterogeneous association of labour, or the assignment of the successive phases of elaboration to workers, some of whom live in separate dwellings, others in a central building.[4] Moreover towards the end of the seventeenth century, in England, Petty desires the concentration of men as the begetter of associated labour[5] ; whilst the so-called great French industry of the time of Louis XIV and Louis XV does not in fact attain to anything beyond the agglomeration in a single place of a number of workers, each of whom carries out all the operations necessary for the production of the finished commodity ; that is to say, with rare exceptions[6] there has hitherto been no more

[1] Xenophon, *ποφοι η περι προσοδον*, IV, 32.
[2] Mommsen, *Röm. Gesch.*, I, pp. 414, *et seq.*
[3] Bücher, *Gewerbe*, "Handwörterb. der Staatsw.," p. 940.
[4] Doren, *Die florentiner Wollentuchindustrie*, Stuttgart, I, 1901, pp. 42, *et seq.;* pp. 213–4, 220, etc.
[5] Petty, *Several Essays in Political Arithmetic*, London, 1755, p. 29.
[6] Cf. Mantoux, *loc. cit.*, p. 388 ; in the manufacturing industry of Abbeville in the time of Louis XIV, "each *specialty* is placed under the supervision of

than the purely environmental and entirely homogeneous association of labour. The same happens in Russia, where the great industry of the time of Peter the Great is founded upon a dwarfed instrumental base; and where, again, towards 1840, great enterprises bring together into a single place a large number of labourers, each of whom works with his own instrument and independently of the others, lest they should desert the collective industry to found an undertaking upon their own account. This form of industry may be compared, in the biological field, to the *coenobium* of the protozoa, a weak reticulum of cells not yet united to form a tissue; and it is always limited to the sphere of the homogeneous association of labour.

But it is only in the wage economy, in its maturest development, that the heterogeneous association of labour makes its appearance. Even in England at the beginning of the eighteenth century the heterogeneous association of labour is purely embryonic in form; whereas at the same time in Holland the association of labour properly so-called is just beginning, and the anonymous author of *The Advantages of the East India Trade to England*[1] holds up Holland as an example to his compatriots.—In the German cities at this epoch we find in progress what Möser speaks of as *industrial simplification*, that is to say, a simple heterogeneous association, assigning to the various labourers, instead of successive phases of elaboration, the production of the individual portions of a single object, such as a watch.[2] But before long the association of labour properly so-called becomes diffused and settled in England, and it is precisely in this country that the process is for the first time scientifically analysed, by Adam Smith; and this association is the nucleus and the soul of manufacture, which now becomes the prevailing form of industry. Finally, in a subsequent and more intense phase of the income of the wage-system, the association of labour, released from the limits within which it has previously been confined, creates a correlative and vaster technical development, and becomes

a chief who disciplines his men in such a way as to obtain from them the best possible results in each department, in order to contribute to the perfectionment of the total result."

[1] London, 1720, p. 107.

[2] J. Möser, *Patriotische Phantasien*, Berlin, 1804, I, p. 190.

intensive, giving birth to a more potent form of industry—machinofacture, which henceforward is in undisputed possession of the field in the most divergent spheres of production. And from the wage-economy, when it has attained its fullest development, machinofacture extends into the more evolved manifestations of the co-operative economy, which, as its forces permit, hastens to adapt itself to the new and mightier form of production.

Though we saw in Chapter III that every form of industry can be combined with every form of income (undifferentiated, differentiated, or mixed), we see now that the more highly evolved forms of industry cannot effectively develop except in the more advanced phases of each form of income, since in these only the association of labour is released, it may be from the anarchical conditions, it may be from the rigid restrictions, that have hitherto prevailed, and attains to a full and adequate elasticity. Hence, under the undifferentiated income upon a communistic or corporative foundation, and under the differentiated income upon the foundation of slavery or serfdom, the prevalent association of labour is always environmental or homogeneous, whereas the extensive and intensive heterogeneous association of labour, that is to say, manufacture and machinofacture appear only under the differentiated income of the wage-system, or under undifferentiated income upon a co-operative foundation.

β. Effective Productivity—Antagonism between Product and Income.

But the coercive association of labour cannot always attain to its virtual economic productivity even thus circumscribed, since a number of influences directly connected with the structure of the income intervene to prevent this.[1]

Assuredly, if we assume the existence of the most favourable conditions, wherein that productive combination which gives

[1] It might be thought that our analysis has here entered a vicious circle; for, whilst we have previously affirmed that the quantity of the income is determined by the quantity of the product, we now affirm that the quantity of the product is, in its turn, determined by the income. In actual fact, this vicious circle does not exist, for the quantity of the product is not determined by the quantity, but by the existence of the income; so that the phenomenal series is—income, quantity of product, quantity of income.

the maximum income, gives also the maximum unitary product (that is to say, the maximum product for each unit of capital and labour employed) and the maximum gross product, the income cannot increase except in virtue of methods which increase at the same time both the gross product and the unitary product; so that all conflict between product and income is eliminated *a priori*.

It may happen, however, that the maximum income coincides with the maximum unitary product, but not with the maximum gross product; and in this case income cannot attain the maximum figure without restricting the gross product below the maximum. Now the restriction of the gross product, the unitary productivity of capital and labour remaining constant, evidently involves a reduction in the number of the labourers employed; and in such a case, therefore, the elevation of the income to the maximum can be obtained only by leaving unoccupied a part of the labourers who would otherwise have been employed. Since it is in the interest of society that the whole of the population fit for labour should be employed and should furnish the maximum total product, income here has an interest which is opposed to the well-being of society.

Finally, it may happen that the maximum income coincides neither with the maximum gross product nor with the maximum unitary product; and in this case income can attain its maximum only by methods which restrict alike the gross product and the unitary product below the maximum.—Now it is quite true that, in such conditions, the restriction of the gross product cannot involve the leaving unoccupied of a part of the population; but since the interest of society demands that labour shall furnish the maximum unitary product and the maximum total product, in these conditions also the advantage of income is opposed to that of society.[1]

[1] It follows from this that an economic policy truly inspired by the interest of society must have as its aim the furnishing of the maximum total product (and such is the contention of Adam Smith, *loc. cit.*, p. 299; Say, *Traité*, pp. 396, *et seq.;* Sismondi, *Nouveaux Principes*, II, pp. 329, *et seq.*); whereas Ricardo (*loc. cit.*, p. 210) and all his followers, since they consider the maximum income to be the objective of economic policy, place the interest of the recipients of income before that of the collectivity. It is true that in the days of Ricardo the interests of the collectivity demanded that there should be the greatest possible elasticity of the productive forces, that is to say that there should be furnished the maximum unitary product even at the cost

Thus there are cases in which the restriction of the gross product below the maximum, whether or not accompanied by the restriction of the unitary product, increases the total income. Now, in such conditions, income, the arbiter of production, has an interest in the restriction of the gross product, and it may be in the restriction of the unitary product, below the maximum, thus preventing the prevailing form of the coercive association of labour from furnishing all the product of which it is capable, or from attaining the limit of its virtual productivity. And since income is limited in quantity by the negative influences of the coercive association of labour, income does not hesitate to seize the opportunity thus offered of enlarging itself to the detriment of production, so that the restriction of the effective productivity below the virtual productivity becomes universal and unavoidable. Thus, owing to the fundamental coercion of associated labour, a conflict of interests becomes established within the very sphere of production.

The restriction of the product may give rise to an increase in the income in three distinct ways, through influencing the production, through influencing the circulation, or through influencing the distribution, of wealth.

(1). Influences Acting upon Production.

An immediate increase in income may be effected by methods which diminish the product (and the income itself) in the future.—We have a typical example of this in deforestation, which increases the immediate income (though the increment may be said to be fictitious, since it is in fact consumption of capital) of sylvan industry, by compromising or altogether annulling the future product (and the future income). The same may be said of methods of culture that exhaust the soil, since these produce the like result. This series of phenomena

of the restriction of the gross product below the maximum ; and this is why the politico-economical aim of the maximum gross product which dominated the preceding centuries is now for the first time superseded by the politico-economical aim of the maximum income, which generally involves the maximum unitary product. Michlachewski ingeniously draws attention to the succession of these two forms of economic policy, destined, in his view, to be soon superseded by a higher policy, that of the maximum wage, which is already tentatively enunciated in the United States [*Exchange and Political Economy*, pp. 472–3].

is irrational and inadmissible in the collectivist form of income (which must not be confounded with state ownership in a capitalist regime—usually inspired by short-sighted fiscal aims), for in this form of income, the owner of the income, the state, represents both the present members of the community and their descendants, and therefore cannot consent to adopt methods that will enlarge the present income at the expense of the income of some subsequent date. But such a practice is perfectly admissible in all the other forms of undifferentiated income ; and it need hardly be said that it is found to be more completely developed in all the phases of differentiated income.

(2). Influences Acting upon Circulation.

Every restriction of the product which increases the unitary value of that product may increase income, or at least the income of the producer, undoubtedly effecting a corresponding diminution in the income of the consumer. Such is the everyday practice of monopolist producers, who restrict the production and the supply of their commodity in such a way as to obtain the value which will secure to them the maximum income.—It is true that in such conditions there may well be a restriction of the production of a given commodity, yet not necessarily a restriction of the total production ; for there is nothing to prevent the capital and the labour that are withdrawn from the production of the monopolist commodity from devoting themselves to the production of other commodities. But if the restriction of the product is obtained by means of the suppression of part of the commodity already in existence, or without any reduction of the capital and labour employed, or simply by employing this capital and this labour less efficiently and less productively, there results a diminution of the total product. Where, moreover, the restriction of the product is effected by means of a restriction in the capital and labour employed, if the monopolist commodity be subject to the law of increasing returns, whilst the commodity to whose production the displaced capital and labour devote themselves be subject to the law of diminishing returns, the restriction of the production of the first commodity necessarily induces a diminution in the productivity of labour, or a worsening in the general conditions of production.

It is quite obvious that this method of increasing income is altogether inconceivable in the first form of undifferentiated income, in the communistic economy. It might indeed be admitted that a productive community could restrict the production of the objects which it sells to another collectivity, in order to increase their price, and therewith its own income; but such a case is in reality exceptional; and it will be excluded *a priori* if we take for examination an isolated state. If then, we put aside from consideration international relationships, the very intrinsic conditions of the communistic economy exclude the possibility of increasing income by restricting the product. In fact, even if we suppose, in this form of economy, that production is entrusted to individuals, it is certain that the collectivity as owner will intervene to forbid any act of monopolisation by individual members; and if monopoly is excluded, it is no longer possible for the producer to increase value and income by restricting supply and production. If, moreover, the collective entity concentrates in its own hands the direction of the productive enterprise, the deliberate restriction of production in order to raise the value of the products can never occur; for, by acting in such a way, the community would inflict an injury upon a part of its own members, by depriving them of the possibility of obtaining a product desired by them. Hence, in such conditions, all the products must be sold at a price determined by the cost of production, and no increase of income can be brought about by limiting supply and production. Again, if certain products are obtained at an increasing cost, the productive collectivity does not sell them at maximum cost, but simply at the average cost, determining the unitary value in accordance with the quotient obtained by dividing the total cost by the total number of the units produced; for in this way it renders these products available to the maximum number of consumers; whereas, by selling them at maximum cost, it would prevent their purchase by consumers less well-off or more parsimonious.[1]

[1] Bourguin, *loc. cit.*, pp. 39, *et seq.*, points out in this connexion that the sale at average cost of production of products obtained at a rising cost, by increasing the demand for these, claims for employments characterised by diminishing productivity, capital and labour which could otherwise be employed without any relative decrease of the product; that is to say, it involves a sterilisation of productive forces. Oswalt makes the same affirmation (*Vortäge über wirtschaftliche Grundbegriffe*, Jena, 1905, pp. 107–8), and the

Therefore, in such conditions, not only is absolute monopoly impossible, but also relative monopoly, or the privileged position dependent upon more advantageous conditions of productivity; and the production of the various commodities is restricted only by the desires and the needs of the consumers.

But directly we pass from the communistic economy, we find that in all the forms of undifferentiated income it is possible to raise the figure of the income by means of an artificial elevation in the price of the products, or by a correlative restriction of supply and of production.—In fact, a craft-guild or a society for co-operative production which possesses a productive monopoly is able to restrict the quantity of the product in such a way as to obtain the price which yields the maximum income. This may be effected, either by restricting the amount of work assigned to each member, or by restricting the number of the members, or by forbidding the admission of new members, as soon as production reaches the level determined by these considerations. Thus the undifferentiated income is increased by influencing circulation through a restriction of the product.

The same may be said of a consumers' co-operative society; for this can, within certain limits, reduce the quantity of the products in which it deals below the possible maximum, even where it does not possess the monopoly of their sale. In fact, if a consumers' co-operative society has to compete with capitalist undertakings only, it can sell its goods at the current price asked by these undertakings, instead of selling them at cost, and may thus increase its own income, without the capitalist competitors being able to do anything to hinder this. Now a consumers' co-operative society which sells at current

present writer sustains the identical thesis in his *Analisi*, I, p. 570. But these considerations, which are certainly irrefutable, do not affect the fact that the sale at average cost of production renders the products concerned accessible to persons who would otherwise have to do without them; and it follows from this that even if a diminution in the productivity of labour be involved, there is nevertheless a social advantage. In any case, if it is certain that, by selling at average cost of production, the collectivist economy reduces the total product below the maximum, it is necessary to add that this reduction is never a source of income; and herein lies the fundamental difference between the communistic economy and the other forms of income, undifferentiated or differentiated.

price (we assume, for the sake of simplicity, that it sells only to its own members), subsequently distributing the profit among the members in proportion to the amount of their purchases, immediately restricts the demand for its goods below that which would exist if these were sold at cost price.— If the initial diminution in the demand is less than proportional to the increase in the price, if, that is to say, the members primarily devote to the purchase of the product thus increased in price a greater quantity of money, they end by obtaining, thanks to the employment of the subsequent reimbursements of their co-operative profits, a larger quantity of product than that which corresponds to the falling off in their primary demand; and therefore the total quantity of product purchased by them is increased. If the diminution in the initial demand is exactly proportional to the increase in the price, if, that is to say, the members primarily devote to the purchase of the product an invariable quantity of money, whatever may be the unitary price of the product, they end by obtaining, thanks to the employment of the subsequent reimbursements of their co-operative profits, a quantity of product equivalent to the falling off in their primary demand; and therefore the total quantity of product purchased by them is ultimately unaffected. But if the diminution in the demand is more than proportional to the increase in price, if the rise in price leads the members to employ in their initial purchase of the product a lesser quantity of money, then, even if they devote their reimbursed profits to the purchase of a further quantity of the product, they can never effect purchases to make up the total to that quantity which they would have procured had the product been sold in the first instance at cost. In such a case, therefore, the sale at current price has effectively diminished the quantity of products sold; that is to say, the co-operative society increases its own income by restricting below the maximum the quantity of products which it sells.

Thus, for example, let us suppose that a co-operative society, by selling at cost price of 5 francs, can sell 10,000 units of the product, thus receiving 50,000 francs, which exactly repay the cost; but that by selling at the advanced price of 10 francs, it can sell a quantity proportionately less, or 5000 units, for which it obtains 50,000 francs, realising a profit of 25,000 francs. In this case :

50,000 francs buy	5,000 units, furnishing a profit of
25,000 francs, with which can be bought	2,500 ,, ,, ,,
12,500 ,, ,, ,,	1,250 ,, ,, ,,
6,250 ,, ,, ,,	625 ,, ,, ,,
3,125 ,, ,, ,,	312·5 ,, ,, ,,
1,562·5 ,, ,, ,,	156·25 ,, ,, ,,
781·2 ,, ,, ,,	78·12 ,, ,, ,,
390·5 ,, ,, ,,	39·05 ,, ,, ,,
195·3 ,, ,, ,,	19·53 ,, ,, ,,
97·6 ,, ,, ,,	9·76 ,, ,, ,,
48·8 ,, ,, ,,	4·88 ,, ,, ,,
24·4 ,, ,, ,,	2·44 ,, ,, ,,
12·2 ,, ,, ,,	1·22 ,, ,, ,,
6·1 ,, ,, ,,	0·61 ,, ,, ,,
3 ,, ,, ,,	0·30 ,, ,, ,,
1·5 ,, ,, ,,	0·15 ,, ,, ,,
etc.	etc.
100,000 francs total price realised.	10,000 units total quantity bought.

Hence the co-operative, selling at current price, ends by disposing of a quantity of product equal to that which it could have sold at cost price. But let us suppose that, selling at the price of 10 francs, the co-operative could dispose only of a more than proportionally smaller quantity of product, for example, 4000 units, for which it would receive 40,000 francs, realising a profit of 20,000 francs. This 20,000 francs, distributed among the members, would enable them to buy 2000 additional units of the commodity, and so on. The result would be :

40,000 frs., with which are purchased	4,000 units, furnishing a profit of
20,000 frs. ,, ,, ,,	2,000 ,, ,, ,,
10,000 ,, ,, ,,	1,000 ,, ,, ,,
5,000 ,, ,, ,,	500 ,, ,, ,,
2,500 ,, ,, ,,	250 ,, ,, ,,
1,250 ,, ,, ,,	125 ,, ,, ,,
625 ,, ,, ,,	62·5 ,, ,, ,,
312·5 ,, ,, ,,	31·25 ,, ,, ,,
156·25 ,, ,, ,,	15·625 ,, ,, ,,
78·125 ,, ,, ,,	7·81 ,, ,, ,,
39·0625 ,, ,, ,,	3·906 ,, ,, ,,
19·5312 ,, ,, ,,	1·95 ,, ,, ,,
9·76 ,, ,, ,,	0·97 ,, ,, ,,
etc.	etc.
Total 80,000 frs.	Total 8,000 units.

Thus the co-operative society distributing its profits among the members succeeds in selling no more than 8000 units of its product, or 2000 less than it could have sold at cost price.

In the economy of undifferentiated income there may therefore arise a conflict between product and income, or, in other words, it may happen that income is increased by means which diminish the product.—But this series of phenomena manifests itself to a much more notable extent in the case of differentiated income, and above all in those forms and kinds of differentiated income in which monopoly is more general and more intense. Thus, while in modern Greece a part of the grape harvest is often destroyed in order to put up the price, in the United States many industrial combines buy inventors' patents with the sole object of keeping them out of the hands of their competitors, and without making use of the inventions themselves for many years. For example, the Edison phonograph, when first invented, has one application only in commercial enterprise, as a means of communication and information; for the combine which has bought it from the inventor will neither allow others to undertake, nor will itself undertake on its own initiative, the other applications of which it is susceptible.[1] Now there is here a case of increase of income dependent upon a restriction in the quantity of the product, whereby the price of that product is kept at a high level. Such a practice finds a much wider application in the railway transport industry, which is pre-eminently monopolist in character. In fact, the companies, or the state, which both alike carry on this industry on essentially capitalist principles, raise the rates to that level which will secure the maximum net income, thus diminishing the number of services supplied and demanded below the maximum which would be obtained if the rates were simply commensurate to the cost of the services. It is estimated that in Prussia, where the railways are all owned and controlled by the state, the rate of transport per ton or per kilometre, according to the existing tariffs, is $2\frac{1}{2}$ times the actual cost; so that, to secure the maximum product, or the maximum sum of railway services, it would be necessary to reduce the tariffs to $\frac{2}{5}$ of their present figure.—Thus the railway industry restricts the tariff in order to increase the income; and this occurs to an even more considerable extent where the railways are privately owned.[2]

[1] Janschull [*Industrial Combines*], Petersburg, 1895, p. 407.

[2] Sax, *Verkehrsmittel*, I, pp. 82, *et seq.;* Launhardt, *Tariffe ferroviarie*, "Biblioteca dell' Economista"; Ulrich, *Teoria delle tariffe ferroviarie*, ibid.; Acworth, *Elements of Railway Economics*, Oxford, 1905; Flora, *La politica delle tariffe ferroviarie*, Naples, 1907, pp. 107–118.

But in these practices, which aim at the increase of income by the restriction of the product, income not infrequently enjoys the support of the state; as is the case, for example, when there are protective duties which, by diminishing the productivity of labour, increase the value of the product, and therewith increase income, or certain kinds of income.

(3). Influences Acting upon Distribution.

The processes hitherto examined for the increase of income at the cost of the product are possible and efficacious only when their application is circumscribed to a single product or group of products; for, if they were generalised throughout all the fields of production, they could not raise the value of the products, and therefore could not increase income. They have therefore, a vast sphere of application in time, in so far as they occur in the most varied forms of income, but their application in space is an extremely restricted one, in so far as they occupy a circumscribed zone in the field of production; moreover, they raise individual income, but not total income. Very different, on the other hand, are those processes which raise income at the cost of the product by influencing distribution; for these are perfectly efficacious even when generalised to all products; and, even when applied to a part only of productions, they raise, not only the individual income, but also the total income; yet these are possible only in certain historic forms of income, that is to say, their sphere of activity is vaster in space, but more circumscribed in time.

Considering first of all undifferentiated income, we find that the association of labour proceeds until that point is attained beyond which the addition of a new labourer effects no more than a proportional increase in the product. In fact, in such conditions, subsistence being equal to the product of isolated labour, and therefore constant, the numerical increase of the associated labourers increases the unitary income in so far as it increases the unitary product. It is to the interest, therefore, of the producers to extend the association of labour only in so far as they derive from that extension an increment of the unitary product, that is to say, an increase more than proportional to the total product; so that, as soon as the new labourers affiliated to the association increase the product only to a proportional extent, there ceases to exist any economic reason for their affiliation, and it is necessary for the new labourers to found new productive associations, which will in their turn extend up to the point at which the affiliation of new producers effects no more than a proportionate increase in the product.

Hence, in the case of undifferentiated income, the association of labour extends until that point is reached at which any further extension would not give rise to any increase in the productive efficiency of labour. The same may be said of the employment of technical capital; for this, in the case of undifferentiated income, is saved and employed as long as it increases the unitary product.—In fact, every replacement of the workers by technical capital, or every employment of new technical capital, which increases the unitary product, increases *per se* (the subsistences being constant) the unitary income, and is therefore to the interest of all the associated producers. Thus the association of labour and the employment of technical capital proceed, in this form of income, up to the point at which they endow labour with the maximum unitary productivity; that is to say, human labour (leaving out of consideration the limits inherent in the fundamental coercion to the association of labour and in the other influences previously recorded) attains the maximum unitary productivity compatible with the prevailing conditions of technique.

Finally, in these conditions, there is obtained, not only the maximum unitary product, but also the maximum total product, compatible with the conditions of technique. This results from the fact that in this form of income the whole population is productively employed, so that the maximum unitary product necessarily involves the maximum total product. Certainly it is always possible that, in a given industry, the replacement of a given number of labourers by a technical capital which undergoes little or no wear in use, may, while increasing the product or the unitary income, diminish the gross product. But the workers who, in this determinate industry, are replaced by technical capital, must find independent employment in another industry, since only on this condition does undifferentiated income persist; and therefore the total mass of products increases in every case.—If follows from this that undifferentiated income always obtains the maximum unitary product and the maximum total product compatible with the prevailing conditions of technique.

This conclusion is no longer irrefutable when there is attained that limit of demographic and economic saturation in which there no longer exists a single available strip of cultivable land. In fact, in such conditions, the new additions to the population, where they are not employed by the associations already existing, find it impossible to found new associations on their own account, and are constrained to sell their labour, in exchange for a bare subsistence, to the members of the existing associations. Thereupon undifferentiated income disappears to give place to differentiated income. If, as is by hypothesis the case, undifferentiated income persists, this is because the new labourers who are superadded are affiliated to the existing associations despite the fact that they increase the product only in a measure proportional or less than proportional. Therefore, in such conditions, the unitary productivity of labour declines in proportion as the association of labour extends, that is to say, it diverges to an ever greater degree from the ideal maximum which corresponds to the prevailing conditions of technique. Moreover, if the unitary product decreases, the absolute product increases; and therefore, in such conditions also, undifferentiated income, if it does not give the maximum unitary product, still gives the maximum total product. For the rest, these conditions of extreme demographic congestion do not correspond to the reality of past or present times, nor even to that of any future that can be definitely foreseen, and they are therefore completely outside the sphere of positive investigation.

In the case of differentiated income, on the other hand, the converse phenomena occur.—In fact, in such conditions, in which subsistences may be (as we shall show more clearly later) inferior to the product of isolated labour and therefore variable, it may happen that the increase in the number of associated producers increases the sum of the subsistences in equal measure with, or in greater measure than, the product, that is to say, it leaves the income unchanged, or diminishes it. Now, in this last case, that productive combination which gives the maximum unitary product, gives an income inferior to the maximum; that is to say, it is to the interest of income to confine the association of labour within that point at which labour attains the maximum productivity. —Thus, for example, if hitherto there have been engaged 10 workers to produce 120 measures, and now there are engaged 12 to produce 160, the unitary productivity increases from 12 to 13·3; but if the individual wage rises (precisely because the number of unemployed persons diminishes), from 5 to 10, for example, the income diminishes from 70 to 40.—Therefore, in this case, income refuses to increase the number of the workers from 10 to 12, refuses, that is to say, to extend the association of labour up to the point at which labour attains the maximum productivity. Conversely, it may happen that the diminution in the number of associated workers (by increasing the number of the unemployed) diminishes subsistences in a greater measure than product, and therefore raises the income; and in such a case income diminishes the number of workers employed, or enforces upon the association of labour a restriction which diminishes the productivity of labour.

The employment of technical capital which increases the product and the unitary income may exhibit, in this respect, just as much as the extension of the association of labour, an opposition to the interests of differentiated income. In fact, the significant matter in this economic form is not the quantity of unitary income, or the quotient obtained by dividing the total income by the number of the labourers, but the quantity of total income available for the recipients of income; and this quantity may very well diminish while the unitary product and the unitary income increase. Thus, if a certain number of workers be replaced by a technical capital (of zero wear) equivalent to their subsistences, which diminishes the total product in a greater measure than the quantity of the subsistences replaced, the product and the unitary income (that is to say the income per labourer employed) may certainly increase, in consequence of the diminution in the number of the workers employed, but the total incomes diminishes, For example, if hitherto 100 workers, requiring 100 subsistences, have furnished a product 200, whereas now 50 workers with 50 subsistences and a technical capital of zero wear amounting to 50 produce 140, the unitary product *increases* from 2 to 2.80, the unitary income *increases* from 1 to 1·80, but the total income *diminishes* from 100 to 90. Now what signifies to the recipients of income is not the unitary product or the unitary income but the total income ; and since this diminishes, they have no interest in the employment of technical capital. This is why it is that a technical capital which increases the unitary product and correlatively the unitary income, and which would certainly be employed in the economy of undifferentiated income, is not employed in the economy of differentiated income, because it diminishes the total income ; that is to say, differentiated income renders impossible the adoption of an improvement in technique which would increase the productivity of labour, or, in other words, the productivity of labour is restricted within the maximum which it might attain.[1]

In the case here indicated income is opposed to an increase in the unitary product which is accompanied by a diminution of the total product.—But the case may arise in which the total product equally with the unitary product is artificially restricted by the influences of differentiated income, so that income increases in virtue of methods which diminish the product. We see this every day in capitalist home-industry, in capitalist petty farming, in the undertakings in which women and children replace adult males, and generally in those forms of enterprise which the Webbs speak of as parasitic, and which diminish the productivity of labour and the product, but by depressing wages in still greater proportion increase the

[1] Against these considerations there might be adduced the views of Oswalt (*loc. cit.*, pp. 109–10, 144), who points out that, in order to determine the unitary product, we ought not to measure the product in relation to labour alone, but also in relation to technical capital, and that, if we do this, we find that the replacement of the workers by technical capital equivalent to these, when it diminishes the total product, diminishes at the same time the unitary product. Thus, in the example given above the unitary product, after the machine has come into use, will not be $\frac{140}{50}=2{\cdot}80$, but $\frac{140}{50+50}=1{\cdot}40$, that is to say, it will be less than that which was obtained prior to the introduction of the machine. But if it is logical that such a writer as Oswalt, who posits even differential rent among the elements of the cost of production (*loc. cit.*, p. 116), should regard the accumulation of capital as a cost comparable on equal terms with labour, it is no less logical that we, who cannot accept this view, should persist in measuring the productivity of associated labour solely by comparing each with the other the product and the labour employed.

income. Here income increases at the cost of the product. But such a phenomenon may also arise independently of any involution in technique, or concomitantly with an advance in technique. In fact, every technical improvement which diminishes the product in less degree than it diminishes the number, and consequently the total subsistence, of the workers employed, increases the total income, and is therefore in the interest of income, but diminishes the total product of the industry concerned. Hence the workers replaced by the machine cannot find productive employment unless new capital is productively saved, so that it may very well happen that the diminution of the product in that particular industry is not compensated by an increase of product in some other industry, or, in other words, that the diminution in product is a general one. If, then, in the case of undifferentiated income, every technical advance which increases the unitary product and the unitary income increases the total product, in the case of differentiated income, on the other hand, a technical advance which increases the unitary product, the unitary income and the total income, may diminish the total product ; that is to say, the increase of income may be obtained by methods which diminish, not merely the product of one particular undertaking, but the total product of society.

Sometimes, on the other hand, differentiated income increases, or maintains itself at the maximum figure, no longer by diminishing the social product, but by impeding its increase. This necessarily happens in those conditions of demographic congestion to which we have previously referred. In fact, since in such conditions the employment of additional labourers effects a very trifling increase of total income, or effects no increase at all, the recipients of income refuse to employ any additional workers. And since, in the supposed conditions, there are no available lands upon which the increments of population can be employed, the unwillingness of the recipients of income to take on new workers for the undertakings already in existence involves the irremediable unemployment of these additional workers and the inevitable arrest of social production. This, if it avoids or restricts the diminution in the unitary product, yet brings about a restriction of the total product below the limit which it could otherwise attain.

But in addition to such direct influences, income may diminish the product by indirect means, that is to say, by the reactions which the practices previously studied provoke on the part of the labourers. If, indeed, income is increased by methods injurious to labour, labour not infrequently reacts by means of strikes, or by obstructive methods such as the restriction of the quantity of labour furnished by each labourer ("ca' canny"), or by some other vexatious interference with the progress of the enterprise—practices which all necessarily lead to a restriction of the product.—Now if income, notwithstanding these influences, maintains itself above the level at which it would have become established in the absence of any practice hostile to labour, income will continue to employ such methods notwithstanding the reduction in the product to which their employment gives rise.

These manifestations of antagonism between product and income inherent in differentiated income[1] appear with diminishing intensity in the successive sub-forms of that income. In fact, the greater the technical productivity of labour, the greater is the loss of product dependent upon the influences tending to limit productivity, and hence the less probable is it that a process which diminishes the productivity of labour will succeed in increasing income.—On the other hand, the greater the productivity of labour, the less likely to arrive, or the more remote, is the moment in which the increase in the number of associated labourers, increasing the unitary product, will increase the total product in a ratio barely equal to or less than the increase of the subsistences,

[1] Pareto (*Cours d'économie politique*, II, pp. 92, *et seq.*, p. 179) is therefore wrong in affirming that the enterprise of an independent producer, and the communistic economy, in establishing those coefficients of manufacture that produce the maximum well-being for the members, arrive at the same coefficients of production which are established on the basis of free competition in an individualistic or capitalist economy. The truth is that in the economy of the independent producer and in that of the communistic producer—sub-forms of undifferentiated income—the maximum income necessarily coexists with the maximum product, whereas in the capitalist economy (even if it is founded upon free competition), a form of differentiated income, this is not the case. Therefore the enterprise aiming always at the maximum income is, in the case of undifferentiated income, necessarily organised in such a way as to obtain the maximum product, but is not necessarily thus organised in the case of differentiated income.

and will therefore fail to give rise to an increase in the total differentiated income. Finally, the greater the productivity of labour, the more probable is it that a process increasing the product and the unitary income will at the same time increase the total income, and therefore redound to the advantage of the recipient of income. Hence the influences just studied (and the same may be said of those indicated under the sub-headings (1) and (2)) accentuate the advance in the productivity of labour that manifests itself in the successive forms of income ; so that these forms, as well as exhibiting an increasing virtual productivity on the part of associated labour, manifest the diminishing power of income to reduce the effective productivity of associated labour below its virtual limit. Now the incessant increase, thus determined, in the productive efficiency of associated labour, is such as to outweigh the progressive decline in the productivity of the land which necessarily manifests itself in every successive phase of income. Hence, despite this countervailing influence, in the successive forms of income the relative product of labour presents an incessant increase.—This is true, however, only in the ascendent phase of each form of income ; for, during the declining period, in each successive form, there becomes continually more marked the diminution of the virtual productivity of associated labour and the reduction (due to the influence of income) in its effective productivity below the virtual limit ; so that the relative product of labour is subject to a progressive decline.

Each form of income may be compared to a receptacle, within which the productive forces of society are confined, and within which they undergo elaboration and development ; but these forces can only develop freely to the degree permitted by the limits of the receptacle, and not beyond. No doubt, in every successive form of income, the confines of the receptacle become more extended, either because the technical or virtual productivity of labour becomes greater, or because the influence of income in depressing the effective productivity of labour below the virtual productivity becomes less ; hence, in the successive forms of income, the productive forces can develop with increasing efficiency. Moreover, in every form of income, during its ascendent period, the limits of the receptacle gradually expand until a maximum is attained, this expansion rendering possible a concomitant continuous expansion of the productive forces. But as soon as the maximum has been attained, the receptacle progressively contracts, thereby bringing about a corresponding decline in the productivity of associated labour. Hence the progressive phases of the coercive association of labour could be even more aptly figured as an ascendent series of parabolas, in each of which the productivity of associated labour increases up to a certain limit—higher in each phase than in the one before—and, having attained this limit, declines.

But within a single form of income, the different kinds of income exercise an influence which diminishes with varying intensity the productive potency of associated labour. Whilst it is true that income sometimes undergoes an increase in virtue of methods which diminish the unitary or the total product, this occurs more especially and with greater frequency in certain kinds of income, and above all in the income derived from the rent of land—for this last increases as a rule with every decline in the productivity of agricultural labour or of its product. It follows from this that those forms of industry in which the rent of land prevails are subject to a restriction of production more frequent and more intense than occurs in other forms of industry in which other kinds of income prevail; and this is why it is that in agriculture, processes restricting production are especially prevalent. For this reason also, given different degrees of income, that degree in which land-rent predominates must exercise upon production a restrictive influence greater than that exercised by those degrees of income in which other kinds of income predominate; and given two countries, in one of which rent predominates, and in the other profit, in the former there must be a more marked inferiority of the effective productivity of labour in relation to its virtual productivity. Finally, it may happen that income of a given kind may be increased by methods which diminish, not only the total product, but also the total income.

In this way the effective productivity of associated labour is always that which yields the maximum income, and the effective productivity is more or less inferior to the virtual productivity according as the income is differentiated or undifferentiated, according as the form of income is less or more evolved, and according as land-rent or the profit of capital predominates.[1]

II. *The Wear of Technical Capital.*

The specific product of associated labour contains one portion which goes to redintegrate the quantity of technical capital (necessary to institute the association of labour) which undergoes deterioration in the process of production. Now, to ascertain the income, it is evidently necessary to subtract this quantity from the specific product from associated labour; and the income will therefore be greater or less according as this quantity is more or less considerable.

III. *The Product of Isolated Labour.—The Quantity of Subsistence.—Struggle Between Subsistence and Income.*

In the conditions hitherto postulated, in which income is precisely equal to the specific product of associated labour, and in which therefore subsistence is equal to the product of isolated labour employed with a unitary technical capital (allowance being made for the wear of this)—the quantity of income is exclusively determined by the two factors previously indicated, and it is absolutely independent of the productivity of isolated labour or of the quantity of subsistence. In fact, in such conditions, if the productivity of isolated labour increases or diminishes, there increases or diminishes the quantity of subsistence; but since this has no necessary influence upon the productivity of associated labour, it cannot have any effect upon the absolute quantity of income.—But it may happen that the remuneration of labour expands in excess of the product of isolated labour, or conversely that income succeeds in restricting the remuneration of labour to less than the product of isolated labour; that is to say, it may happen that the worker obtains for himself a part of the product of associated labour, or that income obtains a part of the product of isolated

[1] With regard to the further complications that arise out of the antagonism between product and income, consult the present writer's *Costituz. ec. odierna*, pp. 51–3; Effertz, *loc. cit.*, pp. 254, *et seq.;* Landry, *L'utilité sociale de la propriété individuelle*, Paris, 1901, pp. 1, *et seq.*

labour employed with a correlative technical capital. Now the assignment to the worker of a part of the product of associated labour effects no more than the distribution of the integral income between two participants, the labourer and the non-labourer, without in any way affecting the total quantity of the income itself. In the second event, on the other hand, if income acquires a part of the product of isolated labour, the part thus withdrawn from subsistence is practically transformed into income, or irrevocably confounded therewith. Hence, in such conditions, we have not only a process of distribution or redistribution of income, but further a positive increase in the total quantity of income, which expands beyond its natural limits, or assumes super-normal dimensions. —The process here is analogous to that to which we referred in an earlier chapter, regarding the house rented to the labourer.[1] We pointed out that the renting of the house to the worker involved the transference of a part of the wealth from subsistence to income, or the expansion of the latter at the expense of the former. Now, an analogous process occurs in the more general case in which a part of the product of isolated labour is taken from subsistence for the benefit of income. There is this difference, however, that in the case of the dwelling the transference of a part of subsistence to the domain of income is the essential condition whereby a primary need of the labourer obtains satisfaction; whereas in the present case the transference of a certain quantity of products from subsistence to income does not satisfy any individual need, and is nothing more than the effect of economic organisation or the economic struggle.

Now, when subsistence is less than the product of isolated labour, the total quantity of the income may change, the specific product of associated labour and the wear of technical capital remaining constant, through an increase or a diminution in the excess of the product of isolated labour over the quantity of that product assigned to the labourer; that is to say, the total quantity of income varies with every variation in the specific product of isolated labour and in the quantity of the product assigned to the labourer; that is to say, the product of isolated labour remain-

[1] See p. 62.

ing constant, the total quantity of income varies in inverse ratio with the quantity of subsistence.

