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THE THEORY OF PROFITS

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THE THEORY OF PROFITS

BY

PRAFULLA CHANDRA GHOSH,

LECTURER IN ECONOMICS, CALCUTTA UNIVERSITY



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To
The Memory of my Son



PUSPASREE

Born 1st October, 1925

Died 30th May, 1930

PREFACE

More light is needed on the theory of profit. This is my plea for publishing these pages. Reflections that have considerably cleared my own ideas are presented here in the hope that they may also prove helpful to others.

The enquiry began at Cambridge in Michaelmas Term, 1929 and ended by the Easter, 1931. The main conclusions were arrived at during the second year of my stay at Cambridge. The award of a Research Studentship at King's enabled me to prolong my study of the problem beyond a year. I owe a deep debt of gratitude to the authorities of the King's College and particularly to Mr. J. M. Keynes, for offering me this opportunity of completing my investigation.

My enquiry started with the belief that profit was the product of Uncertainty-bearing. (Uncertainty-bearing was regarded as a distinct factor of production.) I had perfect confidence in Pigou's teaching that uncertainty-bearing was a separate factor and—as I interpreted it at the time—in the same sense as land, labour or capital. Equally strong was my belief that Wicksteed's version of the marginal productivity theory explained the distribution of national dividend between the different factors. The Risk theory and

Marginal Productivity theory were considered complementary to each other in the determination of profit. Risk, I imagined, explained the supply-price of the entrepreneur's service, while marginal productivity governed its demand-price.

A critical study of the American theorists soon led me however to the opinion that the theory of risks only stated the problem and did not point to its solution. A scrutiny of the basic assumptions of the marginal productivity theory revealed that the theory was inapplicable to factors or services which cannot be physically measured, or which do not contribute to the product by way of continuous variation. Its application is moreover vitiated by the presence of non-economic factors which affect the product, but which are often imperceptible, immeasurable or discontinuous. Here we refer to elements, such as flood or fashion, weather or inflation—factors which influence productivity, but which cannot be appropriated privately and cannot claim a share in the economic distribution of the produce. The theory is really a mathematical version of the conditions of productive efficiency of the variable economic factors, so far as it depends on the quantitative relation of the factors and not on their qualities, appertaining to a particular process of technical production. It assumes the stable continuity of one method and the rigidity of its results. The very function of an entrepreneur however is

so to administer, alter or modify methods as to secure better return from the resources than hitherto obtained. And the very nature of the entrepreneur's skill or activity is its immeasurability in any kind of physical units. So I had to discard both these theories. My subsequent reflections are embodied in this volume.

The first three chapters seek to classify the various theories of profit, the next four critically examine their underlying assumptions, and the remaining four present the writer's view-point and conclusions.

Profits, in the sense of returns from business undertakings, may be looked at from different points of view. Society is interested in the industrial output of material goods and services. The business man, as the entrepreneur who provides for society's divergent needs and wants, naturally looks upon profits as the monetary return of the resources he himself owns or controls. His view-point is necessarily financial. The two view-points, industrial and financial, social and entrepreneur-*al*, have been kept separate to prevent confusion in thinking.

The two fundamental needs of society, *viz.*, livelihood and leisure, are both satisfied by the modern entrepreneur and with one and the same process. The process of production has been so modified for the purpose that an increased participation of capital is now essential for a cheaper

out-turn. The capitalistic production offers the appropriate opportunity for purchasing leisure, that is to say, for securing a property-income through an increased investment of capital. The entrepreneur's activities and his income have been simultaneously examined from both these stand-points.

A short summary of the conclusions regarding the nature of profit will be found in Chapter X. One or two points may however be noticed here. The difference of profit from other incomes cannot be discerned either in the industrial or in the financial process of production. From the view-point of society, the peculiarity of profit lies in the (indirect) *method* of earning this income, and not in the nature of the services that help, industrially or financially, to turn out a product. Profit is not the result of the "industrial process ;" it is rather the result of the mercantile process involved in the exercise of the entrepreneur's social function—the provision of society's needs. Secondly, the nature of profit cannot be described as a "surplus." Surplus really refers to the measure of the income and not to its nature. Thirdly, the theory of value cannot be directly applied to the business man's resources or services, material or personal, to determine his income, as is done in the case of rent, wages, or interest. For, the proximate source from which profit is realised is not his capital and ability, but the saleable product into which his resources,

both material and personal, are transformed and embodied.

The relation of normal profits to industrial equilibrium is analysed in the last chapter. My conclusions regarding industrial equilibrium appear to be in harmony with the ecological conditions of biological equilibrium. There is a sort of economic balance between the agents of production and the industrial environment, as there is a biological balance between the inhabitant and its habitat. Vegetable life, animal kingdom, and bacteria must maintain a biological balance in the sense that the stability of their existence is assured only so long as the necessities for each kind of life circulate at a uniform rate in the environment consisting of themselves and the inorganic elements on which the plant-life grows and subsists. Too rapid development of one species relatively to others (or what comes to the same thing, too rapid exploitation of its environment by one species) causes a deficiency in the circulation either of oxygen or of food-supply or of any other essential vital elements. It reacts upon the possibilities of the life and growth of its own kind by the shortage of food or other necessities, for which it depends upon the other species or upon the physical environment. Similarly with the industrial classes of an economic community. Too rapid development of the capitalist class reacts upon the possibility of its life and

growth. (This is equally true of labour). Capitalistic production appears in the industrial system to provide employment for the growing surplus of incomes that the capitalists cannot or will not spend. This means in a closed economy displacement of labour and a diminished capacity of its consumption. Consequently social consumption decreases and so does the circulation of wealth. The scope of investment in general and opportunities for earning profits in particular shrink under the process.

No kind of life, ecology points out, can have a stable existence in an environment, unless it gives back to the environment all it takes away for its living. The rapidity at which the living species exploit the environment must not be greater than the rate at which they replenish it. Scarcity of food or of other necessities ensues otherwise and it paves the way for their deterioration and decay. It seems to be true as much in economics as in biology. The capitalist or the proprietor takes his income from the industrial environment in the form of rent, interest and profits. But he gives it back to industry in the form of investment and consumption. So long as an equality is maintained between his income and outgo, his exploitation and replenishment of the economic environment, the equilibrium of the industrial system continues to be stable. But as soon as his income exceeds the amount that he

has the opportunity to invest and the willingness to spend, disequilibrium results. And this disequilibrium becomes a chronic condition of industry, when the income of the capitalist as a class continually outgrows the scope of new investment and he is unwilling nonetheless to change his habitual amount of consumption. It may be regarded as the actual condition in many of the capitalistic communities to-day.

The source of the instability of capitalism lies in the capitalist's unwillingness to modify his behaviour in a way that the industrial system demands for its equilibrium. The pressure of the capitalist's greed for investment in excess of the industrial need for it is crushing the productive system of the capitalist countries. It is likely to destroy the economic basis of modern civilisation, as it has destroyed its many predecessors, unless equilibrium is restored to the system by a check to accumulation, investments abroad, or an increased consumption of non-investment goods. But this reflection belongs more to philosophy than to economics. My analysis, therefore, confines itself only to the cause and the nature of the disequilibrium that the modern craze for accumulation and concentration of property has given rise to.

I must mention my obligation to my Cambridge teachers for the direct and indirect stimulus I have received from them in my studies and enquiries.

My intimate contact with Professor Pigou and Messrs. J. M. Keynes, D. H. Robertson, P. Sraffa and M. H. Dobb has been very helpful. I have immensely benefited by my association with Mr. Keynes' Political Economy Club. Dr. Sraffa's criticisms greatly stimulated my thoughts, while Mr. Dobb's appreciation emboldened me to develop ideas that would not certainly be regarded as orthodox at Cambridge.

My best thanks are also due to Dr. J. P. Neyogi and Prof. S. N. Sen of Calcutta University and Prof. S. Dutt of Ramjas College, Delhi, who have occasionally helped me by revising proofs and making useful suggestions.

CALCUTTA UNIVERSITY,

P. C. GHOSH

1st March, 1933.

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THE THEORY OF PROFITS

CHAPTER I

THE CONCEPT OF PROFIT AS A CLASS INCOME

What is the nature of profit, who receives it, for what services is it the reward, and what constitutes the disutility of these services,—have all been matters of dispute since the eighties. The earlier economists appear to have agreed more or less in their definition of profit. But their successors, in their efforts to explain or justify profit, begin to define it differently.

This appears to be the reason of the puzzling perplexities that commonly characterise the critique and analysis of the problem of profit to-day. The earlier definition of profit, it will be presently shown, was based upon a classification of incomes that the later concept has altogether modified.

Economists may be broadly placed under three groups, according to the different nature of the basis on which their classification of incomes rests and in consonance with which they define the term profit. The earlier writers and the classical school regard profit simply (a) as a class

income, the income of the Capitalist-Entrepreneur, the income of one enjoying the economic status of an employer. Their immediate successors mostly confined the term to include, (b) the reward of the Entrepreneur only, as distinguished from the Capitalist proper. The later and the modern tendency is to define the term as the reward of such services of the Entrepreneur as cannot or should not be included under the triad of land, labour and capital. Profit is here regarded as (c) the reward of a distinct factor of production, separate from the traditional three. All modern theories of profit take their start from this third concept.

Of these three classifications, the first we may regard as a spontaneous and factual conception of concrete class incomes of the early economic society. Incomes are classified here according to the well-recognised or commonly accepted social rank and status of their recipients, and not by the nature of the source or of the medium through which they are obtained. The second may be taken as a distinct recognition of the economic importance of the Captain of Industry, forced into prominence since the Industrial Revolution. The utility of the conception lies in emphasising the importance of the Entrepreneur as an agent of industrial progress, and also in elucidating the mechanism of distribution. It marks the advent of an industrial stage when production begins to depend

frequently on borrowed capital. The third may be taken as a purely abstract and hence scientific conception. It attempts to explain the reward or economic incomes in terms of the distinct productive service every factor of production is supposed to render, and hence to find a place for the profit-earner side by side with the earners of wages, interest and rent. It proposes to pick out services of the Entrepreneur that cannot be included under land, labour and capital. The classification of incomes is here based upon the medium of earning them, and not upon the rank of their recipients.

Our classification is intended to mark out the actual historical stages of the modification of the meaning of the word profit. As the classification is based only on the difference of the sense, one and the same author may find his way in all these groups according as he chooses one meaning at one time and a different one at another. R. G. Hawtrey, for instance, uses profit in the traditional English sense of a business-man's income; while qualified by adjectives "normal" and "pure" he uses them almost in the second and the third sense.

The earlier writers, Cantillon, Turgot and Adam Smith evidently used it as a class-income, the income of those who had the status of an Employer. With each of them it was the income of the class of Employers or Undertakers, who employed labourers, agricultural or industrial, with

their capital. There were mainly three classes in society, the other two being Landholders and Labourers.

Profit with them was not so much an income from capital, as later economists¹ were mostly inclined to interpret them, as an income of the Capitalist-Employer or Undertaker. The income, in other words, was distinguished by the earlier writers according to the social or economic status of its recipients rather than the source from, or the medium or instrument through which it was obtained. Profit thus meant with them the entire income of the Employer or Undertaker, irrespective of the physical or economic nature of its source or medium.

This is clearly suggested by the heading of Book I of *The Wealth of Nations*, where to consider the Order of the Distribution of the Produce Adam Smith refers to "the different Ranks of the people." Without such a meaning in his mind, he would not have stopped to argue and warn that the *profits of stock* must not be regarded as "only a different name for the wages of a

¹ Haney in his *History of Economic Thought* (1925, p. 509) ascribes to Adam Smith and his followers "the idea of profits as a return upon capital considered as a distinct factor of production." Two distinct ideas seem to underlie this statement: that with the classical school (1) capital was a factor of production, and (2) profit was the return of this capital.

particular sort of labour, the labour of inspection and direction." ^{1a}

And this is also supported by the readings from Ricardo. The preface of his *Principles* opens with a statement of the division of "the produce of the earth" among the "three classes of the community, namely, the proprietor of the land, the owner of the stock or capital and the labourers." He speaks of "the proportions of the whole produce of the earth which will be allotted to each of these classes, under the names of rent, profit and wages." He refers to "the produce of the earth" as "all that is derived from its surface by the united application of labour, machinery and capital," and not as the product of "land, labour and capital." Evidently Ricardo had no idea of regarding capital as a factor of production, and his profit was a class income.

Even Prof. Cannan seems to recognise this meaning in the writings of Adam Smith. For in one of his editorial footnotes (Book I, p. 63) of *The Wealth of Nations*, he remarks: "they are called profits simply because all the gains of the master-manufacturer are called profits."

Dr. Cannan ² thinks, however, that the meaning of the ordinary language was modified by Cantillon to include by profits earnings of any producers who are not wage-earners. Here he seems to overlook

^{1a} Book I, p. 50 (Cannan's edition).

² *Vide A Review of Economic Theory*, pp. 303-04.

that as Cantillon reduced all classes and people besides the Prince and the Landed Proprietors into only two classes, (i) wage-earners or (ii) entrepreneurs,³ those who are not wage-earners are necessarily profit-earners. The classification of Turgot is almost similar. He divides society into three classes, (i) Cultivators, the *productive class*, (ii) Artisans, the *stipendiary class* who receives *stipends* from the produce of land, and (iii) Proprietors, the *disposable class*, "the only one not bound by the need of subsistence to any particular labour."⁴ But he points out that with the growth of capital the stipendiary class is subdivided into "two orders," Capitalist-Undertakers and simple workmen;⁵ similarly the productive class into Farmers and Cultivators.⁶ So even in the case of Turgot we see that besides the Proprietors, the whole society occupied in supplying the different wants is classified as Undertakers (Employers) or Workmen.

According to Adam Smith the price of the whole annual produce "resolves itself" into three parts and is parcelled out among the different

³ See Cantillon: *Essai sur le Commerce*, Part I, Chap. 12.

⁴ Turgot: *Reflections on the Formation and the Distribution of Riches* (The Macmillan Company, New York, 1911), § 15.

⁵ *Ibid.*, § 61.

⁶ *Ibid.*, §§ 62 & 65.

PROFIT A CLASS INCOME

inhabitants of the country, either as the wages of their labour, the profit of their stock, or the rent of their land.”⁷

Adam Smith clearly seeks to explain the distribution of “price” or “the whole produce of labour” to the three *different classes* of society. With the accumulation of stock in the hand of “particular persons” and the appropriation of land as private property, the labourer “must share” with the Employer as well as the Landlord the price of the whole annual produce. These three classes may also be broadly differentiated from each other by the funds from which they “derive” their “revenue:” “Whoever derives his revenue from a fund which is his own, must draw it either from his labour, from his stock or from his land.”⁸

Again Adam Smith clearly distinguishes profit from interest. Income is derivable from capital in two ways: (a) by loan, yielding interest, (b) by managing or employing labour with it, yielding profit. Evidently *any revenue derived from stock* is not *profit* in the nomenclature of Adam Smith. The following quotation from Adam Smith will make it obvious:

“The revenue derived from labour is called

⁷ The Wealth of Nations, Bk. I, Chap. 6, Vol. I, p. 54, Cannan's edition. Italics mine.

⁸ *Ibid*, third paragraph.

wages. That derived from stock, by the person who manages or employs it, is called profit. That derived from it by the person who does not employ it himself, but lends it to another, is called the interest or the use of money." The income of the Employer of stock is thus *profit*, while that of the *lender* is *interest*.

The reader need not be reminded that Turgot's profit is also the income secured by the actual employer of capital: "Undertaker, Manufacturer, Employer, all possessors of large *capitals which they make profit from* by setting men at work, by means of their advances."⁹ Like Adam Smith, he is equally explicit that the *loan* of capital yields interest: Sec. 71 is headed "Fifth employment of capitals: the loans upon interest." Sec. 81 recapitulates the five different methods of employing capital or of profitably investing it: "the first is to buy a landed state," the second, the third and the fourth are to invest in (a) agricultural, (b) industrial or manufacturing and (c) commercial undertakings respectively. Some of his passages clearly suggest that as the loan of money is a sale of its use, so the leasing of land may be regarded as a loan of land for use, and the price is rent.¹⁰

From all these readings it is clear that the income of the Employer as a class who actually

⁹ Turgot: Reflections, § 61. Italics mine.

¹⁰ Turgot: Reflections, § 71.

used capital for employing labour was called profit by all of these earlier writers.

The classical writers always meant by profits the income obtained from the *employment* of *stock* or capital by its employers. Money is only "a part, and a valuable part of capital."¹¹ Interest according to Adam Smith, Ricardo and Malthus, is the income obtained from the money-capital lent. The rate of interest, according to Ricardo, is "ultimately and permanently governed by the rate of profits,"¹² "which can be made by the *employment* of capital."¹³ Malthus, while complaining against the use of the word stock in its narrow sense of capital (i.e., stock devoted to production), describes *profits* as "that portion of the national revenue which goes to the *capitalist* in return for *employment* of his capital."¹⁴ J. S. Mill describes profits as "the share" of the produce of the *capitalist*; the profits of capital or stock; the gains of the *persons* who advance the expenses of production."¹⁵ He recognises three classes "who divide the produce." He describes "the class of capitalists" as "employers of labour."¹⁶

¹¹ Ricardo: Works (McCulloch edn., 1871), p. 284.

¹² *Ibid*, p. 220. ¹³ *Ibid*, p. 179. Italics mine.

¹⁴ Malthus: Principles of Political Economy. (second edn., London, William Pickering, 1836), p. 262. Italics mine.

¹⁵ Principles of Political Economy, Bk. II, Chap. XV, § 1. Also Chap. III, § 3. Italics mine.

These quotations are perhaps tiresome but they are, nevertheless, necessary to shake off our impression, made so deep in our minds by systematic teaching, that classical profit is the return from capital, as if it was a confusing term carelessly used for the return of the factor of production called capital ; while the fact is that it always meant the capitalist's income from the employment of his capital, that is, income from business, and it still retains that meaning in popular usage as well as commercial vocabulary. Even to-day the English Census Authorities classify occupations of people as earning wages or profits—the very same classification of incomes as made by Cantillon, against which Dr. Cannan complains. The notion of classifying incomes on more scientific lines, seems to have begun to dawn upon English thought since General Walker used, after the French fashion, the term *profit* to designate “the share of the producer going to the employer, as such,” apart from interest. This new conception of profit, or rather the distinction, attracted Sidgwick's attention on the publication of Walker's *Wages* in 1876. But F. A. Walker points out in an article¹⁶ that it was shown earlier by his father, Amasa Walker, in *Science*

¹⁶ Quarterly Journal of Economics, April 1887, p. 269.

of Wealth in 1866: "while the French writers have always recognised profits and interest as separate shares in distribution. J. B. Say treated Adam Smith's neglect of the entrepreneur as creating a serious hiatus. All of Say's successors down to Courcell-Seneuil, have dwelt strongly on the importance of that industrial function."

We must not pass over the word "function" without noting that the French writers since the time of J. B. Say are supposed to have begun to classify incomes by *functions* of the so-called economic factors of production instead of the social status of their recipients, the class to which they belong.

That the meaning of profit had changed from Adam Smith's "revenue derived from stock" to Walker's earnings of management of an entrepreneur, was noted in 1892 by L. L. Price in Volume Two of the *Economic Journal*. And his reasons and remarks are worth noting, although he was evidently wrong in thinking that the classical writers meant by profit "revenue from stock" and not capitalist-employers' gains:

"But there can be no doubt that in the common use of the term, in England at least, both elements enter,—that of the interest of capital, which is emphasised by Adam Smith, and that of the reward or earnings of management, to which General Walker would confine its use. The transference of the emphasis is the more

important because it corresponds to a change in fact, which is not so complete as the alteration in thought which we have traced. On the one hand the domestic system of industry prevailing in Adam Smith's time did not afford such wide or peculiar scope for the work of business management as that furnished in the large undertakings of the present day; and on the other the modern agencies for borrowing and lending capital have rendered less indispensable the possession by the business man himself of all or the greater part of the capital used in his business. In this as in many other cases the change in theory has reflected the change in practice, although perhaps in General Walker's writings it has received an excess of emphasis; and his use of the term profits diverges too widely from the common acceptation to find a permanent place in Economics."¹⁷

¹⁷ Evidently Price ignores here the distinction that Adam Smith draws between profit and interest. Again, we should never forget that the earlier and popular division of incomes had its basis on the economic status or "rank" of their recipients, and not on the material source from which they derived their income. Adam Smith only borrows the popular phraseology to describe generally wages, profit and rent as the income of the labourer, employer, and landlord. But in Book I, Chap. VI, he seems to suggest an alternative and a more scientific classification based upon the material medium

In spite of more than 50 years' efforts the scientific economists could not yet change the meaning of profit from a business-man's (Capitalist-Employer's) income to the income of his "pure enterprise." This is evident from Prof. F. H. Knight's complaints in 1921 and Dr. Cannan's in 1929.

Prof. Knight complains :¹⁸ " The inclusion of interest in profit was opposed by Bagehot, and in the United States by Walker, but the use of the term is still somewhat loose in England, as is seen in Marshall. Even in this country the development of corporation accounting while separating wages of management from profit, has tended to a new confusion of profit and interest." This irritation is natural to a scientific economist, who thinks that profit is a confused classical use for the remuneration of the factor *capital*, for which there

"of earning incomes. He seems to mentally argue that the economic character of the landlord, labourer and his employer derives its peculiarity from the land, labour and capital they own and employ. " A gardener," he argues, " who cultivates his own garden with his own hands, unites in his person the three different characters of landlord, farmer and labourer. His produce, therefore, should pay him the rent of the first, the profit of the second and the wages of the third." (Bk. I, p. 55, Cannan's edition.)

¹⁸ F. H. Knight : Risk, Uncertainty and Profit, p. 25.

is already a name, *viz.*, *interest*. But this comment does not seem to be fair. Practice is entitled to follow its own advantages, as much as theory its own. Practice regards all incomes coming from what is called *business* as *profits*, and income coming from the loan of money-capital as *interest*. The loan of capital brings interest, and the employment of capital (called business) brings profits. The tendency of the modern theory is to classify incomes according to the "factors of production" remunerated, while the basis of the earlier and popular classification of incomes was, as we have seen, the social status or "rank" of their recipients. Thus rent to-day signifies the return of land in place of the landlord's revenue, and interest is expected to mean the return from capital in substitution of the money-lender's price. The responsibility for this confusion seems to lie with the theorists, who have attempted to change the meaning of a word from its well-established popular sense to an abstract concept of theory. Life would get unnecessarily complex, if the popular terms of every day use have to be rechristened according to the passing whims of every theorist who may chance to hold the field for the moment. After all, factors of production do not appear to-day to be a very helpful classification for the so-called productive functions they are supposed to indicate. The post-classical

trinity have already yielded in America to accommodate a fourth factor, and a fifth, *viz.*, uncertainty-bearing, is fighting for a formal recognition either as a substitute of the American fourth or an independent fifth to dominate over all. Wicksteed¹⁰ is perfectly justified in holding that there is no "possible scientific division of the factors of industry into great groups, and still less any possibility of an exhaustive enumeration of them." The conception of business capital, he further points out, is inconsistent with any such division or differentiation.¹⁰

Prof. Knight seems to overlook that corporation accounting is still doing the very same thing that its predecessors did, *viz.*, it calculates the income of the businessman, the employer of capital. If it separates to-day the wages of management, that simply reflects the fact that the management is no longer an inseparable adjunct to the employment of capital and the manager of an American corporation is no longer a necessary owner of the business enterprise. But it is necessary to recognise that a change in the meaning of profit appeared to be a logical necessity to the later scientific economists who implicitly assumed or followed a classification of incomes

¹⁰ Wicksteed: *The Common Sense of Political Economy*, p. 366.

based upon the so-called "factors of production." What they have usually overlooked, however, is that profit with the earlier economists was a concept derived from a classification of incomes different from their own. And the neglect of this fact cannot but lead to errors. Even an acute analyst and scientific historian like Dr. Cannan, for instance, accuses Marshall with having introduced a two-fold classification of incomes, which is confusing.

In *Economics of Industry*, observes Dr. Cannan,²⁰ "Marshall begins the practice which he subsequently followed without much wavering, of using both of two classifications of income. In one, income is (1) rent, (2) profits consisting of (a) interest and (b) earnings of management, and (3) wages and salaries; in the other, the classification is (1) rent, (2) interest, (3) earnings, consisting of (a) earnings of management and (b) wages and salaries."

In a note²¹ Dr. Cannan further points out :—

"He [Marshall] does sometimes waver, e.g., *Principles*, 8th edn., pp. 611-12, where the 'corrected' rate of profit is made to exclude earnings of management, which, he says, 'ought to be classed under another head' than profit; here

²⁰ A Review of Economic Theory, p. 310.

²¹ *Ibid*, note 2, p. 310.

profit (when 'corrected') takes the place of 'interest' in the second of the two classifications above. Moreover, his invention of quasi-rent involved yet another classification."

This criticism of Marshall is obviously based on a misunderstanding. For his first classification clearly points out that in his concept of profits he is more inclined to follow the classical tradition rather than the newer classification. If his "corrected" profit excludes the undertaker's earnings of management, this is done for a very strong reason,²² viz., that profit of large and small businesses cannot be scientifically compared otherwise. For in a small business profit includes the earnings of management, which are excluded in the case of a large.

Marshall never identified profits with true or net earnings of management. Nor with "interest"; first because his "interest" is the income from capital lent, i. e., loan of money-capital;²³ secondly, because he defines profits as the gains from the capital employed in a business,²³ which are always expected to exceed its interest. Marshall is also incapable of identifying profits with "Quasi-rent"; because he defines it as the income of any man-made productive appliance fixed for the short period in general. His

²² Principles, VI, viii, I (8th edn.)

²³ See definition of interest, p. 73, *ibid.*

"Quasi-rent" refers to the income of only a part of the capital goods, *viz.*, fixed capital like machinery while *interest* refers to *free* capital. This is why he had to drop "profits" out of his second classification altogether. But this "interest"^{23a} in the second classification in that case must be interpreted broadly as the return of the aggregate stock of capital goods, and not as the loan-price of free capital. And this is justifiable, for clearly his first classification refers to the incomes of the different classes of society, namely (1) landlords, (2) capitalists, and (3) labourers; while his second to those of the economic factors, land, capital and labour. His first classification is the older and popular division of class-incomes, while his second is the more modern and scientific. Far from being confusing, which Dr. Cannan unfortunately thinks it to be, Marshall's classification seems to be the best and clearest. Much of the present misconception with regard to the nature of *profit* would disappear and a truly scientific theory of profit, clear and unequivocal, would

^{23a} In the first edition of his *Principles*, p. 723, Marshall points out that when capital is used in the broad sense of all accumulated wealth, "interest on capital must be used with corresponding breadth so as to include the usance of all accumulated wealth." I am indebted to Dr. Cannan's book for the first information on the matter.

Prof. Fisher's treatment reminds us of Turgot, who not only differentiated interest from profits, as we have already noted, but was also inclined to treat *rent* as a loan-price for the use of land.²⁵

The English economists generally follow the popular usage and adhere to the concept of profit as the income of those who *employ* capital, i.e., make "deliberate outlay...for the sake of future advantage"—a concept really founded, as we have seen, on the older classification of incomes according to the "rank" or social status of their recipients.

Before we finish this chapter we feel that it would have been helpful if we could indicate the origin of the general belief that the classical school meant by profit A. Smith's "revenue derived from stock." Dr. Cannan, to whom we would naturally turn for any kind of authoritative historical information, unhappily disappoints us here. For he himself seems to share that belief.^{25a} Most

²⁵ Turgot : *Reflections*, Sec. 71.

^{25a} See "A Review of Economic Theory," p. 309 : "The truth is that the English economists of the first three quarters of the nineteenth century were quite willing.....to throw out of 'profits of capital' all that the undertaker gets in consequence of his personal activity rather than his possession of capital, but they threw it into the air instead of finding a place for it in their treatment of income derived from labour."

probably the confusion crept stealthily into economists' thought through the gradual dissociation of the capitalists from the active employment of their own capital, as has been hinted in many earlier passages. This has also been pointed out by L. L. Price whom we have quoted. There is not the slightest doubt, however, that profit *first* signified only a class income.

Land-owners received rent, labourers wages ; when a mercantile class appeared and began to dominate society, its income was named profits. The independent peasant-proprietor or farmer came into being after the decay of the system of carrying on agriculture or industry with the aid of serfs and slaves. Their income could easily be named profits, after the practice of mercantile undertakings, to distinguish it as an income of independent enterprise, and also from rent, the income of the owner of land. And as the competition of numerous agricultural entrepreneurs, who were mostly hirers of land rather than proprietors, forced them to part with almost the whole of their profits to pay rents, agricultural profits were not prominent enough to attract sufficient attention. Though rent was and could really be paid out of agricultural profits, the two things were not sharply distinguished. The reason seems to be that the agricultural entrepreneurs were not regarded as a new or distinct class of society : they were the same serfs, only gaining independence.

CHAPTER II

THE CONCEPT OF PROFIT AS ENTREPRENEURS' REMUNERATION

J. B. Say was the first to distinguish the concept of an *entrepreneur* from the capitalist-employer and to define his functions. The entrepreneur is the principal and active agent of production. "It is he rather than the capitalist properly so called, the landed proprietor or the workman who is 'almost always passive,' who directs production and superintends the distribution of wealth."¹ The entrepreneur is the pivot of the whole system. He is the active employer and hence the mechanism of distribution acts through him. He is the mouth-piece for the expression of social demand for the factors of production. He is the distributor of the product to "the productive services." He is also the distributor of "services" to the different industrial needs. It was Say who introduced into economic science the theory of the three factors of production. It is not to be found in Adam Smith, although his treatment of distribution suggests such a classification. Neither Ricardo nor Malthus had any such conception. Prof. Cannan

¹ Gide and Rist: "A History of Economic Doctrines," p. 113.

dwells upon it authoritatively.² Ricardo's preface speaks of "the produce of the earth" as being derived from "labour, machinery and capital." Ricardo writes to Malthus that "rents are in no case a creation of wealth" (*Letters*, p. 59); they are "always a transfer" (*Letters*, pp. 128, 155). Malthus appears to think in terms of the necessary conditions of supply of a commodity rather than its factors of production.³ He thinks not so much of labour as of "the quantity and direction" of people's exertions; not of capital but of the assistance its owner lends to labour; not of land as such but of "the raw materials and food furnished by the landlord." With James Mill the requisites of production were two only, viz., labour and capital. Only Torrens clearly stated that there were *three* instruments of production. "But he does not divide his exposition of production into divisions on labour, capital and land." With Senior and J. S. Mill both, capital was a *secondary* requisite, and Senior called it "abstinence." It is thus clear that productivity of the factors was a *secondary* concept that slowly crept into English economic thought. Productivity is, indeed, a *derived* concept, derived by J. B. Say from Adam

² Cannan: *A History of the Theories of Production and Distribution*, pp. 40-2.

³ See *Principles of Political Economy*, by T. R. Malthus (1820), Chap. II, Sec. III in general and pp. 78-83 in particular.

Smith's division of the national revenue into three parts, going to the three classes. What one gets one produces, seems to be the underlying principle of this classification. But J. B. Say wanted to stress the progress of industry that was going on around him and to ascribe it to the agency of the entrepreneur. He wanted to explain the mechanism of distribution, probably with a more practical conviction, "as the master-spinner of Auchy-les-Hesdins." The entrepreneur, as a mere intermediary of consumers, *demand*s the productive services, which the three passive agents of production *supply*. Thus the interaction of demand and supply fixes wages, interest, and rent. Distribution of products takes place through him and simply by way of ordinary exchange. This also explains why profits of the old capitalist have to be subdivided into interest of capital and profits of the entrepreneur, and not of enterprise, as the concept of enterprise was still then in the womb of the future.

Thus we find that the classification of the factors, according to the function (specific, may we call it?) they perform, is a by-product of the necessity for explaining distribution. The distributor is the entrepreneur.

With this historical background of his origin at the back of our mind, let us enquire into the profits of the entrepreneur, who has become the starting point of all varieties of modern profit theories.

FRANCIS A. WALKER'S CONCEPT OF PROFITS

As soon as General Walker⁴ imported the concept of entrepreneur into English economics, profit ceased to be a pure class income. At any rate it was conceived to be the income of a fourth class of people, actual or hypothetical. "What would be the share of produce," Francis A. Walker enquires, "going to the employer, as such, irrespective of the proper interest on capital (of which the employer himself may or may not be the owner), in case the *body of employers constituted a distinct class, either naturally or artificially defined...*?"⁵ He speaks frequently of "business profits, the remuneration of the *employing class*."⁶

In coming to discuss "the minimum of profits,"⁷ Walker adopts, however, another (and narrower) definition—a *quantitative* definition of profits. He conceives it as a differential income. It is the difference of remuneration a man can earn as an employer and as an employee. It is the excess of an employer's actual remuneration over his wages procurable as an employee in the open or competitive market. "Profits not in

⁴ Quarterly Journal of Economics, April 1887, p. 269, *et seq.*

⁵ *Ibid*, p. 269. Italics mine.

⁶ *Ibid*, p. 270. Italics mine.

⁷ *Ibid*, pp. 270-71.

excess of wages we have agreed to consider no profits at all," he states expressly.⁸

Walker does not adopt the French concept of an entrepreneur *in toto*, although he imitates them in their distinction of the employer, as such, from the capitalist. With Walker the employer is a separate class, either as an actual fact or a "representative fiction." Walker is still thinking in terms of the *classical ranks* of people, originally based upon their occupations, their physical means of livelihood. In greater conformity with the actual conditions of his time, his analysis proceeds a step further than that of the classicists. The classical capitalist—Turgot's Capitalist-Entrepreneur—is simply separated into two classes. The capitalist need not be necessarily an employer: an employer may sometimes be actually found working with borrowed capital. Profit is the income of the employer as distinct from a mere lending capitalist. Profit is thus a *class* income with Walker.

⁸ *Ibid.*, p. 277: "Likewise, [*i.e.*, like the cost of raising wheat from the soils of the lowest fertility] the cost of maintaining the employers of the lowest industrial grade necessarily enters into the normal price of produce. But we have already noted that the remuneration or means of subsistence of this class of employers would, under full competition, not exceed the remuneration of the same persons if themselves employed by others; and profits not in excess of wages we have agreed to consider no profits at all."

But the French concept of an entrepreneur, as developed by J. B. Say and followed by his successors, does not appear to have the same genesis. Say's entrepreneur is the supplier of a product, a commodity demanded by consumers, and its active producer. Landlords, capitalists and labourers are mere passive agents: they supply the means, the instruments, the factors that the entrepreneur needs to produce the commodity. Say's *factors of production* refer to the different sources out of which the entrepreneur obtains his different means. The *factors* are sources of assistance needed by the entrepreneur for production: they do not comprise all the means and assistance that go to form the product; they do not include the entrepreneur's own personal services.

It is the entrepreneur who produces the commodity: the owners of Say's "productive services" simply supply the means that assist him in turning out the product. "Productive services" are, therefore, services that enable the entrepreneur to *produce*. Say's factors of production are, in other words, entrepreneur's *factors*: they do not constitute the whole of the elements that enter into the economic composition of the product, they do not mean the *factors* of the product.

Say modifies the old French concept of entrepreneur. Turgot's Entrepreneurs make profit

"by setting men at work, by means of their advances." Say's Entrepreneurs make profit "by setting men at work" only. Those who make advances are capitalists. So far his analysis runs similar to Walker's. But Say adds to his (entrepreneur's) qualifications; the entrepreneur is also the distributor of the product-value. In making him "the pivot of the whole system," Say makes him the only *active* agent in production, and that too rightly and in greater conformity with facts. Profit is thus the remuneration of the *active* agent, while rent, interest and wages are the remuneration of the "passive" factors supplied to meet the demand of the *active* entrepreneur.

Say's Entrepreneur takes his rise from the concept of an "active" agent and the "passive" instruments or elements he needs to fulfil his social function, viz., to supply the commodity that the consumers may or do demand. Walker's Entrepreneur is the classical capitalist-employer who does not "make advance," but "set men at work" all the same. Say's Entrepreneur is the outcome of his attempt to locate the agency and to explain the mechanism of distribution. But Walker's is the result of his deliberate bisection of the classical capitalist to distinguish the recipient of interest from that of profit.

Walker, therefore, looks upon the entrepreneur as the representative of a *class*. Rent, interest and wages as well as profit are all

class incomes, distinguishable analytically, though the distinction may not be apparent as an obvious or commonly accepted fact. He does not follow Say in looking upon rent, wages and interest as the remuneration of the entrepreneur's passive *factors of production*. Nor does he give any indication that he even thought in terms of the all-comprehensive *three* factors into which the product is perfectly analysable. In his quantitative definition of profit, Walker, no doubt, excludes the wages of superintendence and direction from profit. This he does, not to qualify his repeated assertions as to the nature of profit as the income of the "employer, as such" or as a class-income, but to *measure* its amount effectively. The measure of the employer's skill ought to be reflected in the amount of profit he earns. Unless he can earn an amount greater than what he does as an employee under another man's direction, his skill is of the same order as that of a labourer. He adopts this as his zero-point or base-level from which one is to measure profit. Strict logical consistency, of course, demands that he should name it a *net* or *true* profit or some such thing. But he did not name it thus. He is content with the statement that "profits not in excess of wages we have agreed to consider *no profits* at all."

This, however, seems to be a traditional method of English economics, prevalent also at the time when Francis Walker wrote, as far as a foreigner

can guess and see. Rent, for instance, is a *class* income with the English school, but it is nevertheless measured not by the *absolute* return obtained from the soil but by the *net* return obtained after deducting the interest of capital sunk and embedded in it. (Rent is thus *qualitatively defined* as the income of the landlord class, but *quantitatively* measured by the superior capacity of "land" to yield a surplus beyond what is required to remunerate the co-ordinated amount of labour and capital. Walker similarly, and with the same justification, measures his profit by the superior capacity of the entrepreneur to provide a surplus beyond what is necessary to pay to or compensate the co-operating capitalists (who make "advances") and labourers.) Rent thus came to be associated in our economic thinking, not so much with the income of the landlord, as with the differential capacity or superior productivity of the "land" he owns. And Walker's profit similarly came to mean generally the reward of the differential skill or superior productivity of the entrepreneur. Just as rent is associated with the fertility of "land," its additional capacity to produce, so does Walker associate profit with the superiority of entrepreneur's skill, his additional capacity to "create" a greater product. As rent is to *agriculture*, so is profit to *industry*. That is how Walker thought and argued with a view to destroying the basis of the socialists' attack on industrial profits.)

Marshall⁹ immediately agreed with Walker in his analysis of entrepreneur as distinct from the capitalist. But Marshall pointed out that only a part of what Walker called profits, could be regarded as analogous to rent. His earnings of management and that part of his remuneration, that comes to him from education and training, must form, Marshall insisted, as a real return of the capital invested in his mental equipment and hence as a necessary part of price. Only that part, which he owes to his natural endowment, might be looked upon as rent.

Marshall agreed with Walker that the whole of the remuneration of the entrepreneur was to be included in profits, and this was inevitable, for he upheld the first concept of profit as a class income, the income of the classical capitalist. But Marshall differed as to which part of the entrepreneur's profit was to be regarded as a surplus, in the sense of an excess above price-determining costs.

Now this inclusion of the whole of the remuneration of the entrepreneur as profit is the distinctive characteristic of the economists whom we have included in our second classification. Among the prominent representatives of this concept we may mention Taussig, Davenport, and Hobson. Other economists further subdivided this portion, distinguishing the remuneration of those functions which

⁹ Quarterly Journal of Economics, Vol. I, 1887 : the article by A. Marshall, *The Theory of Business Profits*.

are delegated to salaried officials in a joint-stock company as wages or earnings of management. The residual non-transferable function of the entrepreneur they regarded as earning pure profit. The reason for this distinction is that they classify incomes according to the nature of the medium of earning them—the so-called factors of production; and as every factor of production must have a distinct productive function, the labour-function of the entrepreneur has to be separated from what they conceived to be the “function of entrepreneur as such.”

According to Prof. Taussig, “business profits }
are best regarded simply as a form of wages.”¹⁰
For “the theory of wages should consider the remuneration of every sort of labour.....of independent workmen as well as.....of a hired labourer.”¹¹ His classification of incomes seems to be implicitly based upon the return from the three factors, land, labour and capital. The independent conduct of industry characterises the peculiarity of a business man's service and this connotes assumption of risks. His irregularity of income is explained by his position as a residual claimant, by productive-distributive arrangement. His income, though irregular, is not due to chance. Continued success is due to the possession of qualities, shrewdness, ability, and skill. Besides “talent,” }

¹⁰ Principles of Economics, Vol. II, Chap. 49, Sec. 1.

¹¹ Chap. 47, Sec. 1.

which is a rare gift of nature, "capital" and "connection" are the two factors which make or mar a business career : "Set training doubtless counts for less." "In the business career, as compared with most others, inborn capacity counts more, training and environment less."¹² These explain the difference of the long-period incomes of businessmen from one another. (Taussig's profit, be it noted, is not a differential income like rent, as we find it in Walker's quantitative definition,

Prof. Davenport¹³ also inclines to the same view : "Compensation for hired labour is wages (or salary). Compensation for the entrepreneur is profit.") Who are entrepreneurs? "All employers of labour or of instrumental goods for hire are entrepreneurs, no matter whether the prospective product is to be offered for sale or not.)" He examines three alternative senses in which profit may be understood : (1) "exceptional, unclassified, irregular gains,—conjuncture profits," (2) "compensation for independently working human factor in *production*" (a broader notion), (3) "compensation for the independent human factor in the *quest for gain*" (a still broader notion). The difference that underlies these three senses is based upon the fact that under the present economic organisation dominated by private property and interests, it is

¹² *Ibid.*, Sec. 5.

¹³ *The Economics of Enterprise* (1928), pp. 67, 139 & 404.

sometimes possible for an individual to acquire an income without making any addition to the wealth of society, or without making any conscious efforts for it. He decides ultimately in favour of the third sense. This definition, he thinks, would not confuse "the socially productive aspects of business with the competitive and gain-making aspects." (It would include both competitive and conjuncture gains.) Profit in this sense stands as "a form of wages" of an independent employer for "entrepreneur's activity as such." "This profit goes no doubt to him who takes the risk, but does not, therefore, go as compensation for the risk or in proportion to it. It is, indeed, in the very nature of the entrepreneur labour that it is the labour of the risk-taker.")

It is superfluous here to point out that "entrepreneur's activity as such" is nothing but a kind of labour in the conception of Davenport,—the labour of an independent employer, which connotes, however, the taking of risks.

Before we state the view of J. A. Hobson on profit, we should notice the peculiarity of his theory as to the constitution of any kind of factorial incomes. Rent, wages, and interest are each divided into three parts. Each part represents a kind of charge upon the income from the industrial system. "The first charge is the amount necessary to maintain the existing industrial fabric; the second charge, the amount of the surplus above maintenance

necessary to evoke the growth of the supply of factors; the third charge, the remaining part of the surplus paid out in such a way as to evoke no increase in productive output or efficiency."¹⁴ Wherefrom comes this surplus? This emerges, of course, from the "ability" of the entrepreneur to organise and direct production. Profit is the reward of this ability of the entrepreneur. From the social standpoint his service is both essential and creative: it is to enlarge the industrial output through efficient organisation. So profit is a necessary supply-price to stimulate the activity of the entrepreneur. But the amount actually earned differs often from what is essential as the minimum to induce his activity. The maximum possible profit is the difference between the total product created by his organising ability and the minimum that represents the first charge to industry. Within these limits of maximum and minimum profits, actual profits will be determined by the superior bargaining power of the entrepreneur over the factors or by his success in stifling competition of his rival producers. "Thus profits, while to a certain extent, *sui generis*, are amenable, like other forms of income, to division into *three parts*, as necessary to maintenance, necessary to growth, and superfluous in relation to an adequate discharge

¹⁴ P. T. Homan: *Contemporary Economic Thought* (1929), p. 319.

of the social functions of the business ability."¹⁵ So profit must be regarded broadly as the remuneration of the entrepreneur's ability, though in common with every other income the surplus it enjoys over its minimum supply-price depends on the "hindrances to perfect equality of bargaining power,"¹⁶ between the different parties of production.

Hobson further believes that "ability is distributed among the various trades according to the genuine prospect of gain based on experience, though the distribution will be much less exact than in the case of other factors."¹⁷

These three authors, we believe, will sufficiently represent the concept of profit as an entrepreneur's emoluments, entrepreneur being analytically separated from the capitalist-employer as a class. These authors, be it noted, belong to different schools of thought. Taussig is orthodox and classical. Davenport is reactionary and Austrian-marginal. Hobson is equally revolutionary but Ruskinian and reformist, with concrete ideals but abstract philosophy, with a belief in social harmony through a re-valuation of economic processes by "human costs" and "human values" rather than "economic utility".

¹⁵ *Ibid.*, p. 320.

¹⁶ Hobson: *Economics of Distribution* (1900), p. 360.

¹⁷ Hobson: *The Industrial System*, p. 130.

and "economic costs," and through an abolition of "forced surpluses."

Let us now pass on to the theorists of "pure profit," the product of a logically pure service, unalloyed with any traces of land-labour-capital elements, or the remuneration of a *pure entrepreneur*.

CHAPTER III

THE CONCEPT OF PURE PROFIT AS THE RETURN OF A NEW FACTOR OF PRODUCTION

Turgot's entrepreneur was a capitalist-employer, a lively labourer with a full capital-equipment of tools and materials, himself ready to work and set other labourers to work. Walker stripped him of his tools, and made him an unequipped labourer. J. B. Clark performed upon him a marvellous operation of analytical surgery, took away from him the entire body of the concrete employer, all the limbs he possessed as a labourer, and left to him only a bare soul. This soul somehow establishes relation between his body and his tools and through them with the external world. It can "co-ordinate labour and capital," and thus start the process of production.

By abstracting a concrete entrepreneur, Clark¹ confines the entrepreneur "to co-ordinating the elements furnished by others..... In performing this one function, he contributes to industry nothing but relations. He connects labour and capital with each other in his own establishment."^{1a} He connects this establishment

¹ Clark: Insurance and Business Profit, Q.J.E., Vol. VII, p. 46.

^{1a} Note that this is inconsistent, for the establishment must belong to him as the capitalist.

with others and makes it do its part in the general industrial system." In short, the entrepreneur is "the man who co-ordinates capital and labour, without in his own proper capacity furnishing either of them."² With the creation of this non-capitalist non-labourer entrepreneur, it was now easy to seek for the source of pure profit, to look for the service proper of which it is the reward.

According to J. B. Clark, this service is "co-ordination" of labour and capital, as the previous quotation indicates. He explains at first the nature of this service by saying, "Pure profit is the return of simple ownership."³ Again we have: "The entrepreneur or assumer is he who takes upon himself the responsibility of ownership."⁴ But this, we fear, was the source of all misunderstandings.

He explains, no doubt, that the three functions of the capitalist, the manager and the owner, though at times combined in one and the same person, are distinct. So are their rewards. The growth of corporations has tended generally to a practical separation of these functions. Stockholders, bondholders and business creditors are capitalists. Salaried officials are managers.

² *Ibid.*

³ J. B. Clark: *Profits under Modern Conditions*; *Political Science Quarterly*, Vol. II, p. 606.

⁴ *Ibid.*, p. 607.

Entrepreneurs, in the limited sense of the term, are stock-holders. "Pure profit resides in the portion of dividends that is in excess of current interest on the paid-up capital."⁶

But even this explanation does not make it clear whether "co-ordination" is exactly identical with the function of ownership, or it is something distinct but usually indissociable under the present circumstances from the condition of ownership. There are many passages that seem to imply that co-ordination necessarily connotes ownership and profit comes to the owner. There are reasons, however, to believe that "co-ordination" with Clark is an economic service that only involves ownership. Now is this co-ordination a productive service? There is nothing to show that co-ordination is a service to which his marginal productivity theory is applicable. On the other hand, as profit in a static state is zero, the productivity of co-ordination at that stage, if it has any, must be zero. Co-ordination however goes on gathering profits in a dynamic state. The question is: if co-ordination—the service of the entrepreneur as such—is co-equal with services of labour and capital including land (for that is his classification of productive services), why should co-ordination fail to secure a reward in the static state unlike the other factors? Does he regard it then as a mere receptive function, a

⁶ J. B. Clark : *Profits under Modern Conditions* ; *Political Science Quarterly*, Vol. II, p. 607.

kind of moral propriety to receive profit when it comes ? Does he mean that this service need not claim a reward as a necessary pre-requisite to its offering, but only claims a moral title to appropriation, when it happens to appear ? There are, however, passages in "The Distribution of Wealth," which clearly show ⁶ that co-ordination is a productive service. Profit is regarded as a "sufficient lure" to "overcome obstructions and take risks" for securing progress. Competition again is supposed to give to an entrepreneur "what the co-ordination function creates." But these at first sight seem to be out of harmony with the general trend of his writings. "The essential fact," he tells us ⁷ "is that the employer buys out his partners in the productive operation..... The function of the entrepreneur as such consists ...in two operations, the one mechanical, and the other mercantile : he directs a productive process, and he buys the elements that enter into the product.....In the one capacity he is a labourer and receives a higher variety of wages : in the other capacity he is a merchant, and receives a margin of difference between what he pays and what he gets."

Clark clearly states that the entrepreneur, gets profit as a merchant; and this merchant, if purified

⁶ The Distribution of Wealth, pp. 3-4.

⁷ Clark : Profit under Modern Conditions ; Political Science Quarterly, Vol. II, p. 605.

of his labour function, emerges as a "co-ordinator" proper.

Now Hawley objects to Clark's definition of the entrepreneur as "the man who co-ordinates capital and labour without, in his own proper capacity, furnishing either of them." His criticisms are worth noting :⁸ "The labourer," he complains, "can be defined as he who co-ordinates his own labour with things, and, when these things are or become capital, as one who co-ordinates his own labour with capital. Then, according to Prof. Clark's definition, the only distinction between the ordinary labourer and the entrepreneur is that the one co-ordinates his own labour, and the other the labour of others. How, then, does the mere foreman differ from the entrepreneur ? Surely, it is his interest, or ownership, in the product, and not his being a co-ordinator, which is the distinguishing characteristic of the entrepreneur."

The controversy is very interesting. Both agree that the ownership of the product must remain with the entrepreneur. And both are loath to acclaim ownership as an economic or productive function. Clark thinks that the productive service associated with ownership is "co-ordination," while Hawley is equally sure that it is *risk*.

⁸ Hawley: *The Risk Theory of Profit*, Q. J. E., Vol. VII, p. 472.

Hawley makes an additional ground out of J. B. Clark's confession that ownership of the product always remains with the entrepreneur, who receives profit. This enables Hawley to argue, "if the ownership remains, the risk remains: the two are inseparable."⁹ So it is the risk that constitutes the productive service of the entrepreneur.

Now, what is the real meaning of co-ordination? What J. B. Clark wrote about it in the *Quarterly Journal of Economics* and in the *Political Science Quarterly*, he almost repeats in his *Distribution of Wealth*. "The function (entrepreneur's) in itself includes no working and no owning of capital: it consists entirely in the establishing and maintaining of efficient relations between the agents of production."^{9a} He notes, however, subsequently ^{9b} that within the sub-groups, or specific industries, productive agents have to be "co-ordinated" with each other—"the quantity of each kind has to be determined." In Chapter 19 he points out again how a normal apportionment of labour and capital among the industrial groups takes place by the movement of factors according to the law of diminishing productivity. "Here entrepreneurs are the movers of labour and capital."

⁹ *Ibid.*, p. 473.

^{9a} *Ibid.*, p. 3.

^{9b} *Ibid.*, p. 301.

Does co-ordinating, then, mean regulating the movement of factors till their right proportion of quantities is determined? If so, how can we say that the co-ordinating function creates a product? The necessity for this function does rather arise when the group-productivity of any factor differs from its normal level, that is to say, when it is different in different groups. An argument of this kind is indeed plausible, but not conclusive. There is no reason why we should conceive of "co-ordination" as a sort of static service. Clark always associates his entrepreneur with dynamic conditions, as introducing improvements and securing progress. And improvement and progress in any process of production implies an establishment of *new relations* among the productive factors and not an imitation of one universally adopted. So co-ordination is to be associated with the *new* and *improved* relations of the productive factors and must be regarded as a productive service.

Now, even if we grant in the light of this interpretation that co-ordination is a productive service, still it can be contended that it is nothing but a kind of mental labour and it is but the service of labour. And this makes it clear that the difference between Clark and Hawley is to be attributed here to their difference in the basic idea or philosophy that underlies the concepts of the entrepreneur and profit.

Clark^{9c} resolves the gross income of society into wages, interest and profits. The rent of land is regarded as merged in interest. Wages and interest are the earnings of labour and capital respectively. The profits are "gains from a certain co-ordinating process that is performed by the employers of labour and users of capital." "This purely co-ordinating work," as we have seen, is the entrepreneur's function, according to Clark.

The conception of an "entrepreneur" and his function seems to be derived analytically—to explain the distribution of incomes. These incomes are classified, not according to the ranks of their recipients, nor according to the material medium of earning them, such as land, labour and capital. The current names of incomes are taken for granted. He does not care to classify them explicitly according to any logical plan. But his classification of incomes is really based upon his static and dynamic concepts. Incomes are classified as static or dynamic. Profit is a dynamic income: it can be created only under dynamic conditions. The other two incomes, *viz.*, wages and interest, are static. He believes that "the distribution of the income of society is controlled by a natural law; this law..... would give to every agent of production the amount of wealth which that agent creates."^{9d} The entire study of distribution is, in this view, a study of

^{9c} The Distribution of Wealth, pp. 2-3.

^{9d} *Ibid.* Preface, p. v.

specific production. " It is an analysis of the wealth creating operation, and a tracing to each of the three agencies that together bring wealth into existence of the part which it separately contributes to the joint product. To each agent a distinguishable share in production, and to each a corresponding reward—such is the natural law of distribution." ⁹⁰ The three agents of production he speaks of do not stand on the same level. The dynamic income can only be earned by a dynamic agent. This is his entrepreneur, who produces wealth by initiating dynamic conditions, by "establishing relations" of a newer type between the static factors, that is, by "co-ordinating" them, in his peculiar phraseology, to a better advantage, by "moving" them towards the creation of greater wealth. The labour and capital are static factors. The natural or static law—the law of final productivity—is applicable only to the static incomes, *viz.*, wages and interest.

Hawley's conception of the factors of production and his classification of incomes are based on the contrary, as we shall find it later, on a completely different set of ideas.

F. B. HAWLEY

The risk theory of profit, as proposed by Hawley, is also a theory based on a distinctive

⁹⁰ *Ibid.*, p. 3.

productive service. It is best summarised in his own words :¹⁰

“ The final consumer is forced to include in the price he pays for any product not only enough to cover all the items of cost to the entrepreneur, ... among which items is a sum sufficient to cover the actuarial or average losses incidental to the various risks of all kinds necessarily assumed by the entrepreneur and his insurers, but a further sum, without which, as an inducement, the entrepreneur, or enterpriser, and his insurers will not undergo or suffer the irksomeness of being exposed to risk.

“ This surplus of consumer's cost over entrepreneur's cost, universally regarded as profit, and, from the nature of the case, an unpredetermined residue, is the inducement for the assumption by the entrepreneur, or enterpriser, of all the risks, whatever their nature, necessitated by the process of production. As the inducement to any given action and the reward for that action are the same thing, ... the difference being not in the thing itself, but only in the point of time from which it is looked upon, ... the unpredetermined residue which served as the inducement to risk at the commencement of any industrial transaction must necessarily, when determined and realized at its close, be regarded as the result, or reward, of the risks undergone.”

¹⁰ F. B. Hawley: Reply to Final Objections to the Risk Theory of Profits, Q. J. E., Vol. XV, p. 610.

Nobody contests Hawley in his thesis that uncertainty is responsible for a higher consumer's price and profit (gross). Marshall and Clark both recognise the truth. But the dispute is as to who is benefited by it. Hawley thinks that it is the entrepreneur, and his function is, therefore, risk-taking. Clark maintains that it benefits ultimately the capitalist. "It goes without saying that the hazard of business falls on the capitalist."¹¹ The entrepreneur, he explains, "becomes the owner of the products of this industry, as they are turned out, and sells them in the market for what he can get. In acquiring this ownership, he must pay all the costs entailed in creating the product; and among the costs to be thus defrayed is the entire sum made over to the capitalist as an offset for risk."¹¹

Thus Clark denies that the entrepreneur carries any risk. "The entrepreneur, as such" he elucidates further, "is empty-handed. No man carries a risk who has nothing to lose... To the one (capitalist) the reward of risk is an income: in the other (entrepreneur) it is an outgo that must be submitted to before he can become the complete owner of the product. If there is a true profit in the case, it comes after this demand has been met."¹¹

The difference between Clark and Hawley on this point is mostly attributable to their difference of conception with regard to the entrepreneur and the capitalist.

¹¹ Q. J. E., Vol. VII, p. 46.

The significant thing in the entrepreneur is the ownership, insists F. B. Hawley. Clark asserts that ownership, though a necessary one, is a mere incident. Their real difference seems to lie in the emphasis of the altogether different things connected with ownership. Thus while Hawley emphasises on the uncertain character of the income derivable from this ownership and thus identifies ownership with risk-taking, Clark looks to the productive arrangement that has made this acquisition of ownership (of the product) usual and regards ownership as a mere incidental necessity. Without ownership the different agents cannot be made to associate together so easily for purposes of production, nor can they be "co-ordinated" so efficiently in their right quantitative relations. *Co-ordination*, with Clark, means *the establishment and maintenance of this right relation* between the producing agents. But Hawley and Haynes,^{11a} in common with innumerable others, are unable to imagine that the "co-ordinator" can be distinguished from a labourer of some kind or other. The acquisition of ownership of the product is the most usual and the easiest means to-day by which "land, labour and capital" are productively associated. But this need not be thought of as the only means for bringing about their association. Nor does it necessarily imply an acquisition of the ownership of the productive equipment. Ownership

^{11a} Haynes : *Risk as an Economic Factor*, Q.J.E., pp. 409-49.

is an incident of Clark's "co-ordination" only in this limited sense—an incident appertaining to a method of organising production that is almost universal to-day.

Clark conceives the 'entrepreneur' in a narrow sense of the 'owner of an enterprise,' *viz.*, the owner only of its product, as distinct from the different factors co-ordinated. The entrepreneur is the usual owner of the product, for otherwise he cannot usually be its supplier. But to Hawley enterprise in its physical form means everything that appertains to a business or firm, including the productive plant and working equipments, and the entrepreneur is the complete owner of this enterprise. Capitalists are mere lenders to the enterprise. Hawley is thinking here of the proprietor *de jure* of an enterprise. Clark's capitalist is the owner of any kind of property: it includes lenders as well as employers of capital. But every capitalist is not the owner of the products: only the capitalist-employer can be the owner, not the capitalist-lender. Capital in his system stands for the aggregate material resources of the nation devotable to production; the only other factor of production is labour which comprises the whole population. Labour and capital, however, are only *static* factors, akin to the *passive* factors of J. B. Say. The labourer and the capitalist as such are mere *static* agents. Clark's entrepreneur must be a labourer in the sense of the source of any kind of exertions,

physical or mental : he may again be and usually is also a capitalist, in the sense of the owner of some property that is utilised for production. As a matter of fact an entrepreneur *usually* has to be, to a certain extent, both a capitalist and a labourer. But he does not earn his profit as a static agent, either as a labourer or a capitalist. He earns it as a dynamic agent, as one who produces more by establishing new relations. He is more than a mere labourer or capitalist : he is a director, a "co-ordinator" of labour and capital.

Clark is seeking for the source of social incomes in the nature of the specific services that contribute to the product. Hawley is looking for the legitimacy of incomes in the nature of the specific disutilities that constitute a service. Both of them are eager to discover a means by which profit may be separated from other incomes. Both of them start their search from a concrete entrepreneur who is most often both a capitalist and an employer. Both of them are looking to the income of shareholders of a joint-stock company for an example of pure profit. Now what differentiates the income of a mere lending capitalist from the employing capitalist who is defined to be the entrepreneur?—asks Mr. Hawley. He finds that the only difference between them is the *ownership*. He, therefore, seizes upon ownership as the explanation of the entrepreneur's income. And as he looks not to the *productivity* of a service but to its disutility

as the justification of appropriating an income, he identifies that disutility with the *risk* that is popularly admitted to be inherent in the ownership of any kind. Thus he transforms the mere ownership to an economic service, of which the nature is *risk-taking*.

Clark is not only looking from a different angle but his plane of observation stands on a different level as well. He finds that profit differs from other incomes by its specific dynamic nature. He discovers the source of all incomes in the productive activities of the entrepreneur, who brings in progress. He wants us to concentrate our attention on the fact that the same amount of money-cost may bring us a greater volume of product simply by an alteration of the relative composition of labour and capital which form the initial productive outlay. The productivity of labour and that of capital are mere derived productivities, dependent on *how* the entrepreneur *relates them* with each other. Their productivity, in other words, depends on the process of production adopted by the entrepreneur. Their productivity is not only subservient but also mechanical, varying as it does with the quantity of a factor according to his "law of final productivity." Once the method of production is decided upon, the productivity of the factors follows a mechanical law and their incomes are determined by that productivity. The function of the entrepreneur is to "establish" newer "relations" amongst the factors, that is to say, to

adopt an improved process of production. The general level of productivity is enhanced thereby. This enhanced level of general productivity constitutes the *source* of profits. It is to be certainly credited proximately against the "co-ordination" or the "establishment of (newer) relations" between the factors. Thus his plane of observation is one of changes in the general income-level and his angle of vision is one of productivity. His conclusion is that the entrepreneur can earn profits only by increasing the productivity of the factors employed. Broadly speaking, the entrepreneur is one who *establishes new relations*, not only by initiating new processes, but also by imitating the newly established ones.

This improved process of production or productive organisation is the source out of which an additional product or surplus is created. But whether this surplus will remain in the hands of the entrepreneur who is the employer, or will go to the employed agents, labour and capital, depends not on the service of "co-ordination" or adoption of an improved method, but on the presence or absence of *friction*, that is to say, on the absence or presence of conditions that ensure "perfect mobility" of labour and capital. A static state, according to Clark, "excludes true entrepreneur's profits," not because of the absence of the dynamics, but because a *real static state* presumes "perfect mobility" of labour and capital.

Absence of dynamic changes with imperfect mobility does not annihilate profit immediately; profits continue to flow to the entrepreneurs till a static adjustment of prices be completed. But "with dynamic changes in progress and friction absent, the standards of price change every day, but actual selling prices conform every day to them."^{11b} Here there is no chance for the entrepreneurs to retain the surplus-product or profit that their "co-ordination" creates.

It follows, therefore, that Clark's "co-ordination" can create the source of profits, no doubt, but it does not entitle or enable the "co-ordinator" to appropriate them. How can we then correlate here the productive service of the entrepreneur and the profit which is assumed to be its reward? This, we believe, is the weak point in Clark's theory. This forces us to the conclusion that profit is the outcome of external conditions outside the sphere of productive activities, rather than the fruit of a productive service that Clark calls "co-ordination."

Let us now inquire, in what sense Hawley regards risk-taking as a productive service? His risk means "the risk of price fluctuation *attendant upon ownership*," the risk associated with the financial responsibility of any business enterprise. These risks, he warns us, refer to the *industrial risks* and are different from the

^{11b} J. B. Clark: *The Distribution of Wealth*, pp. 80-81.

speculative risk of gambling or betting upon mere price changes.