Now the very structure of income often imposes the reduction of the quota of the labourer below the product of isolated labour. For the coercion implicit in the association of labour (in addition to the direct action of income itself) limits, as we have seen before, the specific product of associated labour, and therewith invites income to expand beyond this measure by annexing a part of the product of isolated labour, or by reducing subsistence below its normal dimensions. Subsistence, in its turn, being thus restricted, reacts, and endeavours in every possible way to reattain to its normal level, or even to rise beyond this, by annexing a part of income. Thus the very limitation of the product which arises out of the fundamental coercion to the association of labour creates the platform of an incurable conflict between subsistence and income.

On careful examination, the same conflict may be detected in the case of undifferentiated income ; only, in this economic form, it develops within the inner and silent recesses of the consciousness of the recipients of income, behind the inaccessible ramparts of their minds, and not in the public arena of economic conflicts.—For the recipients of income, constrained by the limitation of the product which results from the coercive association of labour, cannot give to their subsistence a normal expansion, and yet at the same time enjoy a considerable income ; hence they are perpetually struggling between two opposing tendencies. In them, as in Faust, there live two souls, each hostile to the other. On the one hand, we have the material and prosaic inclinations leading them to enlarge their consumption of the necessaries of life, whilst, on the other hand, we have the superior inclinations urging them to enlarge their more refined consumption. In such conditions, the struggle between subsistence and income takes the form of a struggle between the consumption of necessaries and the consumption of luxuries, each class alternately gaining or losing at the expense of the other in an unending conflict.

In the case of mixed income, the struggle between subsistence and income is more obvious and explicit.—In fact, in this form of income, the labourer, who receives an exiguous undifferentiated income, first enlarges it artifically at the cost of subsistence, and then endeavours to restore the level of subsistence at the cost of differentiated income ; there thus arises a primary internal conflict between subsistence and undifferentiated income, and a subsequent external conflict between subsistence and differentiated income. We have unmistakable examples of this last and more open struggle when a worker who receives a wage above the minimum fights for a further advance of pay, or when (as in Tuscany in 1902 and 1906) small tenant farmers or metayers endeavour to secure better terms from the landowners, or independent artisans engaged in home-work for a capitalist fight for better terms with the capitalist. In all these cases what do we find, substantially ?—We find that labourers who participate in income are striving to increase their own subsistence at the expense of the owners of differentiated income ; and therefore the struggle between them and their masters is but one specific form of the eternal conflict between subsistence and income.

But in the case of differentiated income this conflict assumes a yet more conspicuous and yet more plastic form. For in this form of income, not only does the limitation in the quantity of the product arising from the coercion to the association of labour invite income to reduce subsistence, but the law of the persistence of income demands that the saving of the worker shall be kept below the value of access to the land, either by means of a direct reduction in subsistence, or by means of an elevation in the value of access to the land which indirectly depresses subsistence.—Hence, in such conditions, subsistence, after having suffered a primary reduction through the coercion to the association of labour, suffers a further reduction in virtue of the law of the persistence of income.—Against this twofold diminution, subsistence naturally rebels, endeavours to prevent such diminution, and tries further to effect its own expansion to the detriment of income. Thus the struggle between the two fractions of the product finds expression for the first time in an open contest between the two classes which represent and incarnate these respective fractions.—This is the struggle between rich and poor in which Aristotle and Polybius discovered the secret of history, which furrows as it were by a crimson-tinted stream the predestined course of the ages:

> Toujours barons et serfs, fronts casqués et pieds nus,
> Chasseurs et laboureurs ont échangé des haines;
> Les montagnes toujours ont fait la guerre aux plaines.
> . . . . Pourtant, j'en conviens sans effort,
> Les barons ont mal fait, les montagnes ont tort.[1]

When we contemplate this tragic contest, which continues without pause and without truce throughout recorded history, we are inclined to think with Marcus Aurelius and with Schopenhauer that history is nothing more than the everlasting repetition of the same passions and the same struggles, and that the most diverse social epochs differ from one another only in respect of the names of the personages and of the staging of the piece; just as in the ancient Italian comedy, however much the scene and the subject may vary, the drama always revolves round the figures of the dullard Pantalone and the rogue Tartaglia, always deals with the cowardice of Brighella and the coquetry of Colombina. Yet, beneath the fundamental identity of the struggle between subsistence and income, the most superficial observer can discover, in successive epochs, the most significant divergences.

If, however, the struggle between subsistence and income is in the first place a result of the limitation of the product, it follows that it should gradually become less intense with the evolution of income to forms of production continually less restrictive.—In fact, if we study the successive forms of differentiated income, we find that the struggle between subsistence and income displays manifestations less and less violent. From crucifixion, which was a perpetual menace to the Roman slave, through the feudal exactions and the blows which oppressed the medieval serf, to the fine or dismissal which hang over the head of the modern wage-earner, the decline is undeniable and conspicuous.—In correlation with this change, we find also that the reaction of subsistence against income becomes less violent. From the slave-war, fermenting always beneath the surface in secret hatred, breaking

[1] Victor Hugo, *Les Burgraves*.

out from time to time in clamorous sedition,[1] next in the fierce struggles of the medieval peasants, carrying on their agitation by night in hidden conventicles, and then breaking out in cruel *jacqueries*, and finally in the labour movement of modern times, at first confused and anarchical, but at length legal and disciplined, we have a regressive series in respect of violent and explosive reactions, and a continuous progress towards more temperate and civilised debate. Moreover, whilst the ancient methods of struggle are essentially monopolist and restrictive, and increase the limitations imposed upon production of which those methods are themselves the outcome, the modern methods are technically efficient and effect a diminution in the cost or an increase in the productivity of human labour.—Thus, in this sphere of phenomena, we see once more revealing itself the eternal evolution from violence to skill, from the struggle against men to the struggle against nature; or, better expressed, the struggle among men, which in former days was a hindrance to success in the struggle of men against nature, now passes into forms which make the struggle of men against nature continually less harsh in character, and which make it more likely to triumph.

On the other hand, precisely because the struggle between subsistence and income is a corollary of the limitation of the product, that struggle necessarily becomes fiercer during the declining period of each form of income, wherein the restriction of production becomes more conspicuous. This happens in the case of undifferentiated income when the sun of that form of income is setting, and when undifferentiated income has largely degenerated into differentiated income; thus the struggles between the richer and the poorer members of the primitive community or of the medieval guild become more tragical during the declining phase of these institutions, just as to-day the co-operatives are the arena of fierce conflict between capitalist members and labouring members, whenever their affairs are going badly and prove less lucrative than before. Still more plainly manifest, however, are these phenomena in the case of differentiated income; for here the contests between slave-owners and slaves, barons and serfs,

[1] Guiraud, *La main d'œuvre industrielle dans l'ancienne Grèce*, Paris, 1900, p. 119.

capitalists and wage-earners, always become more intense during periods of decline and of industrial stagnation.[1] Thus arises a repercussion. In fact, the reduction of subsistence induces, as we know, an increasing interference on the part of the workers with the productive process, whence results a slackening of this latter and a diminution of the product; that is to say, the very conditions that result from the falling-off in the product co-operate to effect a further decline.

If, now, we ask ourselves what is the concrete result of the conflict between subsistence and income, at what point, as the outcome of this struggle, subsistence is established, we must answer that, in the last resort, the arbiter in the contest is income, and that subsistence becomes established at that point which gives the maximum permanent income. This may or may not, according to circumstances, coincide with the maximum immediate income. In the case of undifferentiated income, stable by nature and comparatively immune from threatening dangers, the maximum permanent income coincides with the maximum immediate income. In the case of differentiated income, on the other hand, matters are different; for if that level of subsistence which furnishes the maximum immediate differentiated income enables the labourer to effect savings which exceed the value of access to the land, differentiated income is condemned to death without possibility of reprieve; to avoid this it is necessary that subsistence should be reduced to a lower figure, and this cor-

[1] Thus the uprising of the Piedmontese serfs (the *tuchini*, from *tucc-un*—"all one") in the years 1382–4, and the peasant revolt which occurred contemporaneously in England, not to mention the rising of the *va-nu-pieds* in Normandy, or that of the *croquants* of Guyenne in the seventeenth century, are nothing more than reactions against the baronial exactions when these become excessive as income declines (Rogers, *History of Agriculture*, Vol. I, pp. 82, *et seq.;* Walker-Page, *loc. cit.*). Similarly in Russia to-day labour-struggles and mutual dissatisfaction between entrepreneurs and workers regularly ensue during the decline that follows a period of industrial expansion (*Russian National Economy*, Nov. and Dec., 1904, p. 26). In the United States, again, the commercial crisis of the year 1903 renders worse the relationships between employees and employers, and the latter take advantage of the weakness of the trade unions which results from the crisis to withdraw from their undertaking not to employ non-union men; thus between the end of 1903 and May, 1905, 1500 firms of employers once more open their doors to non-unionists (Lescure, *loc cit.*, p. 373). It may be generally noted that recourse to arbitration is more likely during periods of prosperity, for the employers are then more inclined to propose arbitration, and the workers have less reason to regard arbitration as a ruse to depress wages (Pigou, *Principles and Methods of Industrial Peace*, London, 1905, p. 15).

relatively reduces income below the maximum figure. The measure to which subsistence will be reduced will be precisely that which yields the maximum permanent income.

If we suppose, for the sake of simplicity, that the maximum permanent income coincides with the maximum immediate income, the quantity of product assigned to the labourer is that which gives the maximum income. Hence, whatever be the initial figure of subsistence, if the increase in subsistence, by increasing the number of workers permanently employed, or by stimulating the efficiency of labour, increases income, the figure of subsistence will rise; and this increase in subsistence will proceed until the point is attained at which income reaches its maximum. It may happen that the maximum income is obtained by an increase in subsistence more than proportional to the increase in the productivity of labour, and therefore more than proportional to the absolute increase in income which results from the increase in subsistence; and in such a case subsistence will effectively rise in a measure more than proportional to the increase in the productivity of labour and of income. But it is necessary to point out that in such a case (leaving technical capital out of consideration, or supposing technical capital to increase proportionately with subsistence) the increase of subsistence gives rise to a diminution in the rate of income, and therefore cannot take place if that rate is to remain constant.—Finally (if the supply of labour is limited), it may happen that the maximum income is obtained by the addition of a part of income to the subsistence of the worker, or by the creation of mixed income. Now in this case the quantity of product assigned to the worker is that which yields, not the maximum total income, but the maximum differentiated income; for the owner of differentiated income is the arbiter in the distribution of the product, and determines this with an eye to his own advantage. Hence, when the quota of the labourer does not contain any part of income, it establishes itself at that figure which gives the maximum income, and the income in these conditions is necessarily differentiated; when the quota of the labourer contains a share of income, subsistence is established at that figure which gives the maximum differentiated income; that is to say, in every case, the struggle between subsistence and income results in the quota of the labourer being fixed at that point at which will be furnished the maximum differentiated income.[1]

Now, an increase in the quantity of product assigned to the labourer (that is to say, an increase in wages), will be more likely to lead to an increase in the differentiated income, and therefore will be more likely to occur, in proportion as the productivity of associated labour is greater—for the greater then will be the increase in the product which results from an increase in the number of the associated labourers and in the individual output—and thence from the increase of subsistence, which gives rise to the twofold increase just explained. Hence, the more the productivity of labour increases, the more probable is it that subsistence will rise, or that eventually to subsistence will be superadded a share of income. And since the successive phases of income endow associated labour with an ever-increasing productivity, the quantity of subsistence should, in the successive phases of income, progressively increase.—But the increase in subsistence is less sensible in those forms of differentiated income, or in those declining phases of every form of differentiated income, in which the persistence of income itself depends upon a reduction in the remuneration of the labourer; on the other hand, the increase in subsistence is more conspicuous and more decisive in those forms of income, and in those ascendent phases of income, in which the persistence of differentiated income depends upon an increase in the value of access to the land.—Even if it be true that this latter process has itself also an indirect influence towards the diminution of subsistence, it is none the less true that in the former case subsistence remains inferior to the constant value, whatever that may be, of access to the land, whereas in the latter case subsistence has to remain inferior to an increasing value of that access—so that, in the latter case, subsistence itself should attain a higher level.

This is why it is that in the passage of differentiated income from the phase of the systematic wage-system to that of the automatic wage-system, there occurs a primary notable

[1] This conclusion is in no way modified by the fact that the rate of wages is sometimes established by arbitration, for substantially this means no more than an amiable and pacific determination of that rate of wages which the conditions of the economic system in any case render necessary.

elevation in the figure of subsistence; and with the further progress of the automatic wage-system, there occurs a further advance in subsistence, until the latter at length annexes a certain share of income. This exercises a considerable influence in changing the law of numerical distribution of those workers who receive diminishing wages. In fact, it is logical to suppose that, at the outset of the change, the more favoured workers, those enjoying an absolute monopoly which permits them to attain the maximum wage, are in minimal number, whilst the number is gradually increasing of those who find themselves in less advantageous conditions, and who therefore can be paid at a progressively lower rate. In other words, at the outset, the distribution of the workers who receive diminishing wages may be represented by a pyramid. But if now the wages of the lower-paid workers increase, a part of those who have hitherto been lowest in the scale rise to higher levels. There occurs, therefore, a diminution in the number of those at the bottom of the scale and an increase in the number of those just above this; and it may happen that this movement will continue until the number of those at the bottom of the scale becomes less than that of those just above them. At this point the distribution of the workers in accordance with the rate of wages is no longer to be represented by a pyramid but by a parabola. Thus, if at the outset

10	workers	had a	wage	of	100	francs
20	,,	,,		,,	80	,,
30	,,	,,		,,	60	,,
40	,,	,,		,,	40	,,
50	,,	,,		,,	30	,,

and if now in the case of forty workers of the lowest class and of twenty of the lowest but one the wages rise to 60 francs, we see that

10	workers	have a	wage	of	100	francs
20	,,	,,		,,	80	,,
90	,,	,,		,,	60	,,
20	,,	,,		,,	40	,,
10	,,	,,		,,	30	,,

so that the distribution according to wages no longer has the form of a pyramid but that of a parabola.

This is precisely the curve in accordance with which the wage-earners are distributed at the present day in the most advanced nations.—In the youngest of these countries, as in the United States, this curve is unsymmetrical and incomplete. But in older countries the parabola of the wage-earners takes a much more distinct form.

From this remarkable form which in our own times is presented by the distribution of wages, certain statisticians have hastened to draw the most optimistic and most roseate conclusions.—If, indeed, they tell us, the workers receiving maximal and minimal wages are few, the number of the workers endowed with qualities conspicuously superior or inferior to the average is also in like measure small; and if the number of workers receiving wages gradually falling away from the maximum, or rising above the minimum, and thus approaching the mean, is an increasing one, there is also an increase in the number of workers whose capabilities fall below the maximum or rise above the minimum to approach the average. The curve of wages therefore presents a perfect homology with respect to the curve representing the capabilities of the workers, and this shows that the figure representing wages is perfectly adequate to the capabilities or to the productive capacity of the labourer.[1]

To show the futility of these conclusions, it suffices to refer to the fact recently observed that the curve of wages diverges normally and constantly from the binomial curve representing the capabilities of the labourers, and that this divergence is especially marked, it may be in the case of the lowest wages, which are more numerous and present a lower level than that which should correspond to the curve of the capabilities, it may be in the case of the highest wages which are received by a smaller number of workers than should be the case in conformity with the binomial curve.[2] It must further be added

[1] Benini, *Principii di demografia*, Florence, 1901, pp. 104–5.

[2] Henry, *La mesure des capacités intellectuelles et énergétiques*, Paris, 1906, pp. 51, *et seq.* Moore (*The Efficiency Theory of Wages*, "Economic Journal," 1905, pp. 571, *et seq.*; and *The Differential Law of Wages*, "Journal of Statistical Society," 1907, pp. 638, *et seq.*) endeavours to prove that individual wages are distributed according to a composite curve corresponding to the twofold series of the capacities and the strategic power of the labourers; this last, he considers, somewhat crudely, to be susceptible of two gradations only, according as labour is skilled or unskilled. But according to Moore's

that the distribution of wages in a curve is a phenomenon peculiar to the automatic wage-system, for, as long as the systematic wage-system lasts, the distribution of wages is pyramidal; it therefore remains true in any case that over a long period the distribution of wages takes a course altogether different from that of the capabilities of the labourers. In fact, then, the distribution of wages in the form of a parabola which is characteristic of the automatic wage-system presents itself as the natural derivative of the general rise in wages, and more particularly of the lowest wages, and can therefore be perfectly well explained without supposing the existence of any mysterious correlation between the level of wages and that of the capacity of the labourer.—What occurs is that the partial rise of the lower wage-earners into higher grades, resulting from the rise in their wages, diminishes the ratio between the number of those in the lower and the number of those in the higher classes, and thus gradually removes material from the base of the pyramid of wages until this pyramid is transformed into a parabola. That is all.

Such is the law which regulates the quantity of subsistences, which quantity, as long as it remains at a level inferior to that of the product of isolated labour, is a factor determining the figure of income.—It must be understood that this law does not apply only to the subsistence of productive labour, but also to that of unproductive labour which receives subsistence in advance, for example, to that which is required to effect the coercion to the association of labour and the persistence of differentiated income. It must be understood, also, that the law of subsistence can be modified by the action of the State, when this establishes a minimum wage, or diminishes or increases the taxes upon wages, etc. etc.

IV. *The Quantity of Saving.—Saving and Population.*

As long as saving is assumed to be constant, the elements hitherto analysed alone suffice to determine the quantity of income, which (if, for the sake of brevity, we leave out of

own calculations, the real curve of wages diverges also from this composite curve in the sense of a greater insufficiency and a greater frequency of low wages, and a lesser frequency of high wages.

consideration that part of the net product which is transformed into non-periodic accruements) is equal to the excess of the product of associated labour over the technical capital consumed plus the excess of the product of isolated labour over subsistence ; or, to put the matter more concisely, it is equal to the excess of the total product over the consumption of technical capital and subsistences. In normal economic conditions, however, saving is not constant, but progressively increases.—Now, given progressive saving, the excess thus determined is no longer wholly income, since a part of it undergoes conversion into technical capital and subsistence, productive or unproductive. Hence, to determine the quantity of income it is necessary to subtract from the total product that part also of the product which is productively and unproductively saved. Now, leaving out of account for the sake of brevity unproductive accumulation, often irregular, and in any case self-destructive and ephemeral, upon what depends the quantity of product which comes to be saved ?

Let us suppose first of all the extreme case in which the whole quantity of product is saved, over and above what is required for subsistences and for the redintegration of technical capital. In these conditions, in which income is actually annulled, the quantity of wealth saved *is* the quantity of wealth produced—less the redintegration of the productive elements, a constant and primary datum ; hence, in proportion as the wealth produced increases or diminishes, so also increases or diminishes the wealth saved.

In actual fact, however, not all the excess of the product over the redintegration of the productive elements is devoted to saving ; for a part of this excess is employed to maintain unproductive labourers, or is distributed gratuitously among a part of the population, or is directly consumed by the recipients of income, whose income in the strict sense of the term it thus constitutes.[1]—In such conditions, the quantity of

[1] Hence the calculations made by Price, Cayley, and others, who have endeavoured to ascertain to how many thousand millions of francs would now amount the sum produced by one franc accumulated at compound interest since the beginning of the Christian era, are essentially vitiated by the fact that they involve the fallacious supposition that all the income is saved.

saving is determined, not only by the quantity of the product, but in addition by the proportion of this which is saved ; and therefore saving may vary, while the product remains constant, in accordance with variations in the extent of saving or in the elements which prescribe its amount.—But according to what rule is the measure of saving established ? At what limit does it tend to become fixed ?—The reply does not differ from that which we have given as regards the factors previously considered ; the normal quantity of saving, or the proportion of income periodically saved, is that which—the other elements remaining constant—secures the maximum income, not immediately (for the maximum immediate income excludes *per se* that any part of it shall be saved), but during a period embracing the normal or probable life of the recipient of income—or, in a word, which secures the maximum totalised income during life.

If, indeed, during the n years which remain to him, the recipient of income consume all his income, he will have received, at the end of the n years, his annual income multiplied by n. If, during the n years, the recipient of income save the whole of his income, he will have received, at the end of the n years, an income of zero. But if, during the period in question, he save a part only of his income, it may happen that, at the end of the n years, the parts of the original income gradually consumed plus the incomes derived from the parts gradually saved, will exceed the initial income multiplied by n. And there will be a given fraction of income the saving of which will yield, at the end of the n years, a sum total of income which exceeds to the maximum degree the initial income multiplied by n. Now it is at this level that saving will be established, for it is this alone which corresponds to the ultimate advantage of the recipient of income.

Thus, for example, let us suppose that the annual income is 100, and that every fraction of income accumulated obtains interest at the rate of 100 % ; and let us further suppose that the expectation of life of the recipient of income is five years. If the recipient of income consume the whole of his income, he receives a totalised income during life of 500. If, on the other hand, the annual saving be 50, during the first year he consumes 50 and saves 50 ; during the second year he consumes 50, plus

50, the income furnished by the saving of the first year, in all 100, and he saves 50—and so on; so that we have

Year.		Income consumed.		Saving.
1	..	50	..	50
2	..	100	..	50
3	..	150	..	50
4	..	200	..	50
5	..	250	..	50
	Total	750		250

Hence the recipient of income, saving 50 every year, ends by consuming during the five years of his life a larger quantity of income than he would have consumed, had he consumed year by year the whole of his income of 100. Therefore the saving within the limits here defined is advantageous to the recipient of income. Let us now suppose that he goes further than this and saves half of his income every year. In such conditions we have

Year.		Income consumed.		Saving.
1	..	50	..	50
2	..	75	..	75
3	..	112·5	..	112·5
4	..	168·75	..	168·75
5	..	253·10	..	253·10
	Total	659·35		659·35

It follows from this that, when he saves every year half of his income, the recipient of income ends by having obtained, at the close of his life, a total income less than that which he would have received by saving annually only 50. Therefore the annual saving of 50 yields to our recipient of income the maximum totalised income during life, and will therefore be actually practised by him in conformity with his own interest.

The quantity of saving thus determined varies according to variations in the rate of interest[1] and in the expectation of life of the recipient of income. The higher the rate of interest,

[1] As regards the measure of the rate of interest, consult the author's *Analisi*, I, pp. 417, *et seq.*

the more probable is it that the maximum totalised income during life which can be obtained by saving a certain portion of the income will exceed that which can be obtained by consuming the whole of the income, and the more probable is it therefore that saving will be advantageous. Thus, if the rate of interest be 120 %, and there be saved annually 50, we have

Year.		Income consumed.		Saving.
1	..	50	..	50
2	..	110	..	50
3	..	170	..	50
4	..	230	..	50
5	..	290	..	50
	Total	850		250

That is to say, the maximum totalised income during life exceeds by a greater amount that which would be obtained by consuming the entire income, than the excess exhibited when the rate of interest was 100 %, so that there is a greater stimulus to saving. Conversely, a decline in the rate of interest diminishes the stimulus to saving, and such decline may at length diminish the maximum totalised income during life, obtained by saving, below that which would be obtained by consuming the income, thus rendering saving irrational. If, for example, the rate of interest be 20 %, and every year the saving be 50, we have

Year.		Income.		Income consumed.		Saving.
1	..	100	..	50	..	50
2	..	110	..	60	..	50
3	..	120	..	70	..	50
4	..	130	..	80	..	50
5	..	140	..	90	..	50
			Total	350		

Thus, whereas by consuming the whole of the income there is obtained a maximum totalised income during life of 500, by saving annually 50, there is obtained only a maximum totalised income during life of 350 ; that is to say, the diminution in the rate of interest has rendered saving irrational.[1]—But this does not suffice, for, the higher the rate of interest, the greater is likely to be the portion of income whose saving will furnish the maximum totalised income during life. Thus, to continue the preceding example, whereas, when the rate of interest is 100 %, the annual saving of 50 for five years yields a totalised income during life greater than is yielded by the saving of half the income—an analogous calculation shows that if the rate of interest rises to 200 %, the annual saving of 50 for five years gives a totalised income during life of 1250, whereas the saving of half the income gives a totalised income during life of 1550, that is to say the latter yields a larger total. Thus the rise in the rate of interest renders it advantageous to save as much as half the income, whereas at the lower rate of interest it is more profitable to save a lesser quantity.

[1] Clark (*Essentials*, pp. 339, *et seq.*) arrives at opposite conclusions. He affirms that the recipient of income, when he saves, aims to secure for himself in later years, and subsequently for his children, a determinate economic condition, that is to say, a given income. Now, the lower the rate of interest, the greater is the capital requisite to produce a given income; hence a fall in the rate of interest *stimulates* saving (a thesis put forward by Marshall, but only by way of exception, in his *Principles*, 5th edition, p. 235; firmly sustained by Webb; and in earlier days maintained by Child, *New Discourses of Trade*, 1690, pp. 40, 42). Pushing this argument to an extreme Gonner arrives at the conclusion that to annul interest altogether might lead to an increase in saving (*Interest and Saving*, London, 1906, pp. 24, *et seq.*, also Edgeworth, *Mathematic Psychics*, p. 270, Carver, and others), whereas it seems to me that if interest were unattainable, if, that is to say, no income of any kind could be derived from saving, wealth might indeed be hoarded or its consumption might be deferred, but there would be no reason whatever to devote wealth to productive uses; and if the owner were to deposit his wealth in a bank, *the bank would be forbidden to make use of it*, as happened in the Middle Ages. Saving, properly so called, would therefore come to an end. Apart from this consideration, Clark's conclusion would be admissible if those who saved did so with the aim of obtaining at some future time an income fixed and for ever invariable. Conversely, the sum of income which, by hypothesis, they aim at obtaining in the future bears always a certain ratio to that which they obtain now. Now the fall in the rate of interest diminishes the immediate income, at any rate the immediate income of a notable proportion of those who save, that is, of the capitalists; and therefore effects a corresponding diminution in the income which they hope to obtain in the future. Hence, since the quantity of the future income which they hope to obtain diminishes proportionally with the fall in the rate of interest, the total quantity of capital which they must save in order to obtain the income that is desired in the future remains unchanged although the rate of interest falls.

In reality, the recipients of income who are guided by the criterion of economic interest do not aim at obtaining a determinate future income, or an income proportional to their present income, but at obtaining the maximum totalised income during life, and eventually during the lives of their children; and since this is the case, a fall in the rate of interest may slacken or suppress saving, as shown in the text.

Analogous reasoning shows that an increase in the expectation of life of the recipient of income, the other conditions remaining unchanged, increases the gain resulting from saving. In fact, the excess of the totalised income during life, which is obtained by saving a certain proportion of the income, over that which is obtained by consuming the whole of the income, is negative during the earlier years, and does not become positive until after the lapse of a certain time, after which the positive excess increases year by year, as is evident when we refer back to the figures given on page 225. These, in fact, show that the total quantity of income received at the end

Of	If the saving be zero, is	If the annual saving be 50, is	Difference + or −
1 year ..	100 ..	50 ..	−50
2 years ..	200 ..	150 ..	−50
3 ,, ..	300 ..	300 ..	0
4 ,, ..	400 ..	500 ..	+100
5 ,, ..	500 ..	750 ..	+250

and it follows from this that if the average life of the recipient of income be one or two years, the annual saving of 50 will yield a totalised income less than that obtained by the consumption of the whole income; if the average life be three years, the totalised income will be the same in both cases; if the average life be more than three years, saving will yield a greater totalised income than consumption, the excess furnished by saving being greater in proportion as the average duration of life increases. It follows that the greater this average duration, the greater the stimulus to saving. Nor is this all, for the longer the average life of the recipient of income, the greater is the quantity of income whose saving will yield the maximum totalised income during life. Calculation shows that if the rate of interest be 200 % and the average life three years, the annual saving of 50 gives a totalised income of 450, and the saving of half the income gives a totalised income of 350, that is to say it gives less; whereas if the average life be five years, we have seen that the saving of half the income gives a totalised income superior to that given by the annual saving of 50. From this it follows that when the average life is short, the saving of a part, and of a relatively conspicuous part, of the income increases the totalised income only on condition that the rate of interest be high. This is one of the reasons why, during the Middle Ages, and generally during periods of war or revolution, in which the mean duration of life is comparatively low, the rate of interest is high. Conversely, in conditions in which the mean duration of life is high, the partial saving of income increases the totalised income even if the rate of interest be low.—If, now, the recipient of income wishes to obtain the maximum income, not only during his own life, but also during that of his children, this amounts to saying that the average life which has to be taken into consideration is equal to that of the recipient of income plus the number of years by which his children may be expected to survive him ; that is to say, it is in effect as if we had to do with a recipient of income whose mean duration of life were greatly superior to that of the normal man. Therefore in such cases the saving of a part, and a conspicuous part, of the income increases the totalised income, so that there is a motive for such saving even if the rate of interest be low.[1]

Thus it is to the interest of the recipient of income to limit saving to a more or less circumscribed fraction of the income. But saving does not, as a rule, attain even to this circumscribed level, because of the operation of various influences intimately connected with the organic structure of the concrete forms of income, for these influences either render it impossible for savings exceeding a certain limit to produce any increase of income, so that saving is for this reason suppressed, or else these influences limit the total number of the recipients of income, and therewith limit the total saving.

Considering first of all undifferentiated income, we find, for the reasons previously given, that in this form of income the

[1] In this connexion Cassel makes some acute observations (*The Nature and Necessity of Interest*, London, 1903, pp. 145, *et seq.*, pp. 152, *et seq.*). But the author complicates and vitiates his demonstration by supposing that the wealth which is not saved is devoted to the purchase of a life annuity. Now in such a case this wealth, if it be not saved by the one who buys the annuity, is saved, at least in part, by the one who pays it. If I give 100,000 francs to John Smith in order to obtain from him a life annuity of 6,000 francs, John Smith saves the 100,000 francs, and this sum is consumed only to the extent of the difference between the 6,000 francs and the normal interest upon 100,000 francs, or the interest upon that gradually diminishing quantity of the 100,000 francs which remains. A clearer supposition would be that the wealth not saved by the recipient of income should not be saved by anyone else, or that the income which is not saved should be wholly consumed.

employment of capital increases income in so far as it increases the productivity of the labour of the one who saves, or the productivity of unitary labour, whereas as soon as this productivity has attained its maximum, any further increase in saving does not effect any increase in the income of the one who saves, so that the latter has no further reason for saving. Hence, in such conditions, individual saving is arrested within the limit previously indicated, at which it would be established if every new increase of saving produced a further increase of income. This check on saving, it must be clearly noted, manifests itself however different may be the amount of the respective individual incomes, since each of these incomes can only be saved in that measure which increases the maximum productivity of the labour of the recipient of income. If it be desired that saving shall surpass these circumscribed limits, it is necessary that the authority which organises production should itself prescribe this by force of law. We see this, for example, in the Indian community, where the law itself determines the proportion of agricultural income that must be employed in the maintenance of manufacturers.

On the other hand, the peremptory limit thus imposed, in the case of undifferentiated income, upon the savings of individuals, attenuates to a notable extent the inequivalence of individual fortunes; for the initial inequivalence of the incomes, whether dependent upon differences in personal capacity or upon environing conditions, cannot here be increased by the indefinite progress of saving. This is the explanation of the fact to which we have previously referred (Chap. III) that in every form of undifferentiated income there occurs deliberate human intervention for the maintenance of equivalence of incomes; for such intervention could not develop efficiently, and indeed would be hardly conceivable, unless the organic structure of that form of income imposed rigorous restrictions upon the disparity of individual incomes.

But the peremptory limit which, in this form of income, arrests individual saving, does not involve the imposition of any limit upon social saving. It is, in fact, implicit in the very nature of this form of income, that the new increments of the population which cannot be employed by new savings effected by the pre-existing population—owing to the fact that the accumulation of capital on the part of the last-named has become arrested—shall be able to establish themselves upon available land, and to practise saving there on their own account. For if they were unable to do this, they would have to offer their labour for wages to the producers already established, and then we should no longer have undifferentiated income, since differentiated income would take its place. If, as is by hypothesis the case, the income remains undifferentiated, this very fact shows that the new increments of population are exempt from the need of selling their labour to the owners of accumulated wealth, that is to say, that they are able on their own account to proceed to the saving of capital. Hence saving, while it ceases among the producers already established, is continued among the producers who are now establishing themselves, and in this way saving continues gradually and without any limit.

Altogether different in character are the phenomena which make their appearance in the case of differentiated income. Here, in fact, as in the case of mixed income, to which in this respect differentiated income is comparable, the recipient of income is in no way constrained to save only that part of his income which can increase the productivity of his own labour, but can save as much more of it as he pleases, employing as labourers, slaves, serfs, or wage-earners, and obtaining from their labour an increment of income which has no definite limits. Hence, unlimited individual saving is the inseparable correlative of differentiated income ; and there results from this a maximum expansion of individual income and an extreme and increasing inequivalence in the amount of individual incomes.[1] But the absence of limits upon individual

[1] The contrast thus manifested between undifferentiated and differentiated income is substantially coincident with that pointed out by Sombart (*Der moderne Kapitalismus*, I, pp. xxxi–ii) between the economy for subsistence and the economy for profit ; but this writer is wrong in enumerating among economies for subsistence certain forms also of differentiated income, such as the feudal economy, forms which are in truth economies for profit, however much this may be attenuated by the lesser prevalence of exchange. But Sombart's terminology (consistent, for the rest, with his theoretical idealism) does not seem to me acceptable—because it is founded upon a teleological criterion, that is upon the purpose which the organiser of the productive enterprise sets before himself, instead of relating to the objective conditions of the economic system which are the sole and undeniable regulators of the measure of saving—and further because it does not correspond to reality. In truth it cannot be admitted that in some economic forms man puts before

saving does not exclude, in this economic form, the existence of rigorous limits upon social saving. For, in the first place, the recipient of income does not always save all that part of income whose saving would procure for him the maximum totalised income during life; and, moreover, differentiated income being the appanage of only a small minority of the population, unlimited individual saving may give rise to a comparatively restricted total saving.

This limit to social saving which is inseparable from differentiated income presents a diminishing intensity in the successive forms of that income. In fact, in the forms of income founded upon the ownership of men, saving is practically non-existent.—Again, at the court of Louis XV a man reputed to save was generally despised; and in each of these economic forms it is necessary to enforce by law that a given part of income shall be devoted to the maintenance of the labourers, that is, that it shall be saved.[1] Conversely, in the forms of income founded upon ownership of the land, saving, freely effected by the recipient of income with a sole eye to his own advantage, acquires an elasticity and a vigour hitherto unknown, and attains the highest limits. But even in the present form of income people are a long way from following the advice of the good Abbé Baudeau, that one-third of the income should be saved![2] It has, indeed, been calculated that even in the wealthiest countries capital hardly amounts to four times the annual income, and this denotes a comparatively limited coefficient of accumulation.[3]

Parallel with the unceasing progress of saving which manifests itself in the successive forms of differentiated income,

himself the aim of obtaining subsistence alone, and in others, the aim of obtaining profit. In every case, man aims at obtaining profit; but it is by the conditions of the economic system, in the case of undifferentiated income, that the amount of this profit is limited, or is kept approximate to the level of subsistence, whereas in the case of differentiated income, the conditions permit the unlimited expansion of profit.

[1] Consult Mossmann, *De l'épargne au moyen âge*, "Revue Historique," 1879, pp. 55, *et seq.*; Vanderkindere, *loc. cit.*, p. 134; Felix, *Moderne Reichthum*, Berlin, 1906, p. 11. We must also take into account the narrowness of the income that was then susceptible of being saved. A calculation made by Davenant shows that in the year 1688, in England, the maximum excess of annual income over expenditure among the Lords Spiritual was £20, and the minimum among the working tenant farmers was 10s.

[2] *Première introduction à la philosophic économique*, edition Daire, p. 759.

[3] Chiozza-Money, *Riches and Poverty*, London, 1905, p. 145.

there may be noted an increasing development of the institutions which promote saving.—In slavery and serfdom, in both of which saving is strictly limited, the deposit of wealth is either altogether unknown, or is effected quite exceptionally in the temples or in the vaults beneath the larger habitations. Moreover, in these economic phases, the deposit of wealth is an act of hoarding rather than that of saving; and even the banks, when first founded, are merely institutions for hoarding, which, far from paying any interest to the depositor, exact from him a fee for safe-keeping, undertaking in return not to lend out again the money placed in their care. Hence, in such conditions, the income stagnates in the strong-box instead of being diffused through the irrigating channels of production. It is only in comparatively recent times that the banks have become the potent receivers and distributors of saved income, whose saving and increase they have thus simultaneously developed and promoted.[1]

The quantity of saving exhibits differences according to the kinds and degrees of income. Certain kinds of income are saved less extensively than others; and an English writer of the middle of the nineteenth century calculates that of profit one-third is saved, of rent less than this proportion, and of wages hardly anything.[2] On the other hand, if it be true, as Adam Smith maintains, that a large capital with a low rate of profit increases more rapidly than a small capital with a high rate of profit, it is no less true, as we have seen, that professional incomes, usually smaller, must be saved in greater proportion than others, and that, apart from this consideration, the larger incomes are saved in lesser degree, or are devoted in a greater degree to objects not productive of income; this being an additional explanation of the statistically ascertained fact that income increases at a rate less than proportional to the increase in capitalised property. The French, therefore, who measure the wealth of a man by his income, are more

[1] Warschauer, "Jahrbücher für N. Œ.," 1904, p. 435. The first design for the foundation of a savings bank was put forward in England in the years 1798–9 by Priscilla Wakefield and the Rev. Joseph Smith. The institution founded at Hamburg in 1778 was not a true savings bank, for it was intended only to receive the deposits of domestic servants and to provide for them an old age pension (W. Lewins, *History of Banks for Saving in Great Britain and Ireland*, London, 1866, pp. 18–19).

[2] Morrison, *Essay on the Relation between Labour and Capital*, London, 1854, pp. 34–6.

practical and clear-sighted than we are in Italy who talk at large about great fortunes without paying attention to the income which they yield. It follows from this that the concentration of income, if in the higher incomes saving diminishes proportionally as compared with the lower incomes, must diminish the total quantity of saving. For example, if the total income 1000 has hitherto been distributed in the form of two incomes of 500, and one-half of these incomes has been saved, the total saving is 500. If now the total income is distributed in the form of two incomes of 750 and 250 respectively, and if saving is effected to the extent of one-third of the former and four-fifths of the latter, the total saving is 450, and is therefore diminished. But if the saving of the larger income amounts to two-fifths, the total saving is unchanged ; if the saving of the larger income amounts to 48%, the total saving is increased.—And since saving involves diminution of the present income and increase of the future product and of the future income, the concentration of income, in so far as it has the effect of lessening saving, increases the total present income and diminishes the total future product, thus exhibiting an additional manifestation of that antagonism between product and income to which reference has previously been made.

The influences which restrict saving limit correlatively the increase of population ; for it is evident that the increment of population can be nourished only upon the wealth that is saved, or rather upon that part of it which is transformed into subsistence.—Postulating the extreme case in which the whole income is saved and the whole of the saving consists of subsistence, the quantity of superadded population for which a living can be provided, is precisely determined by the income, or, better, by the excess of the product over the cost of production.[1] If, however, the increment of population is greater than that which can be nourished by this excess—limited, as it is, by the very regime of the coercive association of labour—

[1] To these conditions, and to these conditions only, is applicable the principle of Sismondi (*Nouveaux principes*, II, pp. 257, *et seq.*), that population is limited by national income ; because the income, being entirely devoted to saving, constitutes in its entirety a surplus upon which the increments of population can live. But since the quantity of wealth devoted to saving ceases to be income, it would be more correct to say that in this hypothesis the population is limited by the excess of the product over the redintegration of the expenditure necessary to obtain it

there necessarily arises an excess of population in relation to the means of subsistence, and therewith poverty and destitution.—It follows from this that the excess of population in relation to the means of subsistence manifests itself as the necessary result of the coercion implicit in the association of labour, independently of the specific or concrete forms taken by that association.

When we proceed to the study of these concrete forms, we find that in the case of undifferentiated income the increments of population can certainly establish themselves upon the available lands, and can there save for themselves the wealth necessary for their own maintenance. But this does not exclude the possibility that the scanty productivity of coercively associated labour employed upon new lands of gradually diminishing fertility, will ultimately no longer allow the saving of sufficient capital for the complete support of the producers; that is to say, that the producers who have established themselves upon the lands newly put under cultivation, will suffer from poverty or even from destitution.—Now it is implicit in this form of income that poverty cannot affect only the increment of population, but must be diffused throughout the population previously established; for, were this not the case, the established population would be placed in a privileged position, which is excluded *a priori* in this economic form. Hence the diminution of production and of saving which manifest themselves upon the lands last put under cultivation, will have its ill effects diluted by the extension of these throughout the entire population, and this process will correlatively attenuate the intensity of the evil—that is to say, there will arise poverty of comparatively slight degree equally diffused throughout the population.

This is precisely what we find in the most varied forms of undifferentiated income. Thus, among the Eskimos, who live by hunting and fishing in an economy of undifferentiated income, there not infrequently occurs a deficiency of the means of subsistence in relation to the population, leading to the slaughter of children, old people, and invalids. The same thing occurs among the Hottentots and among the Australian blacks. No less frequent and no less acute is the poverty in the mountainous regions of Thibet, and in other sterile parts of Asia ; where recourse is had, in order to keep down the birth-rate, to polyandry, to celibacy, to castration, or to infanticide.[1] In such conditions, however, the excess of population over the means of subsistence is rendered less pressing and less frequent by the restriction of the birth-rate which is the outcome of undifferentiated income. For it is precisely the personal consolidation of subsistence with income, or of labour with the means of production, which creates a sense of economic responsibility, and renders directly ascertainable the influence exercised by an excessive birth-rate in compromising individual well-being ; from this there results an automatic check upon procreation, which is kept thereby in permanent equilibrium with the increase in subsistences.[2]

Very different and more serious are the phenomena that manifest themselves in the case of differentiated income. In this form of income, the quantity of wealth (limited, as we have seen) saved by the recipients of income who constitute a more or less inconsiderable fraction of the population, or, better expressed, the portion of that quantity of wealth which becomes subsistences, may be insufficient to nourish all the increment of population.[3] In this case a part of this increment of population is condemned to destitution and to death, whilst the remainder is sufficiently nourished. It may indeed happen that the quantity of subsistences that has been saved may be equally distributed among the pre-existent and the supplementary labourers, and in that case all the components of the labouring population are reduced to an insufficient nutriment. But, in any case, the excess of population over the means of subsistence affects, in this form of income, the working population only, leaving immune the class of the

[1] Elie Reclus, *Les primitifs*, Paris, 1903, pp. 40–52 ; Cabiati, *Le basi economiche della famiglia*, Milan, 1906.

[2] To-day, also, those who receive a fixed income are less fecund than those who have a speculative income (Dumont, *Natalité et dépopulation*, Paris, 1898, p. 225).

[3] To the thesis of Ricardo (*Works*, p. 51), that the increase of capital determines the increase of population, Marx replies with the diametrically opposed thesis, that the increase of population determines the increase of capital (*Mehrwerththeorien*, II, 2, pp. 326–8). Now there is no doubt that the increase of capital is directly proportional to the productivity of land on the margin of cultivation, which is itself inversely proportional to the density of population. But it is no less certain that the measure in which capital increases, rigorously determines, in its turn, the measure in which the employable population increases.

recipients of income. If, in consequence of a high birth-rate, the number of these last undergoes a sensible increase, this simply gives rise to a diminution of individual income. Now the diminution of individual income may diminish the total mass of income which comes to be saved, thus diminishing the increase of subsistence, and therewith increasing the poverty of the working class. The diminution of individual income necessarily leads to a diminished consumption of luxuries on the part of the recipients of income. But this diminution of individual income can in no way compromise the subsistences of the recipients of income, which remain unaffected by this change.—Thus, whereas in the case of undifferentiated income the excess of population over subsistences creates universal poverty, in the case of differentiated income, it suppresses or diminishes the subsistence of a portion of the population, while leaving the rest of the population unaffected.

In view of the fact that, as we have seen, the limit upon saving decreases in the successive forms of differentiated income, it is logical to conclude that the excess of population over subsistences should, if the other conditions remain constant, decrease as we pass from one of these economic forms to another. In fact, however, the birth-rate is not constant in the successive forms of differentiated income; and as we pass from one form to another it is nowhere found to exhibit a regular movement either of ascent or of descent, but is subject on the contrary to very considerable irregular oscillations. In the economic form based on the ownership of men, the birth-rate is restricted and oscillatory, in correlation with the quantity of subsistences[1]; in the economy of the systematic wage-system, the birth-rate presents a rapid advance; whereas in the economy of the automatic wage-system, the birth-rate exhibits a gradual decline.[2] In correlation with this, the excess of population also presents the most marked oscillations, and, like so many other economic phenomena, takes the

[1] In the seventeenth century, in parallelism with the diminution of wealth and of subsistences, there occurs a fall in the birth-rate; in consequence of this there arises a casuistry to justify infecund sexual intercourse, and there develops witchcraft, because it teaches abortion (Michelet, *Histoire de France*, XIII, pp. 212–3).

[2] See, for example, Mombert, *Studien zur Bevölkerungsbewegung in Deutschland*, Karlsruhe, 1907, pp. 129, *et seq.*, pp. 263, *et seq.*

form, as time passes, of a regular parabola ; thus it exhibits a gradual elevation down to the end of the economy of the systematic wage-system, to decline progressively during the automatic wage-system, until finally the excess may even disappear.—But the limits upon production peculiar to labour coercively associated exclude in every case the possibility of a permanent and unchangeable equilibrium between population and subsistences, and at all times involve the possibility that the excess of population which has been temporarily annulled may reappear, bringing in its train all the miseries of poverty and death.

In conclusion, the quantity of saving is a function of two variables, the quantity of the product and the fraction of the product which is saved. The coercive association of labour, the basis of all the forms of income, imposes upon the quantity of the product limitations which gradually decrease during the successive phases of association. The structure of income imposes limitations, gradually decreasing, upon saving, individual or total, or upon that part of saving which is productively employed. Thus there arises a twofold series of influences, one group of these dependent upon the coercive association of labour, and the other group dependent upon the structure of income ; and the result of these influences is to limit directly or indirectly, but to a decreasing extent, saving, or productive saving. Whenever the birth-rate exceeds a determinate measure, the inevitable outcome of these influences is the production of an excess of population.

Thus, then, the absolute quantity of income is a function of the following elements : (1) the quantity and productivity of associated labour ; (2) the wear of technical capital ; (3) the productivity of isolated labour ; (4) the quantity of product assigned to the labourer ; (5) the quantity of saving.—But since elements 1 and 3 can be reduced to a single one, the absolute quantity of income depends upon the four following factors : productivity of labour, wear of technical capital, quantity of product assigned to the labourer, quantity of saving.

These factors upon which the mass of the income depends present in their turn a varying intensity according as there are variations in the forms, the kinds, and the degrees of income.

In fact, the various forms, kinds, and degrees of income give rise to a coercion to the association of labour varying in intensity, and from this there result : variations in the productive efficiency of labour itself ; varying degrees of reduction in the quantity of product assigned to the labourer ; variations in the quantity of saving ; and therefore, according to the varying predominance of the different forms, kinds, or degrees of income, there result also correlative variations in the total quantity of income.

Conversely, the total quantity of income reacts upon the form, the kind, or the degree of income. It is, in fact, certain that, when the total quantity of income declines, the prevailing form of income is compromised, and is most likely to be replaced by a different form of income. On the other hand, during the ascendent periods of any form of income, consolidated incomes prevail over fluctuating incomes, whereas during the declining periods the opposite of this is the case. Finally, for this very reason, during the ascendent periods of income, the process of expansion of one individual income at the expense of another individual income is less intense, and the concentration of income in its superior degrees resulting from that process is less marked, than are both of these in the declining periods of income.

In any case, given the prevailing forms, kinds, and degrees of income, and the conditions these severally impose, that complex of factors tends to become established which gives rise to the maximum income, immediate or permanent ; and this income is saved to a sufficient extent to secure to the recipient of income the maximum totalised income during life.

§ 2. The Rate of Income

Having thus determined the absolute quantity of income, we have next to determine its relative quality, or the rate of income, which, as we know, is equal to the quotient obtained by dividing the total absolute income by the factors from which it is derived.—Now since these factors do not necessarily consist of the same products as those which constitute the income, in order to determine the rate of income we must first reduce to a common denominator the products constituting the income and the products necessary to produce it, or must assume as the basis of our calculations, instead of the products themselves, their value measured, in effective labour (wherever possible), or in complex labour, or else in money ; thus the rate of income is equal to the value of the income divided by the value of the elements that produce it.

Precisely because the rate of income is the ratio between the absolute income and the respective productive elements from which it is derived, we can recognise as many different rates of income as there are productive elements, that is to say, we have the rate of income in relation to labour, in relation to technical capital, and in relation to land.

The rate of income determined in relation to the quantity of labour measures the productivity of associated labour. If, for example, in a certain country, A, 100 days of associated labour produce an income of 50, and in another country, B, 200 days of labour produce an income of 50, the rate of income in the former country is 50%, and in the latter 25% ; that is to say, the productivity of associated labour is in the former country double what it is in the latter. If the income be considered in relation to subsistence instead of in relation to labour, and if subsistence be equal to the specific product of isolated labour employed in conjunction with a correlative technical capital, the ratio between subsistence and income denotes at the same time the ratio between the product of isolated labour and the product of associated labour, and between the part of the product assigned to labour and that assigned to ownership of the means of production. If subsistence is (as we saw frequently happens) inferior to the product of isolated labour, the ratio between subsistence and income indicates simply the ratio between the quota accrueing to labour and the quota accrueing to property. If, finally, the labourer receives a part also of income, in addition to the product of isolated labour constituting the maximum limit of subsistence, the ratio between subsistence and income indicates simply the ratio between the productivity of isolated labour and that of associated labour.

If the rate of income be determined in relation to technical capital, it expresses the productivity of technical capital, and is greater in proportion as the ratio of the technical capital to the absolute income is less. If it be determined in relation to the total capital, subsistences together with technical capital, that is to say, by dividing the value of the income by the value of the total capital, it expresses in part the distribution of the product between capital and labour, and in part the productivity of technical capital.—If, on the other hand, the rate be determined in relation to land, the rate of income expresses the productivity of the land, and is greater in proportion as the ratio of the extension of land to the absolute income is less.

Finally, the rate of income may be determined in correlation with the sum of the three productive factors. But this may give rise to difficulty as regards the valuation of these elements. There is no difficulty in the case of labour, for to the charge of labour may be assigned the value of the subsistences; again, the value of technical capital is immediately determined by the cost of the products of which it consists.—But the matter is less easy as concerns land. For if to the extension of the land (an element not really calculable in money), we charge its value reckoned in terms of capitalised rent, the greater productivity of the land is reflected in an elevation in the value of this land; thus every increase in the income (the numerator) due to the greater productivity of the land, is accompanied by a proportional increase in the value expended (the denominator). Therefore the rate of income remains constant, notwithstanding the increase in the productivity of the land; that is to say, the rate of income has no longer anything to do with the technical efficiency of the natural element of production.[1] To obtain some light upon this

[1] In the same sense, consult Fisher, *Income*, p. 187. For this very reason Huschke affirms that by determining income in relation to the value of the land it is possible to measure all the factors of variation of income which are independent of the varying fertility of the soil (*Landwirtschaftliche Reinertragsberechnungen*, Jena, 1902). This difficulty, which arises in every case in respect of the determination of the rate of income in relation to the land, also presents itself in respect of the determination of the rate of income in relation to capital when capital is valued in terms of capitalised interest—as Fisher wishes to do (*Income*, p. 202, *Rate of Interest*, p. 130), and, formerly, Chaptal; because, in such a case, the variations arising in the productivity of capital certainly change the value of the capital, but leave the rate of income unaffected. Such a method of determining the value of capital is, however, totally inadmissible, as I have previously pointed out in the *Rivista di Scienza*, Anno II, No. vi.

question, we must therefore consider the value of the land as constant: it may be by determining that value independently of its productivity; it may be by considering all the lands as having the fertility of land on the margin of cultivation, and therefore having a zero value; it may be by assuming the value of the land to be equal to the value of the subsistence of the labourers who cultivate it, which value does not necessarily change with changes in the productivity in the land itself. In this way, every increment in the productivity of the land increases the income without increasing the value of the land, and therefore without increasing the total cost of production of the income; so that the greater fertility of the land is reflected in a higher rate of income.

If the element of land be abstracted from the problem, or be considered constant, the rate of income becomes a function of three variables, the absolute value of the income, the value of the technical capital, and the value of the subsistences necessary to produce the income; but as the technical capital and the subsistences may be subsumed under the general term of *capital*, it may be said that the rate of income is a function of two variables, the value of the income and the value of the capital.—Since, then, the value of the income is a function of the unitary value of the income-products and of the absolute quantity of income, it follows that the rate of income must vary with variations in the elements that determine the absolute quantity of income—with variations, that is to say, in the quantity and productivity of labour, in the wear of technical capital, in the quantity of subsistence, and in the quantity of saving.

There result from this certain qualitative and certain quantitative differences between the rate of income and the rate of profit. First of all, the elements that determine the rate of income are not the same as the elements that determine the rate of profit. In fact, the rate of profit is independent of the more or less considerable fraction of income that is saved; whereas the rate of income varies inversely with the quantity of saving. Secondly—and here we have a more substantial difference—the rate of profit is determined by the distribution of the subsistence-product between the capital and the labour employed to produce it, and this distribution varies in its turn in proportion to the productivity of the labour producing the subsistence-commodity and the technical capital requisite to produce this. Therefore the rate of profit remains unaffected by variations in the productivity of the labour employed in the production of the income-commodities and of the technical capital requisite to produce these.—Conversely, the rate of income rises (or, in the inverse case, declines), not only at every increase in the productivity of the labour that produces subsistence (which increase, by increasing the rate of profit, increases for that very reason, *ceteris paribus,* the rate of income), but also at every increase in the productivity of the labour employed to produce the commodities constituting the income (or the technical capital requisite to produce these commodities), provided that this increase of productivity be not accompanied by a proportional diminution in the unitary value of the commodities themselves. In fact, if the increase in the productivity of the labour that produces the income-commodities diminishes the unitary value of these in proportion as the absolute quantity of income increases (as happens if they are produced in conditions of free competition), it leaves unchanged the value of the income, and therefore leaves unchanged also, if the value of subsistence and of technical capital remain constant, the rate of income. But if the increase in the productivity of the labour that produces the income-commodities does not diminish the unitary value of these, or does not diminish that value proportionally to the increase in the absolute quantity of income, as happens when they are not obtained in conditions of free competition, the value of the income increases while the value of the technical capital and of the subsistences remains constant. This does not raise the rate of profit, which remains in every case determined by the conditions of distribution of the subsistence-product; but it necessarily increases the rate of income.

Thus our analysis leads us to a conclusion diametrically opposed to that enunciated by Marx.—This writer affirms that the rate of surplus-value, that is to say, the rate of income, varies solely in accordance with the variations in the productivity of the labour producing the commodities of consumption of the workers (or the technical capital necessary to produce these); whereas the rate of profit may vary through a variation in the technical composition of the capital employed in the production of every commodity. In reality, the opposite of this is the truth. The rate of profit may vary solely in consequence of variations in the productivity of the labour employed in the direct or indirect production of the commodities of consumption of the workers; whereas the rate of income may vary, not only in accordance with every variation in the productivity of the labour that directly or indirectly produces subsistences, but also in accordance with every variation in the productivity of the labour that directly or indirectly produces income: that is to say, to express the matter in more general terms, the rate of income may vary with every variation in the productivity of labour, however employed.

On the other hand, since technical capital and subsistences produce profit and all the other parts of income, the rate of income—equal to the value of the total income divided by the total technical capital and the total subsistences—has a denominator equal to that which determines the rate of profit (if we leave out of consideration that part of income which is saved), but it has a numerator which is necessarily greater; that is to say, the rate of income is always greater than the rate of profit.

Like the rate of integral income, the rate of the total incomes of various kinds can also be determined in correlation with each of the productive elements separately, or with the totality of these.—But here it is necessary to point out that the different productive elements intervene in varying proportions in the production of various kinds of income, and that for this reason the different rate of the various kinds of income, when measured in correlation with one and the same productive element, does not furnish any absolute information as to the productivity of this particular element. Thus, for example, commercial capital is employed practically without making use of any portion of land, whereas agrarian capital requires a large quantity of land for its employment. It follows from this that the rate of income in the case of commercial capital, measured relatively to the land, is enormously higher than that of agrarian capital, without this difference denoting a greater productivity of the land in the former case as compared with the latter.

One observation in conclusion. We have already seen that income tends to impose that quantity of product and of subsistence which raises income itself to the maximum figure. But if there are several combinations of quantity of product and of subsistence which yield the maximum income, that combination is preferred which yields the maximum rate of income. And if there are several combinations which yield the maximum income and the maximum rate of income, that combination is preferred which yields the maximum product; for, the conditions being otherwise unchanged, it is to the general interest, including that of the recipient of income, that the product shall be greater.—Thus, if two different combinations give an income of 100 and a rate of income of $\frac{1}{3}$, but one combination employs a capital of 300 with zero wear, and the other a capital of 300 with total wear, the product is in the former case 100, and in the latter case 400. In such conditions, the second combination will be preferred.

§ 3. Quantitative Tendencies of Income

We have now to ask whether the total income thus determined alike in its initial quantity and in its successive increments, tends to increase or to diminish in the successive forms of income, or in the successive phases of one and the same form of income. When we consider the forms of income in their normal or ascendent period, it is not difficult to ascertain that the total quantity of income is greater in each successive form.—In fact, in each successive form of income there is an increase in the productivity of associated labour, which is itself the primary determinant of the absolute quantity of income. It is true that, in the course of economic development, technical capital and its wear and tear increase, and the quantity of subsistence may increase; but since technical capital and subsistence increase only in so far as they increase income, an increase in these elements cannot counteract the increase of income, but must render this last more marked. —Finally it is true that, in each successive phase of income, there is an increase in the impulse to saving, or a depression of the limits which restrain saving within the virtual maximum. But it is no less true that the diminution which immediately results from this in the figure of the absolute income gives rise to a progressive increase in its figure in the future, through the increased profits which are ultimately derived from saving.—The definite and necessary result of all this is a progressive increase in the absolute quantity of income in each successive form.

What has been said of the successive forms of income is equally applicable to successive periods in the ascendent phase of each form of income; and there contributes in addition to bring about the same result the increasing predominance of consolidated incomes, which are less influential in restricting production. Therefore in the ascendent phase of each form of income, the total mass of income exhibits a progressive increase.

But the opposite phenomena make their appearance as soon as the declining phase of the income begins; for in this phase, *pari passu* with the decline in the productive efficiency of associated labour, a diminution in the mass of income becomes manifest, and gradually more accentuated. This becomes apparent in the decline of the communistic and of the corporative economy, as also towards the close of the slave economy; whilst the diminution of the feudal income during the decline of the feudal economy was plainly displayed in the decadence of the arts and in the break up of the seignorial households; finally, the same thing occurs under our own eyes during the decline of the wage-economy. Thus, in England, the depression in trade of the year 1885 is followed by a diminution of total income in 1886–7; the depression of 1893 leads to a diminution of the total income in 1894–5 and in 1897; whilst in the triennial period 1903–6 the total amount of property passing through the estate office is £815,253,640, as compared with the sum of £828,841,140, during the triennial period immediately preceding[1]; and besides this there are manifest the most significant symptoms of the decline of income, such as the reduction and sometimes

[1] Harris and Lake, *Estimates of the Realisable Wealth of the United Kingdom*, "Journal Stat. Soc.," 1906, p. 726.

the total suppression of railway dividends, and an alarming increase in pauperism.

If, however, in place of considering the total income of a single country in successive periods of time, we consider the total income of a number of contemporary countries, we find that this income is greater in those countries in which the coercion of labour is less intense, and in which therefore the productive efficiency of labour is greater. And since the intensity of the coercion to the association of labour is, as we know, inversely proportional to the productivity of the land, it follows that the quantity of the total income relatively to the number of the population, is greater in those countries in which the productivity of the soil is less. This becomes manifest when we compare the countries of continental Europe with England, for the increase in the total income is greater in England than in the other countries of Europe.

Income, in addition to increasing in absolute quantity during progressive periods or in the case of progressive nations, tends to increase more than proportionally to the increase in the factors requisite for its production; hence also the rate of income necessarily rises. First of all, in highly evolved conditions of the economy, income increases more than proportionally to subsistence.—It is doubtless possible (as we have seen) that an increment of subsistence may occur more than proportional to the increase of income. But since subsistence has a maximum which is determined by the product of isolated labour, the moment necessarily arrives in which subsistence can no longer increase; and henceforward every increment of product resolves itself entirely into an increment of income, undifferentiated or differentiated. Now, if income increase while subsistence remains constant, the moment necessarily comes in which the total income exceeds the total subsistence; and this excess must be greater in proportion to any increase in the productivity of labour. In other words, in advanced economic conditions, the total income represents a fraction of the total product larger than that which is constituted by the total subsistence, and this disproportion continually increases.

In an ascendent economy, however, the ratio between income and technical capital is also an increasing one; for, the greater the advance of technique, the greater is the mass of income produced by a given technical capital. Now if, in ascendent periods, the absolute income increases more than proportionally to the subsistences and to the technical capital, it follows from this that in these periods the rate of income tends continually to increase ; herein is to be found an essential difference between the rate of income and the rate of profit, for during ascendent periods the latter rate diminishes.—Conversely, during declining periods the rate of income tends correlatively to diminish.

If, finally, during ascendent periods, there is an increase in the quotient that is obtained by dividing income by the sum of technical capital and subsistences, there is, for that very reason, an increase in the quotient obtained by dividing income by the sum of technical capital used up, subsistences, and income itself. Since this last sum is equal to the total product, it follows that, in the course of every ascendent phase of income, income constitutes an increasing fraction of the product. In fact, in England from 1860 to 1901–2, whilst the average income per inhabitant increases by 88%, the average product increases by 72%[1] ; that is to say, income increases in a greater ratio than product, or income constitutes an increasing fraction of product.

[1] Jason, *Die Entwickelung der Einkommensverhältnisse in Grossbritannien*, Heidelberg, 1905, p. 56.

CHAPTER VI

THE DISTRIBUTION OF INCOME

§ 1. The Struggle Between Individual Incomes

Hitherto we have studied income as a whole, its forms, the kinds into which it is subdivided, its total quantity. But, as we have previously indicated, income is an essentially individual attribute, inasmuch as it is by individuals that it is received and consumed. For this reason, the analysis of income cannot be regarded as being exhaustively effected by the study of income as a whole, and the analysis must be completed by an investigation of the phenomena appertaining to income as it is received by individuals.

The average individual income, it is hardly necessary to say, is equal to the total income divided by the total number of the recipients of income. Now, in the case of undifferentiated income, the number of the recipients of income is precisely equal to the number of the productive labourers; whereas in the case of differentiated income, the number of the former is necessarily less than the number of the latter. This is already implied by the fact that in the case of differentiated income a single private owner of the means of production (or it may be of unproductive elements) exercises coercion over a number of associated labourers; for this implies that to a plurality of productive (or unproductive) labourers there corresponds a single owner of productive (or unproductive) elements. It is true that the recipients of income do not consist solely of the owners of productive or unproductive elements, but in addition of unproductive labourers who obtain an income; but the presence of these last does not materially modify the result, or affect the fact that the number of the recipients of income is in any case necessarily inferior to that of the labourers. This statement is statistically confirmed; thus, for example, in Prussia, in the year 1906, those exempt from income tax, that is to say, the labourers, constitute 60·35% of the population, whilst those who pay income tax (or the recipients of income) form only 39·65% of the population[1]; and in the United Kingdom the wage-earners represent four-fifths of the total population.

Now, since we have seen that in an advanced economy the total income is superior to the total subsistence, and that this preponderance of income continually increases, and since we have now seen that the number of the recipients of income is equal to or less than the number of the productive labourers, it necessarily follows that the average individual income is normally greater than the average individual subsistence, and that the disproportion between the two continually increases. By statistics this is proved beyond the possibility of doubt. Thus in Prussia, in the year 1902, whilst the average wage was estimated at 883·30 marks, the average income of those subject to income tax was 2277 marks.—In England, during the period from 1890 to 1901–2, whilst the average wage increases by 55%, the average income per inhabitant increases by 88%; and in the United States, from 1890 to 1905, whilst the average wage increases by 12·8%, the average income produced by a single worker increases by 33·3%.[2]

But the average individual income is not only devoid of all symptomatological value (for a high average income may go together with a low rate of income and therefore with a low productivity of capital and labour, if the mass of capital and labour employed be great, and may in addition coexist with a low level of individual income in the case of the great majority of the recipients of income); it is, moreover, a fictitious entity having no counterpart in actual life, for life presents to us a series of individual incomes divergent to the greatest possible extent. And just as the absolute individual incomes are thus diverse, so also are extremely various the rates of the specific individual incomes, that is to say the quotients respectively obtained by dividing the individual incomes by one or by the totality of the productive or unproductive elements employed to produce these incomes, that is to say, by capital, land, and productive or

[1] *Statistik der preussischen Einkommenssteuerveranlagung für* 1906, p. iv.

[2] Wagner, *Weitere Untersuch.*, etc., p. 233; Jason, *loc. cit.*, p. 56; Chatelain, in "Questions pratiques de législation ouvrière," July, August, 1908.

unproductive labour. Undoubtedly, if the individual recipients of income were in free competition one with another, the integral rates of their individual incomes, or the ratio between these incomes and the total capital outlay necessary to obtain them, would be equal. Since, however, the individual total income contains in most cases monopolist elements (such as land-rent, or the remuneration for various kinds of unproductive labour), it results that the rate of various individual incomes is as a rule different, thus contrasting with the rate of profit, which tends normally to equality, since the rate of profit has reference to an element in respect to which, speaking generally, the fullest competition prevails.

At what point do the respective individual incomes become established? By what factors is their amount determined? We pointed out in Chapter IV that, given the coercive association of labour, the entity of the respective individual incomes, determined at the outset by the fertility of the land owned by the individual recipients of income, undergoes gradual changes owing to the operation of a series of influences which were then discussed. These influences may be classified under two clearly distinct heads. In the first place, every individual income may be changed by all the causes which change the quantity of the total income. Hence an increase in the product and a reduction in the subsistences, inasmuch as these changes *per se* effect an increase in the total income, increase, or may increase, though in varying degrees, the respective individual incomes. In addition, these last may be affected by causes which leave the quantity of the total income unchanged; for it may happen that some of the incomes increase in consequence of the partial or total annexation of other individual incomes, giving rise to a correlative reduction in the incomes thus subjugated.

Now individual income tends first of all to increase in virtue of the physiological methods[1] which increase the total income. These methods, however, encounter sooner or later an in-

[1] With regard to the use of the term "physiological," it is desirable to explain that the author classifies under two heads the methods of increasing income. The first of these is by increasing the product, and this method is good, healthy, and physiological. The second method is by the forcible or fraudulent annexation of the income of others, and this method is bad, unhealthy, and pathological.—TRANSLATOR'S NOTE.

superable obstacle, for the reduction of subsistence is resisted by the productive labourers, whilst the increase in the product is peremptorily limited by the restrictions imposed on the productivity of associated labour by the coercion which disciplines that labour. Sooner or later, therefore, the moment arrives in which individual income can no longer be increased by methods which increase the total income; and the increase of individual income can then be effected only by methods which leave the total income unchanged, that is to say, by the more or less forcible annexation of other individual incomes. In this way individual income, restricted by the negative influences of the coercion to the association of labour, is forced to seek expansion *per fas et nefas* at the cost of rival incomes; and thus from the initial fact of the coercion implicit in the association of labour there results as an inevitable corollary the struggle between incomes. This is the only form of human struggle which can be compared with the animal struggle for existence—whereas the struggle between income and subsistence, on the other hand, as this struggle is displayed in the case of differentiated income, is parallelled by many and various phenomena of biological parasitism.

For the very reason that the struggle between incomes is the natural outcome of that coercive association of labour which is the inevitable foundation of all the forms of income, this struggle makes its appearance equally in the case of undifferentiated, of differentiated, and of mixed income; with this difference, however, that in the case of undifferentiated income the restrictions imposed by the associative authority moderate the intensity of the struggle, inasmuch as the slight degree of quantitative divergence between the individual incomes renders comparatively unlikely the victory of one income over another, and therefore less reasonable and less intense the struggle between the incomes; whereas in the case of differentiated income, in which coercion by the collectivity is non-existent, and in which the difference between the incomes is conspicuous, the fight between incomes is necessarily fiercer and more enduring.[1]

[1] "Wherever capitalism penetrates, there the struggle for existence between the different undertakings begins." Vandervelde, *Le collectivisme et l'évolution industrielle*, Paris, 1900, p. 74.

The struggle is carried on between the coexistent incomes, whether these are identical or are different in the matter of their technical foundation, their form, their kind, or their degree. In the first place, wherever there exists an income founded upon unassociated labour, income founded upon labour coercively associated wages war against it. On the other hand, we have seen that when differentiated income coexists with undifferentiated income, there is carried on between the two a savage warfare, as a result of which one or the other form attains a sovereign predominance; without, however, always driving the vanquished form from the field. Further, within a single given form of income, the struggle may be carried on between incomes of the same kinds or of different kinds, and between incomes of the same degree or of different degrees. The various kinds and the various degrees of income are engaged in incessant warfare one with another, and this gives rise to interesting complications which will subsequently be discussed. But incomes of the same kind or of the same degree may also struggle one with another as soon as they present a sufficiently conspicuous quantitative disparity (and we have seen that individual incomes of the same degree may differ quantitatively) to create the possibility of a conflict or of the victory of one over the other. It follows from this that the struggle between incomes is not, properly speaking, a class-struggle; for the struggle between incomes manifests itself also in the case of undifferentiated income wherein disparity of social classes is unknown, and the struggle goes on between the possessors of incomes equal in kind or equal in degree, that is to say (if the society be one in which class-distinctions exist) between those who belong to the same social class or sub-class.[1] In general terms, this struggle is a universal phenomenon, the outcome of the simple fact of the coexistence of a number of individual incomes, however little these incomes may differ.

The struggle between incomes, arising on the silent platform of economic conflicts, frequently degenerates into a political struggle. Even when confined to the purely economic plane, there is always some political admixture, inasmuch as

[1] Halperine, *Des luttes sociales*, "Annales de l'inst. int. de sociologie," 1907, pp. 252, 254.

the individual incomes make use of the arm of authority in order to weaken their rivals. Limiting ourselves here to the consideration of the struggle between incomes in its strictly economic manifestations, it may be pointed out that this struggle manifests itself in two ways that are substantially diverse. It may happen that an income, in the struggle against its rivals, favours the natural influences which privilege it, with the ultimate aim of increasing its own superiority to their disadvantage. This is what happens, for example, when landowners annex new uncultivated areas of land, or when they oppose the introduction of agricultural improvements, or when they insist upon short-term leases, in order to increase rent at the expense of profit ; or when capital favours by premiums or in some other way the importation of foreign wheat at a low price, or facilitates the transfer of land, or the loan of money to tenant farmers at low rates of interest ; or when the larger incomes solicit loans at low rates of interest for the larger industrial undertakings, or form combines to purchase raw materials or machines at reduced prices. But it may happen also that income is not content with favouring the natural conditions of its own pre-eminence, but that by artificial and arbitrary means it secures a pre-eminence which it would not naturally possess. This happens, for example, when certain vendors combine to force buyers to pay abnormal prices for their commodities, or when certain producers, less able, or less favoured by nature, obtain by means of protective duties or by bounties the monopoly of a national or a foreign market, or procure by some underhand manœuvre the monopoly of certain supplies needed by the state, or secure preferential tariffs from the railway companies. It will be understood that in this latter case the struggle between the incomes will be fiercer or will assume more complex forms.

Finally, we may in the abstract distinguish the struggle between incomes, according as that struggle is confined to preventing the decrease of individual income, or aims at effecting an actual increase. In practice, however, the distinction is inept ; for the struggle, even if it has been begun with the intent of preventing the decline of individual income, ends always by aiming at the increase of that income.

Putting such distinctions on one side, and considering the struggle between incomes in its most varied manifestations, it may be said that this struggle is practised according to three methods which are very different in character, although they may be associated ; *violence, fraud,* and *monopoly.*

(*a*) VIOLENCE.—The first of these methods is seen in operation whenever one income forcibly attacks a rival income, in order to annex the latter, wholly or in part. Such a method of struggle is seen even in the case of undifferentiated income, and it will be easy to give examples of this. Thus, in Russia, up till a few years ago, struggles frequently occur between the more well-to-do and the less well-to-do members of the rural communities ; the latter strive to bring about a redistribution of the common lands, whilst the former, who are in possession of larger lots, resist by all the means in their power. Sometimes the contest is fought out by the bloodless method of wrangling, or by legal finesse ; but not infrequently more serious trouble ensues, such as the refusal of some of the communists who have been deprived of their lands to pay dues to the commune any longer, or there may be armed combats, which are hardly allayed by the intervention of the priests, cross in hand.[1] Analogous phenomena are seen in Bavaria in 1793–4, in 1803–4, and subsequently : either because the larger owners oppose the equal distribution of the communal wealth ; or else because, the distribution of the land having been effected, they insist that all common rights to the communal pastures shall come to an end ; or because, on the other hand, after having withdrawn from the community, they claim the right to pasture their own cattle upon the common land.[2] It will, however, readily be understood that violence is practised with much greater frequency and intensity in the case of differentiated income. We find that Aristotle postulates theft as one of the natural means of acquiring property,[3] and primitive Roman law likewise regards theft as a matter of civil not of criminal law ; nor indeed can it be maintained that either the Greeks or the Romans showed much moderation in their attempts to profit

[1] [*Miscellany of Economic Researches upon Russia*] Moscow, 1892, I, pp. 49, 52, etc.

[2] Wiesmüller, *Geschichte der Theilung der Gemeindeländereien in Bayern,* Stuttgart, 1904, pp. 41, 59–60 ; 71–2, etc.