Hawley's arguments briefly seem to indicate that the assumption of these risks is a necessary condition of industrial production. It is also a disutility which will not be assumed without the expectation of a reward. His recognition of risks as a *productive* service does not amount to mean that this service adds to the product the entrepreneur undertakes to produce. It only emphasises the fact that no production can be undertaken, unless the entrepreneur "submits himself to conjuncture," unless he depends for his remuneration upon the chance of his success in the enterprise. And this involves a disutility. The assumption of risk, in other words, is a disutility inherent in any kind of production. He seems to regard *service* as a kind of disutility, and *productive service* means to him only a *disutility* involved in any kind of production.

Considered in this light, we can well understand why the shareholders of a joint-stock company receive profit, as both the reward and inducement for incurring the disutility which the uncertain results of an enterprise put them to.

The shareholder, in Clark's view, obtains interest as capitalist and profit as one who has increased the productivity-level of capital and labour by putting them into new relations, by "co-ordinating" them, *i.e.*, by the adoption of an improved process.

This is why the excess of the dividend above interest is pure profit, according to J. B. Clark.

Clark and Hawley, however, *measure* profit quantitatively in the same way : by the surplus of the entrepreneur's receipts over his disbursements. And this is the method almost universally adopted : there is no serious dispute about it.

Profit, in the sense of gross returns, must, of course, go first to the owners of the product, *i.e.*, entrepreneurs. But when uncertainty reacts, as Hawley argues, on the cost of production, when entrepreneurs are only induced to take up risky production on an extra reward, does it not follow that the flow of any economic resource to industry is really conditioned on a higher supply-price ? If so, is not Clark's contention true that uncertainty ultimately results in a higher supply-price of capital ? Of course, it is not the whole truth. For there is no reason why the earnings of management should not increase likewise. In fact as uncertainty attaches to the result of the enterprise as a whole, all economic factors ought to be affected in their supply. No doubt, risk of capital is great : but so is that of the class of labour which supplies business ability.

Now the admission of this fact, of course, implies that the so-called function of uncertainty-bearing or risk-taking as a distinct specific service attributed to the entrepreneur, as such, is a pure fiction.

The truth underlying the conception seems to be that uncertainty of the results of enterprise affects the relative supply of the different kinds of business enterprises themselves.

The followers of Clark, the dynamic theorists, admit that risk affects capital, labour and even the reputation of the concrete entrepreneur. They agree that risk is a disutility and usually fetches a reward. But that reward, they point out, is not profit. Dr. Willett¹² reminds us that the problem of profit is approachable from two alternative points of view, (a) entrepreneur's activities or (b) his reward. Activity analysis leads to identifying the entrepreneur either with (1) a labourer earning wages of management, or (2) a capitalist serving society by carrying risks, or (3) a combination of both earning an extra-gain supposed to accrue from the dual rôle he assumes. Willett points out that Clark followed the second method and he also follows the lead of Clark. He rejects the first course on the ground that the entrepreneur, as the director of industry, is too complex a conception to be serviceable in an analysis of distribution.

Profit serves as the impelling motive of the entrepreneur, but risk acts as a deterrent, due to the unwillingness of the capitalist to risk his capital,

¹² Allen H. Willett: *The Economic Theory of Risk and Insurance* (New York, 1901, as submitted for the Ph. D. Degree of the Columbia University), pp. 17-18.

and of the manager to risk his labour.¹³ This, according to Dr. Willett, is the sole relation between profit and risk. Risk, it is necessary to note, is defined as "the objective correlation of uncertainty about the relation between present outlay and future return."¹⁴

He reminds us of the difference between the *chance* or the degree of *probability* and the degree of *uncertainty*. Uncertainty refers to the entire range of the deviation of a variable from its average value. "The uncertainty is the greatest when the chances are even," that is, when the degree of probability is measured as half.

Risk affects economic activity according to the degree of uncertainty and according to the unwillingness of the people to incur this psychic-disutility. This unwillingness can be overcome by the inducement of a reward. The assumption of risk is, therefore, prompted by the prospect of a reward.¹⁵ But who can assume this risk? None—says he, echoing Clark—except those who have something to lose. Now the only person who has something to lose is the capitalist.¹⁶ So risk and its reward both go to the capitalist.

So far, we have nothing new. Briefly, the reason is that profit is the remuneration of the

¹³ Allen H. Willett : *The Economic Theory of Risk and Insurance* (New York, 1901, as submitted for the Ph. D. Degree of the Columbia University), p. 133.

¹⁴ *Ibid*, p. 49. ¹⁵ *Ibid*, Chap. IV. ¹⁶ *Ibid*, Chap. V.

entrepreneur as such. But risk is run by the capitalist and not by the entrepreneur. This is, of course, no answer to Hawley, who shows that not only capital but wages and interest yet to be earned, and even reputation can be risked.¹⁷ Dr. Willett himself shows that risk limits the activity of the entrepreneur by his unwillingness as a manager to risk his wages.¹⁸ But we can well imagine what answer he might have given to Hawley. If entrepreneur is not a capitalist, he is not a labourer either. He has nothing to risk.

He adduces, however, additional reasons¹⁹ as to why the reward for risk-taking cannot be regarded as profit: (1) Profit is a surplus above price-determining costs, while risk is an element in the cost of production. (2) Profit is a temporary gain which is annihilated by competition. Uncertainty, as a disutility, is a permanent trait in human character, which competition cannot uproot. (3) Profit arises from *abnormal* dynamic conditions. Risk is a *normal* static condition as well. (4) There is no uniform relation between profit and risk-taking.

It will be seen from the above that Willett mainly relies on two arguments to refute the claim of risk-taking to profits: (1) Profit is a surplus which competition destroys. (2) If profit is a

¹⁷ Q. J. E., Vol. VII, p. 478.

¹⁸ Willett, p. 138.

¹⁹ *Ibid*, pp. 77-78.

reward for risk-taking, why should not profit increase in proportion to risk? Hardy²⁰ also tests the claim of risk-taking to profit by the first of these arguments. Hardy recognises two sources of profit, (a) monopoly, in the Clarkian sense of conditions restricting mobility and competition, or in the Marshallian sense of conditions restricting short-period supply, and (b) risks. Both give rise to profit by limiting competition. But there are differences in the way it is limited: risk throws obstacles that can be overcome by extra disutility. Monopoly conditions of the Clarkian group are ways yet undiscovered by or inaccessible to rank and file. The latter can be conquered with knowledge or pluck, and is a function of time. The former (risk) is surmountable by payment for this disutility and is independent of time. In the case of *monopoly*, the suppliers either do not know their way to the trade or they are unable to find an immediate approach. In the case of risk, they do know the road, but would not go in, unless they are paid something extra to walk over the thorny way.

This constitutes the main difference between the Clarkian dynamic theorists and the Risk theorist Hawley. Both point to extraneous conditions which affect the fortune of industry. But

²⁰ Charles O. Hardy: Risk and Risk-bearing (The University of Chicago, 1923), p. 43.

dynamic theorists stress only those conditions or effects which, they imagine, affect the reward of the entrepreneur and not his costs. How that is possible, many of us will immediately question? We have already seen that they do it by definition, —by defining profit as a surplus above price-determining costs. But they are also sure that risks are not and cannot be assumed by the entrepreneur, pure and proper.

Hawley, on the other hand, is anxious to “orient” Economics on “enterprise.”²¹ He emphasises that the so-called factors of production, land, labour and capital, are mere means, and enterprise or risk-taking is *the* factor of production. Such a factor cannot be made to work for society on an uncertain and a vanishing surplus. Profit is *the* cause of rent, interest, and wages. The three factors are servants of enterprise, but *enterprise* is the servant of society.²² A marginal entrepreneur must have a normal rate of profit. Hawley questions, and questions rightly, the very assumptions on which the whole theory of current distribution was based, *viz.*, that factors are mutually employing each other, or they are directly

²¹ F. B. Hawley: The Orientation of Economics on Enterprise, American Economic Review, 1927, p. 409, *et seq.*

²² Hawley: Enterprise and Productive Process, Chap. V, p. 96.

employed by the community.²³ He enquires into the productive process itself and finds on reflection that neither the productivity theory of Clark nor the pain-cost theory of the classical school applies in an unqualified manner to the province of distribution.²⁴

The real root of their difference, therefore, lies much deeper than what was apparent on the surface of these long controversies. The Clarkian group seem to rely entirely on the doctrine of marginal productivity in distribution and look upon profit from an altogether different angle of vision.

Profit arises out of the divergence of the *income* from *cost*, due to each factor.. How is this divergence possible at all ? Obviously this is due to some sort of limitation to competition. Imperfect competition keeps up the productivity of factors above the level of their cost.

Their view-point, as Dr. Willett admits, is completely different. The dynamic theorists did not care to enquire about costs. They hold that costs will be on a level with the marginal productivity, as soon as competition can fully establish itself. If it is claimed that risk means disutility, it is obviously a cost and cannot, therefore, be a factor accounting for a surplus above cost. Consequently profit cannot be attributed to any kind of service that is based upon cost. This is why Clark was forced to correlate profit with the *dynamic* service of a

²³ *Ibid*, p. 98.

²⁴ Q. J. E., Vol. 15, p. 619.

non-capitalist's labour-less " co-ordination " outside the field of *static* costs.

They had also another difficulty in accepting risk-taking or enterprise as an independent factor of production. If it is really an independent factor, the reward of risk must correspond with its degree. The pain-cost theory would assume a correlation of this kind. But practical instances belie that assumption. High risks do not bring in a high level of profit to the affected industry as a whole : profit is often negative. Why should this happen? This anomaly is not found in any other factor. They, therefore, did not regard risk as a separate factor. It was a mere incidental condition to production, which put the two factors of production, notably capital, to an extra disutility.

Hardy²⁵ explains the relation of profit to risk very clearly : " The significance of risk as a source of profit depends in each case on its effectiveness as a deterrent to competitive efforts to exploit the given opportunity, and its effectiveness depends on the degree of uncertainty inherent in the situation, the number of people to whom the probability of success appears great, their attitude toward the taking of risk, and the amount of capital they control."

Hawley protested, as we have seen, but in vain. Any theory of distribution, according to

²⁵ Hardy : Risk and Risk-bearing (The University of Chicago, 1923), p. 41.

current conceptions, could be based either upon productivity or upon pain-cost, and preferably upon both. Hawley, who disbelieved both these theories, had certainly no title to be heard seriously in scientific circles. As we shall have an occasion to test the accuracy of these time-honoured theories much more minutely, we should better note here what Hawley thought upon the matter.

"The economic distribution of the product," Hawley wrote,²⁶ "is not and should not be in the proportion in which the product is due to each, in the sense of arising from the activity of each; nor is it in accordance with the sacrifice, in the sense of pain-cost, of each factor. The real principle of division...can thus be stated:

"The proportion of product that each factor obtains is that which tends to result in an equilibrium among them; that is, which induces each factor to an activity in such proportion to the activities of the other factors as shall result in the greatest joint activity possible under the social and economic condition prevalent at the time."

Hawley believes, no doubt, that disutility forms the basis of cost, but thinks that there is no proportional relation between the disutility of service and its reward. His main thesis is that uncertainty-bearing or risk-taking is *the* service which has

²⁶ Q. J. E., Vol. 15, p. 619. See also "Enterprise and Productive Process," p. 328.

escaped detection so long in the economic analysis. Further, this service, which means disutility, is entitled to an esteem, not only similar but also superior to that in which other services are held. This particular service is rendered by the entrepreneur. Just as labour is the service of the labourer, and abstinence is that of the capitalist, so risk-taking is the service of the entrepreneur. It will thus be seen that he approaches the problem from the side of the entrepreneur's activities. His analysis is an analysis of disutility that forms the basis of cost. His discovery is that the disutility of the service of the entrepreneur is predominantly, though not purely, risk-taking. He admits that every *owner* takes and must take risks. The landlord, the capitalist, the labourer is each a risk-taker in that sense; but risk is a minor element in their service. Each of them is only characterised by the predominant type of disutilities. Pure elements are always rare. Hawley even goes to the length of saying that enterprise must not be understood as risk-taking in general. Enterprise consists only in risks borne by an owner. Speculators, who seek to snatch at profits through gambling with price-rates without acquiring ownership of the products they are dealing with, are not *enterprisers*.²⁷ So Hawley understands by

²⁷ Quarterly Journal of Economics, Vol. 15, pp. 100-1, 603-9.

service, as we do often now, the cost of service, its disutility.

Now J. B. Clark and his group confined their attention mainly to the value of entrepreneur's services. Their concrete entrepreneur creates surplus values by his activities as a dynamic *labourer*, carries risks as a *capitalist*, claims profit as a "co-ordinator," but keeps it as a lucky trader, and his luck consists among other things in the immobility of capital and labour.

Clark distributes consumer's price according to productivity. Hawley distributes it according to disutility. One who carefully reads his writings will have no hesitation to conclude that Hawley would readily attribute the reward any concrete factor gets to four elements, viz.: (1) labour, (2) abstinence, (3) uncertainty, and (4) opportunity. This constitutes his "scientific" division of the economic factors according to "functions."

There seems to be an irreconcilable admixture of the different view-points in both Clark and Hawley. Both of them *measure* profit, that is to say, *define* profit *quantitatively*, from the entrepreneur's view-point and the mode of his earning. But Clark examines the *nature* of profit and of the service which yields this income, that is to say, *defines* it qualitatively from the view-point of society and the physical output of industry; while Hawley does the same from the view-point of an individual earner and his sacrifice in the shape of physical pain and mental discomforts.

F. H. KNIGHT

- Prof. Knight, like J. B. Clark, looks upon profit—pure profit—as a noncompetitive surplus and measures it by the difference between selling price and cost. “The primary attribute of competition universally recognised and evident at a glance, is the ‘tendency’ to eliminate profit or loss and bring the value of economic goods to equality with their cost..... But in actual society, cost and value only ‘tend’ to equality, it is only by an occasional accident that they are precisely equal in fact, they are usually separated by a margin of ‘profit,’ positive or negative. Hence the problem of profit is one way of looking at the problem of the contrast between perfect competition and actual competition.”²⁸

Now *uncertainty*, in the sense of *unmeasurable uncertainty*, is the cause of this divergence of actual competition from perfect competition. It is thus the cause of profit.

Prof. Knight comes to compromise between the dynamic theory of Clark and the risk theory of Hawley. He criticises Clark that “it is not dynamic change, nor any change as such, which causes profit.”²⁹ Known changes are predictable, and do not hinder competition.

²⁸ F. H. Knight : Risk, Uncertainty and Profit, pp. 18-19.

²⁹ *Ibid*, p. 38.

He criticises Hawley that " he treats risk as a known quantity." ³⁰ A known risk is no risk at all. It forms a part of cost.

But he finds " a principle of truth " in both these theories. " On the one hand, profit is in fact bound up in economic change (but because change is the condition of uncertainty), and on the other, it is clearly the result of risk, or what good usage calls such, but only of a unique kind of risk, which is not susceptible of measurement." ^{30a} So Prof. Knight comes to supply the missing truth in his *unmeasurable uncertainty* of the future.

One is apparently surprised that Prof. Knight ³¹ accuses Dr. Willett of regarding risk as a known quantity, whom he quotes as pointing out that " the power of accurately foreseeing the future " is one among other additional assumptions that must be made for an ideal static state, besides absence of all dynamic conditions postulated by J. B. Clark. Dr. Willett is again quoted by him in the same passage as considering " discrepancies between the anticipated and the actual results of economic activity." Dr. Willett gives us a measure of uncertainty. He says: ³² " The figure expressing the average variation of the actual losses from the average loss for a number of years is called the probable variation."

³⁰ *Ibid.* p. 45.

^{30a} *Ibid.* p. 48.

³¹ *Ibid.* pp. 39, 40, 44.

³² Willett, p. 34.

The greater the ratio between the probable variation and the whole number of cases, the greater is the uncertainty. Do these look like regarding risk as a known quantity ?

Again, was it not Hawley who pointed out repeatedly in his controversies with J. B. Clark that the reward of an insurer was not the premium he received but the difference between the premium and the actual loss ? Was it not Hawley who showed that the subjective value of a risk was the loss anticipated, but the cost was the actual loss suffered ? ³³

But Prof. Knight uses the word *uncertainty* in a special sense. He analyses human behaviour in the light of the philosophical theory of knowledge. He ³⁴ points out that we do not act upon inferences of logical reasoning, based upon *exact knowledge* of things. We act upon estimates, opinions, "judgment," or "intuition," based upon *imperfect knowledge* of the data and the environment in which we work.

Now an estimate is somewhat like a probability judgment, but very different from the *two types* of probability judgment, ordinarily considered as such, viz. : (a) *a priori* probability based upon absolutely homogeneous classification of instances, and

³³ Hawley : The Risk Theory of Profit. Q. J. E., Vol. VII, pp. 460-78.

³⁴ Risk, Uncertainty and Profit, pp. 223-33.

(b) statistical probability, based on an empirical classification of instances. It is the third type of probability judgments Prof. Knight calls true *uncertainty*. He regards these estimates only, as peculiarly "liable to err." For they rest upon "no valid basis of any kind" for classifying instances.

The types of uncertainties which are amenable to measurement by the methods of *a priori* or *statistical* probability he calls "risks." These types are measured and measurable more or less accurately. But the third type—mere estimates and opinions—is *unmeasurable* by the fact that there is no basis for such a measure.

"It is this *true uncertainty* which by preventing the theoretically perfect outworking of the tendencies of competition gives the characteristic form of 'enterprise' to economic organisation as a whole and accounts for the peculiar income of the entrepreneur."³⁵

Uncertainty, according to Prof. Knight, makes "the task of deciding what to do and how to do it" take "the ascendancy over that of execution." The result is the specialisation of the function of enterprise and the wage system.³⁶

To exercise "responsible control" and to insure the productive agents against uncertainty and

³⁵ *Ibid*, p. 232.

³⁶ *Ibid*, p. 268.

fluctuation in incomes constitutes the peculiar function of the entrepreneur.³⁷

This control and uncertainty-bearing can never be separated. He contends against Hawley that this separation, which the latter observes between a hired manager and his employer, is only apparent, not real.³⁸

“Profit is the residue after deduction of the *payment* for other agencies, determined by the *marginal bid* of entrepreneurs as a class for all agencies as aggregates. The residue in the latter case is not a product residue, but a margin of error in calculation on the part of the non-entrepreneurs and entrepreneurs who do not force the successful entrepreneurs to pay as much for productive services as they could be forced to pay.”³⁹

Now this is a remarkable improvement upon both *dynamic* and *risk* theories. He recognises that social income is subject to fluctuations. Business prospects are uncertain. The division of social income into profit and contractual incomes is thus wholly based upon estimates of a kind peculiarly liable to error. Expectations of the present may well diverge from the actualities of the future. Profit or loss is thus the result. Pure profit is the fruit of a wrong estimation, and not of the entrepreneur's service or sacrifice.

³⁷ *Ibid.*, p. 278.

³⁸ *Ibid.*, pp. 298-99.

³⁹ *Ibid.*, p. 284.

"It is inaccurate," he declares emphatically, "to speak of profit as the reward of risk-taking or as the inducement to take risk. It is of the essence of the situation that the profit is in the future and uncertain when the decision is made and hence it is the *prospect* or *estimated probability* of profit which 'moves men's wills' (Taylor). Hence we cannot assert a connection between actual profit and the irksomeness of risk."⁴⁰ He rather inclines to the belief that profit as a whole is probably negative. "The individual not only charges nothing for this service, but pays something for the privilege of rendering it—on the average."⁴¹

As profit is really an error-of-estimate income, all incomes in the modern dynamic society are to a certain extent profits. "As there is no income which is pure profit so there is none which does not contain an element of profit....ordinary interest includes an element of 'risk premium.' It is no less true that wages contain a variable element which is to be explained by the uncertainty of the return."⁴²

Prof. Knight agrees with both the Clarkian group and Hawley that profit is a surplus and a residual income. He believes in common with

⁴⁰ *Ibid*, p. 363.

⁴¹ *Ibid*, p. 368.

⁴² *Ibid*, pp. 366-67.

the *dynamic* theorists that profit is possible only so long as competition cannot be effective. But what retards competition is not *changes* as such, nor *risks*.

Profit arises not from dynamic conditions as such, nor from the disutility of risk assumption, but from a kind of immeasurable *uncertainty*, created by unforeseen and unpredictable dynamic changes which force people to act upon estimates and expectations. Anticipated estimates may obviously deviate from actual returns.

Prof. Knight applies the doctrine of diminishing marginal productivity, not in the sense of the falling physical productivity of a factor resulting from the increase of its own "doses," but in the sense of the relatively higher level of its value productivity caused by an increase of other factors, as governing the demand of entrepreneur's services.

It is not clear whether Prof. Knight really believes in any kind of pain-cost as restricting their supply. He points out, however, that risk, though it involves the entrepreneur's function in efforts and sacrifices,^{42a} does not exact a reward on an average. This seems to indicate that he had no such idea. The supply of the entrepreneur's services depends on "(a) ability, with the various

^{42a} *Ibid*, p. 278.

elements therein included, (b) willingness, (c) power to give satisfactory guarantees, and (d) the coincidence of these factors."⁴³

Evidently he does not regard *uncertainty-bearing*, as Hawley does, as a distinct factor of production.

Now these controversies between Dynamic and Risk theorists bring into focus the five elemental questions, on the solution of which a satisfactory theory of profit could be set up. These are :

1. Is Uncertainty-bearing a separate factor of production, in the same sense as land, labour or capital ? How is risk-taking practically rewarded in industry to-day ?

2. Does the distribution take place in fact according to the marginal productivity theory ?

3. Does the basis of economic cost, as it is actually paid at present, lie in a group of specific disutilities, such as fatigue, waiting or risks ?

4. If profit is the reward of uncertainty, as the Risk theory maintains, what is the difference between profit and interest, which Böhm-Bawerk regards as a surplus value, also due to uncertainty ?

5. Does competition really tend to eliminate profit—pure profit ?

We shall return to these questions at a later stage. In the meantime let us complete our

⁴³ *Ibid*, pp. 282-83.

survey of other qualitative definitions of pure profit.

Besides these three types of theories, *viz.*, dynamic, risk and error-of-estimation explanations of pure profits, there is another type. This group of theorists admits that the entrepreneur assumes risk, but it is in the nature of his service that he should do so. (This, we may remember, is also the view of Taussig and Davenport.) His profit is due to his ability in so conducting the enterprise that risk is considerably reduced thereby. His profit, in other words, is the *rent* of his supra-marginal ability in risk-reduction—an echo of Walker's rent theory, only narrowed down in the scope of its application. Prof. Fetter is an exponent of this view. So is Prof. Carver. In a criticism of Hawley, Prof. Carver⁴⁴ explains:—“There is no reason for believing that a given loss would fall less heavily upon him (a relieving entrepreneur) than upon those whom he relieves, but there are reasons for believing that the amount and the number of losses experienced by the skilled entrepreneur are less... This is due to superior foresight, and skill in avoiding losses.”

Prof. Carver points out five sources⁴⁵ of profit: (1) superior bargaining power due to his better knowledge of the market and inside

⁴⁴ Carver : The Risk Theory of Profits, Q. J. E., Vol. 15, p. 457.

⁴⁵ Carver : Distribution of Wealth (1924), p. 286.

business workings, (2) deception of consumers, (3) method of terrorism, (4) uncertainty and risk which make an average man willing to accept less as his stipulated wages, rent or interest, (5) his superior ability in risk-reduction.

It will be seen that the first four sources are simply "acquisitive" in the sense of Veblen, and not productive. Only the last is truly productive, although (1) and (4) may also be regarded as *earned* in a sense. He classifies the income of the sources (2) and (3) as belonging to "the same category with those of the thief, the counterfeit, and the confidence man."

He regards profits as a residual amount. But he explains:⁴⁶ "This does not mean that profits are a residual share in the sense that the others are determined independently by laws which affect them each alone, leaving profits as a share which can be determined by no law except that of subtraction. There is no such thing as a residual share in that sense, for any change which affects one share will affect them all in one way or another. They all mutually help to determine one another. But in a very concrete sense the profits of a given business man are what he has left after paying all his expenses" (including wages, interest and rent allowed for himself at the market-rate).

⁴⁶ *Ibid.*, p. 285.

This profit, *a surplus*, does, therefore, appear, like the other shares, as an immediate result of bargaining. In this bargain the entrepreneur has always an advantage in his superior knowledge and strategic position. And this gives him five sources of profit, as we have already noted.

It is clear from Prof. Carver's analysis that risk, in his opinion, is not a factor of production. Risk or uncertainty means only unstable conditions in industry. This causes a divergence between the true marginal product of a factor of production and its payment, for neither the entrepreneur nor the owner of a factor knows in advance what will be the true value.

Profit thus emerges and can only emerge out of the appropriation by the employer of a part of the true marginal products of the other factors of production, consciously or unconsciously. The source No. (4)—the willingness of a man to accept lower payments in exchange of a stable stipulated rate—shows the possibility of a true exchange of economic utilities. Very unfortunately Prof. Carver does not tell us whether the employed factors, in his opinion, would generally agree to pay this premium for *rate-insurance* willingly, if they knew that their annual incomes were not at all insured by the process, and that their *rate-insurance* could be secured only at the expense of a greater uncertainty in the period of their employment.

The source No. 5—the reduction of uncertainty in the sense of losses—is really the rent of ability. It does not, therefore, differ in principle from the Rent Theory of Profits, advocated by Walker, and followed more or less narrowly by all other rent-theorists including Prof. Seligman and even Mr. Layton and Mr. Coats (?) in their evidence before the Colwyn Committee.

Professors Cassel and Seager are content mainly with a quantitative definition of profit as a surplus above cost. They do not bother to correlate this pure profit with any kind of residual service. By competitive profits, Seager means profits in excess of wages-of-management, not due to monopolistic advantage. Prof. Cassel's "employer" ⁴⁷ is a metaphysical entity, distinguished both from the capitalist advancing capital and from the "worker" in the broadest sense "doing work of one kind or other in the service of his enterprise." Risk is a cost and has nothing to do with *pure profit*. Pure profit is "not a normal thing, but a specific element of the individual business." ⁴⁸

A little has to be said about Seligman's classification of profits. Though he seems to recognise such a thing as "normal profits" as forming the cost of production of a marginal firm

⁴⁷ Cassel: *The Theory of Social Economy* (London, 1923), Vol. I, p. 165.

⁴⁸ *Ibid.* p. 168.

both in his *Principles* and in his *Evidence* before the Colwyn Committee, he takes profit in the sense of pure profit, a surplus—"always a surplus" of "the intramarginal over the marginal producer."⁴⁹

He also defines profits as "the income from business enterprise." But his *business enterprise* is only "busy for profit," *i.e.*, for surplus-making, while the family, which is the earliest form of business undertaking, was busy "for a mere livelihood," "to secure a competence rather than a surplus."⁵⁰

He speaks of four kinds of profits:—(1) Ordinary or competitive profits, (2) Aleatory or chance profits, (3) Speculation profits, (4) Monopoly profits. By ordinary or competitive profits he means, as we have already noted, a *surplus* above the cost of production of the marginal producer, which cannot exist in the long run. Competitive profits, he explains, are due wholly to *changes*, such as of population, wants, capital, processes of industry and methods of enterprise. Aleatory profits are chance profits, which exist in society in varying degrees. They are essentially "unique or sporadic." "Chance or luck," he warns, "may often be the cause of sporadic profits, but cannot explain

⁴⁹ Seligman : *Principles of Economics*. (1929), p. 354.

⁵⁰ *Ibid.*, pp. 85-89.

their persistence either for the individual or for society." In other words he recognises a chance element in ordinary profits, but he is not prepared to explain profit as due to chance alone.

Speculation profits are only aleatory profits of dealings based upon anticipated price movements. The only difference between the two is that "speculation concentrates and intensifies the forces which affect demand and supply."

Monopoly profits are the outcome of obstruction of the free play of competition by natural or artificial barriers. They seem permanent, but "in a deeper sense" they are not. Monopoly incomes, like competitive incomes, are not limited to profits.

This explains why he confines his attention to competitive or ordinary profits and explains them as a surplus akin to rent, incapable of affecting prices of the consumer.

FOSTER AND CATCHINGS

All the theorists we have so far examined, with the single exception of Hawley, are not prepared to make pure profit a specific reward for the service of risk-taking. They all admit that there are risks assumed and that forms the function of the *entrepreneur quæ* entrepreneur. Many of them point out the general changes from which risks ensue. All of them recognise the difficulty of

managing business under the usual unstable conditions. They are not blind to the fact that capital is exposed to risk as well. Many of them even see that an entrepreneur's capital and even capacity serve as insuring the stipulated rates of the productive services hired to him. Still they are loath to treat risk-taking as an essentially reward-receiving or reward-requiring service. The dynamic theorists (Clarkian group) have the excuse that they regard risk as related only to capital. But the others do recognise that risk is an inseparable accompaniment of enterprise. How is it that risk is treated only as a profit-expecting service? Men, especially business men, are assumed by economists as very rational and calculating beings. They are even recognised as a rather compact company bent upon fleecing consumers. How is it that this intelligent class allows itself *as a class* to serve the community on the mere expectation of profits, which, like the Derby lottery tickets, are sure to disappoint many, although it may enrich a few? If risk-taking is a *real service* to the community, why should they agree to serve for *nothing*?

The real reason seems to be that they talk of uncertainty-bearing as a service, no doubt, but they do not really mean it as a genuine type of service. It means with them all, just as it means with Professors Carver and Knight, unstable conditions, unpredictable changes, unforeseen

variability in business fortunes, with which their so-called *pure profit* has to wax and wane, appear and disappear. The so-called service means conducting business under these fitful prospects. It seems to signify nothing more.

Their theories on risk are not very different in their innermost essence from the dynamic theory of Clark. If we drop off "co-ordination" from the Clarkian theory and cease to correlate it as the service for which the fluctuating profit is the reward, there is nothing really worth distinguishing between the dynamic and the risk theories other than that of Hawley, except some refinements in the analysis of both.

But the economists of the Pollak group, headed by Messrs. Foster and Catchings, come to declare boldly and emphatically that "the essential element in profit is not something for nothing, but the reward of risk."⁵¹

To induce anyone to take risks, there must be a prospect of gain. Risks are inherent in economic enterprises. Business men run businesses and take these risks of losses in the hope of making gains.

These economists do not care for a hair-splitting analytical function of an entrepreneur as distinct from land, labour and capital services. It is enough for them to point out that *pure profits*

⁵¹ Foster and Catchings : *Profits* (1925), p. 46.

mean the *money-income* that is left over, after all the expenses including rent, interest and even wages of management, have been paid out of the gross income of any business.

Profit arises from Risks. Risks arise not from progress as such, but from conditions involving such unpredictable changes as we find in a dynamic society. A *static* society would have no risks and no profits.⁵²

Business risks are not gambling risks, artificially created for their own sake. They are due to uncertainties that are inherent in the nature of business. They are due mainly to consumers' freedom to choose *what* they will buy, and *when* and *where*.

Profits arise from "wise choice of risks." The fact that superior ability of managers earns higher profits need not discredit the proposition of "wise choice." For "that is, in fact, the way in which superior ability manifests itself."⁵³ This means to say that profit is not procurable from the mere *assumption* of risks. It can only be acquired by their *reduction*. The possibility of making profits or losses arises from the existence of risks, but the probability of positive gains depends on the ability of reducing them. Communism abolishes *profits* by abolishing consumers' freedom of choice. Consumers' freedom of choice involves

⁵² *Ibid*, pp. 46-50.

⁵³ *Ibid*, p. 55.

wastes of competition as well. Wastes of distribution, e.g., advertisement, etc., in a competitive system are properly called *wastes* only, if the privilege of choosing among competitors is not worth paying for. Foster and Catchings, therefore, point out :⁵⁴ " the consumers' freedom of choice, which is the chief business risk, and therefore, the chief cause of profits and losses, is also the chief cause of the high costs of distribution."

The distinctive marks that characterise the theory of the Pollak group on profit are that they are looking at the problem very sympathetically from the business man's view-point. They do not consider that the rate of profits in relation to the stipulated rate of other incomes must vary from any kind of ideal distribution, such as their respective marginal productivity—due to uncertainty.