[3] *Ethics,* Book V, Chap II.

by this juristic indulgence. But the violent struggle between incomes exhibits its extremest scope and intensity in the case of the feudal income, in which the barons endeavour to round off their own incomes by means of a series of systematically organised extortions, it may be from rival barons, it may be from the traders and the burghers of the cities. Well known are the records of those escutcheoned robbers to whom Rabelais gives the name of *genpilshommes* or *gentuehommes*, who sally forth from their castellated fortresses to commit the most barbarous acts of plunder. And such practices must be lucrative when, in the Auvergne, Aimergot obtains thereby an income of 20,000 florins. Nor is this all, for when the barons have terrorised the country-side, they put the whole area *in pactis*, levying an arbitrary tax upon all the burghers and all the labourers. Others adopt a no less lucrative profession, regarded as thoroughly legitimate, namely that of wreckers to obtain booty. Finally, the unending wars between feudal lords and cities, between nobles and clergy, between one vassal and another, which fill this disturbed period with clamour and with blood, are no more than so many manifestations of the violent struggle between incomes which during this epoch exhibits its crudest and most noteworthy developments.[1]

Even in the most advanced and most modern form of differentiated income, the struggle between incomes sometimes develops with armed violence. Private individuals do not disdain to have recourse to force in order to increase their own income at others' expense ; witness the armed struggles between shepherds and cultivators in Sardinia, or the filibustering expedition of Rockefeller against the pipe-line in course of construction for the United States Pipes-Lines Company. Besides, what is war but a method which aims at enlarging the

[1] Bonnemère, *Histoire de la Jacquerie*, Paris, 1871, p. 48 ; Inama-Sternegg, *Deutsche Wirtschaftsgeschichte*, Vol. II, Leipzig, 1891, pp. 169–70 ; Lamprecht, *Deutsche Geschichte*, 2nd edition, Berlin, 1894, *et seq.*, V, I, 79, *et seq.* ; Nitzch, *Geschichte des deutschen Volkes*, Leipzig, 1883, *et seq.*, Vol. I, p. 170, Vol. II, pp. 8, *et seq.* In France private wars are checked by Louis IX and Philippe IV, and are suppressed by Charles VI ; in England they become comparatively rare after the Norman Conquest (Westermarck, *Origin and Development of Moral Ideas*, London, 1906, I, p. 357). But the lessening of the struggle between incomes, even when apparently due to the influence of the sovereign power, is really the outcome of the reduction in the number of the recipients of income and in the total quantity of income, which is the natural fruit of this contest, and gradually deprives it of aliment.

incomes of the members of one nation at the cost of the members of another? As a rule, indeed, in modern times, violence, instead of having recourse to arms, is exercised by the intermediation of the law; for the recipients of the larger incomes take advantage of the pre-eminence this gives them to obtain the passage of laws which enrich them at the expense of rival incomes. Thus in England, from 1650 to 1750, the landowners, suffering from the depreciation of wheat and from the high rate of interest, struggle to secure laws which will lower this rate; whilst the capitalists, supported by the economists, make head against the agitation. On the other hand, during the years subsequent to 1760, the capitalists, injuriously affected by the high price of wheat and by the rise of land-rent, insist on the passage of laws aiming to lower rent.[1] To-day, again, in the United States, with every advance in population, and with every correlative remove of the "frontier," the indebted cultivators, who find their undertakings compromised by the unexpected depreciation of wheat which results from the cultivation of virgin soil, endeavour, in order to save themselves, to obtain the passage of laws that will cause a depreciation in the value of money; hence there results a struggle between debtor-incomes and creditor-incomes fought out by the method of legal violence.[2] Finally, whenever manufacturers procure illicit advantages by means of protective duties or of governmental concessions, we have in fact a form *sui generis* of the struggle between incomes on the basis of violence, or upon that of violence in combination with monopoly.[3]

(*b*) FRAUD.—The second of the methods under consideration, fraud, may also manifest itself in the case of undifferentiated income; and we have examples of this in the craft-guilds, which not infrequently endeavour to enrich themselves by fraudulent means at the expense of rival guilds or of rival incomes. But this method is seen in particular intensity in the case of differentiated income, and above all in the case of the slave economy, in which fraud appears as the systematic

[1] Marx, *Mehrwerththeorien*, I, pp. 18, *et seq.*

[2] Consult on this matter the exceptionally interesting work of Wildman, *Money Inflation in the United States*, New York, 1905, pp. 205, *et passim.*

[3] "The upper class is essentially a predatory class," Veblen, *Theory of the Leisure Class*, New York, 1899, pp. 233, 241, *et seq.*

means of enrichment.[1] As to this matter it is worth noting that whilst it is often maintained that the wealthy class proceeds from methods of violent robbery to methods of fraud, or, in more general terms, the development of criminality by force into criminality by guile is raised to the dignity of a universal law, the struggle between incomes presents, in this regard, the opposite transition; for in the slave-economy the dominant method of struggle between incomes is fraud, whereas in the subsequent serf-economy it is violence. The reason development takes this course, which at first sight seems surprising, is simply this, that in the slave-economy income, not being in possession of political sovereignty, cannot fight with arms in hand against rival incomes, and must therefore have recourse to the more tortuous and less efficacious method of trickery; whilst in the serf-economy, income, wielding power, can therefore wield the speedier and more efficient arm of material violence.[2]

This, however, does not exclude the possibility that fraud may function as a method of struggle between incomes in other forms also of differentiated income. Thus, in the Middle Ages, interest, baffled by the laws against usury, reacts by the subtle craft of the *lucrum cessans* and the *contractum trinum;* whilst to-day the entrepreneur's reward, combated by law and public opinion, since in law and public opinion income appertains almost exclusively to ownership, reacts by means of the artifice of watered capital. To-day, in fact, joint-stock companies issue *preference* shares, or in many cases debentures, representing the value of the capital really invested (though sometimes as much as three times this amount), and *ordinary* shares, or shares properly so-called—for an amount which sometimes is as much as double that of the preference shares or of the debentures—the ordinary shares representing the capitalisation of the good-will, the privileges

[1] It suffices to call to mind the expressions "Greek faith," "Punic faith," etc. Even the Romans, who built a temple to Good Faith, do not appear, in this respect, to have been much better than their enemies; and, in this connexion, it is suggestive to note the frequent references made by the Roman jurists to the position of the *malae fidei possessor*, in contrast with the comparative rarity of allusions to the matter in modern law.

[2] These considerations are developed in detail in the author's *Economic Foundations of Society* (English Translation, London, 1910, Part III, Chap. I, "Economic Revenue and Political Sovereignty"—especially pp. 137, *et seq.*).

enjoyed by the enterprise, the advantage due to exemptions, trade-marks, patents, etc. Now the capital represented by the ordinary shares (when preference shares are issued), or by the shares (when debentures are issued), is simply *water*, that is to say, it is merely fictitious and supposititious wealth, serving solely to secure a conspicuous share of income as the entrepreneur's reward, at the expense of capital.[1]

No detailed reference need be made here to the incessant legal interference with production during the Middle Ages, which displays the lack of industrial honesty; nor to the gigantic frauds of the English bankers and jewellers in the seventeenth century, by which they enrich themselves to a fabulous extent[2]; nor need we make more than passing mention of the fact that during the eighteenth century frauds are customary among the manufacturers of Birmingham and of all the great cities of England,[3] and of the way in which these frauds increase in extent as the merchant princes are replaced by traders working with borrowed capital[4]; nor need we now give a detailed description of the unclean atmosphere of the modern stock exchange, whose transactions are all founded on fraud[5]; it suffices to ask ourselves what does the history of the Standard Oil Trust amount to, but to a tissue of devilish frauds, carried out with inexorable cruelty, upon rival refiners or upon the producers of crude petroleum? Promises and solemn oaths, pledged with tears in the eyes, and thereafter unscrupulously repudiated; gross bribery of rival producers and traders to induce them to betray their own associates; the vexatious obstruction of and the bringing of malignant actions-at-law against rival undertakings; the election by the Trust of its own henchmen, by illegal and equivocal means, to the direction of rival enterprises; the systematic organisation of espionage upon the managers of

[1] Veblen, *Theory of Business Enterprise*, New York, 1904, pp. 147–8; Lawson, *Frenzied Finance*, London, 1906, pp. 374–5.

[2] Tooke, *History of Prices*, London, 1838, Vol. I., p. 33. Many examples are given by Evans, *Facts, Failures, and Frauds; Revelations, Financial, Mercantile, and Criminal*, London, 1859.

[3] Mantoux, *loc. cit.*, p. 394.

[4] Bagehot, *Lombard Street*, Paris, 1874, p. 10.

[5] 1907.—Action against the board of directors of the Savoja-Palmer Company, who have issued shares of 25 lire nominal value at 80 lire, thus securing for themselves a premium of 55 lire.

these; the soliciting and bribing of the customers of their rivals to induce these customers to repudiate orders already given to the rival firms; the dissemination of false reports as to the insolvency of rival undertakings to induce their customers to leave them; the bribery of directors of rival firms to induce them to resign; the bribery of judges who are to try actions brought against the Standard Oil Trust—such are some of the most salient among the frauds deliberately organised by this criminal federation, recorded in unimpeachable documents in letters of fire and blood.[1]

The fact remains, however, that the two methods of struggle hitherto examined,[2] although encountered to some extent in all the forms of income, attain to the position of fundamental social institutions only in that form of differentiated income which is founded on the ownership of man. Now the fundamental part which, in these forms of income, is played by violent or fraudulent methods of gain, destroys the possibility of fiduciary credit by cancelling the conditions which alone can originate and foster it. It is for this reason that, where income is based upon the ownership of man—while usury exists (usury which is the negation of confidence), and also credit upon a personal basis (nexus), and in addition real or hypothecary credit which is independent of personal confidence—we look in vain for fiduciary credit, or for the system of institutions founded on confidence; in other words, as Ferrara well expresses the matter, "we find acts of credit, but not institutions of credit."[3]

Even in Greece and in Rome it was not regarded as safe to lend money at interest. In an edict of Constantine (twenty-second law, Cod, *De adm.*, § 5 *a*) we read: "huic accedit, quod ipsius pecuniae, in qua robur omne patrimoniorum veteres posuerunt, fenerandi usus vix diuturnus, vix continuus et stabilis est; quo facto, *saepe intercidente pecunia*, ad nihilum minorum patrimonia deducuntur."[4] This is why restrictions of all kinds are imposed, lest guardians should employ the

[1] Consult the conscientious and profound work of Ida Tarbell, *History of the Standard Oil Company*, London, 1905.

[2] The two methods of violence and fraud may be associated. For example, it is whispered that many mishaps and fires in the case of ships not yet launched are the work of rival shipping firms.

[3] Bibl. dell' Ec., Series II, Introduction to Vol. VI, p. 135.

[4] Pernice, *Zeitschrift der Savigny-Stiftung für Rechtsgesch.*, 1898, pp. 100, *et seq.*

property of their wards in loans; and for this reason the *malae fidei possessor* of an inheritance is absolved from the burden of the payment of interest for the sums of money of which it is made up, and the same even applies to the partner who lends at his own risk a part of the capital held in partnership; for the interest of capital is regarded as an income of an altogether exceptional character, or as remuneration for the risk incurred in making the loan, and it is therefore considered to belong to the lender even when the capital he lends belongs to another.[1] The custom of hoarding, then so widely diffused, shows how rare were the opportunities for effecting safe loans; whilst the institution of the *tresviri mensarii*, who lend state money to private debtors, shows that private capital is not available for loans in sufficient quantity. The abnormal rate of interest, which the law 26 *de Usuris* specifies at 4% in the case of persons of distinction, 8% in the case of merchants, 6% in the case of ordinary persons, but 12% in the case of dealers in wheat and oats, whilst in actual fact in Rome it was always somewhere near the highest of these figures, shows very clearly how small is the reliance placed on the honesty and punctuality of the debtor.—It is worse still during the Middle Ages; for during this period the rate of interest rises to 20 and even 35%,[2] and there prevails the system of the *vif-gage*, in accordance with which the ownership of mortgaged land is assigned to the creditor, and the most varied operations of credit assume the character of acts of buying and selling[3]; all this results from and gives additional evidence of the complete absence of mutual confidence. On the other hand, it is perfectly true that in Greece the temples, the first bankers of antiquity, receive money on deposit, that in Rome there exist bourses (*basilicae*), and the *argentarii* receive deposits inscribed upon their *codices* or *tabulae*, issue drafts payable by their foreign correspondents, cheques and letters of credit; and that in the Middle Ages we have bills of exchange and public securities (*luoghi di monte*). But in Rome[4] one who sells on credit has no legal right to

[1] Petrazycki, *loc. cit.*, II, pp. 182, *et seq.*, 204.

[2] Cibrario, *Economia politica del Medio Evo,* Turin, 1854, p. 356.

[3] Bücher, *Entstehung der Volkswirtsch.*, pp. 60, 61–3.

[4] Goldschmidt, *Universalgeschichte des Handelsrechts,* 1890, pp. 62, *et seq.*

sue for the recovery of the debt: nor is the transmission of credits admissible except to heirs; or, in order to effect such transmission, recourse is had to the roundabout method of *delegatio nominis*, which extinguishes the original credit in order to create a new one, the consent of the debtor having been obtained, depriving the grantee of the advantages that may be inherent in the original credit. Above all, in antiquity, fiduciary credit, which would be all the more desirable in view of the rarity of the precious metals, is altogether unknown.[1] Even if the Greek τραπεζῖται issue notes payable on demand, it is certain that the Roman bankers know nothing of the discounting of bills of exchange or of notes payable on demand; they are altogether ignorant of the mechanism of fiduciary circulation; and in most cases they are unable to make any use of the money deposited in their hands, and therefore pay no interest upon it. Need we say more? Even in the United States, notwithstanding its advanced economic development, credit institutions are not established upon a solid foundation as long as the slave-holding system continues.[2]

This is manifested by yet more precise evidence in the organisation of the banks of the Middle Ages, which may receive money on deposit, but cannot lend it out again. Montesquieu expresses this in the categorical statement that the banks are institutions for the exchange of money but not for its loan.[3] Indeed, the Venetian laws of September 28th, 1374, and November 21st, 1403, visit with severe punishments bankers who relend deposits; again, the law condemns the use of deposits as irregular; once more, the Contarini visit the practice with heavy penalties.[4] When the Bank of Rialto is founded in 1587, the council of direction undertakes never to lend out deposited money; and when, somewhat later, in the year 1619, the Banco-Giro is founded, it is forbidden to lend money to merchants; and we find an analogous pro-

[1] We even hear of notes issued by the Babylonian banking house Egibi, of bank-notes issued among the Chaldeans in 2300 B.C., and of yet others issued in China in the most remote antiquity; whilst it seems that the Greek temples could relend the money deposited with them. But here we are in any case concerned with sporadic and altogether exceptional phenomena.

[2] Loria, *Analisi*, II, pp. 340, *et seq.*

[3] *Esprit des lois*, XXII, p. 16.

[4] Lattes, *La libertà delle banche a Venezia*, Milan, 1869, p. 125.

hibition imposed upon the Bank of Amsterdam,[1] and upon all the banks of the Middle Ages.[2] The *giro delle partite* of Venice, the *biglietto di cartulario* of Genoa, the *polizza di tavola* of Palermo, the *florin-banco* of Amsterdam, the *sous de Tours* in France, the *devo* in Sicily, the *token* in England, are none of them anything more than warrants of the deposit of treasure or bullion which is not considered available for use by the banker.[3] Assuredly the prohibition is very often disregarded; and it not infrequently happens that the private and public banks lend the moneys deposited with them, in some cases to the State (as at Genoa and Venice), in some cases to mercantile companies, and in some cases to private traders. But the invariable failure of all the banks which undertake to relend deposits, and the ever-recurring necessity of legal intervention to re-establish the inviolability of these deposits, afford the clearest possible demonstration that during this epoch institutions of credit properly so-called are impossible, owing to the absence of that confidence which is the essential element of credit. Indirect demonstrations of the same fact are the banking follies of Law, which would have been impossible in the case of a public already experienced in the working of fiduciary credit institutions[4]; and the angry astonishment with which writers at the beginning of the nineteenth century, such as Lord Liverpool and Cobbett denounce and condemn the foundation of banks issuing notes.[5]

(*c*) Monopoly.—The most important method of struggle between incomes, and that which presents the most interesting developments, is monopoly. Indeed, except by fraud or violence, an individual cannot rationally undertake a contest against another unless he possesses some sort of advantage from which the other is excluded—unless, in other words, he possesses a monopoly. This amounts to saying that if violence and fraud are eliminated, monopoly is the only possible means of struggle between incomes.

[1] Graziani, *Instituzioni di E. P.*, 2nd edition, p. 627.

[2] De Viti, *La funzione della banca*, Rome, 1897.

[3] Ferrara, *Nuova Antologia*, 1873, p. 626.

[4] Levasseur, *Recherches historiques sur le système de Law*, Paris, 1854, p. 29.

[5] Liverpool, *Treatise on the Coins of the Realm* [1805], London, 1880, p. 248; Cobbett, *History of the Protestant Reformation*, London, 1829, §412–3.

The monopoly may be *industrial*, as when a producer has at his disposal technical and economic means superior to those at the disposal of other producers of the same commodity or group of commodities; *commercial*, as when an individual or group of individuals, is exclusively empowered to sell or to buy a given commodity or group of commodities; *creditual*, as when an individual is exclusively empowered to furnish capital to certain persons or to certain social groups. The forms to which these three kinds of monopoly give rise deserve closer attention.

1. *Industrial Monopoly*.—Industrial monopoly is *complete* when a producer has the exclusive right to undertake a given kind of production. In such conditions, however, monopoly, far from being a method of struggle between producers, renders impossible any struggle between the incomes appertaining to a single kind of production, inasmuch as it excludes the existence of a plurality of producers in the particular sphere of industry. In such conditions, monopoly may certainly give rise to a struggle between the producers of different commodities; but it more commonly resolves itself into a method of struggle between the income of producers and the income of consumers; and thus enters the category of the commerical monopolies subsequently to be considered. —Industrial monopoly may, however, be *partial;* and this happens when a producer is the exclusive owner of some element, or of some particularly efficient instrument, which enables him to sell the product at a price lower than that which will repay the cost of production incurred by other producers of the same commodity, or of substituted or similar commodities, and thus enables the producer possessing the partial monopoly to threaten the existence of the others.[1] In such conditions there exists industrial monopoly properly so-called, functioning as the instrument of struggle between the incomes of coexistent producers. This does not exclude the possibility that the struggle between industrial incomes may eventuate in the destruction of all the less favoured producers, and in the survival of the single producer who enjoys the monopoly: but this will transform the industrial monopoly into a commercial monopoly.

[1] Tarde, *Psychologie économique*, Paris, 1902, II, pp. 59, *et seq.*

It is necessary to point out that industrial monopoly could not function as an instrument of struggle between incomes if it were to manifest itself with equal intensity in all spheres of production. If, in fact, in all the kinds of production there should coexist, in like proportion, certain more favoured and other less favoured producers, the employment by the former of superior methods would not have any influence in lowering the price of the products; for it is well known that phenomena which act in equal measure upon the production of all commodities can exercise no influence whatever upon the price of these. Therefore, in such conditions, there could not occur that process in virtue of which the monopoly of certain producers becomes injurious to the income of the rest; that is to say, monopoly, though always the source of an additional income to its possessors, would no longer be an efficacious weapon in the struggle between incomes. In reality, however, industrial monopoly does not manifest itself simultaneously in all fields of production; or, even if it does so manifest itself, it is to a different degree in one field and in another; hence it can exercise an effective influence in depressing the price of the product below that which will repay the cost of production incurred by less favoured producers, the income of these latter being thus diminished or annulled to the direct or indirect advantage of the more favoured producers. Doubtless the less favoured producers can partially escape injury, either by purchasing the depreciated products to re-elaborate them or to export them at a profit,[1] or else by withdrawing from the depreciated field of production to transfer themselves to other fields in which industrial monopoly is less severe or is non-existent; but, in the first place, while such a process may well be open to the more advantageously situated producers, it can hardly be so to those who are less well-to-do, who by the very scantiness of their fortunes are shackled to the kinds of production no longer remunerative; and, in the second place, the transference from one enterprise to another involves a loss of property and income which is often profitable to the victorious competitors.

If industrial monopoly is to function as a method of struggle between incomes, another essential condition is that saving

[1] Cf. Cunynghame, *Geometrical Political Economy*, Lond., 1904, p. 100.

shall be unrestricted.—As long as saving is restricted, a producer may indeed procure the passing of a law which forbids to any other person the production of his commodity, whereby he obtains a commercial monopoly; but the more advantageously situated producer cannot effect the indefinite extension of his own enterprise, and therefore—without the aid of the law—he cannot effect the total or partial elimination of the other producers. Hence, in such conditions, the price of the product remains commensurate to the cost of production incurred by the less advantageously situated producers, and while the monopoly doubtless secures a surplus-income to its possessor, it does not effect a diminution of the income of the producer who is excluded from the monopoly, nor does it compromise the vitality of that income. On the other hand, when saving is unrestricted, the more favoured producer, being able to extend his productive enterprise as much as he will, and being able to satisfy by his unaided exertions the total demand in the market, lowers the price of the product to the level determined by its cost of production, and below the cost of production incurred by rival undertakings, thus diminishing the income of these.—It follows from this that industrial monopoly cannot function as a method of struggle between incomes in the case of undifferentiated income, in which saving is rigorously limited. Moreover, even in those forms of differentiated income which are founded upon the ownership of man, the restrictions imposed upon saving are such as to render the efficiency of industrial monopoly extremely circumscribed. It is precisely because, in the earlier economies, this obstacle to the development of industrial monopoly exists, that the other methods of struggle between incomes which we have previously examined assume, in these economies, so predominant an influence. Only in the wage-economy are all legal shackles upon saving removed, only in this economy does the development of machinery and therewith the superiority of the greater recipients of income over the others become more decisive and more complete—and only in this economy does industrial monopoly attain the fullest potency of which it is capable, to become the supreme if not the exclusive arm in the conflict between incomes. When we recall the fact to which we have previously referred, that of all the forms of income, undifferentiated or differentiated, the wage-economy is the only one in which there exists free competition between the coercive associations of labour producing diverse commodities, we recognise this curious antimony, that the only economic form in which free competition prevails is precisely the one in which industrial monopoly becomes the fundamental method of struggle between incomes. This is because the wage-economy, whilst on the one hand it gives rise, with the legal freedom of the labourer, to free competition between the producers of diverse commodities, gives rise on the other hand, with unrestricted saving, to the maximum expansion and efficiency of monopoly; thus it happens that the two antagonistic institutions germinate contemporaneously and with equal necessity in consequence of the essential characteristics of this economic system.[1]

The object of industrial monopoly may be either a productive element or an unproductive element.—It may happen that an entrepreneur secures the exclusive use of better machinery or of more efficient raw material, obtaining the exclusive use of one or the other by contract with the producers of these; and in such a case the victory of the monopolist entrepreneur is not without advantage to the community at large, which benefits by a diminution of price or by an increment of product. It may happen, on the other hand, that a producer gains the advantage over his own rivals by securing preferential rates from the transport companies, or by the use and abuse of advertisement, or by the process of selling his product below cost, or by a falsification of the quality of the product. In such cases the victory of the monopolist producer is not accompanied by any improvement in production, and for this reason there does not arise therefrom any social benefit.

Sometimes industrial monopoly results from the operation of law. Without going back to the economy of the Middle Ages, everywhere interpermeated with exclusivism and privilege, and confining our observation to our own epoch, we not infrequently find instances of legislative intervention whereby this or that industry is placed in a privileged position,

[1] Cf. the remarkable reflections of Oppenheimer, *Grossgrundbesitz und soziale Frage*, Berlin, 1899, pp. 149–50.

and is thus enabled to struggle victoriously against rival industries. The most efficient weapon in this respect is that of customs duties and of bounties; we have an eloquent example of this in the struggle between the linen manufacture and the cotton manufacture of contemporary France. The linen manufacture—beaten by the cotton manufacture in consequence of the more powerful machinery and of the piece-work system of wages which stimulates the efficiency of the labour employed in the latter—seeks to save itself by demanding the free importation of raw linen (this rendering it possible to procure Russian linen at a lower cost), as well as a bounty on national production to the extent of 2,500,000 francs, heavy import duties upon linen fabrics and thread, and bounties upon exportation. By these methods, enforced by a strong combine among the producers, this manufacture is enabled to carry on a successful struggle with the rival manufacture.[1] Similarly, in 1875, the English Government imposes upon India an import duty upon raw cotton in order to paralyse the influence of the Indian duty upon cotton filatures, and to render it impossible for the Indian filatures to compete with those of Lancashire. That is to say, the British Government intervenes in order to give the British cotton spinners a position of greater advantage than their Indian competitors; a privilege which continues—notwithstanding the abolition of the duty just mentioned—thanks to the reduction and subsequent total suppression (1882) of the Indian duty upon manufactured cotton.[2] Finally every country endeavours to struggle against foreign producers by the imposition of tariffs on imports, and these foreign producers react in their turn by various complicated expedients.[3]

The most interesting example of the struggle between incomes carried out by means of legal monopoly is afforded by the phenomenon for which has been coined in England

[1] Aftalion, *La crise de l'industrie linière*, Paris, 1904.

[2] Syme, *Outlines of an Industrial Science*, Lond., 1877, pp. 73–7; Dadabhay Naoroji, *Poverty and Unbritish Rule in India*, Lond., 1901, pp. 61–2; Digby, *Prosperous British India*, Lond., 1901, p. 89.

[3] Thus on June 20th, 1902, the Rhenish-Westphalian Coal Syndicate (and subsequently other coal companies) accords a bounty on exportation in order to counterbalance the import duty imposed upon the product by foreign countries, the bounty being proportional to the duty. The German, Austrian, and American trusts adopt similar tactics.

the slang name of *dumping:* the sale of the privileged commodities at exceptionally reduced prices in free markets, compensated by an abnormal elevation of price in the markets where these commodities enjoy a privileged position.—Occasionally this phenomenon manifests itself within a strictly national sphere, as in Russia, where the six firms which possess the monopoly of supplying railway materials to the Government sell their own products in the national market at prices exceptionally low, and ruinous to their competitors, compensating themselves by an enormous elevation of the price charged to the State.[1] In most cases, however, the phenomenon we are here considering is international in character, taking the form of the sale abroad of the protected commodity at an exceptionally low price, compensated by a correlatively abnormal elevation of price (which List formerly declared impossible !) in the protected country. For example, the ironworks of Bethlehem, in the United States, supply armour-plate to the Government at a price double that for which they sell the same plate abroad.—By such methods, the national producers, whilst they forcibly annex a part of the income of the national consumers equal to the surplus price of the commodities sold to these, wage a victorious campaign against their foreign competitors, and diminish the incomes of the latter. In their turn, the producers who are damaged by these manœuvres are compelled to contend against them, either by individual initiative or by legislative measures ; and whilst in Germany there is founded a Steel Syndicate which proposes to employ the method of selling its products abroad at specially low prices, Canada (1905) retaliates by imposing duties on foreign produce imported at a low price. But this does not avail to suppress a method now widely prevalent.—The representatives of the capitalist combines practising such methods (in Austria, for example), continually affirm that these are the essential conditions to enable an industry to export its products, and that the faculty of exportation is in its turn a condition *sine qua non* to enable the industry to attain those vast dimensions which will allow the introduction of the most advanced machinery and therefore permit of production

[1] Ozeroff [*Economic Russia*], p. 122.

at minimal cost.[1] The most elementary logical powers render it easy to discover the fallacies in these interested arguments; for, if the commodity produced by the new and more perfect method is sold abroad at a loss, this alone suffices to show that this commodity is, in the country in question, produced at a higher cost than elsewhere, or that protection keeps alive an enterprise weighted by an additional cost, and therefore anti-economical.[2] One fact, however, emerges very plainly from this reasoning: that such manœuvres are the necessary condition to enable the industry to survive the troubles of a period of depression. This agrees substantially with what was pointed out in the beginning of the present chapter, viz., that the struggle between incomes does not arise from the deliberate judgment or from the greed of the recipients of income, but is the necessary outcome of the restrictions imposed upon production and upon income by the coercive association of labour.

Fundamentally, the modern warfare which is carried on by means of tariffs and depreciated exports is nothing more than a form *sui generis* of the international war between incomes, which is waged in all the ages under the impulsion of the restrictions imposed upon production and upon income by the coercive association of labour. The modern capitalist who ruins his foreign rival by abnormally lowering the price of products, works in a similar way with the farmer of the taxes or the proconsul of classical Rome who confiscates a part of the income of the provincial capitalists on behalf of the Latin capitalists.

[1] *Second Series of Memoranda on British and Foreign Trade and Industrial Conditions*, London, 1904, p. 332.

[2] For example, let us suppose that hitherto a protectionist country has produced a given commodity, for internal consumption only, at a unitary cost of 10, whilst in other countries the same product is produced at a cost of 5. If, now, the first country succeeds in selling abroad a part of its commodity at the price of 5, it may happen that this extra sale, by increasing the production of the given commodity diminishes its unitary cost below 10. But the very fact that upon the quantity sold abroad at the price 5 the national producers in any case suffer a loss which must be compensated by a correlative increase in the price at which the commodity is sold in the country in which it is produced, shows that the national cost of the product, however much diminished, is always greater than 5, or greater than the cost at which the product is sold abroad, that is to say that protection leads to production at a cost greater than 5 of a quantity of a commodity which could be produced and purchased at a cost of 5; that is to say that, notwithstanding the alleged improvement in technique, protection always involves a diminution in the productivity of labour. Fontana-Russo shows this very clearly, *Trattato di politica commerciale*, Milan, 1907, p. 252.

Just as in the days of antiquity, so now in our own times, the cost of the international warfare between incomes does not fall solely upon the foreign producer, but upon the national producer himself, who has to pay ransom, as producer and consumer, for the manœuvres of predatory enterprise.

> "Alles wiederholt sich nur im Leben,
> Ewig jung ist nur die Phantasie."
> (Schiller.)

Even in the absence of any legal intervention, industrial monopoly has a large field of expansion in the contemporary economy, and has plenty of opportunity to develop the most trenchant and terrible weapon of the contest among incomes.—This process manifests itself even in the case of undifferentiated income ; and in England we see the Co-operative Wholesale endeavouring to acquire a monopoly at the expense of the autonomous co-operative mills of the Rochdale Pioneers, of Oldham, etc. But the development of monopoly is naturally more complete in the case of differentiated income, wherein the great capitalists, for the very reason that they possess a larger capital, find themselves in a position of monopoly in relation to the small capitalists, and of irresistible monopoly, since the small capitalists, however much they attempt to save, can never attain to the level of the large capitalists.[1] If the larger incomes do not find themselves placed at the outset in a position of monopoly, they proceed to the active conquest of that position by means of coalition ; and this can be effectively established, whatever may be the form, the kind, or the degree of income. A coalition can be constituted whatever be the form of income, whether differentiated or undifferentiated ; for we encounter it, just as under capitalism, so also in the medieval guild, and in the modern co-operative.[2] Coalition (as, for the rest, every other process of struggle between incomes) can be constituted whatever be the kind of income, for we see it established equally in the case of incomes from capitalised property

[1] Bourguin doubts this, *Systèmes*, pp. 164, *et seq.*

[2] In England, in recent years, amalgamations have frequently been effected among the co-operative societies operating in the same area, from which there results a process of co-operative concentration which in many respects surpasses the analogous process simultaneously occurring in the capitalist sphere (Bourguin, *loc. cit.*, p. 224).

and in the case of professional incomes. Thus, whilst in France there is founded a coalition of dramatic authors, which imposes upon its members particular modes of dramatic representation and particular theatres, and penalises non-members—on the other side of the Atlantic the theatrical combine imposes yet more rigid restrictions, while the newspapers fall more and more into the power of the trusts, who make of them an undertaking for the interested manipulation and systematic perversion of public opinion. As other examples of the coalition of the unproductive labourers, may be mentioned the indissoluble cliques formed by certain university professors, which provide for their members extensive emoluments. Need we give further instances? Not long since in Philadelphia and in other large towns of the United States, there is organised a real "brothel trust," comprising all the panders, the white-slave traders, and the brothel-keepers; and the trust consolidates its power by means of friendly agreements with the police.—Finally, coalition may be effected between incomes of any and every degree. Whilst the incomes most prone to combination are undoubtedly the smaller and the medium incomes, whilst the maximum incomes commonly prefer to participate in the struggle as independent entities, the possibility of a coalition even among the greater incomes cannot be excluded, and of this we see examples increasing in frequency in the capitalist cartels and syndicates.[1]

The larger incomes, having thus attained a privileged position, make use of it to gain a monopoly of especially lucrative kinds of production or of especially lucrative businesses. In Germany, for example, the electro-technical companies, weakened by a terrible crisis due to overproduction and to excessive expenditure upon plant, therefore endeavour to get business by the most ingenious machinations. Thus the Deutsche Gesellschaft für Elektrische Unternehmungen, and the company of Siemens and Halske, fight with one another to get possession of the lucrative business involved in the electrifying of the Berlin-Charlottenburg tramway, and inflate the shares to a premium of 270%, whilst the existing company

[1] Thus, in the year 1903, the competition of the *Deutsche Bank* leads to an amalgamation of the *Dresdener Bank* with the *A. Schaffhausenscher Bankverein*—the first amalgamation of German banks.

rarely pays a dividend of 5%. The first-named company triumphs in the struggle, and can in addition sell its own shares at a profit.[1] At Genoa, the houses of Odero and Ansaldo-Armstrong fight for shipbuilding orders, and endeavour in every possible way to force down one another's shares.—In like manner, in the United States, in May, 1901, the Morgan group and the Gould group engage in a tremendous struggle to get possession of the shares of the Northern Pacific Railway[2]; whilst the agreement between the cotton-spinning firm of Newski in Petersburg and the English J. P. Coats syndicate gives to the former the exclusive right of representing the English syndicate in the sale of cotton-thread in Russia, and thus gives the Russian firm a monopolist position.[3]

More frequently, however, the larger incomes make use of their financial superiority to gain the monopoly of a given productive or unproductive element, or of its more efficient kinds. Sometimes the larger capitalists corner the whole of the raw material, rendering it impossible for their weaker rivals to procure any. Thus the Standard Oil Company gives bounties to the producers of crude petroleum in those localities in which rival refineries exist, in order to obtain the exclusive use of the raw material and to starve out the rival enterprises.[4] Sometimes the larger capitalists gain a monopoly of labour, as was done in 1883 by certain English entrepreneurs[5]; whilst in the year 1903, in the United States, the George A. Fuller Company, a firm of builders, brought about by means of bribery a strike among the workers employed by rival firms, thus depriving these of the necessary labourers.—Sometimes, on the other hand, the larger aggregation of capital conquers for itself privileged zones of territory or more advantageous conditions of credit. Thus in Germany the larger mills, already possessing the effective monopoly of the more productive machinery, get possession of the regions nearest to the Rhine, this enabling them to take advantage of the lowest tariffs of the shipping

[1] *Die Störungen in deutschen Wirtschaftsleben während* 1900 *und ff.*, Leipzig, 1903, III, p. 125.

[2] Cassola, *I sindacati industriali*, Bari, 1905, p. 323.

[3] [" Russian National Economy "], 1904, II, p. 108.

[4] *Industrial Commission, Preliminary Report on Trusts and Industrial Combinations*, Washington, 1900, p. 17.

[5] Webb, *History of Trades Unionism*, London, 1894, pp. 118, *et seq.*

firms, and giving them in addition a monopoly of credit upon easy terms, for the city of Strasburg alone lends three millions of marks at 3% for the building of the Giant Mill which begins work on January 1st, 1904, and provisions the whole of Würtemberg.[1] Finally many capitalists endeavour to obtain a monopoly of the most suitable unproductive elements, or the exclusive use of the more far-reaching and subtle methods of success. In consequence of all this, a conscientious observer does not hesitate to affirm that it is doubtful whether, throughout the whole field of modern industry, there exists a single successful undertaking into whose success there enters no element of monopoly.[2]

The recipients of the larger incomes, singly or in combination, having thus obtained a monopoly of the more efficient instruments, productive or unproductive, make use of their monopoly to sell at very low prices, which are ruinous to their competitors.—Thus the great German flour-mills are able to grind at very low prices, bringing about the impoverishment and the ruin of their rivals. In the United States, the manufacturing combines are accustomed to sell their products below cost in places where they meet with competition, thus reducing their competitors to an extremity, recouping the loss by selling above cost in places where there is no competition[3]; whilst the Newski manufacturing firm, already enjoying a position of monopoly in virtue of protection, makes use of the agreement with Coats, previously mentioned, to lower the price of its products, whenever necessary, in such a way as to drive any possible competitors out of the field. In Germany the larger banks, whilst refusing credit to any institution which endeavours to compete with them by founding non-licensed loan institutions, carry on business at rates so low as to prove ruinous to their less favoured competitors. We see that, however obtained, and in whatever way developed, industrial

[1] *Jahrbücher f. N. Œ.*, 1904, pp. 605–6.

[2] Veblen, *Theory of Business Enterprise*, p. 54.

[3] Cassola, *loc. cit.*, p. 226; Syme, *loc. cit.*, pp. 60, *et seq.*; Lloyd, *Wealth against Commonwealth*, New York, 1894, pp. 426, *et seq.* This is another case of national "dumping." A further instance of this occurs in Belgium, where the capitalists force their workers to buy from their own factories, at very high prices, the commodities of which they have need—this permitting the sale of the remainder at a low price.

monopoly displays itself as a mighty weapon in the contest between incomes.

2. *Commercial Monopoly.*—Inasmuch as every exchange relationship presupposes the existence of two contracting parties, a seller and a buyer, it follows that commercial monopoly may be of two different kinds according as it is exercised by sellers or by buyers.[1] Now if it be true, as Webb and Oppenheimer point out, that competition is much more intense between sellers than between buyers, inasmuch as the latter are more often able to wait, it is none the less true that sellers much more readily succeed in combining one with another, and in thus acquiring a monopoly as against the buyers. Sometimes this monopoly develops, thanks to the assistance of the law. Thus, in Rome the *dardanarii* possess the legal monopoly of trading in agricultural produce, and they make use of this monopoly to restrict supply and put up prices.[2] Even the craft-guilds are, in substance, nothing else than legal monopolies of sellers enriching themselves at the expense of the cultivators of the soil who buy manufactured articles.[3] In Italy, again, before the law of 1902, "in cases in which the retailers in a commune have themselves undertaken to farm the octroi duties, they are able to assess the duty upon flour in such a way as to make trade impossible for new bakers who might wish to break the monopoly. Thus the established bakers prevent any competition which might lower prices."[4] Here we have a sellers' monopoly instituted by law, or deriving its opportunity from law. Again, the monopoly of the home-market which results from a protective tariff, raising within that market the price of

[1] Ely (*Studies in the Evolution of Industrial Society*, New York, 1903) distinguishes *commercial* competition, or competition between producers of the same commodity, the result of which is to reduce the value of products to the cost of production, from *industrial* competition, or competition between producers of different commodities, the result of which is to equalise rates of profit. It seems to me, however, that these designations should be inverted, so that in the first case we should speak of industrial competition, and in the second of commercial competition. Thus the suppression of competition would give rise, in the first case, to industrial monopoly, and in the second case, to commercial monopoly.

[2] Daremberg and Saglio, *Dictionnaire des antiquités*, "Dardanarii."

[3] Adam Smith, *loc. cit.*, pp. 112–3.

[4] *Relazione della Commissione Parlamentare sui progetti finanziari* May 7th, 1901, p. 18.

the raw material of industry, inflicts upon the producers of the manufactured article a loss which is merely diminished but not altogether removed through the partial reimbursement of the surplus price which is paid to the exporters of this commodity.—But also in the absence of any aid from law, the sellers are able to effect a monopoly by forming combines. We need merely refer to corners and rings; or to combines on the part of retail traders, who impose upon the buyers increasing surplus prices.[1]

For example, in the United States, the Beef Trust of Chicago effects a notable rise in the price of meat. And since the retail butchers, by way of reprisal, close their shops, the Trust sends its own agents to buy up all the eggs in the market, and this, by rendering eggs dearer than meat, leads to the immediate reopening of all the butchers' shops.[2] The Standard Oil Trust possesses the monopoly of the sale of refined petroleum, and is therefore able to put up the price of this article far above the cost of production.—In England, in January, 1896, there is founded the Proprietory Articles Trade Association, a combine of manufacturers, wholesale merchants, and retail traders, whose aim is to raise prices to the detriment of the consumer.[3] In Germany, again, many commodities have undergone a serious rise in price owing to the monopolies exercised by sellers' combines.[4] Sometimes, on the other hand, the monopoly is not that of sellers as against ultimate consumers, but that of sellers of one stage as against sellers of a subsequent stage—for example, of producer-sellers, or of wholesale traders, as against retailers, or of producer-sellers of raw material as against manufacturers. An example of the first-mentioned kind of combine is afforded by the struggle that took place in England in the autumn of the year 1906 between the producer-sellers of soap and the retailers of this article; for the former wished to put up the selling price of their product; while forbidding the latter to effect a corresponding increase in price on resale.[5]

[1] Baker, *loc. cit.*, p. 78.

[2] Cornelissen, *La théorie de la valeur*, Paris, 1903, p. 397.

[3] Macrosty, *The Trust Movement in British Industry*, London, 1907, pp. 249, *et seq.*

[4] Calwer, *Wirtschaftsjahr* 1905, xvi.

[5] Macrosty, *loc. cit.*, pp. 262–3.—[The history of the attempt of Mr. Lever and other great soap-proprietors to form a combine, and of the defeat (or

An example of the second kind of combine we find in Germany, where the producers of raw material practise the most monstrous extortions upon the producers of manufactured articles who are forced to be their customers, it may be by reserving the right of withholding supply in case of *force majeure,* or the right of arbitrarily reducing the quantity supplied, or of giving no guarantee as to the quality of the commodity, or it may be by putting up the price to an abnormal level.—Thus, in the beginning of the year 1900, whilst the syndicate of mine-owners imposes difficulties upon the iron-masters by putting up the price of coal, the combined producers of coke and of pig-iron insist on the iron-smelters, who have to buy these products, making contracts in advance for the year 1901. The price of coke for 1901 is raised by these contracts to 20 marks per ton, while the price for 1900 is 14 marks, so that the average price for the two years becomes 17 marks. The iron-smelters, who are passing through a period of prosperity, are forced to agree ; but when the period of depression supervenes they suffer from the onerous stipulations, and vainly endeavour to have them rescinded.—The smaller metal-plate manufacturers are especially hard hit, for they are forced to pay correlatively enormous prices for the raw material supplied to them by their trade rivals, the great armour-plate manufacturers, these being at the same time producers of the raw material ; nor is the damage thus inflicted adequately repaired by the attempt, too often abortive, to found co-opera-

apparent defeat) of this attempt by the halfpenny newspapers, affords an interesting example of another aspect of the struggle between incomes, the struggle in this instance being between productive capital invested in the manufacture of soap and unproductive capital invested in newspaper enterprise. The matter is well put by H. G. Wells as follows (*New Worlds for Old*, pp. 204–5) : " Whether the public would have benefited greatly or not is beside the present question ; Mr. Lever and other great soap-proprietors would certainly have benefited enormously . . . by working as a collective interest instead of as independent private owners. But . . . Mr. Lever reckoned without another great system of private adventurers, the halfpenny newspaper proprietors, who had hitherto been drawing large sums from soap advertisement, and who had in fact been so far parasitic on the public soap supply. One group of these papers at once began a campaign against the 'Soap Trust.' . . . They accused Mr. Lever of nearly every sort of cheating that can be done by a soap-seller, and anticipated every sort of oppression a private monopolist can practise. In the end they paid un precedented damages for libel, but they stopped Mr. Lever's intelligent and desirable endeavours to replace the waste and disorder of our existing soap supply by a simple and more efficient organisation."—TRANSLATOR'S NOTE.]

tive steel works.[1] Here we observe an interesting combination of industrial monopoly with commercial monopoly. The larger manufacturers, being at the same time producers of raw material, sell this last at high prices to the lesser manufacturers, while they sell the manufactured article to the consumer at a low figure, which is ruinous to their smaller competitors ; in this way, after the large men have opened the attack on the small ones by means of commercial monopoly, the former complete the ruin of the latter by means of industrial monopoly.[2] Finally, we sometimes find the inverse kind of monopoly, or that possessed by the producers of one stage as against those of the stage before, that of manufacturers as against producers of raw material. In Italy, for example, the Eridania company, having bought a controlling interest in the shares of the Zuccherificio Ostigliese, succeeds in blocking all proposals on the part of the latter firm to add a sugar-refinery to its enterprise, this forces the last-named company to have recourse to the Eridania sugar refinery, and the Eridania company, taking advantage of its monopoly, sells its services under conditions so arduous as to reduce the dividends of the Zuccherificio Ostigliese to zero and to force down the price of the latter's shares to a very low figure. Subsequently the rival company, taking advantage of this state of affairs, has acquired all the shares of the sweet-manufacturing firm, and then only the fortunes of this last are finally restored.

No less striking are the manifestations exhibited by the monopoly of buyers, the theory of which has already been referred to in the first chapter. This monopoly also is sometimes instituted by law. Thus, in Germany, in former times, the complicated legislative interference in the weekly markets and with the right of option tends to modify the relations of demand and supply between the burgher who buys and the peasant who sells, altogether to the advantage of the former[3] ; whilst the same result is attained by the city taxation of prices, the law of the maximum. On June 10th, 1358, the

[1] *Kontradiktorische Verhandlungen über deutsche Kartelle,* Berlin, 1903, I, pp. 173–4, 193, 198–9 ; III, p. 646, pp. 653–4, *et seq.*

[2] Sinzheimer, *Wirtschaftliche Kämpfe der Gegenwart,* "Jahrb. für Gesetzg.," 1908, p. 28.

[3] Schmoller, *Studien über die Wirtschaftspolitik Friedrichs des Grossen,* "Jahrbuch für Ges.," 1884, p. 19.

pontifical court of Avignon decrees that no member of the clergy shall buy wine or grapes in Nîmes, because the magistrates and other burghers demand an excessive price from the ecclesiastical Camera ; that is to say, by means of law the court restricts or annuls the demand for certain specified commodities in order to force the sellers of these to accept more reasonable prices.[1] Even the sumptuary laws have it as their essential aim to reserve for certain classes a monopoly in buying certain products, thus constraining the sellers of these to lower their prices. But the same end is attained without recourse to law by means of secret or avowed combinations among the buyers. We have a notable example of this in the buying of agricultural produce. Without going back to the combines among the buyers of agricultural produce, which were so eloquently denounced by our classical economists of the seventeenth and eighteenth centuries, and which forced the agriculturists to accept unremunerative prices,[2] we see in England to-day that the producers of hops are impoverished by a combine among the dealers, the dealers forcing the producers to accept derisory prices for their product, or binding them down by craftily conceived anticipatory agreements[3]; in Russia the refiners of resin are constrained to sell at low prices to the dealers ; in France the agriculturists find themselves unable to profit by the bounties paid to the breeders of silk-worms, because the middlemen and the buyers succeed in getting possession of the whole amount ; and in Germany the sugar-refiners force the sugar-beet growers to sell their product at a depressed price.[4]

Such phenomena attain the most remarkable development in the United States. Here, in fact, whilst the trust of butchers lowers the price at which meat is purchased to a figure ruinous to the cattle-breeders—the butchers, as we have seen, being in

[1] Arias, *Per la storia economica del secolo XIV*, Rome, 1905, pp. 53–4. In the fifteenth century the founders of the Bank of Pirano (Istria) have the right of buying wine only after August 15th, and of buying oil only after May 8th ; the aim of these restrictions assuredly being to keep down prices (" Revue des études juives," April–June, 1881).

[2] Montanari, *Della moneta* (1683), C.P.A. ; III, p. 61 ; Galiani, *Della moneta* (1750), C.P.M., III, p. 181, IV, p. 147 ; Cf. also Hermann, *Staatsw. Unters.*, 1874, p. 425.

[3] Haggard, *Rural England*, London, 1903, I, p. 173.

[4] Bourguin, *Les systèmes socialistes*, pp. 161, 235.

their turn victimised by other manœuvres—the combines formed by the buyers of wheat, cotton, and wool, succeed, with much disturbance, in forcing down the price of these commodities. If the American merchants succeed in lowering the price of agricultural produce, this is not so much due (as is usually maintained) to speculation, as to the monopoly which, the merchants enjoy as against the cultivators ; so true is this that the distribution of the total value of wheat between the merchant and the seller differs in the case of various portions sold in a degree proportional to the varying intensity which is exhibited at one time or another by the monopoly of the buyers.[1] The notable depression of agricultural prices which annually manifests itself all over the world towards the middle of the summer is deliberately effected by the buyers, whose aim is, by the diffusion of false reports as to the probable abundance of the harvest, to bring about a fall in prices which will enable them to buy to advantage.[2]

The agricultural producers seek to oppose these manœuvres, by restricting or regulating the sale of their produce, by founding rural banks, by certificates of deposit for agricultural products, advances upon commodities, institutes for providing agriculturists with trustworthy information upon conditions of prices and of production. In Texas, there are founded the Truck Farmers' Organisations, whose aim is to obtain a reduction of the railroad freights which have hitherto absorbed the whole agrarian profit. In Bavaria, the landowners, to avoid the necessity of having to sell their crops prematurely, form a society for the sale of agrarian produce. The very prohibition of time-bargains in wheat and flour, which is imposed in Germany by the law of June 22nd, 1896, is nothing else but a means, however ineptly conceived, directed against the manœuvres of the buyers of wheat. In France, on June 16th, 1902, there is founded *l'Union Internationale des Cours du Blé*, whose aim it is to observe the prices quoted on the different

[1] *Report of the Industrial Commission of the United States*, 1900, pp. 222, 332, etc. For example, in the year 1899, in the city of Kansas, the distribution of the price of wheat between the merchant and the producer varied from 12·49% to the merchant and 87·51% to the producer to 30·21% to the merchant and 69·79% to the producer (*Ibid.*).

[2] Paisant, *L'indirizzo del mercato dei cereali ed in particolare del frumento.* "Atti del VII Congresso Internazionale di agricoltura," Rome, 1903, I, pp. 9, *et seq.*

bourses; to collect, by means of national agricultural organisations, the data of the elements which concur in determining the prices of the day, data relating to the extension of the land planted with grain crops, to harvests, to visible and invisible reserves, to the trade in agricultural produce, and to agrarian legislation. Two years later, however, the union is dissolved from lack of funds. *The Green International,* as I have nicknamed the recently founded International Institute of Agriculture, which may the Lord increase and prosper, aims at enjoying the inheritance of the defunct Union or at fulfilling the same ends with vaster means.

It is not, however, in rural industry that combination among buyers attains to its most notable and most plastic manifestations. A stormier and vaster field is occupied by the satanic orgies of the petroleum industry, where the refiners, having formed a gigantic combine (The Standard Oil Trust), which gives them a practical monopoly of the purchase of crude petroleum, force the producers of petroleum to accept prices that are systematically depressed. In this case we have a phenomenon which is the inverse of that above described as happening in Germany. In Germany it is the combine of the sellers of the raw product (coke and pig-iron) which victimises the manufacturers who are forced to buy from it. In America, on the other hand, it is the combine of the buyers of the raw product (crude petroleum) which victimises those who produce that product. With this end in view the Oil Trust begins by constraining the railways to impose differential tariffs for the transport of crude petroleum, and to add the surplus income thus received to the funds of the combine; the next proceeding is the more decisive one of fixing the price of crude petroleum at a figure which is unremunerative to the producers. These latter vainly endeavour to hit back by stopping production for six months, and by federating themselves in their turn (to form the Producers' Union); for in the year 1872 the Oil Trust succeeds by means of ingenious compromises in paralysing the new association, and finally in destroying it. Reconstituted six years later, the Producers' Union endeavours to build a line of its own to the sea-coast, and to obtain the passage of a law forbidding differential railway rates; but Congress, in the pay of the Oil Trust, rejects the Bill. The Oil Trust meanwhile refuses to receive crude petroleum for transmission by the pipe lines except for immediate despatch, and at a price below that current in the market; and the attempts of the producers, endeavouring to defend themselves by building their own reservoirs, prove unsuccessful. Vainly the Producers' Union brings actions against the Oil Trust, accusing the Trust of conspiring in restraint of trade; until, in 1880, after innumerable postponements, the Oil Trust forces a new compromise upon the chief producers, leading the latter, who are now discouraged, to dissolve their second federation. Not until 1887, after a series of discreditable transactions and unfortunate conflicts, does the Producers' Union rise again under the name of the Producers' Productive Association, but this, having been dissolved by the machinations of the Oil Trust, which bribes some of the leaders among the producers, is soon reconstituted under the name of the Producers' Oil Company, subsequently transformed, by means of an alliance with certain independent refiners, into the Producers' and Refiners' Oil Company (1893). This, after a series of fierce struggles with the Oil Trust, succeeds in effecting an alliance with a Pipe Line Company, which opens the greatly desired access to the sea, allying itself also with fourteen independent refineries, and taking the form at length, in the year 1900, of the Pure Oil Company, henceforward a formidable rival to the gigantic corporation hitherto alone dominant.[1] This epic contest, of which merely the leading features have here been summarised, affords a typical instance of a monopoly of buyers who succeed in annexing to their income part of the income of the sellers; which induces the sellers to react by forming a combine in their turn, or by combining with a portion of the buyers, that is to say, to meet the first monopoly by an antagonistic monopoly.[2]

3. *Credital Monopoly.*—Credital monopoly also is a formidable weapon in the struggle between incomes. We see the

[1] Consult the work previously quoted of Ida Tarbell. These practices of the Standard Oil Trust, and other proceedings of the same corporation described in earlier pages, are by no means to be regarded as the specialty of this particular syndicate, for they repeat themselves, in a more or less similar form, in the operations of all the capitalist combines.—For example, regarding the analogous activities of the Tobacco Trust, consult Russell, *Lawless Wealth*, New York, 1908, pp. 180–2.

[2] "As a nail holds fast in the crack between two stones, so sin holds fast between buying and selling." Jesus of Sirach.

dawn of this struggle even in undifferentiated income, where the usurers, who are monopolists of the capital available on loan, victimise the poorer members of the primitive communities and of the medieval craft-guilds. Credital monopoly, however, becomes far more powerful in differentiated income. As long ago as twenty-three centuries B.C., there attain to enormous power among the Chaldeans, "those intriguers who possess such a wonderful knowledge of how to make money productive, and of how, with loans at interest, with mortgages, with trading advances, with transmutations of values, and by means of their acquaintance with the markets, to carry on the fight for wealth by strewing the field with the bodies of their victims."[1] In the Middle Ages, credital monopoly is a powerful weapon of burgher income to the disadvantage of feudal income: whilst to-day, loans on mortgage, practised on the large scale by the great credit institutions, enfeeble income derived from the land; and advances on bills, as made by the private monopolists of credit, constitute a potent influence in effecting the failure of the small producers. Meanwhile the great banking interest endeavours to raise the price of the shares which it issues to a figure which is ruinous to the buyers. Even if in such manipulations we have in great part to do with trickery and fraud, it is none the less true that they are able to take place mainly owing to the tyrannical monopoly which the great banking interest enjoys in the issue of shares. Finally, the fusions and alliances between the banks, the struggle for the privilege of issuing bank-notes, the entire mechanism of more or less disguised loans, with which in our own days the relationships between the banks and the joint-stock companies are interwoven, are, taken all in all, so many different manifestations of the struggle between incomes as carried on by means of credital monopoly.[2]

Thus producers with producers, sellers with buyers, creditors with debtors, wage a savage and unceasing warfare. Thus

[1] Revillout, *La créance*, etc., pp. 240–1.

[2] In England, for example, it often happens that when a company has need of capital, another company (for a suitable consideration) undertakes to buy all the products of the first, which is thus exempted from the need of procuring the capital for current expenses which would have been required had it been necessary to wait some time before the sale of the commodities could have been effected. Substantially, we have here a loan of capital made by the second company to the first in virtue of which a part of the income of

each individual income is unable to develop or to live except by attacking rival incomes, and by the forcible annexation of these, wholly or in part, to its own domain. Thus, finally, the limit imposed by the coercion to the association of labour upon the productivity of that labour and upon income, imposes upon individual incomes an inevitable and perennial struggle, so that beneath the unruffled surface of the economic system there ever germinates war and universal carnage.

This struggle constitutes the very essence of society and of history, and thus affords a new and interesting contrast between the human species and the lower orders of life. Whereas among the lower animals, whose subsistence is gratuitous, and therefore insusceptible of increase, and normally deficient in respect of the totality of coexistent beings, the struggle is essentially a struggle for subsistence—in the case of human beings among whom subsistence is artificially produced, and therefore susceptible of increase, and normally sufficient for the totality of the population, the struggle for subsistence appears only in critical periods of abnormal deficiency, whilst the normal and constant struggle is the struggle for income in its two essential manifestations of the struggle between subsistence and income and the struggle between incomes.[1]

The intensity of the struggle between incomes is not uniform, but presents infinite gradations in accordance with differences in the form, the kind, the degree, and the integral quantity of income. In the first place, it follows from the previous observations that the struggle between incomes is far less intense in the case of undifferentiated income than in the case of differentiated income, because in the former there is less quantitative disparity between the individual incomes, because individual saving is restricted, etc. But the intensity of the struggle between incomes varies also in the different sub-forms of

the one is surrendered to the other. This transference of income is greater in proportion to the urgency of the need for capital on the part of the first company, and in proportion to the difficulty of procuring that capital elsewhere; in other words, it is directly proportional to the intensity of the credital monopoly possessed by the lending company.

[1] "The history of the human race revolves around the struggle for income." Michlachewski, *loc. cit.*

undifferentiated or differentiated income, in consequence of differences in the efficiency of the various methods of struggle, and in the potency of their development.

The struggle between incomes is more or less intense in accordance with variations in the kind of income. We have already had occasion to insist upon the essential distinction between fluctuating incomes, unceasingly engaged in struggles and predatory enterprise, and consolidated incomes, whose characteristics are comparatively stable and peaceful. The struggle between incomes of the former kind is naturally more intense than the struggle between incomes of the latter kind ; hence it follows that when fluctuating incomes undergo expansion at the expense of consolidated incomes—when, for example, industrial profit increases to the detriment of urban rent or of the interest on public debt—there necessarily results an increased ferocity in the struggle between incomes. Again, given a number of incomes, or a number of coexistent forms or degrees of income, exhibiting a different qualitative composition, those wherein fluctuating income predominates will exhibit a more intense and more ardent pugnacity. The same may be said of those kinds of income in which fluctuating income predominates.

The varying intensity of the struggle between incomes in the different industries is further interconnected with the characteristics assumed by the struggle between incomes, characteristics which render it more or less adaptable to varying spheres of production. When, as in our own days, the struggle between incomes is waged chiefly by the methods of monopoly, it is *per se* less applicable to those industries wherein, from their very nature, monopoly is more difficult of attainment. Hence it seems that agriculture, in which monopoly is comparatively difficult, should suffer far less than other industries from the struggle between incomes.[1] This can be said of to-day only, however, for in the earlier forms of income, in which the struggle between incomes was waged by the very different methods of violence and fraud, this struggle was violent and terrible in the case of rural industry likewise, as we see exemplified in the fierce contests between the Latin landowners, or between the

[1] Schmoller, *Grundriss*, p. 506 ; Tarde, *Psychologie économique*, II, p. 82.

medieval feudatories. Moreover, even in modern times, the comparatively slight intensity of the struggle between agricultural incomes is a phenomenon restricted to normal or ascendent periods of income, for in declining periods there is a fierce struggle even among agrarian incomes; this is exemplified by the typical events during the enclosure of the lands in Great Britain, and of the savage struggle between the larger and the smaller landed proprietors during periods of crisis. Finally, that kind of agricultural property which is least affected by the struggle between incomes, is the stable and secure property of the individual who administers his own land, or who buys land with the definite intention of employing his own capital in its development, as contrasted with the speculator who buys land simply in order to resell it; whereas the income of the land-speculator is fluctuating income, like all income from unproductive capital, and is therefore in the thick of the struggle whereby is effected enrichment at others' expense. Hence, also, monopoly, though less intense in the case of agrarian property, manifests itself with conspicuous potency in the case of urban property, which is more readily the object of speculation; this is plainly evidenced by the incessant struggle, always founded on monopoly, carried on between the owners of building land and the speculators, and between these latter and the builders.

Nor is this enough; for, in addition, the struggle between incomes is more or less intense in accordance with variations in the local source of the incomes themselves, or according as (whether industrial or agrarian) they are situated or received in the country or in the town. It is certain that an income received in the turbulent environment of the town presents, if for this reason alone, a greater pugnacity; and therefore there is no reason to wonder that incomes of the same kind struggle one with another more vigorously in the urban environment than in that of the country. On the other hand, it is no less true that the incomes which generally find their way to the town are the larger incomes, or, it may be said, consolidated incomes; hence in this respect the intensity of the struggle between incomes must be less in the town than in the country. The result will be a greater intensity in the struggle between incomes in the town or in the country, varying according as one or the other of these influences preponderates.

The intensity of the struggle between incomes differs also in accordance with differences in their degree. It is, in fact, true that the struggle between incomes is an outcome of the limitation of income dependent upon the coercion to the association of labour, and that for this reason, as we shall see shortly, it is, in every form of income, less intense when the total income is greater. But it is also true that among a number of individual incomes which are all restricted by the influences dependent upon the coercion to the association of labour, and are therefore impelled to enrich themselves at one another's expense, the incomes of high degree are in a position, by the very fact of their superority, to employ more potent means of struggle, and therefore present greater pugnacity, which renders them more capable of increasing at the expense of lesser incomes, just as they themselves in their turn are exposed to mutilation in consequence of the victorious aggression of a still larger income. Supposing then, first of all, that the struggle is waged exclusively between incomes of the same degree, it is certain that the struggle between incomes of a higher degree should present a greater intensity as compared with that which takes place between incomes of a lower degree.[1] But the struggle is waged also between incomes of different degrees. Now, the larger the absolute entity of the greater income, the fiercer is the attack upon the lesser income, and therefore the more acute is the struggle between the two ; the greater the excess of the larger income over the lesser, the fiercer also is the attack of the former upon the latter, and the more severe therefore is the warfare between the two. It follows that the intensity of the struggle between two incomes of different degrees is greater in proportion as is greater the absolute entity of the income of the higher degree (since this exhibits a proportionally greater pugnacity), and in proportion as is greater the excess of the larger income over the lesser

[1] "Competition (or the struggle between incomes) is more lively in proportion as the concentration of the enterprises is more considerable." "Revue économique internationale," Sept., 1904, p. 159.—Baker (*loc. cit.*, pp. 250–3) also writes : "The intensity of competition tends to vary directly in proportion to the amount of capital required for the operation of each competing unit."

(since the struggle is likely to be proportionally more severe); in other words, the intensity of the struggle between incomes of different degrees is directly proportional to the entity of the greater income and to its excess over the lesser income.[1] Hence, given a series of incomes of diminishing degree, the mean intensity of the struggle between two incomes of different degrees is equal to the mean between the intensity of the struggle between the maximum and the minimum incomes and the mean income; whilst the struggle between the maximum income and the various incomes as we descend in the scale exhibits an ever-increasing intensity, to attain a maximum intensity in the case of the struggle between the maximum income and the minimum. Thus, therefore, the greater the divergence between the maximum income and those lower in the scale, the greater is the mean intensity and the greater is the maximum intensity of the struggle between the incomes.

This result may, however, be modified by two series of circumstances. In the first place, there are certain degrees of income, neither extremely high nor extremely low, which exhibit, on the one hand, a limited pugnacity, and, on the other hand, are capable of resisting aggressions on the part of other incomes, or even of warding off such aggressions. Such incomes realise in the best way possible the ancient precept of Aristotle: not to be so rich as to arouse the covetousness of the stronger, nor so poor as to be unable to resist aggressions. Whilst, therefore, the extremely large and the extremely small incomes are ever in a condition of unstable equilibrium, incessantly exposed to unforeseen increase or to sudden decline, the incomes of a moderate degree are by nature endowed with a comparatively stable equilibrium. And there exists, or may exist, a degree of income which is perfectly successful in escaping from the battle between the incomes and from its injurious consequences—an income, that is to say, whose condition approximates to that of stable equilibrium. Thus, therefore, in addition to the distinction previously mentioned between fluctuating and consolidated incomes, participating

[1] Similarly, the intensity with which is perceived the difference between two tones depends not only upon the absolute entity of that difference, but also on the entity of the respective tones (Fechner, *Psychophysik*, Leipzig, 1860, p. 48).

in varying degrees in the struggle between incomes, there is now to be indicated the distinction between the *stable* and the *unstable* incomes, the latter participating in the struggle from which the former are altogether exempt.—Here it must be pointed out that the very existence of stable incomes which do not participate in the struggle between incomes, suffices *per se* to prove that this struggle is not an eternal phenomenon or one inseparable from human social life, but is an essentially contingent phenomenon arising out of the conditions under which income has hitherto prevailed, and one which may perfectly well be dispensed with in a superior economic form.—However this may be, confining ourselves to the subject of the present argument, it results from the existence of stable incomes that the struggle between incomes is no longer in every case directly proportional to their entity ; for, in the sphere of stable incomes, the struggle between incomes is less intense than that which obtains among the lesser incomes, and is, indeed, normally non-existent.

A second and no less striking exception to the principle here considered is created by combination between incomes. In the first place, such combination succeeds, as a rule, in suppressing the struggle between the combined incomes,[1] and in the second place it reinforces them against the attack of greater incomes ; so that in this respect the combined income assumes the aspect of a stable income. On the other hand, the combination raises the combined incomes into a higher sphere, and therewith renders them more aggressive against the incomes lower down in the scale ; thus, therefore, the struggle between combined incomes of a given degree and those lower in the scale may be more intense than the struggle between uncombined incomes of a superior degree or than that between these and those immediately beneath them in the scale.

The struggle between incomes also varies in intensity in accordance with variations in the total quantity of income.—In this connexion, however, it is necessary to refer to two

[1] The possibility is certainly not excluded that struggle may continue between the combined incomes. Thus, in Germany, the cartels consisting of large and of small producers are the arena of incessant contests between the former and the latter. It must, however, be understood that the intensity of this struggle is always less than would be the case if the combination had not taken place.

contradictory influences. First of all, it is certain that the greater the total quantity of income relatively to the population, the greater is, *ceteris paribus*, the absolute entity of the incomes of higher degree, and the greater is the excess of these over the incomes of lower degree, and hence the greater is the intensity of the struggle between the incomes of a high degree, and the normal intensity of the struggle between the incomes last-named and the incomes of lesser degree. It must be added that, in proportion as the total income is high and as the conditions of the economy are more prosperous, do we find that the greater incomes are better able to make use of the advantages conferred upon them by their size, by the introduction of more perfect technical appliances, by the formation of joint-stock companies, by the constitution of powerful combines, and by the undertaking of more lucrative speculations. In this respect, also, the struggle must necessarily be rendered more acute. In the second place, it is equally true that the greater the total income, the greater also is, on the one hand, the prevalence of consolidated incomes, comparatively exempt from the battle between the incomes, and the less, on the other hand, is the need of the recipients of income, and the slighter therefore is the impulse which urges them to round off their incomes by annexing the incomes of others. Hence increase of income, if, by a purely mathematical influence, it tends to accentuate the struggle between incomes, yet tends to attenuate that struggle thanks to a psychological influence, due to the prosperity which the increase of income brings to the recipients of income ; and according as there preponderates one influence or the other, will there be an accentuation or a diminution in the intensity of the struggle between incomes.

As a rule the psychological influence so far preponderates over the purely mechanical or arithmetical influence, that the periods of expansion of income are universally characterised by an attenuation of the struggle between incomes, and the periods of decline by an inevitable exasperation of that struggle. This is a fact to which the writer has had occasion to refer in an earlier work, though it was there considered exclusively in relation to the profit of capital.[1] He pointed out that

[1] *Analisi*, I, pp. 609, *et seq.*

the intensity of redistribution, that is to say, of the struggle between profit and the other kinds of income, is in inverse ratio to the intensity of distribution, or of the struggle between profit and wages, or of the possibility of the former to increase at the expense of the latter, that is to say, in more general terms, in inverse ratio to the quantity of profit. But all this is yet more true in relation to the total income ; for the decline of a given kind of income may be compensated for its owner by a dilatation in income of some other kind, whereas the diminution of total income is always irreparable, and can be compensated only by means of the annexation of income from another, that is to say, by means of the struggle between incomes. This is why the intensity of the struggle between incomes exhibits a rhythmical decline or ascent in proportion as the figure of income increases or diminishes.

Thus, in the United States, the plan for an amalgamation between the Reading Railroad and its rivals, brought forward for the first time in the year 1892 (a period of commercial decline), is altogether unsuccessful ; there results the failure of the first-named company, and it becomes necessary for the other companies to engage in a furious struggle by means of lowering their rates, in order to resist the competition of the bankrupt company, which no longer requires to earn any interest for its shares. But as soon as economic prosperity returns, the intensity of the struggle between the railway companies diminishes, until in the years 1900–1901, with the decisive improvement in the conditions of the market, the amalgamation planned ten years before is at length effected by the instrumentality of Morgan.[1] Here, the increase of income has attenuated the struggle between incomes.—Conversely, during the decadence of Rome, the progressive decline in social income makes it impossible for the proprietors to enrich themselves by the systematic spoliation of the provinces, and there arise those fratricidal struggles which lead Salvianus to exclaim : *Omnes pœne Romani se mutuo persequuntur !* Similarly in medieval Germany, as soon as the decline in wealth forcibly restricts the possibilities of rapine on the part of the feudal seigneurs, these turn fiercely upon

[1] Ashley, *The Adjustment of Wages*, London, 1903, p. 123.

the smaller landowners and vassals, to annex by force the incomes of these.[1] It is the same in 1846, when the decline in income gives rise to the agrarian evictions in Ireland; and everywhere the struggle between the greater industry and the lesser assumes the most sinister forms during the periods of decline of income, as is proved by the history of the ruin of the hand-loom weavers in England and in India.—Here it may be pointed out that in these periods of decline the struggle between incomes assumes violent characteristics unknown to the normal periods of income—as far, that is to say, as the income of the wage-system is concerned—and in any case the struggle is more violent than during normal periods.

But even in the normal periods of an economy, the decline of income always has the effect of exasperating the struggle between incomes. Thus to-day usury, that primitive form of struggle between incomes, flourishes especially in poorer countries; and above all in that land which is the poorest of all, in Sardinia, where the syndic, the lawyer, and the parish priest all practise usury with wicked voracity.[2] In Germany, again, after 1879, as soon as the triumph of protection has led to the sterilisation of so many of the productive forces, and has therewith reduced the mass of income, there occurs a series of violent contests, not only in manufacturing industry, but even in agriculture.[3] In more general terms, of two regions or two towns, in which the intensity of production and of trade differs, giving rise to correlative differences in the amount of the average income, that region or town in which the average income is lower always exhibits a fiercer struggle between incomes.—In Italy we have an eloquent example of this in the well-known fact that litigiousness is far more general in the southern and central regions where the volume of business and wealth are smaller.—A yet more evident proof is afforded by the contrast between Turin and two other towns in so many respects similar, namely Milan and Genoa.—It is certain that the tunnels recently pierced through the Alps, and the new direction taken by international traffic, have furnished to Milan

[1] Lamprecht, *Deutsche Geschichte*, V, I, pp. 79, *et seq.*

[2] Chessa, *Dell' usura e delle sue forme nella provincia di Sassari*, Rome, 1906, pp. 29–30, 33, 53, *et seq.*

[3] Cohn, *Economic Journal*, 1904, p. 193.

and to Genoa conditions singularly propitious for the production and increase of income, but that Turin, on the other hand, has been injuriously affected by the same changes. It results from this that the quantity of income relatively to the population is necessarily declining in Turin, in contrast to what is happening in Milan and Genoa; hence the struggle between incomes, or the forces by means of which the individual incomes tend to enrich themselves at the expense of rival incomes, must display themselves with much greater intensity in the sub-Alpine metropolis. This is what actually happens, and the insane speculations which give rise in Turin to terrible and repeated explosions, with disastrous sequels in the form of bankruptcies and catastrophes, are the inevitable result of a struggle between incomes attaining in this city an abnormal intensity under the inexorable stimulus of too slow an increase in income.

Finally the intensity of the struggle between incomes varies in direct ratio with the number of the recipients of income; inasmuch as the larger this number is, the more frequent are contacts between them, and more frequent therefore the motives and the occasions for conflict.[1] Since the number of the recipients of income is, *ceteris paribus*, directly proportional to the density of the population, it follows that the struggle between incomes tends to increase in intensity as the population increases, even when this increase is accompanied by a correlative increase in production and in capital.

Such being the factors upon which the intensity of the struggle between incomes directly depends, it will be obvious that all those institutions which accentuate or attenuate these factors exercise an indirect influence in increasing or diminishing the struggle between incomes. Law, in so far as it accentuates fraud, violence, or monopoly, powerfully intensifies the

[1] Baker is of a contrary opinion (*loc. cit.*): for he contends that the intensity of the struggle between incomes is inversely proportional to the number of firms, since the greater this number, the less is the effect produced by the appearance of a new entrepreneur in the arena. Although it must be admitted that there is much truth in this observation, it cannot be denied that the struggle must be more active in proportion as the combatants are more numerous. Thus it is a fact that the proportion of incomes destroyed is greatest in the case of those kinds of enterprise in which the number of the recipients of income is largest, as, for example, in the case of those engaged in small retail trade; thus in England it is estimated that every year no less than 960 grocers succumb (Macrosty, *loc. cit.*, p. 244).

struggle; but in so far as it attenuates these factors, it mitigates the struggle. All the institutions which diminish the greater incomes, attenuate the intensity of the struggle between the greater incomes, as well as the normal intensity of the struggle between incomes of different degrees; this is therefore the effect to be anticipated from graduated taxation, and also from the conversion of national debt which affects to a greater extent the larger incomes, those which especially take the consolidated form.—The abolition of entail, by overthrowing a formidable bulwark of the greater incomes, and by permitting the subdivision of these, also attenuates their superiority to others, and therewith diminishes the intensity of the struggle between incomes. The same effect will be produced by those institutions that reinforce or increase the minor incomes. Thus, all the laws which aim at the organisation of the lesser crafts, or at preserving them from the onslaught of concentrated industry; all the institutions, such as the agrarian laws of Rome, Irish land-legislation, the Homestead Law of the United States, which aim at the protection of the small farmer from the onslaughts of the great estates; all the provisions aiming at the diffusion of technical instruction, and at the provision of credit at low rates of interest to small proprietors, independent artisans, small traders, or co-operative societies; the demand from an artisan who wishes to exercise a craft on his own account that he shall furnish proof of capacity; the prohibition, made by the Claudian Law (218 B.C.) of the practice of wholesale trading by Roman senators or their children; the legal exclusion of these from public enterprises; the prohibition (of which we have an example in Austria) of the undertaking on the part of great industry of work not properly appertaining to the particular kinds of production upon which the respective industries are engaged; the prohibition (as by the city of Hanover) of the utilisation by the great shops of the upper storeys of their buildings for the sale of their goods; the prohibition (North Carolina, 1889) of the sale of commodities below cost; the prohibition of retail trading by great aggregations of capital; laws against capitalist combines, speculation, or joint-stock companies; laws to prevent "corners"; the fixing of prices by collective bargains; increased taxation of the profits of the great shops—in a word, all legislative provisions constituting what may be called the policy of the middle classes[1]—effect, or aim at effecting, a diminution in the economic superiority of the greater incomes, and therewith a diminution in the intensity of the struggle between incomes of varying degrees. Public registration of the transference of land, by rendering it possible for the less well-to-do to buy land, would tend *per se* to increase the number of lesser incomes or to slacken the concentration of income, and therefore to diminish the intensity of the struggle between incomes; unless, conversely, by favouring speculation in land it should exercise the opposite influence, destroying the lesser incomes and exasperating the battle between incomes.[2] But, apart from written law, institutions resulting from individual initiative are able to change the relative power of the recipients of income. Thus, all the technical innovations which render mechanical power accessible to minor industry; associations (such as, for instance, the *Artel* among the resin-refiners in Russia) formed by small producers; the confederations among small proprietors for the purchase of raw materials and the sale of products; agreements (such as that recently formed in Hanover) by which small federated manufacturers bind themselves to buy exclusively the products of their own members—all tend to reinforce the small producers, and to diminish the struggle between incomes of various degrees. Insurance, from the most archaic form of a gamble on the fall of public securities (in order to compensate the speculator should the undertaking he is engaged upon turn out badly from some political cause), to that most highly developed and modern form of the time-bargain—insurance, I say, where accessible to the lesser incomes, serves to protract a threatened existence, to defer absorption by the larger incomes, to lessen the amount and the sovereign power of these latter,

[1] Wernicke, *Kapitalismus und Mittelstandpolitik,* Jena, 1907, pp. 385, 470, *et seq.*, 668, etc.; Philippovich, *De la réglementation de la répartition du revenu par la politique économique,* "Revue Econ. Intern.," March, 1907. The Italian bill upon naval credit aims at assisting the less wealthy armour-plate manufacturers, and is therefore resisted by the big firms.

[2] A. de Lavergne, *Les transmissions de la propriété immobilière en Angleterre,* Paris, 1905, p. 241.

and therewith undoubtedly succeeds in limiting the intensity of the struggle between incomes. Finally, an analogous influence is exercised by certain institutions of another kind, which tend to preserve particular social classes, or to save them from possible ruin. Thus the well-to-do class, and the noble class in particular, has the advantage of certain institutions exercising an anodyne or masked kind of charity, securing for the less well-to-do members of these classes a permanent income which exempts them from further participation in the struggle between incomes, or from the more disastrous consequences of the struggle previously waged.[1] In more general terms, all the institutions which diminish the quantitative divergence between incomes, whether by diminishing the larger incomes, or by increasing the smaller incomes, or by both of these methods at the same time, necessarily attenuate the intensity of the struggle between incomes; whilst institutions acting in the reverse direction accentuate, to that extent, this intensity.