They are not satisfied with any proximate cause of risks, such as changing prices. They are not content by merely pointing out the fickleness of business fortune. They look straight into the source of the business income itself and not into the processes by which the income is earned. Thus they trace risks ultimately in consumers' freedom of spending and saving (as a main cause), and in their uncertainty of choice as to the object, time and place of expenditure.

⁵⁴ *Ibid.* p. 65.

Competition, they point out, much as it is coveted as the economists' Mecca, must necessarily mean *wastes* of distribution, e.g., advertisement, etc. For business men are forced to these wasteful tactics in order to maintain their own existence. These are necessary too for the proper fulfilment of their function, viz., to satisfy social wants, which is the *raison d'être* of their existence. If the consumers love to enjoy the luxury of avoiding cares in foreseeing their needs, and indulge like a capricious lady of rank in the habit of ordering things only at the moment they feel the pinch, if they want to exercise the privilege of granting favour of their custom at random to some among many, if they want to obtain things at the cheapest rates or of the newest variety, they cannot escape payment for these services. Nor are they entitled to complain that these are *wastes* made by needy or greedy advertisers.

There are two points in their views that call for special attention: One is that profits cannot be abolished without abolishing consumers' freedom of choice. Communism does away with profits, but only at the cost of this freedom of choice. The root of risks lies in this freedom. The risks thus amount only to consumers' fluctuating demand for a particular commodity.

Prof. Knight on the other hand, it will be remembered, attributed profits to a faulty estimate

of the future product. This need not be taken as necessarily contradicting the view of the freedom of choice. If the product refers not to the physical product but to its value,—and this would be in greater accord with facts—Prof. Knight's theory need not be confined to conditions of production; it might well extend to fluctuations of both demand and supply. But can we readily agree that this freedom which brings about the fluctuation in demand is *the main cause* of uncertainty and profit? Can the fluctuation in supply be really regarded as a minor or negligible factor?

Whether anybody agrees or not with Foster and Catchings' doctrine as a general proposition, the fact cannot be denied that in a monetary economy like that of present society, profits of business men as a class would necessarily depend upon whether the consumers are willing to spend as much as it has cost the business men (including compensation for their own labour and capital). There is nothing novel in the proposition. But the *form* of the statement must be credited with focussing attention on the relation of spending to business profits as a whole.

The second thing to which they draw attention is the universal fear for the deficiency of consumer's purchasing power. Cut-throat competition between firms, industries and nations is the evidence of that fear. This seems to be the

peculiar legacy of our modern capitalistic production and its organisation.

The apple of discord between the productive agents and the sin of eating the forbidden fruit of profit do, therefore, ultimately come from the buying power of the consumers *falling below* the producers' productive capacity. Producers compete, in and outside the industry, within and beyond national frontiers, to control consumers' custom with feverish anxiety.

If this is the truth, the practical nature of our modern economic problem is the complete reverse of economists' usual hypothesis. Is the problem to-day *not* one of economy of the insufficient means of satisfaction or rather of the insufficient capacity of the productive resources of society to meet its needs? Is it really one of superfluity of consuming goods and of super-productivity of social resources under the existing method of production? If so, how far is it due to the technological superiority of capital resources over labour along the diverse channels of production, and how far to the system of property that distributes to capital more than half of society's purchasing power?

The tone of their writing makes it clear that they would not agree with Prof. Seligman in describing business as "being busy for surplus-making" and not for "livelihood." Business men engage in business with the very same object

of earning an income for livelihood just as any economist works in his profession to earn his. But an excess or defect, profit or loss, is in the very nature of a business man's profession, to which he cannot but submit. His fluctuation of income must appear in this form. But the income of those who earn contract rates varies in the form of the varying period of their employment.

THORSTEIN VEBLEN.

All the economists we have so far examined looked only for a surplus above costs, which constitutes pure business profit. Costs cover, of course, all expenses including rent, wages and earnings of management, as well as interest on business capital. This "capital" is usually taken in the sense of "the material equipment, valued at its cost, together with funds in hand required as a 'working capital' to provide materials and a labour force."⁵⁵ Interest is compensation for the loan-price obtainable from the equivalent money value of resources invested in the business.

Veblen proceeded to point out that the modern business capital of a corporation does not represent any permanently fixed assets of stock issued at the time of incorporation. It is simply the

⁵⁵ Veblen : *Vested Interests* (English edition, 1924), p. 66.

capitalised value for the time being,⁵⁶ " by an ever recurring valuation of the company's properties, tangible and intangible, on the basis of their earning capacity." In this capitalisation of earning capacity " the nucleus of the capitalisation is not the cost of the plant, but the concern's good-will."

" Good-will.....comprises such things as established customary business relations, reputation for upright dealing, franchises and privileges, trade-marks, brands, patent-rights, exclusive use of special processes guarded by law or secrecy, exclusive control of particular sources of materials." ⁵⁷

It will thus be seen that capitalised profits form the intangible assets of a corporation and are readily converted into marketable securities in the form of stocks and bonds, when they become a fixed overhead charge and a necessary cost.⁵⁸

Thus the return of " good-will " is really an element of pure profits, although it apparently forms a part of costs.

HAWTREY

R. G. Hawtreys does also describe pure profit as " the privilege of those who possess trading

⁵⁶ Veblen : The Theory of Business Enterprise (1904), p. 138.

⁵⁷ *Ibid.*, p. 139.

⁵⁸ Veblen : Vested Interests, p. 102.

good-will.”⁵⁹ He thinks it an error to regard profit as to a great extent compensation for risk. “Strictly speaking the extra return upon capital which really represents the risk of loss ought to be classed as part of cost of production, and the rest as extra profit. An exact line of demarcation would be impossible to draw.”⁶⁰

⁵⁹ Hawtrey : *The Economic Problem*, p. 372.

⁶⁰ *Ibid*, p. 85.

CHAPTER IV

THE CONCEPT OF RESIDUAL SURPLUS AS A QUANTITATIVE DESCRIPTION OF PURE PROFIT

The concept of *residual surplus* has been condemned by Professor Hollander as an incorrect principle of distribution applied to explain "the theories of rent, interest, wages and entrepreneur's profit—successively and in the order given."¹ He observes, quite correctly however, that the theory was sought to be applied to "the dominant factor in economic organisation," which occupied for the time "the strategically favourable position in economic distribution." He sees quite clearly too that while the other shares of the product are "definite, independently determined," the residual share was *measured*^{1a} by simple subtraction."

Professor Hollander's own analysis, therefore, seems to indicate that the *residual surplus theory* must not be regarded as an *explanation* but as a *measure* of the amount of the share that goes to the dominant economic factor of the time. Such

¹ Hollander: The Residual Claimant Theory of Distribution, Q. J. E., February, 1903, p. 261.

^{1a} Italics mine.

an interpretation of the theory can alone redeem the real sense of the writings of the great founders of economic science—the Physiocrats, Adam Smith, Ricardo, Walker, and J. B. Clark. It is quite clear that J. B. Clark would not have spent so much ink and time in his controversies with Hawley on profit, had he meant to *explain* profit by the residual principle of subtraction, for he had no difference with Hawley on that point. The truth is that *residual surplus* was a *quantitative measure* of a share which was *not* capable of direct or independent determination, because of the residual character of its legal claim, or because unknown causes, unstable conditions, immeasurable elements, or indirect consequences subjected it to indeterminable fluctuations. Naturally the most sensitive of incomes would be the share that went to a party which dominated the economic situation, in the sense that it owned the product and hired other factors or that its services were most in demand in the interest of social production; for its services, therefore, other productive classes keenly competed.

Surplus refers to the measure of a residuary share and *residual* to the indirect method of calculating it by subtraction of the predetermined shares from the total produce. *Surplus* varies as the result of the fluctuation of the total physical product or its value. It may also vary owing to unequal productivity of the agents of production in

different industries or establishments, due to difference in organisation or of effective quality of the agents themselves. The *residual* method of subtraction presupposes impracticability of determining a share independently of other shares, and the necessity for prior satisfaction of predetermined claims against the joint product.

As our interest is mainly with the application of the theory to *profit* only, we would confine our examination to profit-theorists. In passing, we would only like to point out that the very fact that the residual share always went to the *dominant* party and the *dominant* party means the party for whose services the other parties competed, shows clearly why this party should reap the benefit of any surpluses that the industry might enjoy for the time being. (Agriculture was the dominant industry at the time of the Physiocrats and Adam Smith : this is why the landlord enjoyed the residual. At the time of Ricardo factories were more in demand than farms : that is why the capitalist-employer became the residual sharer with Ricardo. Walker wrote at a time when ordinary labourers were most in demand in America : that is why the wage-earner became with him the residual legatee. With Clark, the situation was almost the same as it is now ; the employment of social resources depended on the initiative of the entrepreneur class : that is why the entrepreneur got the residue, if any.)

The meaning of *residual* share was quite clearly pointed out by Walker,² whom Prof. Hollander himself quotes. Referring to labourers as the residual claimant to industry, Walker says :

“ This is the residual share of the product of industry—*residual* ³ in this sense, that it is enhanced by every cause which increases the product of industry without giving to any one of the other three parties to production a claim to an increased remuneration under the operation of the principles already stated ; (*residual* ³ in the sense that, even if any one or all the other parties to production became so engaged in any increase of the product as to become entitled to an enhanced share in its distribution, their shares still remain subject to determination by positive reasons, while wages receive the benefit of all that is left over after all the other claims are satisfied.” Here the reason for the residual method of calculation obviously is that the conditions which determine the share do not favour its computation independently of other claims.

This clearly refers to the conditions which make a party dominate over a given situation and which determine the peculiarity of the distributive process.

² F. A. Walker : The Source of Business Profits, Q. J. E., April, 1887, p. 282.

³ Italics mine.

Professor T. N. Carver⁴ explains *residual* share as follows: "Profits include only what is left after the other shares are paid. This does not mean that profits are a residual share in the sense that the others are determined independently by laws which affect them each alone, leaving profits as a share which can be determined by no law except that of subtraction. There is no such thing as a residual share in that sense...But in a very concrete sense the profits of a given business man are what he has left after paying all his expenses." He refers to "several sets of circumstances which enable a business man—to have a surplus." Here also the necessity for measuring the income as residue by the process of subtraction lies in the priority of other financial claims to the product.

Professor Knight⁵ points out that the entrepreneur's income is *residual* by "the character of the process" by which his income is fixed: "In a sense, the entrepreneur's income is not 'determined' at all; it is 'what is left' after the others are 'determined.'" He means that it is not determined quantitatively like other contractual incomes by direct market processes. It is only capable of an *indirect* estimation.

⁴ Carver: *Distribution of Wealth* (1924), pp. 285 and 286.

⁵ Knight: *Risk, Uncertainty and Profit* (1921), p. 280.

So much for the significance of *residual*. *Surplus* means as usual a quantitative deviation of the actual value from a standard or ideal value of a variable. This meaning applies to all kinds of historic *surpluses* in economic literature from the Physiocratic "produit net" down to Marshall's "consumer's surplus." The standard or ideal and the field of observation or *universe of discourse* may, of course, be different in different cases. Thus the Physiocratic standard for measuring surplus was the subsistence of labour. Land or agriculture was supposed to yield a *net surplus*, because the labour of only a fraction of the population was sufficient to raise subsistence for the whole nation: this made it possible for an *artisan* class to live and work up materials, which required "a long and difficult preparation." It also made possible for a *disposable* class to render the military, administrative and other useful services for society. If every man had to labour his full time to procure his subsistence, there could be no *surplus*, and no industry, no artisans, no disposable class.

The Physiocrats were considering the differential advantages of different industries in yielding a surplus to society. Their field of observation was industries as a whole. Agriculture thus came to prominence in their eyes. When this condition was reversed after the Industrial Revolution, J. B. Say with equal propriety pointed out that his spinning machine earned a surplus

much greater than what the Physiocrats' land did.

Ricardo was not comparing the returns of one industry with those of another. He was considering the differential returns of an equal amount of labour (or labour and capital) upon different kinds of land. And his *standard* was the subsistence of labour (or of both labour and capital). His difference with the Physiocrats, therefore, lay not in the standard, but in the *universe* or *field* where his observations were confined. The Physiocrats measured surpluses in different industries. Ricardo measured them mainly in different lands of the same industry, *viz.*, agriculture.

Von Thünen's field of observation was confined to a narrower limit still. His *standard* is the same as that of the Physiocrats or Ricardo. But his interest was in measuring differences that result from the application of an increasing amount of labour and capital—surpluses obtained from marginal and intramarginal doses of labour and capital, as we now call it—on the same piece of land or on the same industrial plant, for a given process of production. The conception of *margin* really comes from the vanishing point of this surplus.

Roughly speaking, the Physiocrats were surveying the field of industries in general to grade them in the order of their diminishing surplus-making or surplus-earning capacity, that is, in the order of their decreasing productivity. Ricardo's

field of survey was mainly confined to agricultural lands to grade them according to fertility. Von Thünen's survey narrowed down to the effect of successive units of the variable factors of productive resources upon the same fixed productive equipment to grade them according to their effectiveness, *i.e.*, to measure variation in productivity with the quantity of a variable factor.

Looked at from this point of view, these various doctrines of surpluses appear to be complementary. They contribute to the fullness of our knowledge regarding the sources of surpluses or differential productivity.

The Socialists' conception of surplus seems to have the same base, but tainted with a different colouring. Their plane of criticism is rather ideal than actual, ethical than industrial. William Thompson, for instance, the forefather of Marxian Socialism, complains against non-workers having any share of the product at all. Cost in his opinion is only the labour-cost. Hence what is regarded as cost of using land and capital is no cost at all. It is the misappropriated surplus obtained by paying labour only a bare subsistence. The standard of measuring surplus is the same, *viz.*, subsistence of labour.

The same idea runs through Proudhon, in whose ethics property-owners are robbers who force other people to work for their living. But he is more scientific than Thompson. For he shows that

this robbing is possible, because of the possibility of an excess or surplus that results from a combination of labourers working together.

At this stage we would take the liberty of pointing out, even at the cost of a momentary break of the line of thought, that what we have shown throughout is that there is a kind of uniformity in the standard by which surplus has been measured. It is well to note that as the fields of observation covered by these different theorists were different, so the reasons for the origin of these surpluses were also different. Thus the real reason for the Physiocratic surplus in agriculture was a difference in the development of the art of production. Food was not the only necessity for life, though a prime necessity. Clothes, shoes and shelter were equally needed. But the art of production (scientific knowledge applied and technical competence attained) in agriculture, however primitive, appeared to have a greater advantage over other types of industries at the time of the Physiocrats.

The Physiocrats, interested as they were in showing differential advantages of various industries upon national prosperity, pointed out the unequal effectiveness of a given amount of labour in agriculture compared with industry. An agricultural labourer could produce much more than what he needed for his living, while an industrial artisan could not.

Income or return, we are entitled to argue, depends on the amount of capital resources a man can manage with his ability and industry. And this is again relative to the existing knowledge or art in the technique of the particular line of production. Possibly the optimum size of a productive unit relative to the art of production, that was available within the means of a typical producer, gave a more bounteous return in agriculture than in *industry* at the time of the Physiocrats. The Physiocrats appear to be wrong in attributing the cause of surplus to natural bounty in place of the art of production. But evidently they were not wrong in asserting *as facts* that an agricultural labourer was more productive than an industrial labourer or in saying that agriculture thus yielded a surplus, an excess over the cost of living of labour.

Ricardo was equally wrong in attributing this surplus to the niggardliness of nature. But in pointing out the existence of different grades of land as *a fact*, he was equally right. The real cause of differential fertility of soils lies in their physical, chemical, or bacteriological properties. Fertility thus differs from crop to crop that is raised on the same soil.

The cause of Von Thünen's surplus lies in the technological combination of different factors relating to a given process of production, different proportions answering to productivity with different efficacy. Our conception of maximum

productivity or optimum proportion owes its origin to this technological property of production.

Similarly Proudhon recognises that organisation, that is, skilful combination of a number of labourers gives rise to a greater return. And this is the source of the surplus. This really refers to an improved method of production.

Karl Marx's *surplus* does not differ in substance from that of Thompson or Proudhon. Surplus arises from the difference that exists between the capacity of a labourer to produce and his necessary means of subsistence.

Thus we see that the source of the socialists' surplus is in its essence the same as that of the Physiocrats, *viz.*, that the art of production yields an amount of products much greater than what is necessary for supporting the life of the actual labourers. Or, in other words, the material needs of society can be well met by the labour of only a part—may be a major part—of its population. This analysis is, of course, sound. It is the triumph of man over nature, a symptom of progress, and certainly not a misfortune. This ought to have led to the demand that those who are thus relieved by the progress of human civilisation from labouring for material needs should work for the immaterial needs of society, and their subsistence should be made to depend upon that work and not that all the material produce should belong to the *labourers* alone. Or, if the margin of leisure

over the working hours of labourers were too small for a life of enjoyment or culture, certainly the labour class might claim a sufficient relief from this strain, even at the expense of the labour of a part of the non-labour class being diverted from the cultural to the material sphere, and even at the cost of slowing down the pace of progress. For what is progress worth if it cannot relieve the misery of mankind ?

But this reflection is not strictly relevant to our immediate point, which is to show the interconnection of the different ideas on *surpluses* and their relation to the conception of *pure profit*. It will now be clear that surplus was always a measure—the measure of a variable product or return. Malthus' description of fertility as "the surplus produce from the land" or J. S. Mill's reference to "surplus profit" as the amount "beyond the value of the risk and the interest" adds further support to our claim that surplus was a quantitative concept and classicists used it as a measure of variables.⁶

We have shown above that all kinds of historical surpluses—Physiocratic, Ricardian, Intra-marginal or Socialist—are measured in the same way, *viz.*,

⁶ Malthus : *Principles of Political Economy* (1820), p. 152 n.

J. S. Mill : *Principles of Political Economy* (Ashley's edition, 1923), p. 428.

by the deviation of the actual value from the standard.

Similarly pure profit, as a surplus, was also measured by all pure-profit theorists, by the deviation of the actual business income from a standard set up to cover the entire cost. Pure profit is thus a surplus over costs.

This *pure* profit must not be confused as a surplus over *normal* profit. For that is a different concept altogether. Pure profit is calculated no doubt on an arbitrary standard of profits (business income). But *pure* and *normal* profits are two different concepts, based upon two different classifications of social income. They are not directly comparable unless they are reduced to a common denominator.

The concept of *pure* profit comes from the factorial classification of social income. The concept of *normal* profit originates from the classical division of social income on a class basis. We pointed out already (Chap. I) that profits meant with the early French writers and the classical school income derived from the direct employment of capital for production as contrasted with the income obtained from lending it, which is interest. It meant with them Capitalist-Employer's income, the income of that class of people whom we now call business men. That concept still lingers in the business world and that meaning still obtains in the common parlance of people. Taking

profit as business income or the business man's income, the earlier economists talk of normal profit as the profit that brings the entrepreneur's activities to an equilibrium, that is to say, that does not offer any motive to expand or contract his scale of operations. It is also a purely theoretical conception and nobody knows in practice accurately what is normal profit in an industry, in the sense of the analytical economist. But whatever that may be, any profit earned in excess of that amount is *abnormal* profit, a kind of disequilibrium index by virtue of the definition of the word "normal." Actual profit deviates from this *standard* or *normal* and we can speak of it as an excess or *abnormal* gain. Abnormal profit is also, therefore, a surplus, but the *standard* from which it is measured is the *normal* profit, something quite different from the *standard* from which *pure* profit is measured.

The concept of *gross profits* of a business man is recognised by both the modern and the earlier schools. But as incomes are classified by the modern theorists according to the factors of production, this gross business income or business profits will be subdivided into portions attributed to capital and labour. How is it attributed? Now as it is the factors that earn income in their conception, business man's capital is precisely allowed the same rate of interest and his labour is also permitted to draw by imputation the same wages of management

as he could obtain at the market, had he offered himself or his capital for employment. The amount thus calculated serves as the standard from which pure profit is calculated. *Pure profit* is thus a surplus above this arbitrarily chosen standard of profits in the popular sense of the term. It will now be seen how it corresponds to the apparent base of their calculation, *viz.*, costs. Besides the costs that are paid for the hired factors and other expenses of the business, Gross Profits are supposed to contain two other elements of cost in the income of a private firm, *viz.*, the interest of the capital invested and the wages of the managing labour devoted to the firm. The mental argument is: suppose both this capital and managing labour were obtained on hire, would you not pay for them? So these are costs really and truly, which you must deduct before you can calculate *pure profit*.

We have already seen that in the opinion of earlier economists and also according to business practice as well as popular notion, the whole gross income of a business belonging to the share of the business man is represented by profits. According to this conception and definition, the difference between profits and other incomes, *viz.*, rent, interest and wages, is simply this: both are incomes earned through the *medium* of the factors, but the *method* of earning is different. Profits are incomes of the factors when they are *employed* in the business, in the sense that

their remuneration is only capable of indirect determination, and is dependent upon the sale proceeds of the commodity produced by the business *less* the costs incurred for hired factors and raw materials, etc. But other incomes are contractual incomes of the factors when they are *lent*. They are determined by the ordinary exchange processes of the market, by the direct interaction of the forces of demand and supply. Factors, we can say, earn income in two ways: (i) by business or by transmutation of their services into products for sale, and (ii) by hiring or selling them to an employer or entrepreneur in the former process. Profits are incomes of the very same factors, but earned indirectly through the products of a business.

The new modern school does not recognise this sense of profit. In their conception land, labour and capital can never earn profits. Their incomes are always rent, wages and interest respectively, whether they be hired or self-employed. To them profit is something which is not rent, wages or interest. So when they found a surplus in the business income after the payment of these charges, they hailed it as a separate income hitherto undiscovered or undetected. They gave it the name of profit. Pure profit is a mere courtesy epithet to distinguish it from the older use. "Gross profits to the younger economists," remarks

Dr. Haney⁷ "seem to be a sort of historical concept retained out of respect to John Stuart Mill."

Now the fact that their concept of pure profit is a pure analytical creation, arbitrary by its calculation and mathematical in its nature, has been completely overlooked. They forget that the real concrete thing in a business is gross profits. They subdivide this with reference to a total amount calculated by imputing interest and wages to the business man's capital and labour, and separate it to form a part of society's legitimate and necessary costs. The remaining portion is pure profit or surplus. We are not even entitled to say that business is undertaken for the lure of the total amount of gross profits. For they (pure-profit theorists) themselves are loud in their declamation that it is the lure of the *surplus* that attracts men to business. Evidently one would not prefer an uncertain method of earning income by business, if one can get the same income by the certain method of an insured contractual rate. So it is quite arbitrary to impute the contractual rate of interest and wages to the capital and labour of the business men and regard it as their true cost or sacrifice or minimum inducement to enterprise. But for analytical purposes anybody is justified in doing it if he so likes. This is adopted as the

⁷ Haney: *History of Economic Thought* (1925), p. 656.

standard cost with reference to which pure profit is to be calculated. Well and good: but this does not entitle him to forget that it is a part of the same income obtained by the very same factors,—the income that he has subdivided. And if, by virtue of the fluctuating nature of the income itself and as a result of subdivision, a surplus ensued, it would be no other than the very same income. It is not a separate income due to an undetected factor. It is his own creation, the outcome of his mathematical assumption and analysis.

But this mathematical and analytical nature of the concept the modern theorists completely forgot. This slip was very easy for them, if not natural and inevitable, for they looked *only to the factors* as earning incomes and they believed, one and all (except Hawley), that the factors earned this income according to their marginal productivity. It is this faith in the marginal productivity theory that made it possible to look upon the analytical surplus of their own creation as a separate kind of income. This led them to imagine that the essential nature of pure profit is that of a surplus. A separate income requires a separate service as its cause and justification. A search was at once begun, therefore, for a fourth factor of production. Confusion followed confusion. Socialists attacked profit as an unearned surplus. Economists got frightened and nervous and looked for a socialist-

proof service, co-equal in sacrifice with that of socialists' labour. We have already seen the fruits of this search and research in Chapter III.

What is important for us to remember here is that almost all the pure-profit theories regarded surplus as a measure of pure profit and not its explanation. Surplus is to be understood as the quantitative description of pure profit, or as its quantitative definition. The basic standard for calculating this surplus was apparently costs, partly actual and partly imputed, but really an implicit standard of profits.

It may be noted in passing that the interest on business man's capital is not treated as a part of cost according to the business practices of Great Britain and America. Courts of law and equity as well as bankers regard it as a part of profits.⁸ This simply means that they stick to the old concept of profit as the income of one who is the owner of a business: a firm in the case of joint stock organisation takes the place of a business man, the firm itself being represented as a legal person by a common legal fiction.

Before we close this chapter we should like to remind the reader of the immense influence the marginal productivity theory exercised over the pure-profit theorists, both in their qualitative analysis, as we have seen in Chap. III, and in

⁸ Atkins: *Industrial Cost Accounting*, p. 236.

their quantitative. It may be pointed out once again that cost, which forms the basis and the standard for measuring the surplus of pure profit, is determined by the marginal productivity of the factors. Of the Risk theorists, only Hawley believed that risk was a separate factor of production. Others denied, as we have seen in Chap. III, that risk exercised any direct influence over profit. Profit is the result, according to most of them, notably Prof. Knight and Prof. Carver, of deviation of the actual marginal productivity of the factors from their estimated marginal productivity, which determines the cost. The practice of calculating cost by imputing the market rate of rent, wages and interest to the entrepreneur's land, labour and capital cannot be explained on a scientific basis, unless we assume that the pure-profit theorists treat all lands, all efforts and all kinds of capital goods as qualitatively homogeneous and as having the same marginal productivity.

We remind the reader specifically of this point, because we shall have to examine the validity of this conception in connection with our scrutiny of the marginal productivity theory. The concept of pure profit as a surplus above cost can only be upheld on the basis of this assumption. It may also be noted that the exchange-value of a commodity, that fixes the entrepreneur's cost, is not determined by its marginal utility alone. The determination of

the entrepreneur's expenses or costs in terms of marginal productivity of the factors completely ignore, therefore, the influence of real cost or pain-cost sacrifices upon value and supply. A commodity is at once the product of pain-costs and the source of satisfaction. The same commodity may require different amounts of pain-costs in different circumstances. Its satisfaction value to the consumer may remain the same, even though the disutility of production increases to the producer. If so, why should he agree to incur this extra disutility without an additional reward ?

CHAPTER V

THE MARGINAL PRODUCTIVITY THEORY AND ENTREPRENEUR'S REMUNERATION

We have seen in the last two chapters how the pure profit theorists relied upon the marginal productivity theory for determining the remuneration of any factor. But they are not the only economists who share this faith. Not only rent, wages and interest, but even the entrepreneur's reward is assumed to be determined by marginal productivity. The doctrine thus deserves a most careful examination.

If we take profit, in the second sense of the entire remuneration of the entrepreneur proper, as the gross business profits less interest of his capital,—which seems to be the current view of English economics to-day,—and if we attribute it all to his business ability, we may easily get this remuneration from the doctrine of marginal productivity. This is the underlying belief of all the attempts we propose to notice.

There are generally three senses in which the law has been sought to be applied to the entrepreneur's remuneration. The *first* is to treat an entrepreneur's labour like any other labour, to count it by the number of hours he devotes to business: the remuneration conforms to the marginal return

of his labour, balanced against its marginal disutility. Edgeworth considers this case in connection with his criticism of Barone's theory of distribution and dismisses it as obviously inapplicable except in the case of the hired factors in a regime of competition.¹

The theory of marginal productivity is obviously an attempt to measure the serviceability of a factor that contributes to a product. The possibility of this measure depends primarily on the fact that the physical product or output varies quantitatively in a definite manner with the variation of a factor, provided that other co-operant factors also are present and the method of production pursued continues to be the same. This interdependence of the effectiveness of a factor and the quantity of the other auxiliary factors makes it impossible however to obtain an absolute measure of independent productivity of any factor. It is dependent on a law of physical productivity, *viz.*, the law of diminishing returns or the law of the most effective combination of producing factors—a law, neither absolute nor immutable, but relative to a given process of production and dependent to a considerable extent on the knowledge and technique of the process prevailing at a given time. This law offers however the possibility of measuring the

¹ Edgeworth: Papers relating to Political Economy, Vol. I, p. 28.

relative marginal productivity of factors for a given qualitative and quantitative relation to each other, that is, for a given process of production.

But if there be any factor which affects the physical productivity of the combination, but which is not capable of a quantitative measurement physically, its marginal productivity is obviously indeterminable. For instance, weather is such a factor in agriculture. Now if we reflect that the knowledge of the technical process is only a rough indicator of productivity and the actual productivity in any concrete case depends mostly on the *skill* of combining the factors for production, the *art* of combining itself will appear to us as an important factor of production. The same materials are converted into table delicacies of different qualities by cooks of different skill. Can we measure this skill by the amount of pain or trouble or the number of hours a cook devotes to cooking? The same tune can be played by two different artists on the same piano with considerably different effects on our ears. Can we measure this skill by the hours of time devoted or the foot-pounds of energy spent? The skill of the entrepreneur is a factor of this kind, the productivity of which cannot be related mathematically to the physical exhibition of his energy or activities. Turgot noted, more than 160 years ago, that the husbandman's remuneration is the result of "the *wisdom*, far more than of the *laboriousness*, of

the means which he has employed to render it (soil) fertile." ²

We can see from the above that the serviceability of the entrepreneur's effort in production is not capable of such a simple mechanical measure. Edgeworth rightly dismisses such attempts as inadmissible in scientific reflection.

A shrewd anticipation of the wants, tastes, and purchasing power of prospective consumers of unknown description, bargaining for resources in right quantity and quality on favourable terms, setting up of a plant on moderate expenses and of a type that can expand on non-expensive lines, wise choice of risks undertaken and judicious selection of securities, establishing good will, extending business relations, and securing a stable custom—are tasks, certainly more of "wisdom" than of "laboriousness," that face a modern entrepreneur.

It is thus clear that the *hour* is not a suitable basis for measuring the productivity of the entrepreneur's labour.

T. N. CARVER.

The *second* sense is that of Professor T. N. Carver, also examined by Edgeworth.³ Prof.

² Turgot : Reflections, Sec. 7. Italics mine.

³ Edgeworth : Papers relating to Political Economy, Vol. II, p. 332.

Carver applies the law to the earnings of a business man in the following sense: his remuneration is "the amount which the community is able to produce with his help over and above what it could produce without his help." And "this is the only sense in which any factor can be regarded as productive," according to Prof. Carver.⁴

The theory, in other words, is that "the remuneration of the entrepreneur is exactly equatable to the loss which his removal from the industry would occasion." Edgeworth examines this case in the light of S. J. Chapman's constructions,⁵ and after a careful mathematical analysis concludes that "the proposition is neither quite true nor very useful."⁶

Apart from mathematics and authorities, let us consider the proposition from the common-sense point of view. The proposition claims that if the aggregate production of an industry with a given aggregate of capital and labour be placed under the control of 100 entrepreneurs instead of 99, an additional product will result. Is this generally true? The answer to this question seems to depend upon two sets of considerations: (a) Is there an optimum size of production in

⁴ Carver : *Distribution of Wealth*, p. 262.

⁵ Chapman : *Remuneration of Employers*, *Econ. Journal*, December, 1906.