Does the struggle between incomes tend to become more acute, or less, as income evolves ?—In truth, if the struggle between incomes is nothing more than the corollary of the restriction imposed on the productivity of associated labour by the coercion which constrains it, it seems obvious that this struggle must become less severe in each successive form of income, since, as we proceed from each form to the next, this coercion undergoes (save for occasional exceptions) a progressive attentuation. On the other hand, and independently of this, it is in the very nature of economic progress that there should ensue a continually increasing mitigation in the processes of this struggle—for the struggle, as we have seen, from the harshness of violence and of fraud, proceeds universally to the comparatively civilised forms of monopoly. —Counterposed to these influences, however, in the successive phases of income, is the increasing efficiency of the technical and economic means of struggle, whereby in turn the struggle between incomes is rendered continually more potent and destructive; whilst in the case of income founded on the wage-system, to render the contest more disastrous, there

[1] May, in the "Jahrbuch für Gesetzgebung," 1903, pp. 914–5.

ensues the snapping of all the legislative shackles which had been imposed to restrict the battle between incomes in earlier historic forms.—Meanwhile, with the advancing evolution of income there results an increasing prevalence of movable wealth, and therewith of fluctuating incomes; whilst there is a continual increase in the disparity between incomes and in the number of the recipients of income, so that there is an ever-increasing accentuation of the factors upon which the intensity of the struggle between incomes depends.—From these considerations the conclusion is obvious that the struggle between incomes must become continually more intense with the passage of income through its successive forms. —Inasmuch, however, as in the ascendent periods of each form of income there occurs an increase in the total quantity of income and an expansion of consolidated incomes at the expense of fluctuating incomes, these being factors which attenuate the intensity of the struggle between incomes, whereas during the declining periods of each form of income the inverse phenomena occur, it follows that in each form of income the struggle between the incomes, while remaining more intense than in the preceding form, decreases in intensity during the ascendent period, to become progressively more acute during the subsequent period of decline.

§ 2. Result of the Struggle Between Incomes. The Distribution of Income.

(*a*) *Static Conditions.*

The result of the struggle between incomes is, like the result of every struggle, the victory of one income over another. Just as in war, however, it is not the personal courage, but the possession of the best warlike instruments, and therewith the possession of the greatest abundance of money, which decides the victory, similar considerations apply to the struggle between incomes. In fact, the quantitatively superior income is placed, precisely on account of its greater size, in a more advantageous position for the employment of the various methods of struggle previously described; and this fact, if most plainly manifest as concerns monopoly, is also extremely obvious in respect of the other methods of struggle, namely violence and fraud. Thus it is in the very nature of things that the struggle between incomes should lead to the triumph of the greater income.[1]

What, then, is the actual outcome of the victory of one income over another? In the less severe instances the result is merely to hinder the defeated or lesser income from enrichment or increase; that is to say, the victorious or larger income is able to annex, to the exclusion of the other, the general increments of wealth and of product. In such conditions, the influence of the struggle between incomes is comparatively limited, inasmuch as the condition of the victorious incomes is improved without any serious harm being done to the defeated incomes.

In many cases, however, the struggle between incomes has precisely the opposite result, inasmuch as it impoverishes the defeated or lesser incomes without enriching the victorious or greater incomes. Now, since this ruin of a part of the incomes is the necessary outcome of the struggle between incomes, which is itself an inevitable corollary of the economic system based upon the coercive association of labour, it follows that the inviolability of property is economically impossible.

The consequence is that the struggle between the income founded upon associated labour and the income founded upon isolated labour, in view of the fact that the latter is necessarily less fitted for warfare, suppresses a part of the representatives of income founded upon isolated labour who would otherwise have been able to subsist; that is to say, the mass of isolated labour producing income, and persistent because it produces income, is less than that which would exist were there no struggle between incomes.

As a rule, however, the victory of one income over another leads to a combination of the effects above indicated, depress-

[1] "In existing society the struggle for existence is a struggle among the best armed, that is, among those who own better machinery, etc. But it is the manufacturer who possesses the largest capital who is able to develop his business on lines corresponding to the latest mechanical improvements, who can procure the services of the finest technical experts, and so on. The struggle is in reality between the capitals" (Bonger, *La criminalité et les conditions économiques*, Amsterdam, 1905, pp. 343–4).—"It is not any form of ability, whether directive or manual, which furnishes a greater reward in industry. It is capital as capital." Chiozza-Money, *loc. cit.*, p. 97.

ing the defeated income into an inferior degree, and raising the victorious income into a superior degree. In Germany we have a classical example of this; for here the struggle between banking incomes leads to the destruction of many private banks, whilst the lesser joint-stock banks group themselves more and more round stronger institutions, until there come into existence three or four banking-suns around which revolve numerous minor satellites.[1] In a similar way there is effected the progressive annexation of the smaller mining enterprises to those of the coal barons. The same phenomenon now occurs in the most varied spheres of economic activity, leading to a reduction of the lesser incomes and to a corresponding elevation of the larger.

Now whichever of the three eventualities here indicated takes place, whether the victorious income increases, the defeated income diminishes, or both these changes simultaneously occur, the necessary result is in all cases alike an increase in the quantitative divergence between the individual incomes. This gives rise to a remarkable repercussion. We have seen that the increase in the disparity between incomes increases the intensity of the struggle between incomes; and we now see that the struggle between incomes increases the disparity between incomes. It follows that the struggle between incomes, by increasing the difference between incomes, generates *per se* a force tending to intensify that struggle; that is to say, it tends to render itself always more intense by the very effect of its own consequences.

This purely quantitive working of the struggle between incomes leads, sooner or later, to a marked qualitative change. From the very fact that the victorious income increases and the vanquished income diminishes, the struggle between incomes tends to make the victorious income differentiated, and the vanquished income undifferentiated. Nor is this all. Let us in fact suppose a primary condition in which there is a declining series of undifferentiated incomes, differing one from

[1] Schmoller, *Grundriss*, pp. 695, *et seq.*; Calwer, *Wirtschaftsjahr*, 1905, p. 258; Schuhmacher, *The Concentration of German Banking*, "Political Science Quarterly," March, 1907. The failure of the Società Italiana di Credito Mobiliare results from a fierce struggle between banking incomes, and leads to the enrichment at the expense of the defeated company of not a few national institutions.

another by quantities which, as we know, must necessarily be very slight. If now there arises a struggle between the incomes, the vanquished incomes are thrust down into a lower sphere, and the lowest incomes are forced into the most depressed sphere of all, that of subsistences. In other words, the capitalist-labourers of the lowest grade are transformed into labourers pure and simple ; and, in the non-existence of free land, such remains their permanent condition. On the other hand, the victorious incomes, or at least the most fortunate among these, are raised into a superior sphere ; and this elevation sooner or later enables these recipients of income to exempt themselves from labour, so that their undifferentiated income is transformed into differentiated income. Hence the necessary result of the struggle between incomes (when aided by the suppression of free land) is the cleavage of the undifferentiated income hitherto existing into two antagonistic categories—subsistence and differentiated income. This is the actual way in which, in prehistoric times, differentiated income come into existence. It is well known that in the primitive communist economy the struggle between the owners of incomes quantitatively diverse ends, on the one hand, by the expropriation of the poorest and their transformation into slave labourers, and, on the other hand, by the enrichment of the victors, who are in this way enabled to abandon labour and to attain to the delights of a respectable inertia. That is to say it is the struggle between incomes which effects the cleavage of the primarily undifferentiated income into two distinct and hostile zones, that of subsistence and that of differentiated income. If then we learned in the last chapter that mixed income is the outcome of the struggle between subsistence and income, we see now that differentiated income and pure subsistence are, in their turn, the outcome of the struggle between incomes ; that is to say that, in the social arena no less than in the biological arena, struggle is the perennial creator of the kinds and the forms of life.

If in this manner the struggle between incomes influences the form of income, it influences also to a marked extent the various kinds and degrees of income. It is evident on the face of the matter that the struggle between incomes of various kinds, by leading to the increase of some incomes at the expense of others, changes the quantity of wealth agglomerated in the various kinds of income. Moreover, the kinds of income which, in the struggle between incomes, are more subject to attack, must lose a portion of their wealth; whilst this loss often leads to an increase in the wealth of those incomes which have had less share in the battle. Thus the fluctuating incomes are exposed to reductions, whilst the consolidated incomes remain constant or may increase. Hence the total quantity of fluctuating incomes stands in a diminishing ratio in respect to the total quantity of consolidated incomes; that is to say, the profit of productive capital tends to diminish relatively to urban rent and to non-hazardous unproductive capital. Here we have a further confirmation of what was said in Chapter IV.

On the other hand, the struggle between incomes may raise the victorious incomes to a higher degree, and may depress the vanquished incomes to a lower degree, thus giving rise to degrees of income, high and low, which did not previously exist, and increasing the disparity between the maximum and the minimum degree of income. Further, by increasing the quantity of wealth of the greater incomes at the expense of that of the lesser incomes, the struggle between incomes greatly accentuates the tendency to the condensation of wealth around the highest degrees of income. Herein we have an additional explanation of the fact previously mentioned that the larger incomes tend to constitute an increasing fraction of the total income.

It is obvious that the various methods of struggle between incomes must necessarily diminish the social product; for violence and fraud absorb a quantum of energy which is therefore withdrawn from production, whilst monopoly is *per se* a great paralyser of the productive forces. Now, by diminishing the product, the struggle between incomes must necessarily diminish the absolute quantity of the total income.

If, however, in this way, the struggle between incomes effects a diminution in the total income, it may, in a different way, lead to the opposite result. In the case of differentiated income, the recipients of income who are worsted in the struggle between incomes, and who are therefore impoverished, may reimburse themselves at the expense of subsistence, thus diminishing this last; whilst the victorious recipients of income, fortified by success, are better able to resist the demands of their workpeople. Hence, in the former case, subsistence diminishes and income correlatively increases; whilst, in the latter case, the increase of subsistence and the correlative diminution of income are prevented.

This influence is even more considerable when the impoverished recipients of income are at once thrust down into the sphere of the incomeless. The inevitable result of the descent of a part of the recipients of income into the class of the incomeless is to increase the number of these last. Now, if the wealth which was formerly consumed unproductively by the defeated recipient of income is now annexed to the capitalised property of another recipient of income who employs it productively, the increase in the supply of labour is accompanied by a correlative increase in the total subsistence, and for this reason the individual subsistence may remain unaltered. If, on the other hand, the wealth which has hitherto been consumed unproductively by the defeated recipient of income is destroyed in the struggle, or is transferred to a recipient of income who consumes it unproductively, the increase in the supply of labour is not accompanied by any increase in the total subsistence, and for this reason the individual subsistence is necessarily diminished by the change, so that income and the rate of income are thereby correlatively increased. In the long run, however, the increase in the supply of labour cannot fail to increase the product, and therewith saving and the mass of subsistence, thus restoring, sooner or later, individual subsistence and the rate of income to their previous dimensions.

But the struggle between incomes influences, in addition, the absolute quantity of income and also the quantity of saving. Recalling what was previously pointed out, that the increase of individual income may diminish saving, we should conclude that the struggle between incomes, by the very fact that it leads to the annexation by the superior incomes of a quantity of wealth hitherto appertaining to the inferior incomes, may exercise an influence in the direction of diminishing the total saving, and may thus effect the figure of income.

Moreover, the struggle between incomes exercises a yet more remarkable influence upon the numerical distribution of the recipients of income. In the fourth chapter it was shown that there exists a series of diminishing degrees of income within which the individual incomes present more or less conspicuous disparity. Let us assume the initial condition to be comparatively simple, namely that the recipients of income of different degrees are equal in number; then the struggle between incomes of a determinate degree and the correlative enrichment of some incomes at the expense of others, necessarily lead to a diminution in the number of the recipients of income of the given degree, correlatively increasing the number of the superior or of the inferior recipients of income. To simplify the matter further, let us exclude from the case under consideration the ascent of the victorious recipients of income to a higher degree, and let us further suppose that all the defeated recipients of income are at once precipitated to the lowest sphere of income. If the intensity of the struggle were identical for all the degrees of income, the struggle between the incomes of equal degree would result simply in reducing in like measure the number of the recipients of income of the various degrees, the lowest degree excepted, whilst the number of those in this last degree would be increased by a figure equal to the sum of those lost by all the other degrees. We know, however, that the intensity of the struggle between incomes of equal degree is directly proportional to the degree of income, that is, that the struggle exhibits a greater intensity in the higher degrees. Now, since the effect of the struggle between incomes of a given degree is to diminish the number of the recipients of income of that degree, the necessary result of the greater intensity of the struggle between incomes of a higher degree must be a greater mortality among the incomes of this degree, that is to say, a greater reduction of their number. Therefore, always supposing the initial number of the recipients of income of various degrees to be the same, the numerical reduction of the superior recipients of income (this reduction being effected in a degree proportional to the extent of their incomes), and the correlative numerical increase in the number of the recipients of income of the lowest degree, have for result that the numerical distribution of the recipients of income assumes, after the lapse of a shorter or a longer period, the figure of a pyramid (a conclusion which seemed so remarkable to G. B. Say). Further, at the outset of the period of observation, let us suppose the numerical distribution of the recipients of income to present the form of an inverted pyramid, that is to say, let us assume the number of the recipients of income to be greater in proportion as is greater the amount of their income; it follows that the recipients of the maximum incomes, among whom the struggle is more intense, will necessarily be subjected to a process of elimination more severe than that by which are affected the recipients of income as we pass down the scale of incomes, since among those lower in the scale, precisely because their incomes are less, the struggle is less fierce. It follows that the recipients of the larger incomes undergo a greater numerical reduction. If this more rapid process of elimination of the superior incomes should continue, the moment will necessarily arrive at which the number of the recipients of greater incomes has become less than the number of the recipients of smaller incomes; that is to say, after the struggle has lasted a certain time, the pyramid will no longer be inverted, but will be re-established on its base. This result is unaffected even if, in place of supposing that the vanquished in the struggle between incomes are thrust down into the lowest sphere of income, we suppose, more in conformity with what really happens, that they merely fall into one of the lower zones of income.

The struggle is, however, not waged only between incomes of the same degree, but yet more between incomes of different degrees. Now the struggle between incomes of different degrees results in the depression of a part of the recipients of income of the lower degrees, who are necessarily the defeated parties, into a still lower sphere, and perhaps to the very lowest sphere. Inasmuch as we have seen that the intensity of the struggle between two incomes of different degrees is, *ceteris paribus*, directly proportional to the extent of the superior income, it follows, given a number of incomes decreasing in degree, and assuming the differences between the degrees to be represented by equal figures, that the intensity of the struggle between two incomes of successive degrees declines as we pass down the scale; in other words, if the declining series of incomes be represented by the figures 5, 4, 3, 2, etc., the struggle between the incomes 5 and 4 is more intense than the struggle between the incomes 4 and 3, and so on. It results from this that the owners of the higher incomes (the maximum income excepted), for the very reason that they are the victims of a fiercer struggle on the part of the recipients of incomes immediately higher in the scale, must exhibit a larger proportion of falls than the minimal category of incomes; that is to say, the number of the larger incomes suffers a reduction proportionately greater than is suffered by the incomes as we pass down the scale, since those lower in the scale are threatened by less formidable antagonists; and here we have another reason for the diminution in the numerical proportion of the greater recipients of income as compared with those lower down in the scale.

The struggle between incomes of two successive degrees influences in its turn the relationships between the incomes lower down in the scale. The incomes of a given degree, injured by the attacks of the recipients of income of the next degree above their own, endeavour to reimburse themselves by reacting with greater violence upon the recipients of income next below them in the scale, and this increases the number of these last who are depressed to yet lower zones.[1] Now, since the intensity of the struggle between incomes of successive degrees diminishes as we pass down the scale of incomes, it follows that the influence exercised upon the recipients of income lower down in the scale, or the fraction of these which is depressed to a lower level, becomes less as we pass down from degree to degree. Herein we have at work an additional influence, co-operating with the reason last indicated, to effect a diminution in the numerical reduction of the recipients of income as we descend in the scale, and to accentuate the pyramidal form assumed by the figure representing the recipients of income.

The struggle between incomes, however, does not only effect the descent of the vanquished towards the sphere of the lowest incomes, but in addition it raises the victorious recipients of income into a higher sphere of income. Now, since the intensity

[1] Consult Simmel, *Soziologie der Ueber- und Unterordnung,* "Archiv für Sozialwiss.," 1907, pp. 500, *et seq.*

of the struggle between incomes is directly proportional to the entity of the income, it follows that, in a given degree of income, there is a proportion of victors, and therefore of recipients of income who ascend to a higher degree of income, larger than that which will be found in the case of the recipients of income of the degree next beneath in the scale. Hence the number of the recipients of each degree of income diminishes, in consequence of the ascent of a part of these to a superior degree, more than the number increases by the ascent of a part of the recipients of income from the degree next beneath in the scale. In other words, each degree of income (with the exception of the maximum, which receives increments from below without losing any of its members to a higher degree, and therefore definitely increases) is subject to a reduction in the number of the recipients of income.—And the higher the degree of income, the greater is the numerical excess of the recipients of income who rise to a higher degree of income, over the recipients of income who pass upwards into the degree in question from the degree next beneath in the scale, the greater, that is to say, is the numerical reduction of the recipients of income. Herein we have a third influence, reinforcing the two previously considered, and determining, like these, the numerical increase of the recipients of income as we proceed lower in the scale.

Now, these three influences—each of which is a co-factor in determining the numerical inferiority of the recipients of income of every degree as compared with the recipients of income of the degree next beneath in the scale,—when working in co-operation, give rise to a marked numerical increase in the recipients of income as we descend in the scale.—Let us assume the initial condition to be that in which there are several numerically equal groups of recipients of income of degrees gradually diminishing; the struggle between the incomes of equal degree, being proportional in intensity to the degree in income, determines, in each group, a reduction precisely proportional to the entity of the respective income ; that is to say, the number of the recipients of income of the varying degrees who remain victors on the field as the outcome of the struggle between incomes of equal degree, is inversely proportional to the entity of the incomes concerned. Thus, given several numerically equal groups of recipients of income, in degrees diminishing in the ratios of 8, 4, 2, 1, if the struggle between the incomes of the degree 8 reduces the recipients in this degree to the figure x, the struggle between the incomes of the degree 4, being only half as intense, reduces the recipients in this degree to a figure double the preceding, that is to $2x$, the struggle between the recipients of income of the degree 2 reduces their number to $4x$, and the struggle between the recipients of income of the degree 1, reduces their number to $8x$; that is to say, the number of the recipients of income of the different degrees will come to vary precisely in inverse ratio to the degree of the respective incomes.[1] Since, however, in addition to the struggle between incomes of equal degree, there is carried on a struggle between incomes of different degrees, and since the two struggles, in addition to

[1] In actual fact, the intensity of a struggle is measured by the number of those who fall, and not by the number of those who remain victors on the field; for, the more intense the struggle, the greater is the number of the slain. It may therefore be affirmed that the number of the recipients of income who fall is always directly proportional to the intensity of the struggle, that is to say, to the entity of the income. But through the very fact that the number of the recipients of income who fall is directly proportional to the entity of the income, the number of the recipients of income who survive upon the field may fail to be inversely proportional to the entity of the income; for a difference may fail to be inversely proportional to the subtractor, and therefore the number of survivors may fail to be inversely proportional to the number of those who fall. Thus, for example, it may happen that we have:

Income.	Number of recipients of income, among 100 receiving incomes of equal degree, who succumb in the struggle.	Number of recipients of income who survive.
20	20	80
10	10	90

Here the number of the recipients of income of each degree who succumb is precisely proportional to the entity of the income, but the number of the recipients of income of each degree who survive is less than inversely proportional to the entity of the income.

Conversely it may happen:

Income.	Recipients of income per cent who succumb.	Recipients of income who survive.
20	70	30
10	35	65

and here the number of the recipients of income of each degree who survive is more than inversely proportional to the entity of the income. Nevertheless, the differences between the ratio of those who succumb and the ratio of those who survive are generally so small that we may without serious lack of precision measure the intensity of the struggle by the number of the survivors; and therefore it is not incorrect to affirm that the number of the recipients of income of each degree who survive in the struggle between incomes of equal degree is inversely proportional to the entity of their incomes.

bringing about the fall of the vanquished recipients of income, determine the ascent of the victors to an income of higher degree, and since all this further diminishes the ratio between the recipients of income of each degree and the recipients of income of the degree next beneath in the scale, it follows that the number of the recipients of income of each degree, when compared to the number of the recipients of income of the degree next above in the scale, is found to exhibit a greater ratio than that above indicated; that is to say, the ratio between the two is found to be more than inversely proportional to the entity of the respective incomes. To express the matter in a different way, the number of the recipients of income of the various degrees is in inverse ratio, not to the degree of the income, but to a power of that degree.—If therefore the struggle between incomes of equal degree brings it about *per se* that the number of the recipients of income is inversely proportional to the first power of their respective incomes, the fact that there are superadded the struggle between incomes of different degrees and the ascent of the victorious recipients of income, brings it about that the number of the recipients of income of various degrees is inversely proportional to some greater power than the first power of their respective incomes. For example, given incomes on the descending scale of 100, 50, and 25, the respective recipients of income, instead of being in the numerical ratios 25 : 50 : 100, will be in the numerical ratios 625 : 2500 : 10,000; that is to say, as we descend in the scale, they are not inversely proportional to the differences between the incomes, but inversely proportional to the squares of these differences.

Hitherto we have supposed that the distinction between the incomes is quantitative merely. But between incomes there exist also qualitative differences. In the first place, the incomes may differ in form. Now, in so far as the income of minimal degree tends to assume the form of undifferentiated income, the struggle between incomes, inasmuch as it increases the number of the recipients of income of minimal degree, tends to increase the numerical proportion of the recipients of undifferentiated income as compared with the recipients of differentiated income.

Incomes may also be of different kinds; and the numerical distribution of the recipients of income of diverse degrees differs in one kind of income from what it is in another. First of all, there is a substantial difference in this respect between income from capitalised property and professional income. We have previously shown that the lesser incomes and those of medium size are predominantly professional incomes, whilst the larger incomes are above all incomes from capitalised property. It follows from this that the pyramid of the recipients of professional incomes must be a much shorter one than that of the recipients of income from capitalised property, for all the uppermost part is wanting in the case of the former; and it must be much broader in the base, because of the aggregation here of minimal incomes. It follows also from these considerations that the pyramid representing all the recipients of income (incomes from capitalised property together with professional incomes) is much more ample and accentuated than is the pyramid representing only the recipients of income from capitalised property.

Let us leave on one side professional incomes, to consider only incomes from capitalised property. Recalling what we have previously shown, that income always increases less than proportionally to the increase in property, we may infer that the number of the recipients of income of various degrees derived from capitalised property, if inversely proportional to the quantity of their incomes raised to a given power, necessarily exhibits a ratio which is less than inversely proportional to the quantity of their capitalised property raised to the same power.

However, these same incomes from capitalised property are distinguished, as we know, by varying pugnacity. Now, since increase in the number of the recipients of income as we descend in the scale is the outcome of the struggle between incomes, it follows that this increase must naturally be more accentuated where we have to do with the more combative varieties of income; that is to say, it will be more marked in the case of fluctuating than in the case of consolidated incomes. Therefore the fluctuating incomes will be arranged in a more accentuated pyramid than the consolidated incomes; and the pyramid representing all the recipients of income (fluctuating and consolidated) must undergo a specific accentuation in those degrees in which fluctuating incomes predominate, and a corresponding attenuation in those degrees in which consolidated incomes predominate.

We have seen, however, that, in addition to the incomes which participate more or less actively in the struggle between incomes, there are other incomes, or degrees of income, which are perfectly stable and are altogether removed from that struggle. Now the stable incomes, precisely because they are unaffected by the struggle between incomes, or because they ward off that struggle, are exempt from the injury which the struggle inflicts upon its victims; that is to say, they are exempt from the fall to a lower sphere of income. If, then, in a given degree of income, stable incomes predominate, the recipients of income of this degree will suffer no numerical reduction in consequence of the struggle between incomes, or will suffer much less reduction than that which is suffered by the recipients of income of other degrees. Hence the number of the recipients of income at this point remains greater than it would be were not the income of this degree stable. On the other hand, in so far as this degree of income exhibits a high numerical density, to this extent also the number of the recipients of income in the degree next beneath in the scale will be more attenuated than would have been the case had not the incomes next above been stable; for, had it been otherwise, a part of the recipients of income of the higher of the two degrees would have fallen to the lower. Thus the numerical distribution of the recipients of income is changed in two ways: there is an increase in the degree of income in which stable incomes predominate, and a diminution in the degree next beneath in the scale; that is to say, at the point corresponding to the stable incomes, the pyramid representing the recipients of income undergoes, or may undergo, inversion. Nor is this all. For the very reason that in the degree of income next beneath the one in which the stable incomes prevail, the number of the recipients of income is comparatively small, it follows also that the number of these latter is smaller who attack the incomes yet lower in the scale; less, therefore, is the numerical reduction suffered by these last, so that their number is greater than it would otherwise have been. In this way the greater numerical density, or the exemption from struggle of the recipients of stable income, by diminishing the number of the recipients of income next beneath in the scale, leads *per se* to an increase in the number of the recipients of income in the degree immediately beneath the last-named. Thus the stability possessed by the income of higher degree leads to an increase, not merely in the number of the recipients of that particular income, but also to an increase in the number of the recipients of income of a degree much lower in the scale; thus this last exhibits a high numerical density, not because the income in this degree is itself stable, but as an indirect outcome of the inherent stability of the income of higher degree. In other words, the directly stable income generates *per se* an income endowed with a reflected equilibrium, or with an equilibrium which is nothing more than the shadow or the reverberation of the first.

In this manner the presence of stable incomes modifies or attenuates the pyramid of the recipients of income in two different ways, or introduces a duplex interpolation; it subtracts from two degrees of income a certain number of recipients of income in order to increase with these elements two degrees of income higher in the scale. This renders the distribution of income and the pyramid of the recipients of income less accentuated, but does not necessarily give rise to any marked change in the essential lineaments of these.

What results if there are certain degrees of income in which the recipients of income form combines? The degrees of income in which this happens, being as a rule immune from all struggle within the limits of their own degree, and being able to resist the attack of the recipients of superior incomes, do not lose any part of their own members to inferior degrees of income, and therefore present, or may present, not a less but a greater numerical density than that of the income next beneath in the scale; that is to say, at the point at which we have combined incomes, the pyramid of incomes is arrested or inverted. If the combine is formed among the recipients of an income inferior to the maximum, its effect is to increase the proportion of the recipients of income in this degree as compared with those of a superior and of an inferior degree; that is to say, it accentuates the pyramid in the region superior to the combined income, whilst it attenuates or inverts it in the region immediately beneath this. On the other hand, a combination among the recipients of income of any given degree, rendering fiercer their attack upon the recipients of income lower down in the scale, leads to the fall of a greater number of these latter into a yet lower degree ; hence the numerical density of the last is increased as an effect of the combination; that is to say, the pyramid of the recipients of income after being attenuated in the region immediately beneath that of the combined income, becomes accentuated in a region yet lower in the scale. If, however, the combine is formed among the recipients of income of the maximum degree, the result will be identical with that just elucidated only as concerns the region below that of the combined income, for in such conditions there is lacking any region above the combined income. In such a case, the number of the recipients of incomes in the degrees inferior to the combined income is less than it would be did the combine not exist, for the result of the combination is to prevent the fall of a part of the combined recipients of income into lower zones ; less is the number of the recipients of income of the degree immediately beneath the maximum, either for the reason just given, or on account of the violent attack upon the incomes of this degree on the part of the combined recipients of income ; and, correlatively, the number is greater of the recipients of income of the lowest degree, owing to the fall into a lower sphere of the recipients of income overcome by the combined recipients of income.—Hence the pyramid of the recipients of income becomes widened at the summit and at the base ; or, to express the matter better, the primitive pyramid tends to be transformed into two pyramids, one inverted and the other erect, having a common vertex. To sum up, we may conclude that the formation of the combine gives rise to a super-normal numerical inferiority (considered in relation to the combined recipients of income) of the recipients of income of degree superior to the combined income, to a sub-normal numerical superiority of the incomes of the degree next below the combined incomes in the scale, and finally to a super-normal numerical superiority of the recipients of income yet lower in the scale. But let us hasten to add that, while these influences may indeed render more or less marked the pyramidal form representing the numerical distribution of the recipients of income, or may introduce some asymmetry into the figure at this point or that, they cannot change the general outlines of the figure or the formula arrived at in the preceding discussion.

An influence analogous to that exercised by combination among the recipients of the largest incomes is exercised by the struggle between subsistence and income. This struggle does not do much harm to the greater incomes, which are better armed for the fight; but is apt to be fatal to the lesser and the medium incomes, which suffer damage and are forced into a lower sphere.[1] In this way the pyramid of the recipients of income becomes widened at the base.

Hitherto we have always assumed that, while those vanquished in the struggle between incomes are precipitated into a lower sphere of income, they yet remain recipients of income. In such conditions, the struggle between incomes, though it modifies the numerical distribution of the recipients of incomes of different forms, of different kinds, or of different degrees, does not in any way affect the total number of the recipients of income. In most cases, however, the struggle between incomes precipitates a part of the recipients of income into the class of the incomeless, that is of those who are reduced to subsistence alone; and in this case the struggle between incomes does not merely modify the numerical proportion between the recipients of incomes of various forms, kinds, or degrees, but directly diminishes the total number of the recipients of income. This influence is so striking that certain authors have limited their considerations to it alone. Thus, Marx, for example, lays stress only on the numerical reduction of the recipients of income as the outcome of the struggle between incomes, considering this to be the weapon that is to lead to the overthrow of the capitalist system; and he takes no account of the modification in the numerical proportion of the recipients of income of various degrees which is so prominent and fundamental a consequence of the struggle between incomes.

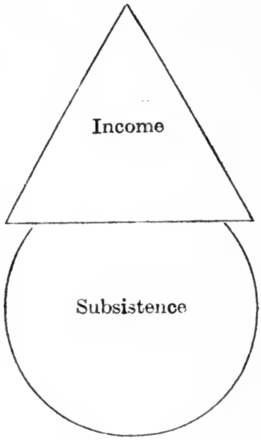
[1] In Sicily the rise in the wages of agricultural labour, due largely to emigration, has been disastrous to the peasant proprietors (*civili*) (Lorenzoni, *Relazione sulla inchiesta compiuta in Sicilia*, Palermo, 1907, p. 86).

If, now, the fraction of the recipients of income who fall into the sphere of the incomeless is the same in all degrees of income, the result of their fall is merely to reduce the dimensions of the pyramid of the recipients of income, leaving unaffected its steepness and its form. But if the fraction of the recipients of income precipitated into the sphere of the incomeless differs in the different degrees of income, then the reduction in the dimensions of the pyramid is accompanied by a change in its form, the various spheres of income being differentially affected. That is to say, if it is the uppermost spheres of income which are chiefly affected, the vertex of the pyramid becomes more acute; if it is the middlemost spheres of income which are chiefly affected, the middle stratum of the pyramid becomes attenuated, or the pyramid may be transformed into a clepsydra; whilst if it is the lowest spheres of income which are chiefly affected, the pyramid undergoes contraction at the base.

Whilst, however, some of the recipients of income are thus precipitated into the sphere of the incomeless, there is a certain number of the incomeless, more or less considerable, who succeed in rising above the level of those receiving subsistence merely, and in attaining to an income; this income is at first undifferentiated, but in favourable circumstances may become transformed into differentiated income. This is true, not merely of our own days, in which all professions and social conditions are legally accessible to every one: but it is also true, though to a much less considerable extent, of earlier times; for even in those days certain labourers and domestic servants were able to escape from the condition of servitude to attain to liberty and to differentiated income. In all cases, therefore, and in every age, the movement by which some of the recipients of income descend into the class of the incomeless is counterbalanced by the ascent of some of the labourers into the class of the recipients of income. The respective measures of these two movements, and which of the two tends to be in excess of the other, depends upon several factors which will be pointed out below; but in any case the numerical density of the recipients of income taken as a whole is the resultant of these two antagonistic movements, whilst the numerical density of the recipients of income of each degree is, *ceteris paribus*, less or greater, according as the number of the recipients of income of the degree in question who are precipitated into the zone of the incomeless is greater or less than the number of the incomeless who ascend to the income of this degree. Since the labourers who receive the highest wages, or the labourers of the highest degree, that is to say, those who most often become recipients of income, in most cases get no farther up the scale of income than the lowest degree, it follows that the numerical density of the recipients of income of the lowest degree undergoes a special increase, and sometimes ends by being greater than that of the labourers of the highest degree, that is, of those who are found in the uppermost levels of subsistence.

Thus the existence of stable and combined incomes, and the mutual interchange between the class of the recipients of income and the class of the incomeless, produce in the social pyramid numberless re-entrant and projecting angles which make it resemble rather Mt. Cervin in form than the tombs of the Pharaohs. But, notwithstanding all this, the distribution of the recipients of income conforms always to the general law which has been indicated in the preceding pages, and presents the figure of a pyramid. Now, when we recall what was said in the preceding chapter concerning the distribution of subsistence, it will be evident that the numerical distribution of the recipients of income of various degrees is subject to a law essentially different from that which governs the numerical distribution of the recipients of subsistence of varying amount; for the recipients of subsistence are distributed in accordance with a curve, and those of income in accordance with a pyramid. Thus the radical and essential difference between subsistence and income finds graphic, and we may almost say tangible, expression in the difference between the figures representing the distribution of each; and herein we have a new proof of the radical inanity of the theory which endeavours to effect the forcible confusion of these two heterogeneous entities into a single undifferentiated category.

Thus the integral distribution of wealth is incapable of representation by a single figure, whether curve, parabola, or pyramid, and can be represented only by the duplex figure of a pyramid, or a truncated pyramid, superposed upon a curve, or let us say upon a circle. Since, as we have seen, the numerical density of the recipients of income of the lowest degree is usually greater than that of the labourers who receive subsistence of the maximum degree, it follows that the uppermost part of the curve representing the recipients of subsistence is narrower than the base of the pyramid representing the recipients of income ; that is to say, the general distribution of wealth exhibits a contraction at the moment in which we pass from income to subsistence, as may be precisely represented by the following figure :



The numerical distribution of the recipients of income in accordance with the law here indicated has the most remarkable economic consequences. In fact, since the economic power (not to speak of greater powers) of which each man disposes, is directly proportional to his income, and inversely proportional to the number of coexisting recipients of equal or superior incomes, it follows that the pyramidal distribution of income subjects the mass of the recipients of income and of the labourers to a restricted oligarchy of potentates. The tyrannical domination of these manifests, as we have seen, terrible effects in the struggle between incomes, which is directly disastrous to the minor recipients of income, and in many cases ultimately renders impossible the continued existence of the latter ; but even when the matter does not go as far as this, the oligarchal power of the greater recipients of income creates or regulates at its own arbitrary will the conditions in which develop the lives of the lesser recipients of income and of the labourers, or determines the orbit in which these revolve.[1]

In this way there arises a hierarchy of economic powers which presents the closest analogy with the hierarchy of military or executive powers. Just as in the executive we have a limited number of chiefs, commanding a larger number of sub-chiefs, and these a still larger number of subordinates, down to the lowest employees who exhibit the maximum numerical density, in the same way a small handful of the greatest recipients of income rules a larger number of less wealthy recipients of income, these rule a still greater number of recipients of more modest incomes, and so on down to the incomes of the lowest degree, which are the most numerous. Between these two phenomena, thus graphically comparable, certain substantial disparities doubtless exist. If the official hierarchy is the deliberately willed product of essentially technical motives, if it is the essential condition of the swift execution of orders and of the punctual fulfilment of duties, the hierarchy of the recipients of income is no more than the unconscious and mechanical outcome of the eternal conflict between incomes, and does not directly correspond to any rationally conceived aim. It is nevertheless true that the inevitable and mechanical hierarchy of the recipients of income fulfils, in the economic phases that have hitherto prevailed, an eminent technical function not dissimilar from that which is exercised in the executive field by the rationally conceived and purposive hierarchy of the officials. In fact, as long as the association of labour is coercive, there is indispensable need for a concentrated control of economy and of production to effect the co-ordination of rebellious and naturally undisciplined individual forces; hence the hierarchy of the recipients of income, for the very reason that it subjects the general order of economic relationships to a dictatorial oligarchy, indubitably fulfils a superior technical function. In this manner, the coercive association of labour, at the same time that it renders technically necessary the hierarchy of the

[1] "The result of the concentration of wealth is that the great mass of the population can progress only in the manner prescribed by the initiative or the caprice of a fraction of the population." Chiozza-Money, *loc. cit.*, pp. 127 and 151.

recipients of income, generates that hierarchy by giving rise to the struggle between incomes; that is to say, the natural process of economic relationships give rise, by its own intrinsic force, to that socially advantageous result which in other fields of activity is attained by the human will deliberately directed towards a rational end.

None the less there appears an essential difference between the two cases. Whereas the hierarchy of officials is by nature rigid and immobile, that of the recipients of income is subject to incessant mutation, in consequence of the silent but inexorable labour of the struggle between incomes. Now every hierarchy presents a certain arrangement of maximum efficiency, which being given, the hierarchy attains to the production of its greatest possible useful effect; whilst when the arrangement of maximum efficiency is surpassed, there occurs, not an increase, but a decrease of co-ordinative power and technical efficiency.—The hierarchy of officials, for the very reason that it is an institution voluntarily planned to effect the better co-ordination of individual forces, usually stops at the normal limit, or at least does not go very far beyond it.[1] On the other hand, the hierarchy of the recipients of income, being the product of the blind struggle between incomes, which continues unceasingly and without end, may readily pass beyond the limit of maximum efficiency to attain a point at which it ceases to constitute a stimulus to the productive forces, and becomes an influence restraining their elasticity.—In other words, the concentration of income, whilst up to a certain point technically advantageous (because it renders possible or more easy the employment of extensive instruments of production or the institution of concentrated enterprise), becomes, when this limit is exceeded, a check upon the productive forces, and therefore an agent which diminishes income.

The hierarchal distribution of the recipients of income gives rise to the analogous distribution of another series of derivative phenomena. It is certain, for example, that the recipients of

[1] This is true only subject to certain reservations, for often the state enlarges its bureaucratic framework in order to satisfy the demands of new place-seekers, or to gain new defenders for the existing economic and political order (Michels, *L'oligarchia organica constituzionale,* "Riforma Sociale," 1907, p. 972).

income, as we descend in the scale of incomes, discount bills of exchange gradually diminishing in value; and that therefore the numerical increase in the recipients of income as we pass towards incomes of lower degrees leads to a corresponding increase in the number of bills of exchange for the smaller values. In other words, the number of bills of exchange discounted is least in the case of bills of maximum value, and the number increases as we descend in the scale of values.—The same may be said of protested bills of exchange, of savings-bank deposits, of forced expropriations, of values assigned or adjudged by decisions of the law-courts; for all these are more numerous in proportion as the values involved are smaller.