⁶ Edgeworth : *Papers*, Vol. II, p. 321.

the industry? Does the general organisation or the technical process of production favour an output most economical for production? If so, and if the industry stands organised on this optimum output, then any extension or contraction of output of a typical individual establishment under an entrepreneur of average ability will lower its productive efficiency, *i.e.*, the cost of production in the industry will increase in either case. But if the individual output were non-optimum and hence uneconomical, any reduction of output or an increment that brings it to the optimum size would be the most economical. In case the output of the typical individual farms or firms is such that a larger size with a bigger output would favour an increased efficiency, more entrepreneurs would mean a decreased productivity and less entrepreneurs a greater. This is the position of Indian agriculture to-day: 73 per cent. of the population earn their living by agriculture and the average size of an agricultural holding is, roughly speaking, 5 acres. The size is too uneconomical. A reduction in the number of cultivators with a greater size of holdings will rather increase the agricultural yield, while more cultivators with still smaller holdings will diminish the productivity. The increase of population, absence of any outlet for the growing generation to go to other industries, and the system of inheritance which guarantees a share

of property to each child, all assist to increase the number of cultivators and reduce the size of agricultural holdings, with disastrous consequences. Here is a direct tangible proof against any universal acceptance of the truth of the proposition.

But the proposition may, under certain circumstances, come to be true, as we have noticed in the earlier paragraph.

The above argument holds good on the assumption that the ability of the entrepreneur is equal to the task of managing a greater firm or farm. (b) This is the second set of circumstances that must also be taken into account. If the size is too big to permit an economical management, the technical economy of the industrial plant may be more than offset by the waste of inefficient management. The two sets of considerations must be taken together. That this is not a fanciful possibility is illustrated by the story of the American Steel Trust and Mr. Carnegie.

"The Great Steel Trust was formed, it has been said, to remove Mr. Carnegie from the industry before he had absorbed the whole of it; having achieved their object and removed Mr. Carnegie, the promoters were unable to find any one who could do the work which Mr. Carnegie had been doing." ⁷ This illustrates

⁷ Henry Clay : Economics for the General Reader (1922), p. 156.

pretty clearly that the concentrated management may or may not prove economical. That depends on the ability of the entrepreneurs available for the task. Of course, geniuses are born. But it is not a very legitimate assumption under ordinary circumstances that more entrepreneurs mean necessarily a more efficient management. First, human capacity is usually elastic enough, and grows and develops with growing opportunity. Secondly, more often than not, lessening output and size mean a greater waste of resources and of organising and managing capacity. And are not these the very reasons which have made it possible to take advantage of the technological economy and enlarge the size of the representative business unit almost with an uninterrupted continuity since the Industrial Revolution?

Now can we not conclude from the above that other conditions remaining the same, more entrepreneurs need not necessarily mean an additional return from the same amount of social resources, nor a reduction in their number need mean a corresponding loss to society?

P. H. WICKSTEED.

Let us now consider the *third* sense in which P. H. Wicksteed⁸ interpretes and develops the

⁸ The Common Sense in Political Economy, pp. 367-373, where he modifies the view that was put forward in his pamphlet: *An Essay on the Co-ordination of the Laws of Distribution* (1894).

theory. The form of his demonstration of the theory is significant and striking ; and he has presented it with a magnificent generalisation that holds good, as Edgeworth observes, "irrespective of the play of the market."

His theory however is based upon the following explicit and implicit assumptions :

1. It assumes a continuous variation of the product with the variable quantity of any physical factor of production. Every factor, be it noted, is also assumed to be qualitatively homogeneous, that is, every factor comprises only units which are "qualitatively indistinguishable" from each other.

2. It assumes that the product is subject to the law of diminishing productivity (in the usual sense) in its relation to any one individual factor. That is to say, for a given or fixed amount of the other co-operant factors, the marginal productivity of a varying factor varies, increasing initially with its increasing quantity, but *diminishing ultimately* as its quantity increases beyond a certain limit.⁹

3. It thus presumes a point of maximum marginal return or productivity for each of the varying factors, for any given ratio of the other co-operants.

It presumes, in other words, an optimum proportion of the various factors, so arranged that the

⁹ Marshall : Principles (8th edition), pp. 169-70.

marginal return (in the Marshallian sense) obtained from the respective quantities of each factor is maximum. Marshall calls it *due proportion*.¹⁰ This optimum proportion, let us note, is at once the limit of increasing returns and the point where diminishing returns commence (with regard to any one factor for a given proportion to the others).

As a matter of fact the law of diminishing marginal returns (condition No. 2) does not only presume a point of maximum marginal return, but also the points of a maximum gross and a net product, as Edgeworth points out in his *Papers*.¹¹

4. A given proportional increment of each of the co-operant factors will increase the product in the same proportion.

5. Wicksteed also assumes that the different factors, although essentially complementary, are yet substitutes for each other in the sense that the "units of each can respectively perform at the margin the common service they can all render alike."¹² This only illustrates the law as it operates at the margin. It indicates that the limit of profitable returns is the point of equi-marginal productivity. This is not an essentially primary condition.

¹⁰ *Ibid*, p. 170.

¹¹ Edgeworth : *Papers relating to Political Economy*, Vol. I, p. 70.

¹² Wicksteed : *The Common Sense of Political Economy*, p. 368.

From the above assumptions it is proved that the distribution of the prôduct according to the marginal productivity of each factor will exhaust the total product, without leaving any surplus.

The hypothesis on which the final conclusion is really based is condition No. 4, and Nos. 1, 2 and 3 are implied in it. This will be clear from the following mathematical version of the theory as adapted by A. W. Flux.¹⁸

MATHEMATICAL VERSION OF MARGINAL PRODUCTIVITY THEORY.

Let the product P be regarded as a function (f) of the various co-operant factors of production (x, y, z).

That is, let

$$P=f(x, y, z).$$

By the assumption No. 4, we are given that

$$\frac{dx}{x} = \frac{dy}{y} = \frac{dz}{z} = K = \frac{dP}{P} \quad \dots (a)$$

where K represents a given constant proportion.

¹⁸ See the Review by A. W. Flux of Wicksteed's pamphlet, "An Essay on the Co-ordination of the Laws of Distribution" (1894), *Economic Journal*, Vol. 4, pp. 308-13.

For a non-mathematical version by Wicksteed himself, see reference No. 8. The non-mathematical readers, in omitting these mathematical pages, will not miss any essential link in the chain of the arguments that follow.

We are to find the possible forms of P :

Now if (a) is true, then

$$\frac{dP}{P} = \frac{\frac{\delta P}{\delta x} dx + \frac{\delta P}{\delta y} dy + \frac{\delta P}{\delta z} dz}{\frac{\delta P}{\delta x} x + \frac{\delta P}{\delta y} y + \frac{\delta P}{\delta z} z}$$

by the theorem in ratios, *vis.*, if

$$\frac{a}{b} = \frac{c}{d} = \frac{e}{f}, \text{ then each ratio} = \frac{1a + mc + ne}{1b + md + nf}$$

$$= \frac{dP}{x \frac{\delta P}{\delta x} + y \frac{\delta P}{\delta y} + z \frac{\delta P}{\delta z}}$$

Hence if (a) is true,

$$x \cdot \frac{\delta P}{\delta x} + y \cdot \frac{\delta P}{\delta y} + z \cdot \frac{\delta P}{\delta z} - P = 0, \text{ for all values of } x, y, z.$$

Now $P = f(x, y, z)$:

suppose P is of the form $\sum_{l,m,n} A_{lmn} x^l y^m z^n$, where l, m, n , obey no law.

Then

$$\begin{aligned} & x \frac{\delta P}{\delta x} + y \frac{\delta P}{\delta y} + z \frac{\delta P}{\delta z} - P \\ &= \sum_{l,m,n} (l + m + n - 1) A_{lmn} x^l y^m z^n. \end{aligned}$$

Now this has to be zero for all values of x, y, z ,—and this is only possible if each of the numerical co-efficients of the terms is zero.

$$\text{Hence } l + m + n = 1.$$

That is, P must be a homogeneous function of the first degree.

It is thus clear that the application of the marginal productivity theory is restricted to cases, where the product can be regarded as a homogeneous function of the first degree.

Once our data allow us to assume that P is a homogeneous function of the first degree, we are also entitled thereby to make the assumption No. 4 and draw the conclusion directly with the help of Euler's theorem. Or conversely, if the practical data entitle us to assume the condition No. 4 as a fact, viz., that if a given proportionate increment of each factor will increase the product in the same ratio, this will be an indication that the product is a homogeneous function of the first degree. It will now be realised why we put in the first three conditions as ancillary to condition No. 4. A concrete mathematical form of this function will make it clear.

Supposing that the proportion ^{13a} in which the resultant product is distributed in a concrete case between the different factors is 1 : 2 : 3, a mathematical form of these assumptions may be represented by

$$P = Ax^{\frac{1}{6}}y^{\frac{1}{3}}z^{\frac{1}{2}},$$

where A is a constant.

^{13a} The different physical factors can be reduced to a common measure, either in terms of the monetary expenses incurred, or in terms of the marginal return obtained. Wicksteed adopts the latter plan. Vide *The Common Sense of Political Economy*, pp. 363-4; also *The Scope and Method of Political Economy*, *Economic Journal*, 1914, p. 17.

It will be seen from the form of this equation that P varies continuously with the factors (condition No. 1), and that P increases subject to the law of diminishing productivity (condition No. 2), i.e., the second differential co-efficient of P with regard to any one factor is negative. The law of diminishing returns, it will be remembered, implies a point of maximum productivity (condition No. 3), as Edgeworth has shown.

To satisfy the reader that the equation chosen is one to which the Wicksteedian law of distribution according to marginal productivity is applicable, let us apply Euler's theorem to it :

Generally if $P = f(x, y, z)$ is a homogeneous equation of the first degree, Euler's theorem gives us

$$P = \frac{\delta P}{\delta x} x + \frac{\delta P}{\delta y} y + \frac{\delta P}{\delta z} z.$$

Here,

$$P = Ax^{\frac{1}{6}}y^{\frac{1}{3}}z^{\frac{1}{2}}$$

$$\frac{\delta P}{\delta x} = \frac{1}{6}Ax^{-\frac{5}{6}}y^{\frac{1}{3}}z^{\frac{1}{2}} \quad \frac{\delta P}{\delta x} x = \frac{1}{6}Ax^{\frac{1}{6}}y^{\frac{1}{3}}z^{\frac{1}{2}} = \frac{1}{6}P$$

$$\frac{\delta P}{\delta y} = \frac{1}{3}Ax^{\frac{1}{6}}y^{-\frac{2}{3}}z^{\frac{1}{2}} \quad \frac{\delta P}{\delta y} y = \frac{1}{3}Ax^{\frac{1}{6}}y^{\frac{1}{3}}z^{\frac{1}{2}} = \frac{1}{3}P$$

$$\frac{\delta P}{\delta z} = \frac{1}{2}Ax^{\frac{1}{6}}y^{\frac{1}{3}}z^{-\frac{1}{2}} \quad \frac{\delta P}{\delta z} z = \frac{1}{2}Ax^{\frac{1}{6}}y^{\frac{1}{3}}z^{\frac{1}{2}} = \frac{1}{2}P$$

So it is clear that

$$P = \frac{\delta P}{\delta x} x + \frac{\delta P}{\delta y} y + \frac{\delta P}{\delta z} z = \frac{1}{6}P + \frac{1}{3}P + \frac{1}{2}P$$

That is, the remuneration of the factors according to their marginal productivity exhausts the total product.

Now, let us first examine the implications which are involved in these assumptions and then consider how far these conditions apply to the facts of modern industry to justify us to presume distribution according to this theory.

First of all, the law can usually apply only to the physical product : for a continuous variation of the product with the variation of a factor of production (condition No. 1) cannot be assumed as a fact, if it refers to the market value of the physical produce, unless its price can be assumed to be constant. But the price is certainly subject to fluctuations for reasons entirely independent of the conditions of production of the particular commodity in question.

From assumptions (3) and (4), *viz.*, a maximum marginal productivity or an optimum proportionality of factors and the increasability of the product in the same proportion as that of each of all the factors, it follows that if the aim of every producer were to maximise the physical productivity of each factor, that is, its technical efficiency, expansion of output in an industry would only take place (provided, of course, the physical

conditions of the industrial environment allowed it) by a simultaneous increment of all the factors in the same proportion. The productive plant or business unit would here expand by a process akin to duplication.

It is obvious that the relative proportion of the three so-called economic factors, that would ensure to each a maximisation of its productivity, depends on the technique of production pursued in an industry or a firm or farm. The process of production prevailing may, indeed, differ from time to time according to "the stage of scientific knowledge and technical competence to which society has attained." But at any particular point of time in a particular industrial environment there prevail generally one or two methods that are typically representative of any one industry. The optimum proportion of the factors discussed above relate only to any one particular method. And in view of the necessary homogeneity presumed of a factor, the theory is really applicable only to the *technical factors* of production, such as raw materials of each kind and quality, tools and equipment of any given variety, space ("land") possessing specified characteristics, or labour of one kind of specialised skill, etc., and not to the so-called three factors of "land," labour and capital, into which they are capable of being grouped together. A mere increase of capital, for instance, need not mean a diminishing productivity

of capital even at the optimum position, if the increase is composed of tools and machines introduced for any further specialisation of the part previously played by them, or if it consists of some new materials utilised for converting the waste-products into a by-product useful to society and profitable to the firm. All this will be found to be not only obviously true but also a mere truism, if we remember that a method of production really means such an arrangement of the *technical factors* of each kind and quality as is conducive to their maximum return. Any improved process of production means a re-arrangement and reorganisation of this relation. Every new arrangement thus points to a newer type of maximisation and is virtually a new method of technical production.

The law of optimum proportion of the technological factors of production is thus only an alternative definition of a process of production. From this, the law of *optimum proportion* of economic factors is an immediate corollary. But this corollary is not so sure a basis for the law of diminishing productivity as its parent technological theorem ; for "land," labour or capital can none be regarded as a homogeneous factor of production technologically.

It is now easy to see that till this optimum proportion of the factors is arrived at, expansion of output of a productive plant (agricultural or

industrial), due to one or other of the co-operant factors, is certain to be attended with an increased technical efficiency, that is, with increasing returns. Hence expansion of output will certainly take place under these conditions only by way of an increment of the deficient factors alone—an apparently disproportionate increment of factors, till the harmonious proportion suitable to the optimum output is attained.

It shows us too that what enforces the conditions of diminishing productivity is the relative deficiency of the productive requisites or relative difficulty of increasing their supply. If it is open to an entrepreneur to increase all his factors with equal facility, there is no reason why he should not prefer to augment his output by proportionate increment of all his factors. Production in that case would always conform to the law of constant returns, as Dr. Sraffa¹⁴ claims and Prof. Pigou¹⁵ concedes.

It is, therefore, clear that in positions of pre-optimum proportion, the theory does not and cannot apply. In agriculture, where we usually (but often unjustifiably) assume production outstripping this optimum, the theory may, in a sense, *measure* the productivity of each factor and *distribute* the

¹⁴ P. Sraffa: The Laws of Returns under Competitive Conditions, *Economic Journal*, 1926.

¹⁵ A. C. Pigou: The Laws of Diminishing and Increasing Cost, *Economic Journal*, 1927.

whole product in this way without leaving any surplus. But in manufactures, where it is true or to the extent that it is true, that production does not take place usually to the optimum capacity of its productive plant and more products mean less costs and a nearer approach to its optimum position, the theory cannot apply. Why? Because facts falsify here the first assumption of a continuous variability of the product in its relation to a producing factor, and the second assumption of diminishing productivity. It is obvious that the tendency to diminishing return cannot manifest itself until the output appropriate to the optimum proportion is attained by the productive unit. Besides, we have got to recognise that some expenses in every enterprise partake of the character of fixed expenditure, which is not capable of regulation with every alteration of output, e.g., plant of a factory, audience accommodation in a theatre, heating arrangement in a building, the capacity of the dining hall of a college. More generally, plant and machinery, entrepreneur's services, and as a matter of fact any expenditure for services of factors that vary *per saltum*, i.e., almost the whole of the supplementary costs of a business enterprise, mostly form a discontinuous nucleus, round which the other expenses or factors, *viz.*, prime-costs, only vary continuously.

So if we proceed to remunerate the factors according to their marginal productivity the nucleus

factors or supplementary cost services shall have to go without any reward. For, as their quantity is fixed, the variation of the product with the variable factors can only indicate the productivity of the latter. It is easy however to see that without the fixed or supplementary cost services no production can take place. So they are productive as well. But how to measure their productivity, except by imputing to them a quantity to be subtracted from the total share ?

It follows from this that the theory fails to measure productivity, wherever we have some fixed *overhead charges* in the terminology of Prof. J. M. Clark. Unless we assume that there are no fixed charges in agriculture and that all expenses increase in perfect proportion to the increment of output, the theory cannot even apply to agriculture.

We must not forget that the theorem is only applicable when every factor to which product is due is a variable and varies continuously subject to the law of diminishing productivity, and the relation of a proportionate increase of each and every factor to the increase of the product in the same proportion holds good. Let us now think of a concrete instance, the case of a farmer, say, raising wheat with land, labour and capital and suppose that their amounts stand in the proportion of 1 : 2 : 3.

Then the form of the equation, as we have already seen, would be $P = Ax^{\frac{1}{3}} y^{\frac{1}{3}} z^{\frac{1}{3}}$, where A is an arbitrary constant, dependent upon factors

which affect the product, but to which no definite quantity is *a priori* assignable or which do not vary and is to be treated as a discontinuous or constant factor for the purpose in hand, such as weather, e.g., in this instance. All the uncertainty factors may here be included. Not only this, but the skill of the farmer is also a factor not susceptible of quantitative variation or measurement. And if we think of this equation as one of value-productivity and money-expenditure, then not only technical ingenuity of cultivation but mercantile skill in buying and selling is also to be included in A (the constant of the equation).

Generally, we may say with Prof. Mitchell that not only knowledge, general and technical, but also organising capacity or foresight of the business men is immeasurable. It follows that the marginal productivity of any factor such as $\frac{\delta P}{\delta x}$ or $\frac{\delta P}{\delta y}$ does not give us the *pure* marginal productivity of a factor. It is the conjoint marginal productivity of a variable factor coupled with that of the entrepreneur's services and of the services of other kinds which are immeasurable or invariable.

This will explain why the marginal productivity of labour and loan-capital is not directly deducible from the formula. The marginal productivity of Marshall's shepherd^{15a} can be measured

^{15a} Marshall : Principles (8th edition), pp. 517-18,

as his wages, only on the abstract assumption that there are no fixed overhead charges to take account of. This is why the entrepreneurs follow the simple practice of deducting from the entire value of the product the entire expenses for his hired factors, and claim the remainder as entirely due to their own services.

All that we have pointed out simply shows that the theory cannot apply to the *short period*, for in the long-run concept there is no such thing as supplementary costs or overhead charges, which decrease with increasing output, and there can be no unused capacity or idle plant in the long period.

But it is precisely here that many of the pure-profit theorists applied the theory. J. B. Clark and his school, and others including Prof. Knight¹⁶ explain profit as a short-period phenomenon. Profit (as defined by them) is the difference between the *value* and the *cost* of the product to the entrepreneur, which competition tends to eliminate in the long run. We have seen above that entrepreneur's personal services as well as his capital invested in the business plant and equipment, are an unvarying constant in the short period, whose marginal productivity cannot be obtained except by some kind of imputation, deduction, or subtraction. This again creates the difficulty of ascertaining the actual and true cost of production in the short period

¹⁶ Knight : Risk, Uncertainty and Profit, p. 303.

according to the marginal productivity of the factors, as the pure-profit theorists want to calculate it.

Now the question is: why should we apply the theory to the short-period at all? Should we not take the theory to mean, as Wicksteed himself takes it to mean, that if all the social resources, land, labour and capital, are to be employed to their fullest capacity, then the remuneration in the long run cannot diverge from the rate of their respective marginal productivity to society?

Wicksteed¹⁷ assumes the supply of the factors as given and invariable. An individual undertaker, dealing "by hypothesis.....with limited resources," applies these resources to production to maximise their return, "just as the housewifedesires to maximise the result of her expenditure." Evidently the point of maximum productivity is reached when the relative marginal significances of all the factors are equal in his enterprise. "Now if any number of groups (of factors)..... are in a state of equilibrium with regard to each other, the relative marginal significances of all the factors will be identical in all of them."¹⁸ If not, "clearly a re-grouping would be advantageous" to all of them, till equilibrium was reached. "Thus the proportions in which

¹⁷ Wicksteed : The Common Sense of Political Economy, Chap. 9.

¹⁸ *Ibid*, p. 369.

the various factors that combine in any one group are to share in the product is determined by their relative significance at the margins in increasing or diminishing it. And the same proportions will tend, in the open market, to establish themselves in different independent groups... ..

.....This gives us a complete theoretical solution of the problem of distribution.”¹⁹

Clearly Wicksteed's conception of equilibrium is here derived from the following assumptions, explicit or implicit: He considers how the *physical resources* would be *distributed* between the diverse products of society with a view to *maximise their productivity*. (a) The resources considered are those existing at a given time and are supposed to be constant as well as passive; (b) They are assumed to be uniform in quality, one unit of each kind being “qualitatively indistinguishable” from another; (c) The productivity is conceived in terms of the physical product (and not its value); (d) The productivity of a factor is measured by its marginal contribution; (e) The perfect mobility of the resources between all kinds of production is also taken for granted; (f) The force that moves them to different channels of production is the motive of maximising the physical productivity of each factor. That is to say, the motive considered is technological

¹⁹ *Ibid*, p. 370.

efficiency and not the entrepreneur's motive of maximising his money profits.

As the end of production is presumed to be technological efficiency, it is no wonder that the position of equilibrium has to be one in which the diverse physical resources are distributed technologically according to their maximum productivity. The reader is here requested to note that J. B. Clark's concept of *natural* or normal equilibrium is precisely the same as that of Wicksteed. The equilibrium position is one where the marginal productivity of the factors, labour and capital ("land" has no separate place as a factor in J. B. Clark's system), is equalised over all industries and industrial units.

The equilibrium position is thus dependent only on industrial technique. The equilibrium conceived is purely one of technological efficiency and not of economic return. The distribution considered thus refers to the facts of technique and not of economic values in the wider sense. This is why Wicksteed's law of distribution holds good "irrespective of the play of the market," which Edgeworth notes in his *Papers* and which we have already indicated.

As the position of equilibrium is the point of maximum productivity, it is also the point whence productivity commences to diminish with increasing output. The Wicksteedian equilibrium connotes, in other words, a position of constant and

maximum physical productivity of every factor everywhere.

Now as this equilibrium (technological) is something quite different from the concept of economic equilibrium based upon demand prices and entrepreneur's money costs, it is quite possible that the maximum marginal physical productivity proper to the Wicksteedian equilibrium position should co-exist with diminishing money costs operating in some industries and increasing money costs in some others.

As a matter of fact, however, Wicksteedian assumptions are obviously untenable. Production is undertaken by entrepreneurs, never and nowhere, with a view to maximise the physical productivity or technical efficiency of every factor, but only to maximise their net profits—the money income derived from the resources they themselves own or undertake to manage and control. Secondly, perfect mobility is a hypothesis more logical than factual. What is more important in practice is the different degree of mobility of the different factors as well as their different responsivity to reward. Facts not only of physical durability but also of technical utility, contractual relations and legal rights or quasi-monopolies affect the mobility of the different factors differently. Labour is sensitive not only to the amount of reward like other factors, but also to the conditions of work and the locality of work-shops and the nature of its

relations with the employer, to which others are indifferent.

Thirdly, the marginal productivity can only be measured with respect to a factor, (a) which is physically measurable, and (b) of which the individual units are qualitatively indistinguishable, and (c) only in cases where the product is related to a factor as a continuous variable. We have already seen that portions of factors, as they are actually employed by entrepreneurs, are kept fixed to form a nucleus round which other portions are made to vary. The productivity is thus ascertainable only of the portions that vary. Considerations of long period do not alter the nature of their relative constancy or variability. We have also seen that some elements of factors are physically immeasurable. And we have also to consider that none of "land," labour and capital are qualitatively homogeneous. There are sub-groups of diverse kinds and qualities included in each of these factors. It is now necessary to notice that the productivity of things of different qualities is sought to be measured usually by the method of "surplus" and that the method of marginal productivity as a sensible or fruitful measure is only confined to a group of "qualitatively indistinguishable" units. For it will be seen that even in post-optimum positions we need not necessarily get diminishing productivity, if the units added are of higher quality.

Fourthly, entrepreneurs are only indirectly interested in the physical productivity, their primary concern being with the value productivity or total value.

Fifthly, the supply of the factors, except in the case of "land," cannot be assumed to be inelastic and fixed in the long period, as the theory of Wicksteed seems to presume. The supply of both labour and capital has a normal tendency to increase spontaneously and it also responds to the reward obtained, both in quality and quantity. They are sensitive as well to the disutility they have to put up with. The main disutility in the case of capital is risk, while it is capable of assuming limitless forms in the case of labour. The presumption of *passivity*, namely, that labour and capital will offer for employment for whatever might be their marginal productivity to the Employer or that there is no such thing as *supply price*, seems to be equally preposterous. Actually however the entrepreneur has to adjust the marginal productivity of factors to the level of their hire-price. How can we assume that the standard of living exercises no influence on wages and the supply of capital does not respond to the rate of interest? How can we assume that when the same grade of ability is required in different industries, unequal disutilities appertaining to different kinds of work are not likely to exact compensating reward?

Will entrepreneurs undertake enterprises of unequal risks on the expectation of the same reward? Does capital flow to enterprises involving unequal risk on the promise of the same rate of remuneration?

This ignores, in other words, the influence of disutility upon supply altogether. Wicksteed himself seems to recognise this limitation. For he points out that only "when pain has been faced or when there is no question of pain at all," the ultimate cost can be regarded as the utility of the choice relinquished.²⁰

The actual conditions of demand and supply of the physical factors in the present industrial environment are thus opposed to almost all the assumptions on which the validity of the Wicksteedian law of distribution according to marginal productivity is based. The law does not, therefore, apply to the remuneration of "land," labour and capital. But these observations do not necessarily imply that Wicksteedian analysis is inapplicable to modern industrial facts. For even if we can show that the conditions of modern production entitle us to assume that a given proportionate increment of expenses of each kind increases the physical product or monetary receipts in the same ratio, the Wicksteedian law of distribution will

²⁰ Wicksteed : *The Common Sense of Political Economy*, p. 394.

hold good with regard to the financial factors of production, though not to the physical.^{20a}

Now the factors of production of an entrepreneur to-day may be regarded as mere "factors of expense." Again these are certainly subject to diminishing returns or increasing costs. For any given method of production presumes a point where we have the greatest gross or net return: this, we have seen, is the significant criterion of diminishing returns. This is really recognised in our modern economic literature in an indirect way. Every firm or farm, for any given method of production, is regarded as having a certain optimum size, "trespass beyond which" yields no further economies. The concept of an optimum size or output of a firm, be it noted, represents a fact of reality and not mere theoretic devices or scaffolding of analytical reasoning. The concept, it is further submitted, need not contradict the theory of decreasing costs with increasing output, due to the influence of internal or external economies. This will be obvious if we reflect upon what the optimum size of a firm in any particular industry or its internal or external economy signifies.

(1) The optimum size indicates the obvious fact that output cannot continue to expand indefinitely to the increasing net advantage of the firm, while it retains its existing industrial structure or keeps to the same appliances of production.

^{20a} See page 127.

(2) It reflects the fact that a certain relative proportion, broadly speaking, between the "factors of expense," under stable prices, is most efficient for physical production. This is evidently based upon the technological relations of the physical factors at any particular stage of development in the industrial technique and knowledge, and it must be taken broadly to allow variation, within limits, of the proportions of those physical factors which can yield the same efficiency under different entrepreneurs.

(3) This will explain why till that relative proportion conducive to optimum production is attained, we have decreasing cost, and increasing cost thereafter.

(4) Increasing internal economy obtainable from large-scale production in a given factory is due (besides the advantages of increased division of labour) to the diminishing supplementary cost per unit of output; for while prime costs increase continuously with output, the supplementary costs (i) either vary discontinuously with large additions of output, or (ii) increase at a less proportion to output than the prime costs.

(5) The effect of so-called external economies or "localisation of industries" is due exactly to the same reason as that for internal economy or large-scale production. This is due to the fact that (besides the advantages that accrue from the

subdivision of the productive process into a number of technological stages in each industry) the cost of many services required in common by all the different firms or industries in a locality, such as transportation, banking, insurance, etc., gets less with the growing volume of different industries. These costs, common to a group of firms or *localised* industries, stand in the same analogous relation to the individual particular costs of each separate firm or industry, as the supplementary costs do to the prime in an individual enterprise. The lessening cost per unit of output is thus partly due to the comparatively discontinuous or less proportionate variation of common costs in relation to the continuous or uniform variation of the individual expenses of each enterprise.

These last two considerations indicate that a firm whose output brings in these newer economies, internal and external, along with its expansion, must not be regarded as having attained the optimum size in relation to the technological process of production pursued by the firm or to the industrial or financial capacity of the entrepreneur to whom it belongs.

The optimum size of a firm is thus synonymous with the presence of a minimum cost per unit of output. Any further expansion is thus attended with increasing costs.

These may, at first thought, suggest that production of each firm will normally be conducted in the long run under constant costs. A little reflection will show however that this cannot be the case : expansion of output of any one industry or even of all industries cannot usually take place without an increased money cost, provided there is no change in the technique of production. Expansion may come about in two ways : (a) by increasing the number of productive units similar to the existing ones, (b) or by expanding the output of the existing productive units. As all the existing units are *ex hypothesi* working at the minimum cost, any expansion of its output must bring about increasing costs. This is obvious enough. Even the other alternative cannot but be more expensive. Of course, any kind of physical factor, "land," labour or capital, may be obtained in any quantity according to a producer's requirements. But this is true so far as the physical aspect of their supply is concerned. They can no doubt be obtained, but not at the same price. Their withdrawal from the existing employments can only be effected by the offer of a higher price. Cost to the entrepreneur must, therefore, be greater. A proportionate increment of each "factor of expense" cannot, therefore, increase the physical product in the same proportion, as the applicability of the Wicksteedian law of distribution demands : nor need it necessarily cause a proportionate increase in the monetary receipts destined for

distribution among all the participating agents under the existing conditions. His marginal productivity theory of distribution cannot, therefore, apply even to the "factors of expense" and is thus inapplicable to modern conditions of production.

Even if we could admit the Wicksteedian assumptions as true, we should have only got a relative measure of the marginal productivity, the productivity of one factor being dependent upon the manner in which it is made to co-operate with others. There is no one particular proportion of factors, which yields to each its maximum productivity. There are innumerable proportions, each relating to a different technical method, which can yield the same output, but which can alter the relative shares of the different agents. The so-called round-about methods of production, progressively mechanised with every improvement, are mere devices for obtaining the same return with an increased proportion of capital to labour. The steam ploughs and reaping machines, for instance, have narrowed the field of employment of agricultural labour, while widening that of capital. Machine-made shoes may supply a society with its foot-wear with no less cost per pair than hand-made ones; but the relative proportion of capital and labour employed is different in the two cases. If so, why should labour accept that productivity as its proper share to which it is forced

by any artificial arrangement of the industrial technique, which favours the share of capital ?

Even supposing that there was only one proportion that favoured the optimum productivity, that physical productivity which is its mechanical outcome has no moral title to be acclaimed as just. The theory only suggests a method of distribution. Even if it be true that this is the ideal according to which the entrepreneur strives to distribute the product, it would offer no consolation to those who complain that this principle of remuneration is in itself an injustice.

The principle, therefore, even if it were true, would not be a necessarily just, equitable or desirable mode of distribution. This is happily pointed out by Edgeworth.

“ So it is no *eirenicon* between employers and employed to affirm that, according to the definition of Professor J. B. Clark, ‘ every workman gets the product of his work.’ He is not thereby deterred from desiring more than what is his product according to that definition.”²¹

The marginal productivity, though it can be calculated either in the physical product or in its value, can claim a semblance of justice (economic) only if the distribution is made in terms of physical output. This means that wages and interest are to be adjusted with every change in the price of the

²¹ Edgeworth : Papers, Vol. II, p. 338.

product or more strictly in the income of the business. If the business is one which produces more than one product, which economist will be bold enough to calculate the productivity and allocate the product in strict accordance with the theory?

Even if the product is unilateral, how to adjust the wages of direct labour working with materials or machinery in relation to the wages of those who are serving in the central office of general administration, or even of those who are working in the selling department, on which the prosperity of the business depends as much as on the department of technical production, even if we close our eyes to facts and imagine that direction or planning is no factor of productivity, physical or financial?

This line of thought provokes an interesting question in our mind. This is virtually a method of distribution according to the principle of co-partnership based upon marginal productivity. Now if this is a very just or equitable principle, why should people not agree to this form of distribution? The reason is plain: because the marginal productivity of labour and capital, so far as it is calculable, depends upon the efficiency of the technical processes and of the entrepreneur's skill both in the factory and in the market. Employed labour and capital do not like to be tied down to any arrangement which would penalise them for the inefficiency, unwisdom, foolhardiness, or even

bad luck of their employers. They have, moreover, no control over their employer's plan and policy of production, nor do they most often possess the necessary capacity to judge of them.

The theory, therefore, even if it were true and could be interpreted as a desirable method of distribution, would only measure the relative marginal productivity of a factor. It also ignores the reflex influence of remuneration upon the supply of the factors altogether. It is not only one-sided, but it is useless even as a practical guide to determine what the marginal productivity of labour is in any particular industry. According to Marshall, "the doctrine that the earnings of a worker tend to be equal to the net product of his work, has by itself no real meaning; since in order to estimate net product, we have to take for granted all the expenses of production of the commodity on which he works, other than his own wages."²²

In a foot-note Marshall points out that "such a method (as his marginal shepherd) of illustrating the net product of a man's labour is not easily applicable to industries in which a great deal of capital and effort has to be invested in gradually building up a trade connection, and

²² Marshall: Principles of Economics (8th edition), p. 518.

especially if they are such as obey the law of increasing return.”²⁸

It is very necessary to realise the relative character of this marginal productivity. It is relative to one particular technique of a productive process, selected from an equally efficient group of other alternatives, if it refers to the physical product. It is also relative to the demand and market of the product, if it refers to the entrepreneur's financial return.

Even at the position of the long-period Wicksteedian equilibrium, where the marginal productivity of each factor, according to theory, gets equalised over all industries and productive units, the marginal productivity of each factor is relative to the different processes of production adopted by individual firms. The process adopted, we should remember, is based upon a number of considerations, among which the market for output, the factorial expenses or prices, the entrepreneur's mental inclination, private resources, individual opportunities, industrial ability as well as financial capacity have also to be reckoned with. The equality of the marginal productivity of a factor over all its uses, the imaginary point of the theoretical ideal, would only be true of the portions that are actually employed. Wicksteed assumes no doubt its fullest employment. But this is contrary to facts. The marginal

²⁸ *Ibid.* f. n. (2).

productivity of a factor is often kept deliberately high over the entire range of its actual employment, at the cost of a part being consequently left unemployed.

The above criticism as to the possibility of determining the absolute productivity of a factor holds good even when the law refers to financial productivity. The entrepreneur of to-day is guided by money motives and not by the return of concrete goods. Marginal productivity must be interpreted, therefore, in terms of the value of goods. In this transmutation of physical productivity into value productivity, the equilibrium will now shift from the position of optimum proportion or maximum material productivity to one of maximum profits. As these profits depend upon the price fluctuation of various commodities and services which are interconnected by bonds, industrial, commercial and financial, the task of finding the marginal productivity of any factor becomes delicately difficult, even in a society industrially static or unchanging in its methods of production. Moreover, if we reflect that a substantial amount of labour and capital in a modern firm is devoted under the stress of competition to increasing the purely monetary receipts or value productivity, the interdependent character of the productivity of the factors of "expense" will be obvious. The task of allocating production costs between the various joint products of a firm is difficult

enough to baffle the ingenuity of the best accountants. The task of allocating value productivity between various costs can only be imagined as an interesting theoretical problem rather than a practical proposition.

It is useless to pursue these intricacies of theoretical speculations any further. Enough has been said to show that even if the principle of distribution according to marginal productivity were theoretically valid and ideally just, it would be impossible to determine practically the marginal productivity even of the variable factors, not to speak of those which are immeasurable or discontinuous or essentially dissimilar in quality, like the art of management or the skill of expanding business connections.

The application of the marginal productivity theory to entrepreneur's remuneration seems to rest upon a confused dualism of thought. If the entrepreneur pays any factor according to its marginal productivity, he pays it according to the productivity to *him*, and not to society, but in calculating the entrepreneur's remuneration, we are asked to look to the productivity of his service to society.²⁴

Now society is only interested in the physical output and not in its money value, but an individual entrepreneur cares for,—and he must, if

²⁴ See Carver's analysis quoted in this chapter, p. 119.

he wants to continue in his profession,—the pecuniary profits derivable from it. The methods he often pursues to attain that goal,—ruthlessly enforced upon him on pain of self-preservation under modern “business economy,”—are frankly anti-social. If restriction of output, by monopoly, by false persuasion (*e. g.*, advertisement), by intimidation of competitors as well as customers, or by any other means, fair or foul, helps him to declare a high dividend for his investments, he would be regarded as a successful business man. The measure of his success is profits, and not social benefit, the total money returns of his goods, and not their volume. To measure the productivity of his service under the circumstances in terms of physical product and not its money-value is to falsify the trend of facts. Such an analysis is purely academic and imaginary and is unable to shed light on facts.

Lastly we should like to close this part with one word more as to the complex inter-relations of the factors that affect business profits. Speaking of these factors from the view-point of the business man himself, and enumerating them briefly as (i) his ability, (ii) plant and other material capital and (iii) goodwill or business organisation and connection, Marshall ²⁵ observes :

²⁵ Marshall: Principles of Economics (8th edn), pp. 625-6.

“ But really it is more than the sum of these : for his efficiency depends partly on his being in that particular business; and if he were to sell it at a fair price, and then engage himself in another business, his income would probably be much diminished. The whole value of his business connection to him when working it is a notable instance of *Conjuncture or Opportunity value*. It is mainly a product of ability and labour, though good fortune may have contributed to it. That part which is transferable.....is in a sense *Conjuncture or Opportunity cost*.

The point of view of the employer however does not include the whole gains of the business : for there is another part which attaches to his employees.....it is a kind of *composite quasi-rent*.” In a foot-note he adds : “ when a firm has a speciality of its own, many even of its ordinary workmen would lose a great part of their wages by going away, and at the same time injure the firm seriously.”

This shows, again, that the marginal productivity of the labour of management is not a thing capable of simple determination. The business income is essentially a conjoint product—“ a kind of *composite quasi-rent*,” as Marshall says above.

CONCLUSION.

What is the conclusion to which these discussions on the theory lead us ? Broadly speaking, the theory tells us that the distribution of national

dividend, had the prices been free from monetary disturbances, would be pre-determined by the technical method of production pursued and would be subservient to the mechanical proportions of the factors, as required by the technique. The distribution of the national income between capital and labour, Turgot taught, depends on pure "human conventions and civil laws." The distribution, this theory teaches, depends on the technique of production. The theory does not stop to consider that the productive process itself is a matter of choice and that the choice is made invariably to serve the interests of those who make the choice.

There are three distinct problems of practical importance involved in the question of distribution : (a) what determines the relative shares of the different factors that contribute to the joint product of national dividend ? (b) Why do their incomes vary in different countries or times ? (c) Why do their shares vary in different industries or firms ?

The marginal productivity theory, according to its advocates, adherents and admirers, explains them all. Take, for instance, the share of labour. It seeks to answer the first question by saying that the share of labour depends "on the productivity of labour relative to the productivity" of "land" and capital, and "this depends on its relative plenty and scarcity," that is to say, on the relative proportions of the three factors

employed, or the technical method of production. It solves the second question by saying that the levels of productivity are different at different times or in different countries. Does it not simply mean that the methods of production are often different at different times or climes? It attempts to answer the third question by the relative limitation or abundance of supply that governs the productivity of the factor. Is this an answer at all? That the productivity is higher or lower *at a certain stage* when the supply is smaller or greater is the statement of the law itself. No answer is adequate unless it explains the scarcity of a factor in any particular industry. This the theory is unable to deal with. The other two answers similarly are mere platitudes. All that they say is this: every method of production involves the employment of different factors at a certain proportion to each other, which maximises their productivity; and these methods are not everywhere the same and are capable of improvement with time through progress of knowledge and skill.

The theory thus *explains* nothing. It states a truism. Obviously there can be no production without a method or arrangement of the factors *inter se*.

The theory does not seek to explain why a particular method is adopted, modified or altered. Nor does it care to trouble why or how the supply of a factor is limited at any place or time or industry.

Nor does it consider the effects and implications of the fact that all the factors are not equally mobile for all kinds of industries, even if we presume perfect mobility in the long run. It ignores the fact blissfully that production to-day has not for its primary aim the maximisation of the physical *productivity* of any factor: nor of the total physical output, in which the majority of society is usually interested. The entrepreneurs seek only to maximise their own income or profits. The factors are, therefore, employed according to their net *profitability* to the employers, and not to their *physical productivity* as the theory assumes.

The theory only states that, had production followed a given method, had the supply of each factor been limited to a given amount, had the factors been employed with a view to maximise their technical efficiency, they would have been rewarded according to their marginal productivity. It thus suggests only a possible method of distribution—a method that leaves no surplus—under some hypothetical conditions assumed. It can well be regarded as a useful apparatus of economic logic. But to apply this theory as an accurate analysis of actual facts is obviously illegitimate. The application is misleading and even mischievous. It does not seek to *explain* actual facts and unless the entrepreneur's motive and conditions of production be appropriately modified, it cannot.

Next, can the theory *measure* the productivity of a factor, if it cannot explain its remuneration? Can it serve *economic ethics* by supplying an *ideal* of distribution, if it is unable to serve the *positive science* with an *explanation*?

Any attempt to make the theory indicate more than a rough measure of the relative efficiency of a factor, not only in the short but also in the long period, is misleading and untrue. It is superfluous now-a-days to warn that there is no such thing as specific productivity in the Clarkian sense. We have noted already that the marginal-productivity distribution has no moral basis for its justification, even when productivity refers to physical output, and obviously none when it refers to market-value. Whatever semblance of truth the theory can claim as an actual mode of distribution is based upon the productivity of market-values.

The theory pretends to be supported and its application justified by an analysis of the employer who organises production and engages the factors of production. The demand price of a factor to its employer, it is assumed, is governed by its marginal productivity and the competition of the different employers for the same factor ensures payment of the factor accordingly. The entrepreneur *shall* pay what he *can* pay, by the force of competition—this is the argument.

We have already shown that the factors need not, and usually do not, play a passive rôle as

regards their supply. Secondly, marginal productivity of a factor appears not only as a relative value but also as a conjoint contribution in concrete cases, not easily separable from that of the entrepreneur's ability, organisation and capital. The mathematical reader may be reminded that in the formula $P=f(x, y, z)$ the product P as a homogeneous function of the first degree is not only dependent upon the absolute amounts x, y, z of the different factors, but on the form (f) of the function as well, i.e., upon the relative proportion of the different factors, as indicated in our formula $P=A x^{\frac{1}{3}} y^{\frac{1}{3}} z^{\frac{1}{3}}$, which lies entirely at the discretion of the entrepreneur, who decides his method, among other innumerable considerations, on the consideration of his capital, credit-capacity as well as ability. Qualified in this way and calculated on this basis, the entrepreneur estimates the marginal productivity of a factor in fixing his demand price. Qualifications with which Marshall encircles the estimation of the marginal productivity of his *shepherd* (already noticed) strengthen our belief that even the physical marginal productivity of a hired factor is not capable of any simple direct calculation. Mr. Homan,²⁶ an acute analyst and a conscientious and careful critic, interprets Marshall as having supported the

²⁶ P. T. Homan : Contemporary Economic Thought (1928), p. 243.

theory of marginal productivity as explaining demand. This, we believe, would be reading too much, at least much more than Marshall's contexts warrant. We have to remember that the demand price would not be derived from the entire additional output or value that the increment of a factor would yield, but by deducting from it an amount as properly belonging to the entrepreneur's share. In connection with his discussions on wages, Marshall²⁷ points out that the doctrine of marginal productivity has no "pretension" as a theory of wages. But it "is a useful part of a theory." He only says that "the doctrine throws into clear light the action of one of the causes that govern wages." But this need not mean that it explains demand unqualifiedly. "It helps to explain the demand," no doubt, but subject to the qualifications pointed out before.

Our criticism, therefore, amounts to saying that the theory, as a general *explanation* of the shares of the factors in the distribution of the national dividend or as a *measure* of any share, is useless. It is only useful as an illustration of the physical law of technical production, which every entrepreneur as the organiser of production must take account of. But as the employment of any factor (of homogeneous quality) is limited by the net profitability to the entrepreneur, derivable out of

²⁷ Marshall : Principles, (8th edition), p. 518.

it, marginal productivity plays a subordinate rôle in the guidance of the entrepreneur's economic activities.

As to the applicability of the theory to the entrepreneur's services or labour, it has already been pointed out that the nature of these services is such that the theory cannot explain or measure their productivity. The very nature of an entrepreneur's services is so to administer, alter or improve a method as to secure a better return for the resources than hitherto obtained. The theory presumes the stability of a method and the rigidity of its results, which it is the very function of an entrepreneur to change and modify. And the very character of the entrepreneur's skill and activity is its immeasurability in any kind of physical unit. The productivity of the entrepreneur's labour and industry thus eludes the possibility of measurement in strict accordance with this theory.

CHAPTER VI

THE RELATION OF RISK OR UNCERTAINTY TO PRODUCTION AND PROFIT

With the doctrine of marginal productivity still fresh in our memory, let us now enquire as to what economists mean by *productivity* and *factor of production* when they refer, for instance, to risk-taking or uncertainty-bearing as a factor of production.

THE MEANING OF PRODUCTIVITY.

Economists generally seem to use *productivity* in two different senses. We have, first, the *quantitative* notion of the degree of effectiveness in production or the measure of productivity, the meaning the marginal productivity theorists have in mind. Secondly, it may merely signify that one thing is a necessary element in the production of another. Production however may refer to a concrete economic good, or its monetary value in the market, or its real value to the final consumers in the form of their psychic income of satisfactions. The view-point, in other words, may be industrial, financial or psychic, according as the interest considered relates to society, the entrepreneur or the individual consumer, through their

concern in physical output, pecuniary profit or personal satisfaction respectively. It may stress sometimes the quantitative aspect of effectiveness and sometimes the mere qualitative attribute of its relation as a constituent of the product. Thus, we find in the following passage of Wicksteed references to both the quantitative and qualitative aspects of things as means or factors of production :

“ Though no amount of intelligence or industry can make bricks without straw, yet intelligence may economise straw, and one man with more intelligence and less straw may produce as good bricks as another with more straw and less intelligence. There is a limit to this. To withdraw straw beyond a certain point would be to render it impossible for a given degree of intelligence to produce a satisfactory brick, so if that limit is passed we have come to a point at which a less intelligent man with a better supply of straw might produce a better article.” ¹

In practice however economists do not give us usually any indication whatsoever in which sense they are using the term *productive* and what their view-point is. And confusion thus results.

Let us illustrate what we mean. Whenever economists compare productivities, they use the quantitative notion, as they must. We have seen

¹ Wicksteed: *The Common Sense of Political Economy*, pp. 361-2.

in Chap. IV how the concept of surplus served as a quantitative measure. This surplus-concept as a measure of quantitative effectiveness made the Physiocrats regard land or nature as the only productive factor. This quantitative notion of productivity based on surpluses seems to be responsible also for the concept of the imputed productivity of land and capital in Europe. This doctrine of imputed productivity was probably meant to justify the remuneration of property in general. It was a convenient economic fiction. It derived its plausibility from the so-called residuum of surpluses. It served to justify rather than explain the income from land and capital. Land was the primeval object of conquest, as it was the key to power—the power to make other people work for the landowner, and a source of income without labour. Little reflection is needed to see how this imputed productivity was brought into the common currency of popular thought. Natural environment, *i.e.*, “land” and labour are both necessary for production. In a primitive society the aim of a family, as a social and economic unit, was competence to earn a sufficiency for its customary living. If land of a particular quality and quantity could be found wherefrom a peasant family could raise a quantity of produce in excess of its customary needs, it was natural to attribute the surplus to land. Similarly capital in the form of tools could

claim a surplus over the artisans' group-standard of subsistence.

This was obviously the outcome of the limited character of the needs of the different classes, which characterised the "pre-capitalistic and pre-middle-class economies" of Europe, as Prof. Sombart shows in his *Quintessence of Capitalism*.

The qualitative notion of productivity sometimes comes to us as an associated idea when we generalise the utility of a particular thing, extend its attribute to the whole of its class and think of the class as a whole as useful, essential or indispensable for satisfying our ends, directly or indirectly. Thus land and capital come to be associated in our minds with productivity, irrespective of the consideration whether they yield a surplus or not. According to the quantitative concept, some lands and some capital and even some labour will be found to be unproductive, while according to the qualitative notion they are all regarded as productive, because they represent classes of things that are necessary and useful in physical production. The notion of usefulness however assumes different forms, as our view-point is industrial, financial or psychic, or in other words, relates to society or the entrepreneur or the consumer. Usefulness would mean *requisiteness* or *indispensability* when it refers to a physical product, *marketability* when it refers to its value, and *psychic capacity to*

satisfy an individual desire when it refers to a consumer's need. Rain and sun, for example, are regarded as being as necessary for producing wheat as a plot of land, generally speaking, although it may be a piece of no-rent land. Advertisement and deception, persuasion and intimidation, are as valuable for the profits of a firm as the cost of its plant, although the firm may not declare an extraordinary dividend. Superstition and prejudice, faith and credulity, are important elements of psychic satisfaction to a patient who swallows a patent drug that has no pretence to curative properties in the opinion of medical science.

The mere marketability of a factor is often accepted as a sufficient test of its productivity by some of our greatest economists. According to this test, any economic good is *ipso facto* productive. Valuable and productive are thus convertible terms. J. B. Clark, for instance, presumes productivity of capital on the mere evidence that it earns an income known as interest.²

But qualitative notion of productivity has no practical utility from the industrial, financial or even psychic point of view. Social welfare depends on the quantity of products, the entrepreneur's profits depend on marketability and prices. The individual producer and earner is interested in

² P. T. Homan : Contemporary Economic Thought, p. 64.

the quantitative relation between the cost or the sacrifice he undergoes and the return he can get therefrom. Only the quantitative measure of productivity is therefore important to any of them. The philosophic importance that has been attached by the later economists to the definition of productivity as creating utility seems to be due to the necessity of reducing the various divergent view-points to one common denominator as a convenient basis of reference to them all. Thus social utility is regarded as increasing with a bigger industrial output, the employer's utility with higher money gains, while the individual producer's utility is supposed to swell with the higher real income based upon psychic satisfaction and sacrifice.

It will now be clear why the different view-points may find divergent productivity in the same concrete instance, although they may all regard productivity in its quantitative sense. Suppose the physical output remains the same, its money-value increases owing to a general rise in prices. Here the change is not socially productive, but entrepreneurs make larger money-profits, and as interest and wages do not usually change quickly or proportionally to the rise in prices, their larger money-profits will mean higher real profits also. These profits are thus acquired at the expense of the real income of individuals who earn by hiring their resources to the employers. Money productivity, that is, profitability from

the entrepreneur's point of view need not, therefore, necessarily connote physical productivity in terms of concrete goods from the social stand-point. This is the complaint of Thorstein Veblen and his school, who accuse the classical economists and their followers with confounding *personal acquisition* with *social production*, or individual gain with social benefit.

With this meaning of productivity, with its different and sometimes divergent significances from different view-points, at the back of our mind, let us now find out what economists mean by a *productive factor*.

WHAT IS A FACTOR OF PRODUCTION ?

First, we may take *factors* in the general, wide and scientific sense of any cause that affects the volume of production, be it reckoned in physical units or in money-values. This will include all kinds of service, tangible or intangible, appropriated or free and natural, direct or indirect, which are responsible for a given amount of production. Thus, sun, wind, rain, moisture ; war, pestilence, flood ; exchange-rate, bank-rate, gold policy of America or France ; Soviet production in Russia, *Swadeshi* agitation in India, civil disturbances in China, monetary crisis of Australia ; as well as the Trade Union activities and the Unemployment doles of a socialist government,— may all be regarded as factors of production

in England, besides space, materials, services and various other elements that defy enumeration.

Secondly, we may group these elements under some convenient categories and call them *factors* of production. Thus, according to Marshall, "we may arrange...the things that are required for making a commodity into whatever groups are convenient, and call them *factors of production*."³ The commonly accepted trio, "land," labour and capital, are factors of production in this second sense.⁴

Thirdly, economists sometimes mean by *factors* disutilities, pain-costs, sacrifices or sufferances that are undergone by those who supply the services that contribute towards production. It is in this sense sometimes that we hear of fatigue, waiting or abstinence, and uncertainty-bearing as factors of production. Hawley's *enterprise*, in the sense of risk-taking, is a factor of production in this sense.

Fourthly, we may adopt the entrepreneur's view-point: the factors of production are mere "factors of expense."

³ Marshall : Principles (8th edition), p. 339.

⁴ This excludes, of course, factors like sun, rain and wind and many other elements enumerated in the earlier paragraph, because these are things that are incapable of appropriation, or of serving as the sources of income to anybody, or of being treated as "factors of expense" in an enterprise. (See pp. 191-2, below.)

We are now in a position to answer the question: *Is uncertainty-bearing an additional factor of production in the same sense as "land," labour and capital?*

Prof. G. O'Brien of Dublin is trying to revive the claim of uncertainty-bearing to a separate factorship of production, of which the reward is profit and to which the doctrine of marginal productivity is applicable. He writes:

"The assumption of uncertainty is therefore a disutility and must be rewarded. Is uncertainty bearing on this account, entitled to rank as a separate factor of production, or is it merely a circumstance that increases the supply price of the other factors?"⁵ He cites the authority of Cairnes, Cassel, and Prof. Pigou as supporting its claim to be regarded as a separate factor of production.

Let us examine these authorities and try to discover in which sense they regard it as a factor of production.

Cairnes⁶ clearly regards risk as an element in the cost of production. If we interpret a factor of production in our third sense of disutility, evidently risk is a factor. But it is not a factor of production in the same sense as labour or capital.

⁵ G. O'Brien: *Notes on the Theory of Profit* (Dublin, 1929), p. 17.

⁶ *Some Leading Principles of Political Economy*, pp. 74-5.

Cairnes is explicitly clear on this point and it is impossible to misunderstand him. The following quotations will speak for themselves :

“Our analysis, then, of cost of production resolves it into three principal elements, which, I may remark, are also *ultimate* elements—Labour, Abstinence, and Risk.....the third falling upon labourer and capitalist alike.”⁷

Again we have :⁸ “The sacrifice of risk..... falls on both classes of producers alike; though the nature of risk differs according as it affects one or the other. Affecting the capitalist, it is risk to his property ; affecting the labourer, it is risk to his bodily or mental faculties of life, but in either case *it is an element in cost* ; being a real sacrifice incurred by a producer and demanding consequently a corresponding compensation in the value of the product.”

In a foot-note⁹ he bitterly protests against risk being taken as the sacrifice only of the capitalist : “In the usual exposition of the doctrine of cost of production the only risk taken account of is that incurred by the capitalist ; but this is merely a consequence of that habit of contemplating the work of production exclusively from the capitalist’s stand-point of which I have already spoken.”

⁷ *Ibid*, p. 25.

⁸ *Ibid*, p. 74.

⁹ *Ibid*, p. 75.

After this, can we say that Cairnes regards risk as a factor of production in the same sense as labour or capital ?

Let us turn to Prof. Cassel. He too regards risk as a cost of production.¹⁰ Not only insurable risk, but also non-insurable risk is regarded as a cost. But this is a money cost, and not a real cost or pain-cost sacrifice, that he is thinking of. "Against the general risk of business as such it is, as a rule, not possible to insure. That this risk is, within certain normal limits, taken into account in business calculations is beyond question." He points out that in planning a business the interest on capital is put at 10 p.c., although the usual interest may be only 4 p.c. A limited company reckons as cost the amount of reserve it forms to cover losses, including even "the risk of an inevitable drop in the output or the selling price." He observes further : " This incurring of risk may itself be regarded as a special factor of production. In economically advanced conditions this factor has a market of its own and a fairly definite price. It may also be substituted for other factors of production ; and this always happens when, in order to reduce cost, a lower grade of insurance is taken." ¹¹ Though he does not

¹⁰ Cassel : *The Theory of Social Economy* (1923), Vol. I, pp. 166-7.

¹¹ *Ibid.*, p. 167.

actually define a factor of production; it seems probable that he regards it as a "factor of expense." It is obvious that he uses risk in the sense of any condition that may cause objective losses and thus affect the product. It is perfectly certain that he does not use it in Cairnes' sense of pain-costs.

Risk implies in the first instance losses, objective losses, which must be covered by an enterprise, if it is to continue in business. These losses are to be regarded, therefore, as money costs. As every money cost is a factor, in our fourth sense, for carrying on production, these costs emanating from risks are also to be regarded as a special factor. So Prof. Cassel seems to look upon *risk* as a factor in the sense of *objective costs* affecting production, that is, as a "factor of expense." He does not consider the psychic cost that risks may engender in the supply of land, labour and capital, by a reflex influence reacting from uncertain prospects or from fear of losses. In Prof. Cassel's sense, expenses incurred in heating the office buildings, lighting the workshop, watching door-ways and sweeping floors are to be regarded as factors of business costs and hence of production.

Turning to Prof. Pigou, it appears at first sight that his authority is definitely against us. He regards uncertainty-bearing as a factor of production "on the same level as any of the better known

factors."¹² But a closer scrutiny reveals that he is not using the term in the usual Marshallian sense; he really means by this factor the psychic disutility involved in an investment of capital, caused by exposure to risks. On three grounds we find it reasonable to come to this conclusion. First, the reason for which Prof. Pigou regards uncertainty-bearing as a factor is this: "in the vast majority of enterprises" capital is exposed to uncertainty; and waiting and uncertainty are separable phenomena, though they generally associate together.¹³ Obviously he is thinking of the different kinds of disutility that an investor of capital experiences for the sake of investment. Secondly, he defines "the demand price or the supply price for the exposure of any given quantity of pounds" as "the excess of money offered or asked for above the actuarial value of a pound so exposed."¹⁴ Here again Prof. Pigou does not think of uncertainty as a physical factor separate from capital, but as a psychic disutility distinct from waiting, that claims a compensation exceeding the objective actuarial losses. Thirdly, the illustration of the breaking vases, as showing the productivity of uncertainty, limits the proposition to very

¹² *Economics of Welfare* (1924), p. 726.

¹³ *Ibid.*, p. 915 (1920).

¹⁴ *Ibid.*, p. 920 (1920).

narrow confines. "The services of this million people, in bearing the uncertainty of placing £100 in a position where it is to become anything between nothing and £250, are responsible for an addition of £25 million to national wealth."¹⁵ Productivity here obviously does not depend on the assumption of uncertainty as such, but on the existence of a positive actuarial value presumed by the hypothesis of an equally likely gain "between nothing and £250." That an additional reward is to be held before the eyes of the prospective investors as a sufficient allurements to overcome the psychic disutility of risks, is an undoubted proposition. But whether, as a result of this risk-assumption, an additional national output or profit will be the net result, is unascertainable, unless we assume, as Prof. Pigou does in his illustration, a positive actuarial value. We beg to remind the reader that Prof. Pigou is here considering a risk-decision which Prof. Knight has classified as an *a priori* probability judgment. The risk here, to society as a whole, is known definitely and it is thus insurable. Whether the individual producers would combine together under the circumstances, or find an agent to insure them against this calculable risk, as against fire, is another matter. If they do, the social cost for this service will be lower, for the individual producer can definitely

¹⁵ *Ibid.*, p. 725 (1924).

protect himself against it by paying a premium which is a definite cost to him. If not, in view of the possible incidence of large individual losses, the supply-price for overcoming the disutility of risks is likely to be higher ordinarily, unless the lure of a few very high prizes makes the situation extraordinary. But what is important here to note is that productivity to society in this case is already insured by the *a priori* probability calculation.

Even if the aggregate utility to society does not outweigh the losses, given by *a priori* mathematical data, production may yet be undertaken by entrepreneurs on the lure of very high individual profits. Here risk-taking results in a negative productivity to society.

Only in the third case of Prof. Knight,¹⁶ when there is no basis whatsoever of forming any judgment, we have pure business risks. The assumption of risks in these cases need not insure at all a positive result for the whole community. The conditions implied in Prof. Pigou's illustration presume individual risks, but assure no individual profits. They involve no risks to society as a whole and still they presuppose a positive productivity to the community.

Thus we see that Prof. Pigou's uncertainty is a factor of production only in the sense of a producer's disutility, his pain-costs.

¹⁶ Knight : Risk, Uncertainty and Profit, p. 225.

UNCERTAINTY AND THE SYSTEM OF ENTERPRISE AND WAGES

According to Professor Knight, the existence of the "*enterprise and the wage system of industry*" is "a direct result of the fact of uncertainty."¹⁷ For no one will "guarantee to another a definite result of the latter's actions without being given power to direct his work. And on the other hand the second party would not place himself under the direction of the first without such a guarantee."¹⁸

The "enterprise and the wage system" seems to us to be an independent form of development. Prof. Knight himself admits that it is not an inevitable consequence of uncertainty. The Metayer system and the tenancy-in-common cultivation still prevalent in some parts of India show that the variable product of common enterprise might be shared between the cooperant agents according to an agreed proportion of the concrete produce without any wage system. They do not guarantee a definite *amount*, but they guarantee a definite *proportion* of the resultant output. The growth of numerous manufacturing varieties of consumption goods with the help of various kinds of indirect service and specialised skill, and the growth of money exchange, have led to a *fixed amount* mode of distribution in place of a *definite*

¹⁷ *Ibid*, p. 271.

¹⁸ *Ibid*, p. 270.

proportion plan. The uncertainty-bearing of the entrepreneur seems to be the direct outcome of the *fixed amount* plan of distributing a variable product, with the inevitable share of an arithmetical residue.

Wherever or whenever it is possible or practicable to distribute a varying product of joint enterprise according to a plan of sharing in definite proportions, the co-operating producers will all share uncertainty and risk equally. But when the shares of some producers, for any reason,—be it poverty of one class or security of another,—have to be insured to a fixed amount, it is inevitable that the other producers must bear on their shoulders the entire financial burden of uncertainty incidental to production. Thus we see that while the uncertainty of production is largely uncontrollable, the concentration of uncertainty upon the entrepreneur largely depends upon the arrangement for distributing the product. It is a pure convention. And if it really hinders production and increases unemployment, it is only sensible that the system should be changed.

So it is clear that the “enterprise and the wage system” is not a necessary result of uncertainty.

The enterprise system may be necessary on the contrary even if the conditions that give rise to uncertainty are absent. Consider the problem of administration of a vast landed estate with a huge rent-roll, just as we find among the big landlords in Bengal. Rents are all fixed or pre-determined.

But the use of land is usually sold on a credit basis and not for a cash-price. That is, prices are not pre-payable, but are only realisable later. It necessitates collection at times most suitable to the tenants. This arrangement of collection is what we call estate administration. Because the task is huge, because the collection is to be made at many places at the same time, or simply because the landlord wants to live a life of laziness and leisure and thinks, rightly too, that the estate is not worth having unless it can lavish upon him luxury without labour, he has to engage and he does usually engage a number of people to collect rents on his behalf on a system of wages. Thus we see that the wage system may be necessary owing to the concentration of property, or difficulty of administration, or love of laziness, or necessity of leisure for higher work, or lack of opportunity of a section of people to earn an independent livelihood. The history of slaves, serfs, farmers, and factory-hands illustrates the necessity of the wage system, even apart from any considerations of uncertainty, solely as an appendage of the system of property, coupled with the grounds of economy obtainable from division of labour.

A large accumulation of *bills receivable* in the hands of merchants, leads to the very same problem—the difficulty of collecting dues unaided, as we see in the case of the administration of landed estates.