Finally, the hierarchal distribution of the recipients of income inevitably leads to a hierarchal arrangement of consumption. We have already seen that the struggle between incomes gives rise to a marked disparity between the degrees of income, and we now see that the incomes of greatly increasing degree are received by a decreasing number of individuals. Now, if the recipients of average incomes consume these chiefly in the purchase of average products, as far distant from bare necessaries, on the one hand, as from exceptional luxuries, on the other, the reduction of a considerable proportion of the recipients of income to incomes of a very low figure, forces these recipients to purchase inferior products and those of the lowest price, whilst the correlative creation of incomes high in degree but received by few persons, enables these last to consume products of excessive cost. Hence the hierarchy of the recipients of income effects *per se* a differentiation of consumption (and correlatively of production), leading to an ever clearer separation between two substantially distinct zones, the consumption of necessaries, and the consumption of luxuries.—Now, since the number of the recipients of income diminishes more than proportionally to the increase in their incomes, it follows that the quantity of high-priced products (such as are obtainable only by the recipients of the greater incomes) must exhibit towards the low-priced products a numerical ratio more than inversely proportional to their respective prices. From this, again, it results that a technical improvement which lowers the price of a product, and thus renders it accessible to the recipients of income of a lower degree, increases the demand for that product to an extent more than proportional to the lowering of the price.[1]

By thus increasing the demand for products of luxury at the expense of the demand for products of average and necessary consumption, the hierarchal arrangement of the recipients of income creates and intensifies the disharmony between demand and supply of income-products and of subsistence-products, respectively, and the oscillations in their current prices.—Thus the marked fall in the price of wheat in Russia from 1820 to 1830—that mysterious phenomenon for the explanation of which the Academy of Sciences in Petersburg had instituted a public competition—was explained by Thomin as the outcome of the increased inequality of incomes, owing to which, whilst some were able to purchase high-priced objects, others were deprived of the necessaries of life.[2]

(*b*) *Dynamic Conditions.*

The distribution of income which has been elucidated in the preceding investigations is not immutable, but is subject on the contrary to incessant changes, inasmuch as the struggle between incomes which generates this distribution is itself unceasingly restless and mutable. Now the first problem which presents itself relates to the social value of the mutations in the distribution of income; we have to examine what is the economic significance of the mutations in the numerical distribution of the recipients of income of varying degrees, and to ascertain how far these mutations involve an increase, and how far a diminution, in social inequalities.

In this connexion, at the very outset, the most superficial observation leads to a conclusion extremely categorical and precise. In fact, to speak of a pyramid is to speak of inequality; hence, the more acute the pyramid, the more marked is the inequality, and therewith the more powerful is the economic dictatorship of the greater incomes; whereas the more obtuse the pyramid, the less marked is the inequality. Now the pyramid may be rendered more acute in two different ways. 1. In the first place this change may be due to an

[1] Dubois-Reymond, *loc. cit.*, p. 250.
[2] Tugan-Baranowski [*The Factory System*], p. 109.

increase in the quantitative difference between incomes of different degrees. Here it is necessary to point out that the difference between incomes is not absolute merely, but is also relative to the entity of the incomes concerned; for it is evident that a difference of 20 involves a much more notable disparity when it exists between incomes of 10 and of 30 respectively than when it exists between incomes of 100 and of 120 respectively, for in the former case the larger income is 200% greater than the smaller, whilst in the latter case it is only 20% greater. 2. In the second place, the change may be due to an increase in the numerical difference between the recipients of income of successive degrees. It follows that, the numerical distribution of the recipients of income remaining constant, the inequality of fortunes is greater in proportion as the descent from degree to degree of income is steeper; the difference between the successive degrees of income remaining constant, the more rapid is the increase in the number of the recipients of income as we descend in the scale, the greater is the inequality of fortunes; and conversely. Or, to put the matter in a different way, the more extensive the proportional increase in incomes as we rise in the scale, and the more extensive the increase in the number of the recipients of income as we descend in the scale of incomes, the more marked the economic inequality; and conversely.[1]

If the number of the recipients of income of diminishing degree were simply inversely proportional to their incomes, every variation in the numerical proportion of the recipients of income of diminishing degree would *per se* involve a corresponding variation in the proportion of the incomes of progressive degree, and conversely; that is to say, the two factors now under consideration would be necessarily interconnected.—In fact, given the equation:

$$\frac{N}{N'} = \frac{r'}{r}$$

it is evident that every increase or diminution in the first term (representing the numerical ratio between the recipients of income of diminishing degree) involves an increase or diminution of the second term (representing the numerical

[1] *Analisi*, II, p. 375, note.

ratio between the incomes of increasing degree); and conversely. But we know that the recipients of income of diminishing degree exhibit as to their numbers an inverse ratio to the x^{th} power of their incomes; that is to say, we know that

$$\frac{N}{N'} = \left(\frac{r'}{r}\right)^x.$$

Now the first term varies directly as $\frac{r'}{r}$ and inversely as x; because, the greater $\frac{r'}{r}$, the greater, *ceteris paribus*, is $\left(\frac{r'}{r}\right)^x$, and the greater therefore $\frac{N}{N'}$; whilst the greater is x the less is $\left(\frac{r'}{r}\right)^x$, and the less, therefore, is $\frac{N}{N'}$. It may, then, happen that $\frac{r'}{r}$ diminishes, that is to say that the disparity between incomes increases, while $\frac{N}{N'}$, that is to say the numerical ratio between the recipients of income of diminishing degree, remains constant, or even increases, if meanwhile x diminishes. Conversely, it may happen that x increases, while the numerical ratio between the recipients of income of diminishing degree $\frac{N}{N'}$ remains constant or even increases, if $\frac{r'}{r}$ meanwhile increases, that is to say, the disparity between incomes diminishes.—Since the inequality in the distribution of incomes is in inverse ratio to the numerical proportion between the recipients of income of diminishing degree, we may say that the inequality in the distribution of incomes may increase or diminish, the disparity of incomes diminishing or increasing, if there occur meanwhile an increase or diminution in the power x; and the inequality of incomes may increase or diminish, x diminishing or increasing, if there occur meanwhile an increase or diminution in the disparity of incomes.

If we suppose the disparity between incomes to be constant, the distribution of income is more unequal in proportion as is smaller the numerical ratio between the greater recipients of income and the lesser; or, to put the matter differently, in proportion as is greater the average number of the recipients of income which each recipient of income has immediately beneath him.—Hence every increase in the numerical ratio between the greater recipients of income and the lesser, diminishes the inequality in the distribution of income, and conversely. Now the increase in the numerical ratio between the greater recipients of income and the lesser, may be accompanied by an increase in the absolute number of the recipients of income, or it may leave that number unaffected. We may, for example, suppose that all at once a new crowd of recipients of income is rained down from the skies with their incomes attached. If these recipients of income belong to the higher class, the numerical ratio between the greater recipients of income and those lower down in the scale increases, so that the inequality diminishes; in the converse case, the inequality increases. It may happen, on the other hand, that the number of the greater recipients of income increases without any increase in the total number of the recipients of income, simply by the ascent of recipients of income from the lower spheres; and in this case the numerical ratio between the greater recipients of income and the lesser, increases more than in the previous case, because the number of the lesser recipients of income does not remain invariable, but diminishes.

But in every case the index of the decrease or increase of the inequality is the increase or decrease of the numerical proportions between the classes of the recipients of income of diminishing degree, and not the absolute number of the recipients in one class or another, for this taken by itself is insignificant or ambiguous. For example, the numerical increase of the recipients of average income, if due to the descent into that degree of a part of the greater recipients of income, involves a diminution in the numerical ratio between the recipients of incomes higher than the average and the recipients of average incomes, therefore, in that region of the pyramid there is an accentuation of inequality. But if the increase in the number of the recipients of income of average degree is due to the ascent into that degree of a part of the recipients of income of degrees below the average, this involves an increase in the numerical ratio between the recipients of income of average degree, and those lower in the scale, so that we have a diminution of inequality in this region of the pyramid. To express the matter differently, if, as a sequel to the numerical increase in the recipients of average income, the distribution of incomes presents always a very pronounced form of pyramid, this means that the increase in the recipients of average income is due to the fall of a part of the greater recipients of income into a lower sphere; but if, on the other hand, the distribution of the recipients of income approximates to the form of a binomial curve, this means that the numerical increase of the recipients of average income is due to the ascent to a higher sphere of a part of the recipients of income whose incomes have been less than the average; that is to say, in the former case, inequality has increased, whereas in the latter case it has diminished. It results from these considerations that all inferences drawn simply from the numerical increase of the middle classes are in fact erroneous, for this absolute increase, considered *per se*, does not justify any inference as to the general direction of the distribution of wealth.

It may further be pointed out that changes in the numerical ratio between the recipients of income of two or more successive degrees, may well indicate a change in the economic inequality *at this particular level*, but does not in any way exclude the possibility that at other levels there may have occurred a change of an altogether opposite kind.—Let us suppose, for example, that wealth becomes concentrated in the more elevated spheres of income, and that this leads to the ascent of a part of the recipients of income of the degree immediately beneath the maximum into the maximum degree. This change involves a diminution of inequality between the maximum and the sub-maximum incomes, for at this level there is an exclusive advantage to the lesser of the two degrees of income; and it involves an increase in inequality between the sub-maximum incomes and those lower down the scale, for at this level there is an exclusive advantage to the income of the higher degree. Now we actually find that in the maximum and sub-maximum spheres of income, in which the inequality diminishes, the numerical ratio between the greater and the lesser incomes increases; whereas between the sub-maximum incomes and those beneath, where inequality is accentuated, the numerical ratio between the greater and the lesser incomes diminishes.

Again, if a part of the recipients of average income rises to higher degrees, the numerical ratio of the recipients of income above the average to the recipients of income of average degree increases; hence *at this level* the pyramid becomes attenuated. But if, whilst the recipients of income of average degree thus diminish, the recipients of income lower than average remain constant in number, the numerical ratio between the recipients of income of average degree and those who receive incomes of less than the average degree diminishes, and therefore *at this lower level* the pyramid becomes more acute. If, however, some of the recipients of average income are defeated, and are precipitated into the sphere of the lower incomes or into that of the incomeless, the numerical ratio between the recipients of average income and the recipients of minimal income is diminished, or the numerical ratio between the recipients of income and the incomeless is diminished, so that in the latter case the region beneath the pyramid undergoes enlargement.—Thus, if a crisis eats up the savings of the lesser recipients of income in order further to enrich those who are rich already, the number of the greater recipients of income and of the minimal recipients of income increases at the expense of the average recipients of income; consequently, inequality diminishes in the upper region and increases in the lower region of the pyramid.—In any case, therefore, the increase in the numerical ratio between the superior recipients of income and the average recipients of income attenuates economic inequality throughout the region between their incomes; but it may be accompanied by a diminution in the numerical ratio between the recipients of average income and those lower in the scale, or between the recipients of average income and the incomeless, and in this case inequality is accentuated in the lower region of the pyramid, or as between the base of the pyramid and the region beneath it. This accentuation, we must insist, is not due simply to the fact of the ascent of certain recipients of income to higher levels of income, for this, at this level, attenuates the inequality; but it is due to the fact of an altogether different character, which is not a necessary concomitant, that there does not occur a contemporaneous ascent of certain recipients of the lowest income to the stratum of average income, or that there does occur a descent of some of the recipients of average income into the sphere of the lowest incomes or into that of the incomeless.

Conversely, if the number of the recipients of average income increases in consequence of the ascent of part of the recipients of income from lower down the scale, the numerical ratio of the recipients of average income to the recipients of minimal income increases, that is to say, *at this level of the pyramid,* inequality is attenuated. But for the very reason that there occurs an increase in the absolute number of the recipients of average income, it follows that, *ceteris paribus,* the numerical ratio between the greater recipients of income and the average recipients of income diminishes, that is to say, that *at this level* inequality is accentuated. Here, then, the increase in the numerical ratio between the recipients of average income and the recipients of minimal income, attenuates economic inequality throughout the region between their incomes ; but for the very reason that the increase is arrested at this point, because it is not accompanied by the further ascent of recipients of average income to higher levels of income, there results a diminution in the numerical ratio between the greater recipients of income and the average, that is to say, at this level the pyramid becomes more acute. Now in this case the increasing acuteness of the pyramid in the region superior to the average income is not due simply to the fact of the ascent of part of the recipients of income from the lowest strata to the stratum of average income, but to the fact that this ascent is arrested at the average income and goes no further. Here also, then, the diminution in the numerical ratio between the recipients of income of a given degree and those lower in the scale is always the outcome of an arrest in the upward progress of the recipients of income ; and the point at which this diminution begins affords a precise indication of the point at which is arrested the process of equalisation of fortunes.

All these considerations are true in so far as we assume to be constant the other factor of the distribution of wealth, or the disparity between individual incomes of diverse degrees ; for if this disparity changes, the influences due to the numerical distribution of the recipients of income may thereby be accentuated or annulled. For example, if the number of the greater recipients of income increases, whilst their individual income and the social income remain constant, it is evident that a part of wealth must be taken away from the lesser recipients of income to be transferred to the greater. Hence the disparity between individual incomes of diverse degrees *increases,* that is to say, there is an influence at work which annuls the equalising influence of the increased number of the greater recipients of income. Conversely, if the number of the greater recipients of income diminishes, whilst their individual income and the social income remain constant, this means that a mass of income hitherto accrueing to the greater recipients of income is transferred to the lesser, and there results from this an attenuation in the disparity between incomes, annulling that influence of the numerical diminution of the greater recipients of income which tends to increase inequality.[1]

We may therefore conclude that a change in the form of the pyramid of incomes, rendering it more acute or more obtuse, as the case may be, is always the reflex of a corresponding increase or diminution in the inequality of the distribution of wealth; that is to say, the smaller the numerical ratio between the recipients of income of each degree to those below them in the scale, the more unequal is the distribution of wealth. Now the social pyramid becomes more acute, or more obtuse, the distribution of income more unequal, or more equal, as the result of a number of influences, of which the most notable are the following :

1. *The Variations in the Form of Income.*

We have seen that in the case of undifferentiated income the intensity of the struggle between incomes is much less than

[1] The following writers hold opinions contrary to those expounded in the text : Goschen, *The Increase of Moderate Incomes,* "Journal of the Statistical Society," 1887, pp. 593, *et seq.* Neymarck, "Journal de la Société statistique," March, 1902, pp. 151, *et seq.* Benini, "Giornale degli economisti," 1897, p. 194 ; *Principî di Statistica metodologica* (Bib. Ec.), pp. 187–9. Bresciani, "Giornale degli economisti," 1905, p. 117. Gide, *Principes,* 1891, p. 161. Schmoller, *Die Einkommensvertheilung in neuer und alter Zeit,* "Jahrbuch für Ges." 1895. Wolf, *Sozialismus und kapitalistische Gesellschaftsordnung,* Stuttgart, 1892, pp. 227, *et seq.* Wagner, "Zeitschrift des preuss. stat. Bureau," 1904. Bernstein, *Die heutige Einkommensbewegung und die Aufgabe der Volkswirtschaft,* Berlin, 1902, pp. 34, *et seq.*

in the case of differentiated income. Now, since the differentiation of incomes is an outcome of the struggle between incomes, it follows that in the case of undifferentiated income, the numerical increase of the recipients of income as we descend in the scale of incomes must be much less accentuated than in the case of differentiated income.

2. *The Variations in the Kinds of Income.*

Since, where we have to do with fluctuating incomes, the increase in the number of the recipients of income as we descend in the scale is more marked, it follows that an increase in fluctuating incomes, whether accompanied or not by an increase in the number of the recipients of these incomes, must accentuate the numerical increase in the recipients of income as we descend in the scale ; and conversely. The distribution of the total income is therefore more or less differentiated, according as fluctuating incomes or consolidated incomes predominate. If, then, the various kinds of income correspond to different degrees of income, the quantitative alterations in the incomes of various kinds give rise to corresponding alterations in the incomes of various degrees, and must be classed among the phenomena we have next to consider.

3. *The Variations in the Degrees of Income.*

It is evident that if, *ceteris paribus*, there occur an increase in the degree of the higher income or a decrease in the degree of the lower income, there is an increase in the disparity in the economic condition of the recipients of income, that is to say, in the distribution of income. Therefore, if a new public loan or an unforeseen expansion of industry raises the rate of interest, as occurred in January, 1907, in the London market, where capital advanced on mining securities received as much as 14% interest, the income of superior degree increases ; if the payment of the interest on the public debt is effected by the yield of an indirect tax which falls upon the minor recipients of income, the lower incomes are diminished ; hence the disparity between incomes increases, and the distribution of income becomes more unequal. And the opposite result would be attained by the conversion of national debt, or by the immunity from taxation of the lesser incomes.

A change in the disparity between incomes of various degrees, however, while it has a direct influence in increasing or diminishing inequality, has not *per se* any necessary influence in changing the numerical ratio between the recipients of income at different levels in the scale ; it follows directly from this that the number of the recipients of income of various degrees no longer exhibits the former ratio to the entity of their respective incomes, and this ratio may no longer be unique and determinate. But the change in the disparity between incomes indirectly modifies the numerical distribution of the recipients of income. The greater, in fact, the disparity between incomes of different degrees, the greater is the intensity of the struggle between incomes of higher degree, and the greater therefore the reduction in the number of the recipients of income of higher degree. On the other hand, the greater the excess of the higher incomes over those beneath them in the scale, the more intense is the struggle between incomes of different degrees, and the greater therefore is the number of the recipients of income (the maximum excepted) who are overthrown by that struggle. Here we have a twofold reason for a diminution in the numerical ratio between the higher recipients of income and those beneath them in the scale. This is evident from a very simple arithmetical consideration. In fact, the rise in the higher incomes, *ceteris paribus*, diminishes the fraction expressing the ratio between two incomes of lower and higher degree ; whereas, when the struggle between incomes of different degrees becomes more acute, there is an increase in the power to which this same fraction must be raised in order to obtain the numerical ratio between the recipients of two incomes of higher and lower degree ; thus there is at work a twofold influence to diminish the figure expressing the numerical ratio between the recipients of income of diminishing degree.

Thus, if up till now there have been two incomes, 100 and 50 respectively, the numerical ratio between the recipients of the two incomes will be $(\frac{50}{100})^x$. If, now, there ensue an increase in all the incomes higher than 50, so that, for example, the income 100 rises to 120, the numerical ratio between the two groups of recipients of income (assumed always to be inversely proportional to the ratio between their incomes raised to the x^{th} power) becomes for this reason $(\frac{50}{120})^x$, that is, it is diminished. But, with the increase in the disparity between the incomes of different degrees, there ensues an increase in the intensity of the struggle between them, and this increases the value of x, for this value depends upon the intensity of the struggle between incomes of various degrees; and with this increase in the value of x there follows a further accentuation in the numerical inferiority of the superior recipients of income.

4. *The Variations in the Quantity of the Total Income.*

An increase in the quantity of the total income, in so far as it takes the form of an equal increase in all the incomes, diminishes the relative disparity between incomes of different degrees, and therefore *per se* attenuates inequality.—There are additional ways in which an increase in the total income produces a like result. If the measure of the successive degrees of income remains constant, and if there is no change in the numerical ratio between the recipients of income of successive degrees, an increase in the quantity of the total income is a necessary and sufficient cause, either of a rise in the minimum income, or of an increase in the numerical ratio between the recipients of income of one degree and of the degree next beneath in the scale, or of both these together; that is to say, on this account, the inequality of fortunes is attenuated. When we consider the matter closely, we see that we have here an elementary arithmetical truth, or rather a tautological statement. In reality if, the other elements remaining constant, the minimal income increases, this very fact implies that the sum of all the incomes above the minimum (by hypothesis remaining unvaried), together with the now increased minimum income, becomes larger, that is to say, the total income increases. In such conditions, the increase in the minimum income is equivalent to the increase in the total income, nor can the former increase without an increase in the latter. In other words, the increase in the total income is a necessary condition of the increase in the minimum income. On the other hand, if the total income increases while the incomes above the minimum remain constant, it is perfectly clear that the increase in the total income can be effected only by an equivalent increase in the minimum income; that is to say, in the supposed case, the increase in the total income necessarily and *per se* implies an increase in the minimum income, or the former is a sufficient condition of the latter.

But it is no less evident and tautological that the increase in the total income is a necessary and sufficient condition of an increase in the numerical ratio between the recipients of income of one degree and of the degree next beneath. In fact, according as there occurs an increase in the numerical ratio between the recipients of income of a given degree and those of the degree next beneath in the scale, it is necessary that a part of these latter should have annexed a new mass of income enabling them to rise to the sphere of income next above; and this, if all the other elements be supposed constant, cannot occur without an increase in the total quantity of income. Thus, an increase in the total quantity of income is the necessary condition of an increase in the numerical ratio between the higher recipients of income and the lower.—But I say more than this; I say that the increase in the total quantity of income, supposing that there exists identity of numerical ratio between the recipients of income of diminishing degrees, and supposing the minimum income to remain constant, is a sufficient reason why the numerical ratio of the recipients of income of each degree to the recipients of income of the degree next beneath in the scale increases. In fact, an increase in the total income, if the minimum income remains constant, necessarily involves an increase in the mass of income received by some group of recipients of an income above the minimum; that is to say, it involves the ascent of a part of the recipients of income of this degree to a higher degree; that is to say, it involves an increase in the numerical ratio between the recipients of income of this higher degree and the recipients of income next beneath in the scale. But since the numerical ratio between the recipients of income of two successive degrees is by hypothesis equal for all the degrees of income, it follows that what occurs of any two successive degrees of income must occur throughout the scale; and therefore that the number of the recipients of income of each degree must increase relatively to the number of the recipients of income of the degree next beneath in the scale. Therefore the increase in the total income necessarily brings it about that the ratio of the recipients of income of each degree to those of the next degree beneath in the scale increases; that is to say, the increase in the total income is *per se* a sufficient condition of the diminution in the inequality of fortunes.[1]

If, then, we suppose that the increase in the total income raises to the income next higher in the scale an equal quantity of the recipients of income of the various degrees, we find that each of the groups of the recipients of income of the various degrees loses, in consequence of the ascent of a part of its members to the degree next above in the scale, exactly as much as it gains by the absorption of a part of the recipients of income from the degree next beneath in the scale—if we except the recipients of income of minimum degree, who lose without any corresponding gain, and the recipients of income of maximum degree who gain without any corresponding loss. Therefore the number of the recipients of income of maximum degree, and the ratio of these to those beneath, increases; the number of the recipients of income of minimum degree and the ratio of these to those above, diminishes; whilst all the other groups remain unchanged in number; that is to say, the numerical ratio between the successive groups of the recipients of income, whilst remaining constant in the case of the central groups, is changed as regards the ratio between these and the recipients of income of maximum and of minimum degree.

Apart from these purely arithmetical influences, the variations in the quantity of the total income exercise certain purely economic influences to bring about changes in the numerical distribution of the recipients of income.—We have seen, in fact, that an increase in the total quantity of income has a twofold influence, accentuating, on the one hand, and attenuating, on the other, the struggle between incomes, but that the second of these influences is regularly stronger than the first; it follows that the net outcome of an increase in the total

[1] If Pareto (*Cours*, II, p. 320) affirms that these conclusions can be demonstrated only by the aid of mathematics, this proves that the abuse of spectacles renders the wearer unable to read with the naked eye.

income is an attenuation of the struggle between incomes. Now, the rise in the total income, by attenuating the struggle between incomes, diminishes the numerical increase in the recipients of income as we descend in the scale of incomes, or increases the numerical ratio between the recipients of income of each degree and those of the degree next beneath in the scale; that is to say, it mitigates the inequality of fortunes. Conversely, everything that diminishes the total income increases the rate of increase in the recipients of income as we descend in the scale, or increases the inequality of fortunes. Hence, all the facts which directly or indirectly bring about a diminution in the total income, such as the operation of the law of diminishing returns from land, an increase in subsistence, commercial crises or industrial depressions, protection, income tax, or taxation of luxuries, exercises an indirect influence in accentuating the numerical increase in the recipients of income as we descend in the scale.

Nor is this all. In the case of differentiated income, an increase in the quantity of total income, by attenuating the struggle between incomes, diminishes the proportion of the recipients of income who are precipitated into the sphere of the incomeless; whilst, by favouring an increase in subsistence, it increases the proportion of the labourers who rise into the class of the recipients of income; hence there is at work a twofold influence, whereby an increase in the total income increases the numerical ratio of the recipients of income to the incomeless.

5. *The Variations in the Quantity of Subsistence.*

In the first place, these variations modify the numerical distribution of the recipients of income, by the very fact that they induce a change, in the inverse direction, in the total mass of income; and this falls under the heading last considered. Independently of this, however, a rise in subsistence intensifies the struggle between subsistence and income, and is especially injurious to the lesser and the medium recipients of income, leading to the fall of many of these into lower spheres. Hence an increase in subsistence leads to an advance in the rate of numerical increase in the recipients of income as we descend in the scale, that is to say, it accentuates economic inequality; and conversely. On the other hand, a rise in subsistence leads to the ascent of a part of the labourers into the class of the recipients of income, thereby increasing the numerical ratio between these and the incomeless; that is to say, in this respect the increase in subsistence attenuates inequality.

6. *The Variations in the Quantity of the Population.*

We have previously seen that an increase in the population, even if there be a proportional increase in capital and in agricultural produce, renders the struggle between incomes more intense. Now, inasmuch as the numerical increase in the recipients of income as we descend in the scale of incomes is proportionally more rapid according as the struggle between incomes is more intense, it follows that an increase in the population, by the very fact that it effects an intensification of the struggle between incomes, increases the inequality of fortunes. —If population increases in greater or in less proportion than capital, there results a diminution or an increase in the figure of subsistence, the indirect influence of which (as we have just said) is to attenuate or to accentuate the numerical increase in the recipients of income as we descend in the scale.—Hence a diminution in the birth-rate, or an increase in the death-rate, or emigration, by increasing individual subsistence, intensifies the struggle between subsistence and income, and therewith accentuates the numerical increase in the recipients of income as we descend in the scale; whilst the inverse phenomena have the opposite effect.

But if we suppose the average birth-rate and the other demographic factors to remain constant, the numerical increase in the recipients of income as we descend in the scale undergoes modification by reason of the varying birth-rate among the recipients of income of different degrees. It is well known that among the greater recipients of income the birth-rate is less: it may be because they marry heiresses, belonging *ipso facto* to comparatively infecund families; it may be because the dissipated life of their wives impairs the procreative power of these; it may be (as Maurel contends) because unduly luxurious feeding induces arthritism, gout, and infertility; it may finally be (if we except the recipients of maximum income who are exempt from all troubles of this nature) because they are afraid of splitting up their property among several heirs. Therefore, leaving the recipients of maximum income out of consideration, the fertility of recipients of income is inversely proportional to their incomes.—Moreover, it is statistically established that those recipients of income who fall into a lower sphere of income, exhibit a sudden increase in their birth-rate, which becomes approximated to the average birth-rate of the lower classes. Nor is this all, for the major recipients of income, in addition to having a lower birth-rate, exhibit an ever-increasing preponderance of female births over male, which leads, sooner or later, to an extinction of the male line.—Finally, the lower marriage rate of the superior recipients of income, the sons' predecease of their parents which inevitably manifests itself at a certain moment in the life of the more wealthy stocks, and other solvent influences which high income of itself originates, lead to a very noteworthy result—namely, the more or less rapid extinction of the classes of the superior recipients of incomes.[1]

Now, all these phenomena have the most significant influence in modifying the numerical distribution, it may be of the consumers of income, it may be of the recipients of income. In the first place, the inverse ratio between the entity of the income and the fertility of the recipients of income, has as its primary result the fact that the income immediately received by its holder is actually enjoyed in use by an ever smaller number of individuals in proportion as the degree of the income

[1] In this respect the researches of Fahlbeck as to the Swedish nobility are extremely valuable. This writer shows that the frequency of celibacy, the greater and greater delay of the marriage of the males, the high and increasing proportion of sterile marriages, the low and diminishing birth-rate (now 15·4 per 1000) always lower than the death-rate, and which undergoes a sudden rise only in those families (from one-eighth to one-tenth of the whole) who fall into the lower strata of society, the increasing preponderance of female births, and finally the increasing mortality of the males less than twenty years of age, or the sons' predecease of their parents, which invariably tends to appear in the noble class, depress the average life of the noble families beneath that of the families of the lower classes. It follows from this that 76% of the original noble families are now extinct, and that, notwithstanding the continued ennoblement of bourgeois families, there is no increase, but rather a decline, in the number of noble families. Fahlbeck is careful to add that all this applies with equal force to the whole wealthy class, of which the titular nobility is merely a fragment (*Der Adel Schwedens*, Jena, 1903, pp. 51, 74, *et seq.*).—Analogous researches in England lead to the same conclusion.

is higher. It is true that a high income, while diminishing the birth-rate, simultaneously diminishes the death-rate, and that the second fact serves, at least in part, to counteract the influence exercised by the first in diminishing the number of the consumers of the greater incomes. Since, however, the fall in the death-rate encounters far more immediate and peremptory limitation than the fall in the birth-rate, it follows that the inhibitory influence of the diminished birth-rate of the major recipients of income invariably makes itself felt. Hence the number of consumers of the greater incomes exhibits a ratio to the number of consumers of the lesser incomes which is lower than the ratio between the number of major and the number of minor recipients of income ; that is to say, the consumers of income of different degrees are distributed according to a pyramid far more accentuated than that which represents the distribution of the holders of the said incomes ; and the disparity between the incomes per head of different degrees is much greater than the disparity between the corresponding incomes per family. It follows from this, that, as the pyramid representing the recipients of income becomes more acute, the pyramid representing the consumers of income of diminishing degrees becomes more acute to a greater extent. It follows, also, that the increase in the disparity between the degrees of income, by accentuating the disparity between the birth-rates among the recipients of income of different degrees, has as its result that, in the case of the consumers of income, the increase in their numbers as we descend in the scale is more rapid than the increase in the numbers of the corresponding recipients of income ; hence it follows that the disparity between the incomes per head of the various degrees is proportionately greater than the disparity between the corresponding incomes per family.

Moreover, the greater female birth-rate in the higher classes has a marked effect in diminishing the numerical ratio between the recipients of income of higher degree and those beneath them in the scale. In fact, since the available income of one member of a married pair is equal to half the income received by the two in common, it follows that an individual who receives a given income and marries one in receipt of a lesser income, descends by this very fact to a lower degree of income. Now, in the group of the higher recipients of income, the females born in excess of males must necessarily mate with males who receive incomes of lower degree, that is to say, they must abandon the higher income to descend to income of lower degree. From this it follows that the number of recipients of greater income undergoes diminution while the number of recipients of lesser income increases, in contrast with what would happen if the female births were equal in number to the male births.[1]

This result is greatly aggravated by the process of progressive extinction to which is subject the stock of the greater recipients of income; and this gives rise in a twofold manner, direct and indirect, to an increasing acuteness in the pyramid of the recipients of income.—It is, in fact, evident that the extinction of a part of the families enjoying the higher incomes, and the consequent annexation of their wealth by the remaining families, diminishes the number of the greater recipients of income, and simultaneously raises the figure of their individual incomes, increasing therefore the disparity between these incomes and those beneath them in the scale; this, by intensifying the struggle between the incomes of higher degree, and also that between these and the lesser incomes, increases the number of the recipients of income who fall into lower spheres of income, and increases therewith the numerical ratio between the lesser recipients of income and the greater. There is thus at work a twofold series of influences to render the pyramid of the recipients of income more acute at its vertex, and wider at its base, determining—for the reasons given above—that the pyramid representing the consumers of income of diminishing degrees becomes yet more acute in form.—In this way a number of interacting demographic influences tends to bring about a progressive reduction in the number of the recipients of greater income as compared with the number of the recipients of average or of small income, and thus to render ever more accentuated the pyramid of the recipients of income.

[1] Unquestionably the same effect would result if there occurred in the upper classes an excess of male births over female births; and the phenomenon indicated in the text can be avoided only by a numerical equality in the birth-rate of males and of females.

7. *The Action of the State.*

Finally, the action of the State exercises a certain influence in modifying the numerical distribution of the recipients of income. Thus it is certain that the various provisions we have previously considered whose aim it is to raise or to reinforce the minor incomes, and correlatively to depress the major, attenuate more or less sensibly the numerical increase in the recipients of income as we descend in the scale. Conversely, privileges conceded to the great incomes, labour legislation, which is often a sentence of death to the small and medium manufacturers, and regressive taxation, bring about an increase in the large incomes to the detriment of the small, thus tending to invert the pyramid of the recipients of income. It is certain that the "politics of income" (*Einkommenspolitik*), as laws of this character are pompously called, whose aim it is to effect a change in the distribution of income either in the aristocratic or in the democratic direction, effect a correlative modification in the hierarchy of the recipients of income.

If we now proceed to ask what is the ultimate outcome of all the influences hitherto analysed, or whether in the course of economic evolution the numerical distribution of the recipients of income tends to become more or less unequal, it will not be difficult, after all that has been said, to find the answer. The very struggle between incomes, proceeding without pause, continually increases the share of the total income which is agglomerated in the incomes of high degree, thus accentuating the disparity between individual incomes, accentuating, that is to say, the primary factor of economic inequality.—On the other hand, the incessant progress of the struggle between incomes accentuates ever more and more the progressive numerical reduction in the recipients of income as we ascend in the scale, therewith rendering inequality more acute. There is superadded to this, in the production of the same result, the fact that the struggle between incomes tends to become more acute in the successive forms of income. Such is the obvious outcome of these considerations. It results, in fact, from what has been said, that, whenever we pass from undifferentiated to differentiated income, the numerical increase in the recipients of income as we descend in the scale becomes more acute. Therefore the formation of capitalist property leads *per se* to an aggravation of economic inequality. But every successive phase of differentiated income, rendering ever greater the predominance of incomes derived from movable property (among which are included the fluctuating incomes) over the incomes derived from immovable property (which are normally consolidated), increasing the disparity between incomes, increasing subsistence, and therewith rendering more intense the struggle between subsistence and income which is injurious to the minor recipients of income, increasing, finally, the total number of the recipients of income and the density of the population—renders necessarily more acute the numerical increase in the recipients of income as we descend in the scale. Finally, the extinction of an increasing proportion of the recipients of income of the superior groups, by further increasing the disparity between incomes, also intensifies the struggle between incomes, and therewith accentuates the numerical increase in the recipients of income as we descend in the scale. It follows that, in each successive form of income, the distribution of the recipients of income tends to become ever more unequal.

Recalling, however, what was previously demonstrated, that the numerical increase in the recipients of income as we descend in the scale of incomes is, *ceteris paribus*, inversely proportional to the quantity of the total income, it must now be added that, in any one form of income, the numerical increase in the recipients of income as we descend in the scale of incomes exhibits two clearly distinct phases; inasmuch as this increase tends to become attenuated during the ascendent phase of income, in which the quantity of the total income is increasing, whilst it becomes very markedly accentuated in the inevitably succeeding phase of decline, in which the total mass of income gradually diminishes. Hence, considering the whole series of the successive forms of incomes, we may conclude that the numerical increase in the recipients of income as we descend in the scale of incomes becomes accentuated whenever the income ascends to a superior form, undergoes gradual attenuation (remaining always at a more elevated level than in the preceding phase of income) during the ascendent phase of this superior form, to become once more accentuated during the subsequent phase of decline.[1] Finally, since we have seen that in the case of differentiated income the numerical ratio between the recipients of income and the incomeless is directly proportional to the total quantity of income, we are led to the conclusion that, in the ascendent phase of each form of differentiated income the numerical ratio between the recipients of income and the incomeless tends necessarily to increase, whilst, in the inevitably successive phase of decline in the quantity of the total income, that ratio, on the other hand, progressively diminishes.

This conclusion affords the most decisive condemnation of the thesis of Marx, according to which the progressive reduction in the number of the recipients of income consequent on the struggle between incomes will be the essential factor leading to the ultimate destruction of the capitalist economy. The theory is well known. Just as, according to Darwin, the struggle between organisms unequally endowed, by leading to the survival of the fittest, gives rise to the organic evolution of gradually ascendent forms, so also, according to Marx, the struggle between incomes quantitatively diverse, by leading to the progressive reduction in the number of the recipients of income, gives the impulse to the economic evolution of the capitalist system to the higher collectivist form. Now, it is clear at the first glance that to the struggle between incomes, a constant and customary phenomenon in all periods of ascent or of decline of income, we cannot reasonably attribute any such revolutionary influence. For if, in the periods of the decline of income, the struggle between incomes becomes more intense, and if, in consequence of this, economic inequality becomes more marked and there occurs a reduction in the number of the recipients of income, this implies that the accentuation of the struggle between incomes, the increase of inequality, and the reduction in the number of the recipients of income, presuppose the decline of the income, and therefore cannot be the cause of that decline. Thus the sequence of the phenomena is the absolute reverse of that which is indicated by Marx. What

[1] Thus are corrected the considerations expounded in the *Cost. ec. od.*, p. 750. See also *Ibid.*, p. 745.

happens is, not that the accentuation of the struggle between incomes leads to the decline and to the dissolution of the income ; but that a series of factors bound up with the very structure of every form of income, leads, at a certain point, to its decline, and that this decline intensifies the struggle between incomes, and renders the social pyramid more acute. Undoubtedly, the accentuation of the proportional increase in the number of the recipients of income as we descend in the scale of incomes, and the numerical reduction in the recipients of income, which are thus brought about, may proceed to the point at which they impose restrictions upon the productive forces, and lead to a further decline in income ; but it is none the less true that the decline of income is ever the primary phenomenon, whilst the accentuation in the inequality between the recipients of income and the reduction in their number are no more than derivative and secondary phenomena resulting from that decline.

The numerical distribution of the recipients of income changes, not only in time, but also in space ; that is to say, the distribution of the recipients of income differs, not merely in a single country at different times, but also in different countries at one and the same time. In fact, the predominance of incomes from movable property, the disparity between incomes, the figure of subsistence, the number of the recipients of income, and, in a word, all the determinants of the numerical differentiation of the recipients of income, exhibit themselves in a more intense degree in the more advanced countries. These countries, therefore, will normally present a more marked increase in the number of the recipients of income as we descend in the scale of incomes; and, correlatively, will exhibit a more sensible mitigation of this increase during the ascendent periods of income, and a more marked accentuation of this increase during the declining periods of income. And since the countries industrially more evolved are those in which the productivity of land on the margin of cultivation is least (because the coercion to the association of labour is less intense and therefore the productive forces exhibit a greater freedom and elasticity), it follows that we may generally infer that the intensity of the inequality normally present in the different countries in the matter of the distribution of income, and the greater or less, positive or negative, variations in that inequality, will be indirectly proportional to the fertility of the lands under cultivation in these respective countries.