Perhaps the purest instances—free from any traces of uncertainty—will be the housewife's administration of the household. Here no uncertainty of her husband's or master's income may trouble her at all. Still considerations of efficiency in culinary and other matters, or of laboriousness of domestic work, laziness, desire for luxury or leisure, or a mere vanity of over-lording, may incline a lady of rank to spend on wages, that is, employ domestic hands.

Uncertainty at any rate has never been a historical force in creating the "enterprise and the wage system" in the evolution of human society. Rather if we can believe in Sombart and Schumpeter, uncertainty is largely the result of a restless spirit of enterprise, a human trait, but prominent only in a comparatively few. Sombart traces the social ancestry of a modern business man to the military freebooter, passing through several stages of evolution, land-and-slave lord, sea-pirate and mercantile adventurer, before he has been tamed into an unscrupulous calculating speculator. Schumpeter's Entrepreneur is a promoter of progress, an active creator of new tastes, new goods, and new ideas and methods of productive process. Whether we agree with their views or not, historical events force us to the conclusion that the wage system, in the larger sense of dependent livelihood, has been the outcome, not of the necessity for insuring to the labourers

their means of living, but for insuring to the stronger men a mode of living without compulsory labour and also leisure for other activities than finding food and shelter. The system of private property enabled the system of employment to relax from slavery to wage-work. But the necessity of employment seems to be inherent in the economy of planning and organising division of labour, but it grows more spectacular as well as more important with larger co-operating methods of production. The difficulty of planning and organising grows more difficult, no doubt, with the presence of uncertainty. But that explains only the additional disadvantage of planning and of its execution through employed assistance, and not the necessity of planning and its execution through employed labour, which is really the source of enterprise proper.

UNCERTAINTY AND PRODUCTION

Uncertainty, in relation to production in general, is sometimes used in a broad sense to cover all kinds of risks, measurable and immeasurable, to which an enterprise is subject; sometimes it is used in a narrow sense to apply to unmeasurable risks only. "A *measurable* uncertainty, or 'risk' proper," says Prof. F. H. Knight, "is so far different from an unmeasurable one that it is not in effect an uncertainty at all."¹⁹

¹⁹ *Ibid*, p. 20.

Similarly uncertainty sometimes refers to objective costs, sometimes to subjective costs, and sometimes includes both. Thus Cairnes refers to subjective costs, Prof. Cassel to objective costs or monetary losses, as we have seen. Marshall and Pigou refer to them both. Marshall allows "a charge" in the cost "on account of uncertainty," over and above the actuarial cost of "insurance against risk."²⁰

Uncertainty-bearing, as it is used with reference to an entrepreneur, means simply the assumption of production or enterprise, the economic consequences of which cannot be ascertained, accurately or approximately, by any kind of scientific judgment. It means acting upon expectation, where expectation itself is based upon opinions and estimates which have no scientific basis for determining the probable error and coming to a decision and judgment. It means submitting his capital and labour to the risk of losses of every conceivable kind. An outside capitalist, who lends his capital to this entrepreneur without sufficient security, does also assume this uncertainty. A labourer serving in an industry or profession, that is subject to the risk of accidents and unemployment, also submits to this uncertainty. A soldier's profession, for instance, involves the risk of losing life or limb. But we do not say that a soldier's wages are his remuneration for

²⁰ Principles, V, vii, 4.

risk-taking or uncertainty-bearing. We rather say that he serves as a fighter on behalf of his country. This is because there is no such service, properly speaking, as uncertainty-bearing apart and distinct from fighting. Risk is incidental to fight, it is an inseparable accompaniment, and an essential characteristic of that service.

Now if a man puts his own capital to an enterprise which involves the risk of losing interest or principal, should we say that he performs an additional service besides the productive services supplied by his capital? Is there any service that this investment renders over and above what the supply of capital does to assist the enterprise technologically and financially? If there is any, we must regard risk-taking as a separate service. But if there is none, is there any justification for regarding it as a separate service contributing to production, distinguishable from the services supplied by capital?

The essence of the objection here is not "that uncertainty-bearing never exists in isolation, but is always associated with some other factor."²¹ It is denied absolutely that it can be regarded as rendering a separate service at all, distinct or distinguishable from the services performed by land, labour and capital goods.

²¹ O'Brien : Notes on the Theory of Profit. p. 18.
Hawley : Q. J. E., Vol. 15, p. 78.
Edgeworth : Papers, Vol. I, p. 23.

The argument underlying the risk theory of profits, which looks upon uncertainty-bearing as a distinct service or a distinguishable factor of production, is briefly this: The assumption of uncertainty is a disutility, and the person who assumes it cannot be expected to do so without a reward. This is perfectly true, so far as it goes. But it does not go far enough. It suppresses or overlooks another truth: Those who assume uncertainty do so, because the chance of gain in their expectation is greater than the risk of loss. If risk, the chance of loss, is a disutility, the chance of gain is a utility. One assumes uncertainty only when its utility is expected to be greater than its disutility. R. G. Hawtrey utters this truth with a rather strong emphasis: "One who cares for money-making, and sees profit within his reach, will not be easily deterred from using his opportunities. He will not incur on any terms a serious risk of losing his capital."²² Uncertainty denotes risk, but connotes chances of gain as well.

Every enterprise under modern conditions almost always involves itself in a certain amount of risk, but it also stands the chance of gain to a certain extent. Enterprise comprises economic responsibility as well as technical organisation of production. Risk is thus an incidental characteristic of enterprise. It is an usual associate of

²² Hawtrey: *The Economic Problem*, p. 372.

productive activities under the "Business Economy" of the present time. Its effect may be to check the supply of capital and of appropriate business ability to an industry in question: and thus to increase their relative supply-prices.

Its origin lies in the imperfect knowledge or inadequate control, or both, of the industrial and financial conditions, under which production has to be carried on.

Uncertainty should better be regarded as an *incidental circumstance* rather than an *essential service* for production. The services that are called for in production carry with them some consequences that involve risks. The performance of an entrepreneur's service entails these risks. The choice is to take up this service or not: it is not possible to dissociate one from the other. The entrepreneur takes up the responsibility of production; this service implies that his capital and ability runs the risk of losses. But this fact does not entitle us to say that his service is *essentially* risk-taking. Loss and gain are both possible consequences of his activities. His essential service is production, that is, provision for goods or means of satisfaction: the *incidental consequence* or service, if service we can call it, is risk-taking. In this peculiar sense, we might say as well that his service is gain-hunting. This kind of description seems to put a wrong emphasis upon an incidental aspect of his service and neglect its main significance.

Death or laurels of victory are both possible consequences of fighting. A fighting soldier has either of these possibilities. Still his essential service is fighting. Death and laurels are both incidental to his essential function. A student's chief function in a university is to study. But it is almost certain that every candidate does not pass the examination: so his study involves the risk of failure. Still this is a mere incident of his main function—study.

Some may argue that uncertainty-bearing is certainly a factor of production: An apple-farmer, for example, when he chooses to grow apples, is certainly thinking as to whether he can profit by it. And if the risk is great, he will not produce at all. The community is thereby deprived of the product. The assumption of uncertainty is thus an effective factor of production.

Our answer to this argument is that uncertainty-bearing in this case is production itself and not one of its factors. It plainly means that when one undertakes production, he decides to face all the risks that may befall his interests as the owner of the product. When one decides not to face this risk, well, he is not a producer at all; there is no production to that extent in that particular branch. But it does not necessarily follow that his resources will remain idle or unemployed: they will only be diverted where the risk is less. This must be so, because he cannot live without employment. Any

kind of production is subject to risk. And if any particular kind of production is not taken up for fear of risks, this simply indicates that the entrepreneur's ability is unequal to the task. On the other hand, production already undertaken shows that the entrepreneur has been expecting to overcome the difficulties at a cost which is not too much for society in consideration of the utility that is added. It is, therefore, clear that uncertainty-bearing and production may well be read as different descriptions of the same operation, looked at from two different points of view. From the entrepreneur's subjective and personal view-point it is uncertainty-bearing; from the social point of view, it is production. To say that uncertainty-bearing is a productive factor is tantamount to saying that production involves a subjective sacrifice, which is a truism. All that we do here is to describe the productivity of a service not by its product, but by the pain-costs or the subjective sacrifices involved in it. We may thus describe labour-service as fatigue and capital-service as abstinence or waiting.

All these criticisms must not be read in the sense that we object to defining or describing risk-taking or uncertainty-bearing as a service or as a factor of production. It may be so defined and described, if one chooses to. But then we are to remember that this is something very different from

what we mean as *service* and *factor*, when we refer to "land," labour and capital.

There are numberless elements that are *necessary* for production (in the qualitative sense) and which *affect the volume* of the product (in the quantitative sense). They may all be described as factors of production in one sense or another. We may think of these elements as physical services, that are technologically necessary for the material formation of an economic product, just as we think of the product itself as the necessary physical form it must assume to satisfy the needs of society. Or, we may consider these elements in terms of the necessary financial cost to the entrepreneur just as we consider the physical output as the concrete embodiment of monetary values for purposes of distribution. These pecuniary costs may then be regarded as the entrepreneur's factors of production as much as the physical services of which they are the monetary representative. Or, we may go deeper and look upon these elements in terms of the subjective sacrifices or pain-costs involved in rendering the physical services that are required for technological production. In a sense we may also call them factors of production, for they too represent the services (that help to produce the physical form of a good or its market-value) in terms of real cost, that is to say, of physical pain and psychical discomforts experienced by individuals who render

them. As a matter of fact, social welfare is often sought to be reckoned in the terms of the subjective satisfaction provided by the national dividend in relation to the corresponding physiological fatigue and psychical affliction involved in its procurance. Thus we see how physical services, financial expenses and subjective sacrifices may each be claimed as a factor of production.

Now, *many* of these necessary or affecting elements may be grouped together according to the different nature of the physical sources they come from. First, some come from material sources, and some from human energy : we can thus divide them according to their sources as (i) material and (ii) personal factors. We may further subdivide the material factors, according as they come directly from natural sources, or as they come modified by human labour : the subdivisions are thus (i) natural and (ii) man-made. This classification thus leads us to Marshall's factors of production, *viz.*, (a) "Land" or gifts of nature, (b) Capital or man-made materials, (c) Labour or human energy.

Not *all* of the necessary and affecting elements of production are however included in this classification of land, labour and capital—the common triad, though *many* of them are. For instance, the elements whose source is not material and physical are herefrom excluded. They are excluded as being unimportant for practical problems ; we can usually afford to ignore them, because they

are not physically capable of appropriation and hence they have no place in distribution. But they are not unimportant from the view-point of physical production. For example, knowledge, both industrial and general, is such a factor. Differences between civilised and uncivilised economies are mainly ascribable to it. It will be seen, therefore, that the elements whose source is institutional organisation or climatic peculiarity or social customs or habits, cannot be placed under this classification. Thus division of labour, industrial inventions, transport facilities, quick communication, business organisation, currency and banking operations lie outside its boundary. We know also that law, custom, religion and superstition do sometimes help or hinder our industrial activities. Still they have no room in this classification. It is obvious again that the physical geography of a land, the geological features and climatic conditions that control its vegetation, animal life and mineral wealth, are important factors of national industry and prosperity. Yet they are beyond the reach of this factorial range.

We may remember in this connection the classical exposition of the theory of productive forces and immaterial capital by the German economist, List. Education, morals, intelligence, monogamy, and even Christianity are claimed by him as creative and productive forces. He rebels against the teaching of Adam Smith that labour is the only source of

value. "Whole nations," he protested, "may be in poverty, despite the labour of their citizens. The most depends upon society : whether sciences and arts are developed; whether good institutions, laws, religion, morality, security, and freedom exist; whether agriculture, manufactures, and commerce are harmoniously extended."²³

It is thus clear that many of the elements of national productive force are excluded from the commonly accepted triad, the three current factors of production.

Factorial classification, based upon financial costs, would be no improvement upon it. This would reduce them all to a single factor. Nor any classification, based upon subjective sacrifice or pain-costs; this would further "darken counsel" by its inability to take into account the significance of land and natural resources as a factor of national productivity. The common triad thus appears to be the best of all alternative classifications. But it is clearly a classification of distributive shares. It cannot but be so. We have seen how Say converted Smith's distributive shares into productive agents.²⁴

"Land," labour and capital do not, therefore, include all the productive elements. It comprises however all the productive factors that can claim a

²³ Haney : History of Economic Thought (1925), p. 397.

²⁴ See Chapter II, pp. 26-7.

✓ share in distribution. But what is distributed, the national dividend itself, is affected, as it must be, by all the elements. So even when the physical services included under "land," labour and capital remain the same, the national dividend, both physical and financial, may well fluctuate under the influence of the factors ignored and excluded.

Now this is the secret of fluctuations and the source of uncertainty and risks. Uncertainty or risk, as a factor of production, must be interpreted, therefore, as the totality of influence of all outside factors which affect the product but are unable to claim a share in distribution.

"Land," labour and capital are never regarded by scientific economists as three distinct classes of homogeneous services. They merely represent the appropriated sources from which the various groups of heterogeneous services needed for economic production are obtained. Scientifically speaking, all of the elements that affect production are the true factors, whether they come from appropriated sources or not. We may not be able to enumerate them all or classify them comprehensively. There is, as Wicksteed says,²⁵ "no possible scientific division of the factors of industry into great groups, and still less any possibility of an exhaustive enumeration of them."

If we remember this limitation of the *three* so-called *factors*, viz., that they signify not so

²⁵ The Common Sense of Political Economy, p. 366.

much the *services* as the appropriated *sources* of these services, and they do not include all the elements that affect the national dividend, we can easily see that any true *factor* affecting production must fall either under the common triad (if it can claim an economic share) or outside it, *e.g.*, weather in agriculture.

So whatever might be the *factors*, in the sense of the elements that affect the volume of production and cause fluctuation, they are includable either within the group of land, labour and capital, or must be excluded from it, and treated as implicit conditions or circumstances under which production takes place. These conditions or circumstances merely represent the totality of the influence of those factors which affect the produce, but which cannot be appropriated and which can have no claim in its distribution. The risk-elements of the Risk-theorists include all these foreign factors,—foreign in the sense that they lie outside the range of the three commonly accepted factors of production, such as weather, invention, exchange-rate, discount-rate, foreign competition, foreign demand, price-change, labour-strike, Trade Union activities, saving-mania of the public, and so on—which affect the aggregate volume of business returns and hence profits, but which do not come to claim a direct share, “a bite in the cake of profit,” in the language of J. M. Keynes.

Risk, as a factor of production, means with Hawley that aspect of the influences over fluctuation, which directly affects the cost of production. He refused to identify it with the risk of capital, as J. B. Clark and his followers interpreted it. Hawley, therefore, raised risk-bearing to a distinct factorship of production, called *enterprise*, of which profit was the reward. Other risk-theorists however did not follow his lead. Carver, Knight, and the Pollak group headed by Foster and Catchings regard risk as conditions that cause fluctuation, that is, as foreign factors that affect the business returns and are responsible for the origin of pure profit. But they all treat its influence on costs as indirect. Risk in their opinion raises cost by affecting the supply of other factors, notably of capital and business ability. Marshall treats risk exactly in the same way. Sir Joshua Stamp in his reply to D. H. Robertson²⁶ on the Colwyn committee controversies, inclines to the same view. There is no essential difference between the views of Robertson and Sir Joshua. According to Robertson, "risk-taking is surely a cost and not generally a surplus." Sir Joshua²⁷ concludes that there are two ways in which risk-taking is paid for:—(i) actual pool supplied out of the return from capital and (ii)

²⁶ *Economic Journal*, Vol. 37, p. 566 et seq.

²⁷ *Ibid*, Vol. 38, pp. 206-8.

psychological inducement. They are both business costs.

THE RELATION OF RISK TO PROFIT.

It will now be clear from the above discussions that the effect of risks, that is, of the uncertainty or fluctuation caused by non-appropriated foreign factors excluded by the classification of "land," labour and capital, upon business is two-fold. (1) They affect the volume of the product, physical or financial. (2) They affect the objective cost of production of the entrepreneur in the shape of business-payments and losses; and they also affect the psychic cost of the entrepreneur, as the management of risky enterprises is more difficult and the fear of losses from them is comparatively greater. The second group of effects is all included in the business costs. But the first group of effects appears in the form of business returns or receipts. The business returns or receipts are to be credited, therefore, not only to the factors of "land," labour and capital, but to the foreign factors as well. Now, the actual returns may or may not suffice to pay the entrepreneur's own capital and labour according to the market-rate. And the business costs by their very nature can only be assigned to the physical factors, "land," labour and capital.

It will thus be seen that Sir Joshua is quite right in concluding that the risk is rewarded by

✓ a kind of insurance pool to offset the objective losses and also by an extra price to overcome the psychic disutility of risk. And D. H. Robertson is equally justified in holding that "risk-taking is surely a cost and not generally a surplus."

From the social and industrial point of view, the business returns are the physical output and the business costs are the payments in kind of the concrete products to the owners of the physical factors. So there can be no question of divergence between receipts and payments, rewards and costs in terms of material goods and services. Whatever is produced is appropriated. Total product, no doubt, fluctuates under the influence ✓ of the non-claimant factors in distribution. But this only results in a disturbance and redistribution of the shares of the claimant factors, "land," labour and capital. From the social view-point, in other words, there is no divergence between the total products and payments, because here we strip by abstraction the idea of payment of its concrete distributive arrangement.

But business receipts and costs of an entrepreneur, ✓ in terms of money, may well diverge owing to the distributive arrangement under which production takes place. The income of the entrepreneur is the difference between the total receipts and the total payments (or money costs) he makes to others for the productive resources they have *lent* or *sold* to

him. In common parlance, this difference is known as profits (gross profits). But modern economists, for analytical purposes, speak of *pure profit*, as we have seen (Chap. IV) in a different sense. They do not mean by it the actual income of an entrepreneur's resources invested in the business, but deduct from the gross profits of the popular sense a sum that is equivalent to a compensation for what he might have received as interest, wages or rent for his resources, had he lent them to others and not employed them directly in business himself. This difference between the entrepreneur's actual return of his resources from business and the standard compensation allowed by the analytical economist is called *pure profit*. Pure profit is thus a measure of the divergence of the actual profits from its standard value, a *surplus* of the actual business income over an arbitrarily chosen standard of remuneration for the entrepreneur's individual resources.

The actual income of business undertakings varies, of course, owing to the uncertain character and effects of the influences of foreign factors. Pure profit, by virtue of its definition, must vary likewise. Pure profit is a concept of purely analytical creation. It is a surplus by its mathematical definition. So it cannot but partake of the fluctuating character of the business income of which it is a part, because the other part, *viz.*, the standard remuneration, is a constant term *ex hypothesi*,

- ✓ Pure profit may, therefore, be regarded either as the measure of the fluctuation of the business income or as a surplus income over the standard level of interest-cum-wages remuneration.

THE WEAKNESS OF THE PURE PROFIT THEORIES.

- ✓ The pure-profit theorists overlooked the purely mathematical nature of the surplus they defined as pure profit, and forgot that pure profit was only an analytical creation of their own imagination or exposition.

- ✓ They failed to see that the surplus or excess is really the outcome of fluctuations in the income. If we want to measure a variable with reference to a fixed standard value, its actual value will be a surplus, positive or negative, with regard to the standard, according to its variation. The surplus is really a measure of the variation. Pure profit is thus really a measure of the fluctuation of business income. But this mathematical implication was missed by the pure-profit theorists.

- ✓ If profits were regarded by these economists as business-income or the business man's income, the fluctuating character of this income might have easily led them to see that their pure profit was simply a quantitative deviation of the same income from its standard value.

But they were scientific theorists, who were pledged to explain every income as the specific or

imputed product of a distinct socialist-proof service, and to trace each distributive share to a different factor of production. They observed that "land," labour and capital had each a respective income of its own. They noticed that a surplus was left over after their claims had been satisfied. They named it pure profit. They imagined that this surplus of pure profit was a new kind of income. It must therefore be due, they concluded, to some sort of productive service hitherto neglected and undetected. Thus they completely overlooked the quantitative nature of their problem.

It did not strike them however that services both from the sources that are appropriated as well as from the sources that cannot be appropriated, may technologically contribute to the physical formation of a product, but income can only be traced to the services which come from the appropriated sources alone.

In their efforts to locate the source of this new income they came to seize upon all kinds of factors, personal or impersonal, grouped under a general name or a specific designation, that might affect the fortune or general productivity of a business and that might cause fluctuation of its income. Thus, dynamic changes, risks, superior skill in management or in bargaining, were each made to explain pure profit. It is curious to reflect that the gentlemen, whom the

modern economists of the twentieth century think of, in vanity of their maturer wisdom, as mere babies in economic thinking, should be found to prattle on the very same factors, with more scientific insight and sense. Turgot,²⁸ for instance, writing in 1770, talks of the employer's profits as an amount that must be sufficient "to make up to him," not only the return of his capital in an alternative use, "but also the wages due to his labours, his cares, his risks, and even his skill."

It is remarkable that the entrepreneur's labours, risks, and skill each became a distinct theory of profits, and even his cares were made to play a prominent part in the treatment of some German economists, notably Thünen.

It is, of course, always very easy to discredit our forefathers and belittle their wisdom with the very store of knowledge and experience they have with so much care handed down to us. Sympathetically interpreted and rightly understood, each of these theories is found to contain valuable elements of truth. The authors only differ as to the importance of the item that each, by his psychology or environmental experience, happens to feel interested in and is inclined to stress. Thus the *dynamic* theory stresses the question as to how the progress of science and inventions may cause changes in the business income resulting in

²⁸ Turgot : Reflections, secs. 60, 87, 94, 100.

pure profit. The *risk* theory stresses the unknown ✓ character of the foreign factors that affect the business returns, the fluctuation in which is bound to diverge the actual profits from the standard level. The rent theory of profit emphasises how the skill and ingenuity of organisation in both ✓ production and sale can enlarge the receipts and curtail the expenditure of a business: and hence cause divergence of incomes between individual business units.

The error of the pure-profit theorists lay not so much in their qualitative or quantitative analysis, ✓ as in their attempt to correlate the quantitative definition to the qualitative.

If pure profits mean an excess above the standard profits which they include in costs, the ✓ statement that "profit is the result of risks" is tantamount to saying that profit fluctuates as business income varies.

The inordinate importance that has been attached to risks in the theory of profit seems to be due to missing the quantitative import of the prob- ✓ lem, and to an erroneous idea it engendered, *viz.*, that profit is a separate kind of income different from that of "land," labour and capital, for which alone business men as a class strive, though in vain, and that it is the only economic income that is subject to fluctuation. They forget that business men as an economic class do not comprise the millionaires or multi-millionaires alone. They

include petty shop-keepers and hungry small farmers of oriental countries as well. They all require an income to live upon.

According to Ricardo, "the farmer and manufacturer can no more live without profits, than the labourer without wages."²⁹

Now from the individual standpoint, business, that is, the independent employment of one's resources, is only an alternative method of earning incomes from land, labour and capital, *hiring* them being the other. But from the standpoint of society, *business* is the only method of procuring incomes for the whole community and the method of *hire* is merely an arrangement for distributing them. Business incomes, of course, fluctuate. And as they are the mother-incomes of society, the contractual incomes, their offspring, must fluctuate as well. But there is a difference in degree. Professor Mitchell concludes on statistical evidence that the most fluctuating of social incomes is profit: next in order is wages, and the least fluctuating are interest and rent.³⁰

We often ignore this fluctuation in labour-income, because we habitually think of the labourer's rate of wages and not his aggregate annual receipts. The labourer does not care for

²⁹ The Works of David Ricardo, McCulloch's edition, p. 68.

³⁰ Business Cycles (1927), p. 146.

the rate as such, but only for his annual income in the aggregate. He knows he must live for all the 365 days of a year, and he cannot afford to be consoled that during a single week in the course of the year his rate of wages may be very high with no employment during the rest of the period.

It is easy to see that with every fluctuation of the national dividend, that is, the aggregate business income of the whole community, the incomes of all the classes of society must vary. Business man's incomes vary most, because of his contractual obligations with other classes. But the incomes of other classes cannot evade this calamity. They share it through unemployment.

Thus we see that fluctuation or risk is not a problem peculiar to the business income. Had we tried to find out what constitutes the typical wages (total) in an industry or factory, and how much the actual deviates from this representative or typical wage, the similarity of the two problems, fluctuating wages and profits, should have been obvious. Probably we would have also heard of standard and fortuitous wages.

The weakness of the Risk theory, as also of the Dynamic and the Rent theories, consists in explaining pure profit as a surplus and ascribing it to risks, or dynamic changes or superior managing ability. This explanation is tautologous, as it only shows that a surplus results because the total product fluctuates. They do not really seek to explain profit

as an income, but only why there is often an excess or deficiency of business income with respect to a selected average.

Shortly, we can better understand these theories of *pure profit* as theories of *surpluses*. All the theories of surplus-produce in agriculture, that is to say of rent, were tried on the surplus-income in business. The Dynamic theory might be read as an explanation analogous to that of the Physiocratic surplus, the surplus which was really due to a superior art of production but which the Physiocrats wrongly interpreted as the bounty of Nature.

The Dynamic and the Physiocratic surpluses are both caused by scientific advancement and technological development in production. The Rent theory of profit may be read as a Ricardian theory of industrial rents : surplus is here caused by the superior managing ability of the entrepreneurs in place of the superior fertility of lands. It thus loses its title to be regarded as a theory of profit. It is only a theory of differential wages. The Risk theory is an explanation of windfall surpluses caused by favourable business conditions, analogous to the influence of weather in agriculture.

To explain pure profit, some of the theorists stumbled upon the causes of fluctuation of the entire business-income itself. This is, of course, inevitable. For the division of concrete profits into a selected *standard* or average regarded as cost and a *surplus* or the deviation of the actual from the

average, described as pure profit, is a methodological abstraction, an analytical creation. Their contributions on this side are valuable. The Dynamic theory ascribes this fluctuation to dynamic changes. Of the risk theorists, both Hawley and Prof. Knight take these fluctuations for granted. They do not care to enquire into their causes. Their concern is only with their effects. Hawley traces the effect of these unstable conditions to the increased difficulty and disutility that they cause in production. The entrepreneur, who is *the* real producer according to Hawley, would not take up production, unless there were some inducement to allure him for facing the extra disutility of these risks. This explains Hawley's profit. Prof. Knight, on the other hand, traces the effect of these unpredictable changes to the divergence of the true marginal productivity of the factors from the estimated productivity according to which they are remunerated. This roughly is also the view of Prof. T. N. Carver. But Messrs. Foster and Catchings attack the problem from the financial standpoint, while other risk theorists consider the problem from the industrial standpoint. They trace the cause of business fluctuation and profit to the consumer's freedom of spending and saving. They ascribe profit to the consumer's increased purchasing activity. Prof. Knight, as we have seen, attributes it to a faulty estimate of the future marginal

productivity; and this is the general view of the risk theorists.

THE DEFECTS OF THE RISK THEORY

We may conveniently summarise here our criticism of the Risk theory. Like the other pure-profit theories, this merely states the problem and does not explain it. Pure profit is the deviation of the actual profit from a selected standard. That standard is determined by marginal productivity. Risks or unstable conditions in industry however make it impossible to determine what this productivity really is. So the entrepreneurs proceed to act, as they must, according to estimates. These estimates, as they are mere estimates, are bound to diverge from the actual return of the future. Profit is the outcome. All that we have from this analysis is that pure profit, which is a variation in the business income, is the outcome of risks. But risk consists in the fluctuation of the income itself due to the variation of business conditions. This means that changes in the business income are the effects of changes in business conditions. This is certainly a tautology.

The above analysis shows that there can be no separate reason for pure profit except the reasons which cause business fluctuations in general.

The explanation attempted by Messrs. Foster and Catchings appears to be almost temptingly satisfactory at first sight. But a closer scrutiny belies that

expectation. In a monetary economy like that of present society, the profits of business men as a class would necessarily depend upon whether the consumers are willing to spend as much as it has cost the business men to produce a commodity (including compensation for their own resources). But is not this a mere truism? Take any commodity, any consumption good or even a capital good. Entrepreneurs produce an amount; a part of the expenses on it has already been incurred to pay off the services and materials hired and purchased, their own shares only awaiting payment after sale. Their statement thus comes in substance to saying that the amount received from sale must exceed the amount spent and the amount debitable as costs to yield a profit. The risk points to the possibility that the consumers may not spend and the entrepreneurs may not receive this amount. This follows from the very definition of profit, and is not *in essence* different from the other risk theories which describe it only in a different form; in terms of industrial output instead of monetary values.

Besides this fundamental defect of the risk theory, certain other objections may also be urged against it.

First, taking risk as a subjective cost in the sense of Hawley, costs of risk, both objective and subjective,—actual losses that befall and the compensation for fear of this loss to the

entrepreneur—need not cover the whole of the difference between “consumer’s cost” and “entrepreneur’s cost” which constitutes profit. According to Hawtry,²⁶ it is an error “to regard profit as to a great extent compensation for risk.”

Secondly, even if profit be taken to arise only from the limitation of competition between producers, risk is *not* the only factor that limits competition. Risk again does not limit competition always or under all circumstances.

Thirdly, the hypothesis of subjective cost, *viz.*, that no one is willing to incur risks without a compensating reward, is true only in a broad sense. All it means is that without a *hope* of profit no resources would flow into the industry. But it does not necessarily follow that the industry as a whole will earn profits. “It is only necessary,” as Hardy²⁷ points out, “that there be a sufficient number of successful enterprises to keep the hope of profit alive.” It is the *expectation* and not the *certainty* of a reward, that serves as the motive force of enterprise.

Fourthly, the expectation of an additional reward for risk is natural enough, when there exists an alternative opportunity for risk-less employment. But when there is none, the entrepreneurs must produce to keep them employed and earn something to keep off starvation and they must accept

²⁶ Hawtry : The Economic Problem, p. 371.

²⁷ Hardy : Risk and Risk-bearing, p. 38.

whatever they can for their resources rather than obtain nothing. This is particularly true of the Indian peasantry, whose land and labour must be utilised to fetch whatever they can get as an alternative to unemployment and starvation. So it is not true, as a general statement for all climes or times, that risk must earn an additional reward. All depends on whether it can act as a sufficient deterrent to competition to exact that reward.

Fifthly, the elimination of profit (pure) by competition appears to be a vague and misleading assumption.

DOES COMPETITION ELIMINATE PROFIT ?

Prof. Knight claims to show in his book that profit, pure profit, arises because of the limitation of competition. And as the cause of this limitation is uncertainty, uncertainty must be regarded as the *raison d'être* of profit.

But how can competition eliminate profit, when competition between producers rather increases uncertainty and actually brings about continual transfer and re-transfer of custom from one business establishment to another? Suppose that the total volumes of the consumer's expenditure between the present and future goods maintain an ideal equilibrium in terms of Keynes' equation, viz., $I = S$: we shall still have profits arising in one firm secured at the expense of another in the same

industry, profits in one industry, say, talkies, robbed of another, say, cinemas,—all due to the transfer of custom from one section to another.

Profit depends on two factors: (a) difference between price and cost, and (b) volume of sale. Competition, it is assumed, reduces price to the cost of production, and hence eliminates profit.

Competition, in common understanding, means the existence of an alternative buyer or seller. Competition among rival producers, in this sense, reduces price no doubt to a common level, and that common level may be that of the cost of a marginal producer; but must it equalise the individual costs of production of all competing producers? Not necessarily, unless we assume, first, that every producer's skill, tact, knowledge, foresight, ingenuity and organising capacity are equal over all the spheres of his activities—an improbable assumption. Secondly, that all the factors have equal mobility. Thirdly, that every factor has the same productivity over all its uses, that is to say, it is qualitatively homogeneous irrespective of the uses to which it is put: a painter, according to this assumption, has to be equally efficient as a potter, and a vineyard equally fertile as a wheat field. Fourthly, production is subject to the law of increasing or constant costs: if cost decreases with an increasing output, different individual outputs will have different cost.