The previous considerations suffice for the categorical condemnation of a theory dominant to-day, which affirms that the pyramidal distribution of the recipients of income is bound up with immutable and irreducible conditions of human nature, and more particularly that it depends upon inborn differences in individual capacity. If, indeed, we classify a sufficiently large number of individuals in accordance with their respective mental capacities, we see that their distribution is represented by a binomial curve, or by a hyperbola; for smallest of all is the number of individuals endowed with maximum ability, while there is a gradual increase in the number as we pass to individuals whose ability is less, until we reach the average degree of ability, where is assembled the maximum number of individuals; when we pass below this level of ability, the number of individuals once more gradually diminishes, and this diminution continues as we descend in the scale of ability, until at length we reach the level of minimal ability, that of the idiots, whose number is almost as small as that of the geniuses. Now, it is the contention of these writers that the distribution of men classified according to their wealth is represented by the same curve. They contend that if we observe a sufficiently large number of individuals, we find that the recipients of the maximum incomes are very few in number, and that as we descend in the scale of incomes the number of recipients gradually increases until we reach the average income, at which level there is a maximum number of holders; whilst below this level, as we descend in the scale of incomes, the number of recipients progressively decreases until we attain to the recipients of minimum income, who are almost as few in number as the recipients of maximum income.—Now, these writers conclude, this precise parallelism between the distribution of income and that of ability suffices *per se* to prove that one is nothing more than the outcome of the other; that is to say, that men attain to an income more or less extensive by producing it, or by making use of the greater or less mental capacity with which they are endowed by nature.

It need hardly be said that this doctrine is agreeable to the powerful and to the rich, since it affords the much needed justification for their enormous incomes.

Now there is a great deal to be urged against this doctrine. First of all, the alleged parallelism between these two curves representing income and ability in no way authorises the conclusion that the incomes are a product of ability and proportional thereto, for we might just as well infer the precise opposite, namely, that ability depends upon income.—Besides, for the parallelism between the two curves to establish in any way the dependence of income upon ability, it would be necessary to show that the individuals who are assembled at various points of the curve which represents incomes are *precisely those* who occupy analogous positions in the curve which represents ability. Now this proof, it need hardly be said, is given and can be given by no one; and in its absence the two curves remain devoid of all significance in relation to our problem.

In reality, however, this forced analogy between the two curves respectively representing ability and income does not exist; for the recipients of income gradually diminishing in degree are distributed, not in accordance with a binomial curve, but in accordance with a pyramid. Hence, there is an identity of distribution between the first half of the series of incomes, as we proceed from the maximum income to the average income, and the corresponding half in the series of abilities: but as soon as we pass below the average income and the average ability, and proceed gradually downwards to the respective minima, the two series of incomes and of abilities diverge in the most absolute manner; for whereas the number of individuals endowed with a diminishing degree of ability below the average is a *diminishing* one, the number of individuals who receive a diminishing amount of income below the average is an *increasing* one. Whereas, therefore, ability is distributed in accordance with the binomial curve of which the middle portion represents the maximum density; income is distributed according to the first half of a binomial curve, of which the middle portion approximately represents the average density. In view of these considerations, how is it possible to speak of any analogy whatever between the two series?

Let us admit, however, that, at the outset, abilities, like income, are distributed in accordance with a pyramid. Even on this hypothesis, a coincidence between the degree of income and the intellectual level of its recipients can exist only at the initial instant of development, and must speedily disappear; for the struggle between incomes soon leads to the fall of a part of the recipients of income of a high degree, and therefore endowed by hypothesis with high ability, to a sphere of income lower in the scale, which latter sphere thus necessarily comes to consist of individuals whose respective abilities vary greatly in degree.

Moreover, the very fact of the fatal impoverishment of the heirs of the owners of property, and that of the lucky ascent of the children of the poor into the zone of the recipients of income—do not these suffice *per se* to disprove any possible connexion between income and ability? If, in fact, the greater recipients of income are what they are thanks to their superior mental capacity, it is difficult to understand how this capacity is used up in a single generation, and is not indefinitely transmitted from generation to generation.

If, moreover, the lesser recipients of income, or the incomeless, owe their position to their inferior capacity or to their degenerate condition, it is absolutely incomprehensible why their children should suddenly acquire the superior qualities which are lacking to the parents, and which alone can launch the children on the way to the conquest of fortune. On this doctrine, therefore, the rotation of classes appears absolutely inexplicable. As soon, however, as we recognise that income is altogether unrelated to the capacity of the recipients of income, that it is not an attribute of persons but an emanation of things, we can readily understand how a change in objective conditions may transfer income from its actual recipients to others, and the perennial rotation of the recipients of income thus immediately becomes explicable and perfectly rational.

Again, if the numerical distribution of the recipients of income were in any way the outcome of the distribution of ability, it ought to present an absolute and immutable constancy, corresponding to the absolute constancy in the distribution of intellectual aptitudes in different times and places. But, as we have seen, the numerical distribution of the recipients of income exhibits the most marked oscillations, in correspondence with every qualitative and quantitative change in income, in the total number of the recipients of income, and in the population, and this fact peremptorily contradicts the speciously simple doctrine, that the economic hierarchy is the exclusive outcome of the mental hierarchy.

For the refutation of this doctrine, however, it suffices to study the origins of individual capitalised properties. We learn from this study that the acme of financial wealth is attained, not thanks to superior mental capacity, but simply by the most infamous wiles and machinations, that it is not the index of heroism or of glory, but that it bears the unclean stamp of baseness and infamy.[1]

[1] In this connexion consult the following : *An Appeal to our Millionaires*, "North American Review," 1906, p. 810. Jenks, *Great Fortunes, the Winning, the Using*, New York, 1906, pp. 41–2. Russell, *Lawless Wealth*, pp. 272, *et seq.* Anna Youngman, *The Fortune of John Jacob Astor*, "Journal of Political Economy," 1908. Lawson, *Frenzied Finance*, London, 1906, pp. 282, *et seq.*

CHAPTER VII

REVOLUTIONS OF INCOME

We saw in the fifth chapter that in every form of the coercive association of labour, or of the income which emanates therefrom, the productivity of labour describes a parabola. In fact, in the ascendent phase of the income, wherein the positive influences of the coercive association of labour are predominant, in the phase, that is to say, characterised by the increasing efficiency of labour, the productivity of this last exhibits a progressive increase ; whereas in the declining phase of the income, wherein the negative influences of the coercive association of labour are predominant, in the phase, that is to say, wherein are most potent the restrictions which the coercion imposes upon the efficiency of labour, the productivity of labour exhibits a progressive diminution. Further, in the sixth chapter it was shown that this decline in the productivity of coercively associated labour is, in addition, accentuated in consequence of the limits imposed upon production by the struggle between incomes and by the pyramidal distribution of the recipients of income. Now the diminution which thus manifests itself in the productivity of coercively associated labour, does not take the form of a diminution of subsistence, which is commensurate to the product of isolated labour (or, if inferior to this, is not easily reducible), but appears as a diminution of income ; income, therefore, during the declining period of every economic form, is subject to an inevitable regression.

The decline thus arising in the productivity of coercively associated labour weakens the income that is founded upon associated labour, and therefore diminishes its power of attack upon the income that is founded upon isolated labour. The consequence is that a part of the income founded upon isolated labour, which, in the normal conditions of the coercive association of labour, cannot persist, or can nowise flourish, because it is suppressed by its economic environment, now persists and flourishes as the technical efficiency of the coercive association of labour declines. Thus, whilst a part of the income founded upon associated labour is overwhelmed, a new income founded upon isolated labour makes its appearance. Nor is this all, for isolated labour, notwithstanding its intrinsic productive inefficiency, may now come to produce an income equal to, or even relatively greater than, that produced by coercively associated labour in its weakened and degenerate condition; so that far from being overcome by the competition of the income from coercively associated labour, the income from isolated labour increases at the other's expense. In correlation with this process of contraction undergone by the coercive association of labour, or as a mental reflex therefrom, there occurs an increase in the doctrinal criticism of the income founded upon the coercive association of labour, and in such periods of disintegration this criticism attains to its greatest violence.

Indeed, all the forms of the coercive association of labour, as soon as their decline sets in, present with marvellous regularity the significant phenomenon of the resurrection of isolated labour, which then suddenly emerges from the shade, or from the state of sporadic manifestation to which it was condemned during the ascendent phase of the income, to assume at one bound a prominent and dominant position. Thus the communist economy, when its sun is setting, gradually breaks up, at first at its confines and then more and more extensively, so that it ultimately becomes parcelled out into a multitude of discrete petty properties. Even clearer is the evidence of this phenomenon at the close of the slave economy; for in classical antiquity, as in modern America, slave enterprise, having become incapable of furnishing a sufficient product, undergoes dissolution, and is immediately replaced by a multitude of petty properties, belonging to the former slaves now freed, or to the former slave-owners now impoverished. The same phenomenon manifests itself at the close of the feudal economy; for this, having come to suffer from the like irreparable lack of productive force, finally breaks up into a multitude of dissociated petty properties or of independent crafts.

The same phenomenon manifests itself in our own time, although as yet to a limited extent. Of late years, in fact, since the decline in income has set in in all civilised countries, there begins to be noted a reappearance of peasant proprietorship and small industries, which during the ascendent period of the income had been altogether overwhelmed by the concentration of production. Thus, in Denmark it is observed that small proprietorship in land furnishes a larger product than is furnished by great estates, the former rising to the figure nowhere else attained of 37·3 hectolitres of wheat per hectare.[1] The researches of Jensen show that in Denmark small culture (which, however, does not necessarily coincide with isolated labour) is more intense, yields a larger proportion of forage, sustains a comparatively larger quantity of cattle, and, finally, yields a larger net income per hectare; for the income of estates under great culture is L115, of those under medium culture L122·50, and of those under small culture L168·75. In Germany, too, the income per hectare is inversely proportional to the size of the estate, being for estates of

Hectares.		Marks.
3–5	....	675·65
5–10	....	501·85
10–15	....	414·46
15–30	....	399·05
more than 30	....	380·30[2]

In Germany we find, moreover, that agricultural progress is limited to the estates of the small proprietors,[3] and that in proportion as culture becomes more intensive, the replacement of the great culture by the small becomes an inevitable necessity.[4] We may go even further, and point out that in England, hitherto the classical land of great estates, the small cultivator makes head against the great, the number of large estates declines, while the number of small estates increases, especially

[1] Giglioli, *Malessere agrario ed alimentare in Italia*, Portici, 1904, p. 34. This does not conflict with what was stated earlier in this work (p. 155), that the product per hectare is greater on the larger estates; for this applies to ascendent periods, not to periods of decline.

[2] Laur, *Volkswirtschaftliche Einkommen*, etc., p. 240.

[3] Bulgakoff [*Capitalism and Agriculture*], Petersburg, 1900, I, p. 126.

[4] Consult David, *Sozialismus und Landwirtschaft*, Berlin, 1903, pp. 415, 656, *et seq.*—a work all the more worthy of note in that the writer is a socialist who finds himself forced in this matter to dissent from the dogmas of his party.—In the same sense writes Vandervelde, *Le socialisme agraire*, Paris, 1908, pp. 80, *et seq.*, 121, 138, *et seq.*—The same phenomena are seen in Holland ("Jahrbücher, N. Œ.," 1907, p. 558).

in the agricultural counties[1]; so that Haggard, as the outcome of a careful and profound study of the rural conditions of his native land, comes to the conclusion that England cannot escape from her present difficulties, nor restore her depopulated and exhausted lands, except by the introduction and generalisation of peasant proprietorship.[2]

In this way, each form of the coercive association of labour, after having endowed labour with a productivity superior to that of dissociated labour, comes, in consequence of the increasing limitations imposed upon production by this very coercion, gradually to decline in productivity, thus tending more and more to lose its advantage over dissociated labour; at a certain point, therefore, dissociated labour reappears, and reacquires importance and dominion, inaugurating a period of crises and universal disaggregation.[3] But dissociated labour, although in exceptional circumstances it may produce an income, cannot in the long run produce more than the labourer's subsistence. Hence the renascence of dissociated labour imposes upon the producer a condition of weakness and impotence, which *per se* paves the way for the reappearance of associative coercion.—Thus the coercive association of labour, temporarily dissolved, is sooner or later reconstituted; but this reconstitution is effected in a superior form, imposing less rigid restrictions upon the efficiency of labour, and therefore capable of giving a product more considerable than that which was

[1]

Year.	Number of Estates from 50 to 300 acres.	Number of Estates of 300 acres and upwards.
1885	144,288	19,361
1905	150,561	17,918

("Jahrbücher," 1907, p. 241).

[2] Haggard, *Rural England*, II, p. 575. In the same sense: Hahn, *loc. cit.*, pp. 422, 565–8; Shadwell, *Industrial Efficiency*, London, 1906, II, p. 455; Thompson, *Journal St. Soc.*, 1907, p. 611.

[3] "Vico's theory of 'recurrence' is no more than a presentiment of that fatal day in which the field of nature will be exhausted and in which there will ensue a period of decadence, to give place in its turn to a new enlargement of the field of nature, to be once more followed by a period of decadence, when the field of nature shall have been wholly occupied. The doctrine of the end of the world, which is to be found in a number of religions, is merely the presentiment of the disaster that will ensue when the whole field of nature shall have been occupied." Ferrara, *Lezioni di econ. pol.*, I, p. 228.—The lamentations of St. Cyprian upon the decrepitude and exhaustion of the world, and those of Latimer upon universal ruin, are no more than the echo of these phenomena of social decomposition, which manifest themselves in dissimilar forms, yet always characterised by essential analogy, at the close of the classical and of the medieval economy.

obtained by the preceding form of coercively associated labour. Thus by a twofold process of dissolution and recomposition, or, more concisely expressed, of revolution, of income, there is effected that natural evolution of the economy to forms continually less restrictive, or ever more efficient, of the coercive association of labour, or of income, whose main outlines have been traced in an earlier chapter.[1] But the ultimate outcome of this evolution is to produce a form of income which furnishes the maximum product obtainable by coercively associated labour. Now, at this point it becomes impossible to repair the deficiency in product and in income by instituting a superior form of the coercive association of labour—for no such form exists. At this point, the necessity for increasing the productivity of associated labour involves the necessity for instituting, not now a further form of the coercive association of labour, which is inadmissible, but the free association of labour, which is endowed with a higher productivity for the very reason that it is immune from the restrictive influences of coercion.

The coercive association of labour represents a significant technical advance upon dissociated labour, or upon the isolated and anarchical production which is the corollary of dissociated labour. But the coercive element involved in such association imposes upon production and upon income a series of progressive restrictions which, under the stress of the increase in population, ultimately result in the destruction of the prevailing form of the coercive association of labour, or of the form of income thereon based. As long as the coercive association of labour is susceptible of ameliorative transformations, the influences restrictive of production, and ultimately leading to the destruction of the particular form of income, do not eventuate in the disappearance of the coercive association of labour, but only in its transformation—they result, that is to say, in the replacement of the existing form of coercive association by a more productive or superior form. But when the series of degrees of productivity of which the coercive association of labour is susceptible has been completely traversed, when the productivity of coercively associated labour has at length attained to its maximum, the constitutional antagonisms with-

[1] P. 121, *et seq.*

in the prevailing form of the coercive association of labour, which lead to the ruin of that form, being unable to replace it by a more efficient form of the coercive association of labour (since no such form exists), must necessarily replace it by the free association of labour, since this last alone offers an advance upon the form which has to be replaced. At this point, therefore, we no longer have to do with a revolution in the coercive association of labour, but with its inevitable destruction.—The time has, in fact, at length arrived for the overthrow of that age-long and all-powerful giant by whom has been dominated the whole history of the human race, and fort he establishment of a lasting and equitable organism, that of the free association of labour, which henceforward can alone represent a superior form of production and of economy.—Since, moreover, we have seen that differentiated income is always founded upon the coercive association of labour, whereas undifferentiated income may be based either upon coercive or upon spontaneous association, it follows that at this point it becomes inevitable to institute undifferentiated income; that is to say, undifferentiated income is by inevitable necessity the final form of economy.[1]

It is a notable fact that the increase in population, at the very same time that it renders necessary the transformation of the coercive association of labour into the spontaneous association, creates the possibility of effecting this transformation, and thus provides together with the problem the means for its solution. It will not have been forgotten that the coercion to the association of labour is the result of that degree of fertility of the soil given which the labourer can obtain a subsistence, and nothing more, by means of isolated labour alone ; for the existence of this degree of fertility *per se* excludes the fact that he will be induced to associate his labour spontaneously with that of other producers, whilst at the same time it renders him economically weak, and therefore unable to resist a coercively associative process. Now, as population increases, and thus renders necessary the cultivation of land which is less and less productive, the product of isolated labour

[1] It is hardly necessary to add that undifferentiated income is susceptible of greater complexity and variety, and is therefore compatible with the more advanced stages of economic evolution.

continually diminishes, until it at length falls below the amount necessary to provide a bare subsistence for the producer. At this point the unavoidable necessities of life at length lead the producers to associate their labour spontaneously; at this point, that is to say, there appears for the first time the possiblity of effecting the spontaneous association of labour.

The various examples of the spontaneous association of labour which are found to have existed in former days (although, as we have seen, as regards the examples commonly adduced, spontaneity existed merely in appearance) were probably due to the exceptional manifestation of limited productivity of the soil, whereby the product of isolated labour was depressed below what was necessary for the subsistences of the producers.[1] Apart, however, from such retrospective considerations, we find that this phenomenon manifests itself already to some degree in our own days, owing to the declining productivity of the land. Assuredly, the reluctance to the association of labour, in every country of the globe, is even now tenacious, and almost invincible. Thus, in Sicily, the lack of an associative spirit proves an obstacle to the creation of agricultural co-operative societies, and leads to the dissolution of those which have with difficulty been founded[2]; in Ireland the movement for the diffusion of co-operation and for the creation of free associations, initiated in the year 1889, proves a failure, and this failure is attributed by contemporary writers to the insurmountable obstacle encountered in the resistance of the agricultural classes, who are supposed to be dominated by "the individualism characteristic of the Celtic races." Similarly, an English writer speaks of the anti-co-operative inclinations of the English, dependent upon their individualist sentiment[3]; whilst a French writer tells us that there is little inclination to the practice of association among his co-nationals, who

[1] This consideration suffices to explain the fact pointed out by Cherbuliez (*Riche et pauvre*, Paris, 1840, p. 252), that periods of anarchy are characterised by a sudden manifestation of the spirit of association; for such periods correspond to the appearance of a notable attenuation in the productivity of the land.

[2] Lorenzoni, *Relazione cit.*, pp. 63, 77.—The same thing happens in Russia in the case of consumers' co-operative societies (Totomianz, "Russkaja Müssl.," July, 1906, p. 139).

[3] Devine, *Agricultural Credit Societies*; cf. "Jahrbücher N. Œ.," 1906, p. 762.

would die rather than come to an understanding with their competitors.[1] Of late years, however, *pari passu* with the decline in the productivity of the land, there have germinated in the most diverse regions of the globe forms of spontaneous association, embryonic indeed and imperfect, but such as were inconceivable or unknown in former times. It is a very noteworthy fact, that those forms of economic organisation which in this respect best approximate to the spontaneous association of labour, such as consumers' co-operative societies and co-operative credit associations, are most frequent to-day in those countries in which the density of the population is greatest and the fertility of the soil is least. This fact is displayed by the following table :

Country.	One consumers' co-operative society for inhabitants numbering		One co-operative credit association for the same.
Russia	226,575	......	172,700
Holland	71,878	......	—
Italy	62,306	......	50,000
France	42,528	......	55,640
Germany	36,899	......	4,800
Austria..............	33,548	......	9,700
England	24,496	......	—
Switzerland	9,819	......	—
Denmark	2,325	......	14,000[2]

The most superficial examination of these figures shows that the frequency of consumers' co-operative societies and of co-operative credit associations is least in countries that are sparsely populated and where the fertility of the land is high, greater in thickly populated countries and in those in which the land is less fertile, and maximal (at least so far as consumers' co-operatives are concerned) in the country in which the natural fertility of the soil is minimal, Denmark. In Ireland, under stress of the injury inflicted upon the tenant farmers by American competition and by the exactions of middlemen, we see co-operation triumphing, so that there arise numerous co-operative dairy farms, co-operatives for cattle-breeding, co-operatives for the purchase of raw materials and of machinery, and agricultural co-operative credit associations.[3]

[1] Méline, *Le retour à la terre et la surproduction industrielle*, Paris, 1906, p. 88.

[2] Ozeroff [*Economic Russia*], pp. 234–5.

[3] "Jahrbücher N. Œ.," 1906, pp. 779, *et seq.*; *Recent Growth of Co-operation in Ireland*, "Quarterly Journal of Economics," 1906, pp. 547, *et seq.*

At the same time, in the United States, societies for co-operative production are being instituted, and these exclude at least the initial coercion, even if they maintain the subsequent coercion, of associated labour; recently, moreover, in the State of Michigan, certain miners, learning that the company owning the mine is abandoning a part of its working, have rented this, and have founded a pure co-operative, the Caledonia, which proves successful. Simultaneously, in the Great Republic, there come into existence all kinds of free associations, such as that of the Colonial Dames, that of the Sons of American Civilisation, and numerous working-men's societies.[1] Everywhere free groupings and voluntary federations arise to replace passive obedience. These free groups may already be counted in millions, and new ones are formed daily. They embrace science, art, industry, commerce, mutual aid, and even the defence of territory and insurance against theft, legal proceedings, divorce, or the danger of having twins.[2] In a word, all the forms of human activity may now pursue their ends by means of voluntary associations conducted upon an ever vaster scale.[3] To-day, it is true, all such phenomena are no more than exceptional and sporadic; but they possess a high symptomatic value, as heralds of a new era, or as precursors of that spontaneous association of labour which will be the fundamental economic institution of the coming centuries.

A coercive association of labour which tends towards free association without ever being able to attain to it—here is the synthesis, herein is the essence, of economic evolution in the phases hitherto traversed. But just as the decline which has up till now manifested itself in the productivity of the land has brought about a progressive diminution in the reluctance to the association of labour, and therefore a diminution in the coercion necessary to impose that association; so a further

[1] Certain European writers who have carefully studied the social life of the United States, such as Bryce and Ostrogorski, deplore the growth of such associations, regarding them as imposing harmful restraint upon individual liberty (Ostrogorski, *La démocratie et l'organisation des partis politiques*, Paris, 1902, II, p. 554). But these writers fail to point out that the restraints with which we have to do here are voluntarily imposed by those who submit to them, in order to obviate asymmetry of production or of social life in common.

[2] Kropotkine, *Paroles d'un révolté*, Paris, 1885, p. 212.

[3] Bailie, *Josiah Warren*, Boston, 1906, xxviii–ix.

decline in the productivity of the land, by rendering the product of isolated labour inferior to the subsistence of the producer, will at length altogether annul the reluctance to the association of labour, and will thus open the way for the institution of the spontaneous association of labour.

Summing up the matter, therefore, in broad outline, we may conclude that human labour traverses three principal stages. In the first stage, when the productivity of the soil is exuberant and when isolated labour produces an excess over the subsistence of the producer, *isolated* labour prevails, and constitutes the basis of the *prehistoric age.* In the second stage, when the fertility of the soil has diminished, and when isolated labour produces no more than the subsistence of the labourer, *coercively associated* labour prevails, and this period embraces the whole of *recorded history,* throughout which there occur the distressing and unceasing vicissitudes of an unstable equilibrium. In the third stage, finally, when the productivity of the soil has yet further diminished, and when isolated labour produces less than the subsistence of the labourer, there will arise *freely associated* labour, which will form the foundation of a state of *final equilibrium.*[1]

A primary characteristic of this harmonious economic form is the partial or total reconstitution of that community of origin between subsistence and income which has been cancelled during the period of coercively associated labour. In fact, as soon as the product of isolated labour is inferior to the subsistence of the labourer, the association of labour produces not merely income, but in addition a part of subsistence; that is to say, a term comes to that categorical distinction which has prevailed throughout the period of the coercive association of labour, in virtue of which subsistence is the product of isolated labour and income the product of associated labour. If we

[1] The fantastic assertion of Quetelet (*Du système social et des lois qui le régissent,* 2, s.I, c.4), that the average life of states (or of social phases) is 1461 years, is contradicted by the obvious fact that every economic period, like every geological period, is of less duration than the preceding. On a very rough calculation it may be said that the communistic economy lasted 4000 years, the slave economy 2000 years, and the feudal economy 1000 years; that is to say, that the duration of each social form is one half the duration of the preceding form. If this were truly the case, the duration of the wage economy would be no more than 500 years, and thus the economic order based upon the coercive association of labour could not endure beyond the twentieth century.

suppose the extreme case in which isolated labour is incapable of furnishing any product at all, subsistence and income are both, in their entirety, the product of associated labour, so that we have returned to that primitive state of affairs in which income and subsistence are derived from the same source. This leads, correlatively, to a return to the primitive rule for the quantitative determination of income. For, whereas, when isolated labour produces subsistence alone, the quantity of income is (in normal conditions) equal to the specific product of associated labour and is therefore independent of the quantity of subsistence—when, on the other hand, subsistence and income are both the product, it may be of isolated, it may be of associated labour, the quantity of income is equal to the total product of labour, isolated or associated as the case may be, less subsistence, and thus income becomes a function of the quantity of subsistence.

This, however, is no more than the least remarkable among the characteristics of the latest economic phase. For, with the formation of the spontaneous association of labour there at length arises an economic system altogether immune from coercion, and for this very reason compatible with the unrestricted elasticity of the productive forces. To make use of a simile previously employed, the economic system becomes, in such conditions, a perfectly elastic or indefinitely expansible receptacle, within which the productive forces can develop freely and without encountering any obstacle. It is, therefore, no longer possible for the increase of population to lead to the dissolution of the prevailing economic form, for the increasing development of the productive forces which results from the increasing density of the population can now develop indefinitely within the orbit of the existing economic order.[1] This amounts to saying that there is now at length attained a perfectly stable and indestructible economic form, which finally closes the cycle of social transformations or of economic evolution.—The veiled coercion, which adheres to the association of labour in all the forms hitherto traversed, having come to an end, there disappear all the phenomena which derive from

[1] Herbert Spencer, in his *First Principles*, writes to the effect that a society which has arrived at the ultimate stage of its evolution can no longer be modified by the pressure of population.

that coercion; there cease the disparity between value and effective labour, the existence of independent incomes of various kinds, and the primary disparity of incomes due to the ownership of elements of varying productivity; there no longer exist the antagonism between product and income with the correlative anti-technical limitation of the product; there is no longer a struggle between subsistence and income, no longer a limitation of social accumulation with the consequent excess of population over capital; there is no longer, in fine, a struggle between incomes.—With the cessation of the struggle between incomes, the superior incomes can no longer result from the *annexation* of the income of others, but result simply and solely from a greater *production* due to the efficiency of superior individual abilities: upon this there follows, on the one hand, the necessary exiguity of individual incomes, which are rigorously limited by the efficiency of the productive abilities of individuals; and correlatively there follows the slight degree of disparity between incomes (in contradistinction to the great disparity between individual incomes that are able to increase by means of the annexation of the incomes of others); and there follows, on the other hand, the assignment of the greater incomes to the more efficient and more productive individuals (in contradistinction to the assignment, to the more dishonest and more crafty, of incomes increased by annexation of income from others). The annexation of others' income having come to an end, there no longer occurs the partial destruction of the recipients of income of different degrees, and there consequently ceases the greater reduction in the number of the recipients of income of higher degrees, and therewith ceases the very process that gives rise to the pyramid of the recipients of income; that is to say, the pyramidal distribution of the recipients of income comes to an end, to be replaced by their distribution in accordance with a binomial curve analogous to that representing intellectual aptitudes.[1]

[1] The intense aspiration for equality manifested in every epoch (and especially fervent in children) is substantially nothing more than the unconscious product of the age-long experience of the race in societies devastated by the struggle between incomes; for, in such societies, since the economic superiority of one individual is employed to others' hurt, everyone is instinctively led on grounds of self-preservation to resist any superiority on the

With the cessation of the struggle between incomes there disappears the chief factor of a moral system based upon hatred and upon war, and the way is opened for the spontaneous morality of sympathy and of love. Finally, with the cessation of the technical coercion to the association of labour there cease the derived and superior coercions, that is to say the connective institutions of coercive morality, law, and politics; and there arises for the first time a morality, a law, a political order, emanating from the spontaneous initiative of free associates. The regime of coercion, of inequality, and of war, sinks once and for all into the abysses of history, and from its ruins at length emerges the bright and enduring regime of liberty and peace.[1]

part of others. But when the struggle between incomes has been eliminated, when one individual's superiority in income can no longer be disadvantageous to others, the prejudice against absolute inequality will disappear; to be replaced by the more rational sentiment of proportional justice, or by the desire that there should exist an equal proportion between remuneration and effort.

[1] This idea that human evolution resolves itself into a progressive development from the coercive association to the free association of labour, finds more or less explicit expression in the works of a number of well-known writers. Thus Salvador writes (*Jésus Christ et sa doctrine*, Paris, 1838, p. 11): "The further back we go into early times, the more do we find that the force of disaggregation and dispersion prevails over the force of association, and the more therefore is it necessary that the means employed by legislators and the chiefs of the people to maintain the social state shall be energetic in character. The more fully, on the other hand, the nations effect the occupation of the globe, the more does the force of association increase and continue in the absence of any external aid."—The last assertion is, however, erroneous, for even to-day there exists no example of an association of labour which is sustained in the absence of any coercion from without.—"No important social movement," writes Bailie, in the work previously quoted (and the admission is precious since it is made by an anarchist), "has yet succeeded without specific and often arbitrary organisation. Mankind in its present state of development appears unable to accomplish much without leaders" (p. 81). "The fact remains that a new social movement, if it is to impress itself permanently upon the thought and life of the age, must have active and aggressive leadership" (*Ibid.*). Hence the coercive association of labour is not a phenomenon peculiar to the history of barbaric times, but is one common to the whole of recorded history.—Spencer, in turn (*Principles of Sociology*, London, 1896, III, p. 483), affirms that the coercive association of labour is the productive form adapted to a military society, whereas for an industrial society the spontaneous association of labour is possible and preferable. This would be true only if by the term "industrial society" we should understand the final economy which has not as yet come into existence.—The thesis with which we are here concerned has been the object of a detailed investigation on the part of Metchnikoff (*La civilisation et les grands fleuves historiques*, Paris, 1889), who shows extremely well how the criterion of progress is manifested by the increase in the freedom of associated labour, or in the diminishing degree of the coercion requisite to

effect this association. Unfortunately he falls into the common error according to which human evolution is supposed to have already entered the superior and stable stage of the spontaneous association of labour (*loc. cit.*, p. 52). Durkheim makes the same mistake. He properly distinguishes the free from the coercive division (or association) of labour; but he believes that coercive association continues only so long as a central authority imposes upon each individual the labour which he has to perform, and that with the disappearance of this collective rule the spontaneous association of labour begins. But the author is not slow to recognise that such is not really the case, for he says: "We do not have the spontaneous division of labour unless society is constituted in such a way that social inequalities are precisely correspondent with natural inequalities" (*De la division du travail social*, Paris, 1893, p. 370). Now since in human societies, past and present, this correspondence (as the author himself recognises) does not exist, this amounts to saying that the spontaneous division of labour has in reality never yet been effected. In fact, he himself adds: "It is true that this perfect spontaneity is not yet anywhere to be found" (p. 371); and again, "where there exist rich and poor we have always unjust bargains" (p. 378)—and, let us point out, we have always individuals who are constrained to labour at the will and for the profit of others. Therefore, in such conditions, which are those of differentiated income throughout recorded history, the association is not free, but coercive.

The free association of labour therefore possesses a value which is not immanent and present, but solely evolutional and one of tendency. Durkheim himself, in the end, asserts this in the plainest terms, writing (*loc. cit.*, p. 374): "It is a vital condition of organised societies that the division of labour should approximate always more closely towards the spontaneous form. Assuredly, therefore, the tendency is towards this condition; and the advances hitherto effected give us no more than a faint idea of those which are yet to come." Another French sociologist, Lacombe, puts the matter even more plainly, as follows (*De l'histoire considerée comme science*, Paris, 1894, pp. 405–6): "The final catastrophe towards which our society is tending can perhaps be avoided only by means of a new force, association, by voluntary and free groupings. It is necessary that the idea of the general interest of the species shall create its own organism, which can be none other than a free society, devoid of official character, founded by a few, enlarged by the voluntary influx of free and equal persons dividing and subdividing themselves without breaking into fragments.—It is impossible to prefigure its precise structure. Its foundation must be personal responsibility conjoined to a solidarity more vast than the antique solidarity of the clan, and more enlightened than Christian or Mohammedan charity."—The tendency to the formation and generalisation of free association, recognised many years ago by Mazzini and by Proudhon, sustained by De Molinari (*L'évolution politique et la révolution*, Paris, 1884, p. 482); Hartmann (*Philosophie des Unbewusstens*, Berlin, 1869, p. 296); and Marshall (*loc. cit.*, pp. 51, *et seq.*)—is to-day vigorously defended by Fournière (*L'individu, l'association et l'état*, Paris, 1907, pp. 249, *et seq.*).—To this tendency, in the region of actual experience, there corresponds an analogous tendency in the field of thought, inasmuch as the idea of free individual initiative tends more and more to replace that of a mechanical, objective, and necessary determination. This tendency displays itself, in biology with De Vries and Quinton, in psychology with James and Bergson, in economics with Marshall, in reformist socialism with Bernstein and Goldscheid, and finally (notwithstanding the radically opposite tendencies) in the theorists of syndicalism.

If these considerations are sound, we plainly see the error of the thesis according to which communism is supposed to have originated spontaneously with the first appearance of mankind in the world (cf., for example, Elie Reclus, *Les primitifs*, Paris, 1903, pp. 68, *et seq.*), or, more generally, the falsity of the idea that association was the primary and spontaneous form of human existence. This is so far from being the truth, that association has always been coercive; and the coercion which controls association attains the maximum intensity at the outset of human social life. No less serious is the error of Breysig (*Kulturgeschichte der Neuzeit*, Berlin, 1901, II, pp. 2, *et seq.*), when he affirms that the essential motive force of history is the *impulse to association*, which gradually gives rise to the ascendent forms of social aggregation. In actual fact, this assumed "impulse to association" is not to be encountered in any known phase of history, for there is always manifest throughout all times the opposite phenomenon of an overwhelming aversion to association. The progressive forms of social aggregation represent the series of methods and of institutions successively employed to impose upon labour that association which cannot be spontaneously effected.

CONCLUSION

THE ESSENTIAL ECONOMIC LAW

Thus history presents a succession of economic systems which evolve throughout a more or less considerable period, and finally succumb owing to an inevitable process of internal decomposition. Now the common element in all these successive economic orders must of necessity relate to a series of phenomena universal and constant in character ; and since it constitutes the common substance of a series of forms whose equilibrium is essentially unstable, it must contain within itself a factor of immanent instability. Now the process that is common to all the successive economic forms is the association of labour, a constant and invariable phenomenon in all ages ; whilst the factor of immanent instability of all the changing social forms is the coercion that disciplines the association of labour. The association of labour constitutes the basis of income in every successive form ; whilst the coercion which disciplines that association constitutes the basis and is the essential factor of the antagonism and of the instability with which every form of income is permeated.

The foundation of all the economic forms which have hitherto existed, that which constitutes their essence and their base, is, then, the coercion to the association of labour, which manifests itself, in the case of undifferentiated income, through the instrumentality of the collective labourer, and in the case of differentiated income, through the instrumentality of the individual non-labourer. The coercion to the association of labour is the undifferentiated matrix of the economic order in all the concrete manifestations which have hitherto prevailed ; it is from this coercion that arise the asymmetries and the contrasts which undermine the economic order, and ultimately lead to its disintegration. If, then, the criticism of differentiated income may be made in the name of equality, the criticism of income as it has hitherto prevailed—independently of its form—must be made in the name of liberty; for it is upon the negation of liberty, that is to say upon coercion, that depends the origin of the essential structure of income as it has hitherto prevailed and the complex of antagonisms of which it is composed. The essential basis of social antagonism is, therefore, not to be found in the relationships of distribution, or in the more or less differentiated forms which these relationships assume in the capitalist economy or in differentiated income; for the capitalist economy, differentiated income, the coercion to the association of labour exercised by the individual non-labourer, are in their turn episodes, or specific manifestations of a more general and remoter cause which is comprised within the organic process of production—this cause being the coercive association of labour. For this reason, the analysis or the criticism of capitalist property is altogether unable to conduct us to the root of the matter, or to exhaust the entire field of investigation; for beyond the frontiers of this analysis there extends a much profounder investigation and a much more general and measureless problem.—Just as beyond the problem of the origin of matter we have the most profound problem of the origin of geometrical forms in immaterial space: so beyond the problem of the nature and laws of capitalist property we have the more general and profounder problem of the undifferentiated matrix of all the economic forms, capitalist or non-capitalist, that have hitherto existed; that is to say, of the ineradicable coercion to the association of labour which is the essential foundation of economic antagonism. It follows from this that the forces aiming to bring such antagonism to an end cannot attain their purpose simply by the destruction of the capitalist system; for if this system were replaced by some other form of the coercive association of labour, it may be even on the base of undifferentiated income (as would be the communistic economy), the economic contrasts arising out of the coercive association of labour would persist, and it would therefore be impossible for the social order to attain to a permanent stability and the population to a condition of permanent well-being. The essential social contradiction can be eliminated, economic equilibrium can be established, only by means of a profound transformation, affecting not merely the process of distribution, but also the process of production, relieving this latter process from the coercion which has hitherto environed it and restricted its efficiency ; in other words, by the destruction of the coercive association of labour and its replacement by the free association of labour. Herein is to be found the supreme objective towards which must converge all the forces of social renovation.[1]

[1] This is now understood by all the most enlightened economists, not excepting the socialists, who point out that a reform which effects no more than the distribution of income among the proletarians, while leaving unaffected the method by which that income is actually produced, would have no more than an extremely restricted and fugitive effect ; and that a decisive and durable social renovation must be initiated by a radical metamorphosis in the process of production.

INDEX OF AUTHORS

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