Profit (pure profit) arises however from the difference between the individual cost of a producer and the common price of the market. Individual costs of production need not be equal, unless the individual outputs are forced to surpass the limit of their respective optimum. Individual costs, in other words, cannot be expected to be equal in decreasing-cost industries, and it is here that profit plays a more prominent part. Pure profit appears as the result of the unequal mobility of the factors, or of the unequal disutility or opportunity that confront their owners to move them. If competition presumes perfect mobility, obviously profit is wiped off as soon as it appears. But perfect mobility of the factors of production is a long-period concept, and pure profit *ex hypothesi* is a short-period phenomenon. Competitive conditions which affect pure profit must, therefore, be interpreted as the presence of rival producers and purchasers. Competition for custom in this sense rather accentuates uncertainty of the volume of sale of each producer, and this produces pure profit.

The entrepreneur's income is a function of four variables : (i) price of the commodity, (ii) its amount, (iii) prices of the hired factors and raw materials, and (iv) their amount utilised for production. Competition equalises *prices* for all the producers, but it does not equalise the *amounts* of the various factors utilised nor the volume of sale.

The amounts utilised often depend on the method of production pursued, and the method adopted on the volume of sale as well as technical competence and financial capacity of an individual producer. Even when the process of production followed is the same, the cost per unit of the product often depends on the total output, and output on market. So we find that even costs depend to a certain extent on the volume of sale. And as the volume of sale fluctuates with the intensity of competition for custom, competition affects profit.

The entire cost that a producer incurs for production and marketing has to be realised by the volume of the sale of his product. There is no other alternative method open to him. Cost or surplus, standard profit or excess, is realisable by one and the same process. The volume of sale may however yield more or less than what the pure-profit theorists adopt as the standard of cost. The two are not likely to balance exactly, except by an occasional accident. Profit or loss is thus the usual outcome. Competition for custom, therefore, in the short period cannot but intensify fluctuations in the volume of sale, and thus increase the possibility of greater profits or losses. Competition under present conditions almost always takes the form of snatching each other's market, and the success of some must mean disappointment for others.

CHAPTER VII

THE RELATION OF REAL COST TO SUPPLY-PRICE

It has been pointed out in Chapter III that a satisfactory theory of profit involves the solution of the five elemental questions, which underlie the controversies of the Dynamic and Risk theorists.¹ Three of these questions have already been attempted, *viz.*, the relation between (a) marginal productivity and profit (Chap. V), (b) uncertainty and production, and (c) competition and profit (Chap. VI). Two more still await discussion, *viz.*, (i) the relation between the risk theory of surplus profit to Böhm-Bawerk's surplus-value theory of interest, and (ii) the relation of the economic cost or necessary supply-price to the real cost or pain-cost sacrifice in the shape of various kinds of physical and psychic disutility experienced by the producing agents.

We shall first examine the relation of Böhm-Bawerk's interest theory to the risk theory of pure profit.

To begin with, they are both surpluses. Profit, according to Böhm-Bawerk, is a surplus due to the chance of a happy conjuncture that allows a higher price to be obtained than the normal. Interest is a surplus value due to the higher valuation of

¹ See p. 77.

the present goods over the future. But there is a difference between these two surpluses. Profit is a temporary surplus which competition wipes out, but interest is a permanent surplus which competition cannot destroy.

Three causes are given for 'the empirical fact of undoubted universality' that present goods are valued more highly than future goods of like kind and amount: the first is the greater urgency of present wants. The second is 'the general underestimate of the future, common to humanity, and traceable to want of imagination, defect of will, or feeling of life's uncertainty.' The third is the 'technical superiority' of the lengthy processes of production.² Summarised in the language of Haney,³ the argument runs as follows: "In a round-about process of production instrumental or capital goods are used, which on account of the remoteness of their availability for consumption, have a relatively low present value. As such production goes on the capital goods are transformed or 'ripen' into consumers' goods of a higher present value. As a result of the time element, therefore, there is a growth of values in excess of labour costs, from which excess interest flows as a permanent net income."

² Böhm-Bawerk: *The Positive Theory of Capital* (1891), p. x.

³ Haney: *History of Economic Thought* (1927), pp. 555-56.

To criticise the 'empirical fact' of the higher value of the present goods over the future as a universal or perpetual truth or to examine the validity of the underlying causes, which appear to an oriental mind as more naïve or empirical than the theories Böhm-Bawerk so criticized and discarded, would take us far out of the field of our immediate discussion.

The differences in the concept of surplus and uncertainty between risk-theorists' pure profit and Böhm-Bawerk's theory of interest may be stated briefly in the form of the following propositions :

(1) Profit is a surplus due to the differences in *objective* values or prices. Interest is a surplus due to the differences in *subjective* values or mental significance.

(2) Profit thus arises from an external pricing process, while interest arises from an internal valuation process.

(3) Uncertainty, according to the risk theory, is the only cause of profit. Uncertainty, according to Böhm-Bawerk, is only one of the many causes for the under-estimation of future needs that give rise to interest.

(4) Uncertainty responsible for profit, refers to unstable conditions that prevail in industry. But uncertainty underlying the causes of interest, refers to the unstable duration of life, which makes one doubt the wisdom of any scrupulous care for future provision in preference to the present.

(5) The surplus and uncertainty are thus both *objective* in the case of profit, and *subjective* in the case of interest.

Uncertainty, as we see from the above, is never a prominent factor in Böhm-Bawerk's interest theory. It is treated as a trivial sub-cause contributing to the main cause, under-estimation of the future. Though this under-estimation is subjective and valuation is based upon time, it is not regarded as a pain-cost at all. Senior's abstinence was a cost based upon the time element, but Böhm-Bawerk denies its existence as an independent sacrifice.

It will thus be seen that pure profit and Böhm-Bawerk's interest have nothing common between them, though they are both *surpluses* and are connected with *uncertainty*.

The other question that calls for elucidation is the relation of supply-price to real cost or pain-cost sacrifices of producers. One of the reasons, it will be remembered⁴ for which the Dynamic theorists refuted the claim of Hawley to regard profit as the reward for risk-taking was that profit did not increase in proportion to risk. This is contrary to the principle of pain-cost, by which an agent should be paid according to its marginal

⁴ See Chap. III, pp. 63 and 66.

disutility. If risk is really an independent cost, its remuneration should correspond to its degree. Hawley protested that no reward ever corresponded to the proportion of "sacrifice in the sense of pain-cost."⁵ But in vain. It behoves us, therefore, to examine the basis of the economic cost or necessary supply-price a little more closely.

The relation of real cost to supply-price may be best considered under two heads :

(1) Does an agent of production claim remuneration, because the service causes pain, uneasiness, discomforts.

(2) If not, what is the true relation between the remuneration it claims and the disutility it experiences ?

THE BASIS OF SUPPLY-PRICE.

Let us examine the problem from the viewpoint of personal incomes.

We must not confuse between what an agent may get and what an agent needs must get, that is, the possibility and necessity of receiving remuneration for an economic agent. The problem of cost or supply-price is to be confined to the necessity of obtaining payment, and not to actual payment or its possible upper limit. We should also dissociate from our mind for the time being the question, how much one claims ? Our immediate problem is: why one

⁵ *Ibid*, p. 67.

claims a payment ? Is it because labour is painful, monotonous, tiresome or loathsome, that a labourer needs must demand a payment ?

If all kinds of labour were as agreeable to the workers as their intellectual labour is to the men of science, would it solve the necessity for payment ? Imagine, for instance, that all kinds of work become even more pleasing hedonically to the common labourers to whom the higher pleasure of intellectual work is unthinkable : suppose they find their work as exciting as horse-racing, as thrilling as motoring on the Swiss Alps, or as attractive as kinos or talkies, would they or can they work for nothing ? Would it obviate the necessity for taking remuneration for their labour ? If not, how can we associate the necessity for our remuneration with real cost or painfulness of exertion involved in our work ? We all expect and claim and need remuneration, not because work is tiring or causes fatigue, but because we cannot otherwise live our physical, intellectual, aesthetic or spiritual life.

Whence arises the need for economy in human society ? Is it not the limitation of the resources of man, be it his labour or time, or be it the gifts of natural environment from which he has to eke out his existence ? Economists teach us that scarcity is the source of economic value. Its immediate corollary is that, had all labour been not only pleasant but also equally pleasant, it

would have been necessary to economise time, as we now economise labour, and the problem of valuation and distribution would remain essentially of the same character. Why do economists, therefore, go out of their basic economic principle and seek to justify economic incomes on the ground of real cost or painful disutility? The true principle of cost or supply price, therefore, seems to lie in the fact that living a life depends on wealth, and both production and enjoyment of wealth along with the need for rest competitively demand our daily time, which is limited. Labour is economically valuable to each of us, because it involves expense of time which is limited, irrespective of the consideration whether it is pleasant or painful. Cost, which means the necessary sacrifice for an economic acquisition, thus signifies for an individual labourer the time he spends in order to acquire his income. The supply-price means the minimum remuneration which would enable him not only to live for the period of time actually spent over the service, but also to leave a surplus for saving—to insure against contingencies, such as accidents, illness, unemployment and old age.

The necessity for remuneration or supply-price, therefore, arises because we have to live. Land and capital cost the entrepreneur, because these are properties expressly acquired by their owners for the purpose of exacting an income or a living

from other people. The entrepreneur's cost arises from the necessities of life required by the other agents. Property is created for the opportunity of getting one's living or an income without labour.

The opportunity and possibility of getting one's living or income from property depends on the physical possibility of procuring more subsistence from land and capital than that required by men who actually work with them. This possibility is not due to the bounty of Nature, as was imagined by the Physiocrats, or to the lengthy processes of production as such, as was imagined by Böhm-Bawerk. It is due to the superior knowledge of organising production, skill of workmanship, ingenuity of devising means for saving labour, and the art of applying them to the actual processes of production.

The modern processes look lengthy because of the greater subdivision and the longer chain of the technical stages of production, that most often characterise an improved method in the productive organisation. The length refers to distance between the points at which the operation of the new enterprise begins and ends. The length is mentally associated with the added number of sub-processes that split up the newer organisation. It refers to the more elaborate organisation of a productive equipment and not to the time it takes to operate and function. A sewing machine is a more elaborate preparatory equipment for sewing than

the seamstress's needle, but it does not take more time to sew. Does the loom of a modern factory take more time to weave a yard of cloth than one plied with a weaver's fingers? The first loom, of course, is a much more complex tool. "Is not the supply of water by pipes a more lengthy process?"—was the interrogation with which Prof. Lionel Robbins of London had the goodness to criticise the writer's view in this connection. Certainly not, as far as the time or efforts or pain-costs necessary to obtain or offer the actual supply is concerned. But the preparatory equipment for water-supply is evidently more elaborate.

Now the 'process' here clearly does not mean with the learned Professor the economic process or the manner of distribution of social efforts, and 'production' does not refer to the application of social efforts towards the satisfaction of a want. The length of the productive process in this social sense would be properly measured by the time taken and the number of people engaged in an industry.

But by 'process,' Prof Robbins obviously means here the technical process, and 'production' refers to the descriptive history of the technical origin of a commodity, resolved into the origins of other goods that immediately co-operate in its production. Any technical process that exploits the possibility of a further division of labour or of an increased specialisation of machinery,

must necessarily be lengthy in this sense. But if we go on tracing in this way the origin of the co-operating goods at each and every stage of technical production, can we ever get to the starting point of the entire process? Is not the process in this sense an essentially continuous cycle? Prof. Cassel, let us remember, has conclusively demonstrated the hollowness of the conception of this kind of time-production in his *Theory of Social Economy*.

Had the actual economic process underlying these technical processes been really lengthy, it would have required longer time of the same number of workers, manual or intellectual; they require instead shorter time only of a much smaller number of men. The preparatory equipment covers however a longer range of technical stages and sub-processes. That is why they look lengthy, and the increased sub-divisions incidental to the larger scale of operations and the agency of machine in place of man strike us as roundabout. The total amount of labour, or better say, the total number of men who are required to spend their lives upon the work, is less for this so-called lengthy or roundabout production than the pre-modern process. The objective social cost is therefore less, because the number of people who have to be fed and nurtured for producing a given amount of wealth together with its new equipment becomes less. The so-called productivity of capital

owes its origin here : a less number of labourers is required for the same amount of wealth and it is possible because of the economising devices of the inventors and entrepreneurs. That is probably one of the reasons why Prof. Schumpeter has made progress the cause of the productivity of capital and of the possibility of paying interest. In the static state of Prof. Schumpeter there is no such process of economising labour, there is no scope for employing new capital, nor any possibility of deriving an income from it, interest or profit. Prof. Robbins⁶ seems to criticise Prof. Schumpeter on this theory of interest on quite a mistaken impression. First, the static state of Prof. Schumpeter is not the same as J. B. Clark's. Secondly, Schumpeter's interest is a concrete physical product of society (although non-imputable), and not a mere individual acquisition. This is different from that kind of interest which we pay as a hire-price for consumption-loans. There the question of physical productivity does not arise. The same amount of physical product changes hands to the mutual benefit of exchangers—lenders and borrowers,—in the shape of the greater psychic product of utility and satisfaction : the price paid is a deduction of concrete wealth from one to the other. The interest here is, not an addition to the physical goods of society : it is, of course, an addition to the amount of psychic satisfaction, on which all acts of exchange are presumably based.

⁶ *Economic Journal*, Jan., 1930, pp. 211-13.

The necessity of receiving rent and interest as the supply-price for land and capital, thus arises from the necessities of life and living of the landlords and capitalists. The ultimate basis of cost incurred by the entrepreneurs who want land and capital as essential technical aids to production lies here in the cost of their owners' living. The possibility of paying this rent and interest arises from the superior productive capacity of society, which enables it to satisfy its entire physical needs with only a fraction of the labour of its people. Without this possibility no one would have cared to appropriate durable sources of wealth and there would be no property.

It readily follows from the above that the existence of *property* or durable goods as a store of future incomes is bound up with the possibility of a *surplus* above the cost of living of the actual producers. The share of the property-holders in the distribution of national income is limited to this surplus. If they are greedy, the whole of this surplus would go to them, and this would condemn the actual workers to a stationary standard of life. If they are sensible and prudent, they will allow a part of this surplus to raise the workers' standard of life. And there is a danger in the too-much greed of the property-holders. It may sometimes dislocate the whole economic system to their utter bewilderment, as will be pointed out elsewhere. Here we would only draw the attention of the

reader to the fact that with every improvement or economy of labour in the productive process, the possibility of increasing the share of property in relation to labour is enhanced, for it increases the surplus. Again, if this improved process is due to the creation of durable goods like machinery and plant, it creates the opportunity of finding newer forms of property. That is how capital has come to dominate the present economic situation and has pushed land into insignificance as a form of property.

Some other newer kinds of property such as good-will, patents and copy-rights are not the outcome of physical-production surpluses: they are the result of financially productive surplus, individually gainful and "acquisitive" in the Veblenian sense, but socially unproductive in the sense that they create no new physical output or sources of satisfaction. These are not taken into account in the above analysis.

The property-creation, which we always associate with saving, is thus dependent on the art of production and surplus-making.

All people who cannot or would not earn their living for some reason or other (not necessarily idle or ignoble) with a marketable labour, acquire property in land or capital to earn an income with it.

So long we have discussed the question, *why* one claims a payment? Let us now consider, *how much* one claims? The question is apparently

psychological and is likely to vary in individual cases. But individuals often follow a group standard in behaviour. This is why it is possible sometimes to make a more general statement.

We assume generally in the case of labourers that the income one needs and claims is determined by the standard of living prevailing in the particular group to which one belongs. Would this be a justifiable assumption as well in the case of property-holders, landlords and capitalists?

The income, one may argue, is the motive of property and a given standard⁷ of living (including an enjoyment of leisure) may thus be the basis even with landlords and capitalists, on which they would fix the supply-price of their property.

This, of course, would not be wholly true. Many save and acquire property not for need, nor even for greed, but simply for the sheer love of acquisition, as Prof. Knight⁸ shows in his book; as a proof of one's business ability, or for power and social esteem which the amassing of wealth brings in its train, as Prof. Taussig points out in his *Principles*. Lands and capital are mostly supplied to-day by those whose motive of accumulation has no relation to needs.

⁷ The word "living" is used in this chapter in the larger sense of "enjoyments of life," and not in the sense of "bare means of existence."

⁸ Knight: *Risk, Uncertainty and Profit*, pp. 330-33.

The standard of life and living exercises a significant influence however in the poorer communities or even among the poorer classes of rich societies. The presence of its influence can be indirectly inferred in this way. The price that an individual owner would demand depends on the amount of any particular economic resource he commands and the aggregate income he aims at—an income, let us suppose, limited by his customary standard of living.

Thus in a community of petty landlords, if the amount of land each owns is comparatively small, the rent is likely to be higher. Or in a community of petty money-lenders where the individual resources or loan-funds are small, the rate of interest is likely to be higher. This is the case in Bengal. Agricultural tenants are rack-rented more under the owners of smaller estates than of the bigger. The rate of interest in many places is 24% or 36% nominally, but actually still higher. The chief reason is not really the risk of loan, though it forms a substantial element in many cases, but the paucity of the resources each individual lender owns, and on which he relies for his living. A widow, for instance, depends on the meagre resources left by her husband. Even a rural bourgeois-lender often possesses small funds: the false pride of superior birth or caste, coupled with the traditional notion of respectability enforced upon him by society, would not allow him to take to manual labour, and his rural

environment does not give him an alternative opportunity to earn his living or supplement his income in other ways suitable or acceptable to him. These petty money-lenders cannot but be exacting under the circumstances.

This is a fact which is lost sight of in richer countries with big landlords and corporate money-lenders.

Income is not only dependent upon the price and the amount of the resources one owns, but upon the prospect and chance of its employment throughout the year, *i.e.*, its volume of employment. Let us illustrate it again from the actual conditions of Bengal. The European reader will no doubt realise the truth of this assertion because the case of unemployment of labour will immediately come to his mind. But the truth seems to cover a wider area. Agricultural loans in Bengal rice-districts spread over an approximate period of six to eight months. The usual interest that is charged in the greatest rice-producing district in India for these eight months, is a quarter of the sum lent. It thus comes to $37\frac{1}{2}\%$ per annum to the borrower, the poor peasant. But to the lender, it is no more than 25%. And when we consider the risk of loss through bankruptcy or fraud and the cost of litigation, and when we take into account the meagreness of his resources, the typical lender will not be found to earn during the year more than a bare subsistence on the whole.

So in the case of small landlords and capitalists, we find that their standard of living has an effective tendency to influence the rate of rent and interest.

It is generally agreed that wages of labour are higher in unstable trades subject to greater fluctuations. But the true significance of this admission is dismissed as a subsidiary corollary to the main proposition that wages are really paid for disutility of labour. If it is also agreed, as is usually done, that wages tend to conform to the standard of living, how can we evade the conclusion that, irrespective of the fact as to whether labour is painful, tiresome and monotonous, or it is pleasant, refreshing and exciting, wages must increase or decrease with the normal period of actual employment? Let us put the question in the form of an identity or equation.

Annual income = (rate of wages, say, per hour) $\times$ (hours of work) $\times$ (days of employment).

Let us assume that the annual income is governed by the standard of living of a labourer. The number of hours of work is also to be taken as fixed, either by the physical limit of one's capacity for exertion or social opinion, or factory acts, or trade-union regulations. The other two elements must therefore so move in relation to each other, that the product remains the same. This hypothesis can, therefore, explain why the wages of a typical labourer must vary with

the period of his probable employment in the trade. If, again, a spontaneous desire on the part of labourers in general for shorter working hours is realised in practice, it must also result in an increased rate of wages in accordance with this assumption. The facts of the variation of wages with the period of employment and with the number of working hours, therefore, show that the factor which dominates the determination of wages from the supply side is the aggregate needs of a labourer's life, *i.e.*, his standard of living.

The expected standard of living which determines the norm or the standard of individual income in any profession or trade, is the outcome of our life and living being the continuation of a series—a datum not obtained from vacuum or nothing, but inherited from and fostered by our parents. We owe our life to our parents, and we owe our living to them. Before we can work, we have a long life of painful learning and living. The minimum limit that we set to our expectation of an income is thus determined by the standard of life we get accustomed to. The opportunity for earning an income is given to us by the quality of education we can have and our capacity to profit by it.

Though our native capacity plays a part, ordinarily our quality and capacity to earn rests broadly on the quality of our parents' head and heart (head for choosing a profession and heart for

educating us at the sacrifice of their own ambitions and comforts) and the quantity of their income. Their income itself was similarly determined by their parents' capacity, both intellectual and financial. This is the key to the influence that the standard of life exercises in formulating our expectation of income and in developing our capacity for it. This is because of the fact that the children, who are nothing but labour in the process of formation or making, are not yet things (necessary or for luxury, though the Europeans are showing a progressive tendency to regard them as objects of luxury) in the eyes of their parents. They are not yet bred and nurtured on the principles of "business economy." Economic civilisation has not yet permeated the family life of man to that extent. Family is still the dominant economic unit for consumption of wealth and for the production and supply of new sources of labour. There is a tendency, no doubt, for the break-up of family life and home as economic units for consumption, as we see in the growth of residential hotels in America and Europe, peopled by middle-class couples afraid of children or by bachelors and spinsters, widowers and widows. The economy of large-scale consumption in boarding and lodging is, of course, responsible for this growth of hotel life. Hotels are merely factories for manufacturing cheaper standardised food and shelter. But there is no tendency visible as

yet to maintaining the supply of social labour except through families. So long as family life exists and parents continue to supply the labourers for society, and so long as parents rear their children for affection and not for business motives or profit, the standard of life will effectively influence for the poorer folk their quality of workmanship, their capacity for earning and their expectation of income, in a mutual relation to each other.

Now, labour is a kind of resource which is limited by its nature for each individual owner. So if a labourer wants to increase his income, he can only do so by increasing its market price. This becomes possible by shaping his labour to a form for which the market demand is higher. But the market demand will not continue to be high, if the supply is open to increase without limit. This is why the supply is indirectly restricted in some professions, as in medicine, law, engineering, accounting, etc., by the cost of a highly expensive education (which bars admission somewhat artificially).

In the case of an individual landlord or capitalist, this method of increasing his income is not open. Qualities and quantities of land are limited by Nature. Any kind of capital is reproducible without limit. Of course, landlords or capitalists can all combine together and raise the price by monopoly, as is done in a Trust or Cartel. Land is already a natural monopoly and its

owners sometimes have the lion's share. The forms of productive capital, on the other hand, are independent of the control of the lending capitalists; the variety and use of capital goods lies wholly at the discretion of the entrepreneur. So it is not possible to raise the hire price of capital by the limitation of its uses or forms. Nor is this necessary. A landlord can raise his income by possessing more lands. A capitalist can raise his income by increasing his stock of capital. Both of them have this advantage over the labourer. The concentration of land or capital in individual hands is thus an effective method of increasing their income. With the concentration of lands or capital resources in a few hands, the standard of living ceases to exercise any effective influence over the supply-price; obviously because the income at this stage surpasses any current standard with regard to the rich. With the poor capitalists, however, it has an influence; for they will try to regulate the amount of their accumulation or the rate of interest with a view to maintain their accustomed standard of living. In the case of the peasants of Eastern Germany, where the law of inheritance, like the Hindu law, allows an equal share to each son, the standard of living is operating, as the writer has been told by some of the professors of the Agriculture School in Berlin, in the limitation of the number of sons to one, to prevent the average holding of each family from getting smaller.

The effect of concentration of land or capital is, therefore, to suspend the influence of the standard of living over the rate of price that any individual feels inclined or compelled to charge. The only influence that is exerted under the circumstances over the rate of supply price is the disutility of employing land or capital to any use, and not of saving or of inducement to property-creation.

For the purpose of finding out the true significance of real cost or pain-cost sacrifice upon supply-price, let us now enquire into the sources of the disutility of saving and into the influences which stimulate the people to save.

THE SOURCE OF REAL COST IN SAVING.

The institution of property seems to generate in the minds of the property-holders a feeling of psychic cost of sacrifice when he not only parts with, but even when he lends the use of, his property.

Capital, in its primitive stage and in its original form, is a raw material, a free gift of Nature. Man applies his labour to modify it to his requirement or to secure it for his convenient use; with the sacrifice of his labour he acquires this commodity and from a labourer he becomes a proprietor. As soon as the notion of ownership grows upon his mind, he attributes a share of productivity to any subsequent good which even his

own labour procures with the help of that piece of property. And if the labour that procures it is not his own but another's, his consciousness of the productivity of property becomes keener still and he thinks that his property has a real share in any good procured with its aid. "Could you get it without my property?"—he asks in his own mind, and this explains his justification for claiming a share. This means that property appears to his mind as a substitute for his labour to the extent that it economises efforts or earns an income for him like his labour. That is to say, he begins to look upon property as a store of his own labour, as the embodiment of his own sacrifice.

Now the idea that the property acquired is only a form of his sacrifice, or a substitute for labour, and a source of his future income, is certainly the outcome of the institution of property itself. The expectation of income from saving is itself the basis of real cost.

We have already shown that the notion of real cost or sacrifice behind the supply-price of labour does not arise mainly from the painfulness of exertion or effort, but from the expectation of a living from labour. Similarly the feeling of a kind of sacrifice associated with the necessary remuneration for saving, arises not really from the disutilities of efforts with which we make our saving, but from the expectation itself with which we save. Both are subjective feelings, no doubt, but one is based upon

the disagreeable sensations of exertion and the other upon mere expectation. This expectation, if defeated, would undoubtedly cause us sorrow; but this is not because our original efforts were painful: we should be sorry at disappointment even if our exertion were more pleasurable than painful.

Now, when a philosophic reflection on the accumulation of capital goods leads a mathematical economist to describe them as a kind of summation of a progressive series of subsistence wages, evidently he forgets or neglects this subjective feeling of expectation associated with people's savings. One saves with an expectation, the expectation of securing (besides provision for contingencies) a new income or property, or of alleviating his future toil to procure goods. This expectation generates in him a feeling of sacrifice, a notion of psychic cost.

We must remember that in the original acquisition of capital goods, labour did not get all its wages; labour—the collective labour-power of society—produced the store of capital goods plus subsistence, and it got only subsistence. This store may be looked upon not only as a store of past sacrifice or labour, but also as a store of future satisfaction.

Any piece of wealth may be looked upon either as the result of sacrifice or as a source of satisfaction, present or future. Now, wealth that is

stored for future consumption may, therefore, be looked upon also as a store of sacrifice reserved for future conversion into satisfaction. And as means of direct satisfaction like food cannot be stored as a matter of fact for an indefinite period and made available for consumption in old age, storage is necessarily made in the form of some durable instrumental commodity convertible into direct means of satisfaction in future. And sacrifice, economically speaking, is only a means of acquisition, and hence any piece of wealth, that is not meant for direct consumption, is only a means of acquisition representing an amount of sacrifice stored for future conversion into satisfaction.

Senior and Marshall described saving from the view-point of consumption as utility, satisfaction abstained from at present and waited for till future. Marx described it from the view-point of productive effort, disutility, sacrifice stored for future conversion into satisfaction.

Marx's error lies not in the description of saving as *a store of sacrifice* or of labour (for it is not different essentially from Senior's or Marshall's views), but in inferring therefrom that the labourer, and not labour, is alone entitled to the return of saving or capital. The capitalist, from the economic view-point, is also a labourer who wants to live by the accumulation of his past labour and abstains from present labour—an end for the realisation of

which he has waited so long and which constituted the motive of his saving.

If the capitalist does not acquire that property by labour or sacrifice, that is the non-economic way of acquisition allowed by society, the ethics of which lies outside the boundaries of economics, although it may have important effects upon the application of economic efforts or the distribution of their fruits.

We should look upon saving as the acquisition of property in general for purposes other than immediate consumption, and not as the source of capital alone in the narrow sense of the economist; for the economist's capital includes only man-made wealth to the exclusion of natural resources or "land." For saving, from the individual point of view, may be embodied not only in the shape of durable goods and machinery, but in land and other natural resources as well; and not only in "land" but also in such financial assets as are based upon good-will, patents or copy-rights. The object of saving is financial and not industrial; it is to get an income and not to produce any additional tangible wealth for society.

We can thus clearly see that there is no justification for saying that capital, in the narrow sense of man-made goods only, has a real cost of waiting or abstinence, but the land has none. The cost of saving extends over the whole range of property, all kinds of income-yielding capital, in

the wider financial sense of the term. The view that land is a natural supply and hence its use involves no cost or sacrifice for its owner, is superficial, and confounds between the two different view-points, social and individual, industrial and financial, 'productive' and 'acquisitive.' The individual-financial-'acquisitive' view-point looks upon land, as it looks upon other kinds of income-bearing investment, only as a property. Once upon a time land might have been a free good throughout the world, but all the present occupants of land have acquired it in the same way and by the same kind of sacrifice, by which they could and still can acquire other kinds of property. If you say that capital cost them 'waiting' for saving and this entitles them to interest, how can you deny the claim of a landlord to rent, whose land cost him the same 'waiting' for saving as that of the capitalist? The rent is as much a compensation for cost to the landlord as interest is to the capitalist. Both are true costs from the individual view-point, for both land and capital are acquired by the same kind of sacrifice. From the social point of view however, there is no cost but human labour. So long as the system of property is allowed in society, all those who need or aspire after a life of rest or leisure, in the sense of optional labour, will have recourse to the system of property. There can be no rational basis

for discrimination between the two kinds. If you abolish property in land, they will resort to capital goods and to that kind of artificial intangible capital like good-will, mostly the product of such anti-social activities as Prof. Carver classes together with theft, robbery, deception, intimidation or plunder. If you abolish property altogether, human ingenuity will discover other ways for meeting this necessity for leisure in the sense of freedom from compulsory servitude to any specific types of labour.

Every man must provide for accidents, old age, sickness, recreation or rest, and this not only for himself but also for other members of his family. The necessity is there and it cannot be evaded by such short cuts as the abolition of property in land or capital goods. Either the state must provide for all these needs or society must devise other ways of meeting these necessities.

So long as the necessity for individual saving continues, and so long as society recognises property as one of its legitimate means, the remuneration for property is a matter of course; the objective measure of cost being the alternative use of labour to earn an immediate income in place of provision for future needs.

Our dissatisfaction need not be concentrated so much on property as on the system of inheritance which allows the benefit of the legitimate means

of leisure honestly acquired by one man's labour to be perpetuated and idly enjoyed by another man without service to society, whose idle life throws a burden upon the labouring section of the community. But if we urge for the abolition of inheritance on this score, the advocates of the inheritance system may argue, and with reason, that the uncontrolled growth of labour population leads to a similar burden upon society. The proper course seems to lie in a control both over the use of private property and parenthood, regulated from time to time in the larger interest of the community. The advocates of individual freedom will present us undoubtedly with hundreds of political and philosophical arguments on the evils of state control and on obstacles of self-realisation, and even humanists may preach sermons, as Poet Tagore did in Russia before some Soviet Unions, on the mystic spiritual hankering of human soul for something to own as its own. But our observations are from the view-point of economics as the science of social welfare realisable through external goods.

The necessity for remunerating property, we may conclude, is the same as the necessity for creating property, and the basis of real cost of saving lies in the expectation of an income from property.

What is then the relation of disutility, in the sense of real cost or pain-cost sacrifice, to the

remuneration needed for the supply of a factor, that is, its supply-price ?

THE RELATION OF REAL COST TO SUPPLY-PRICE.

Let us first consider the case of labour. Is it true as a general principle that the supply-price of labour varies strictly with its disutility, such as fatigue, monotony, injury to health or longevity, loathsomeness, or other kinds of pain-cost ? Evidently disutility does not restrict the supply of labour in an industry absolutely. "Sweated" industries, the least paid and most painful, are sweated only because there is an overflow of labourers. The overflow or superabundance is due obviously not to the attractive remuneration the industries offer, nor to the pleasantness of labour, but to the want of opportunities for employing themselves better. Of course, it is the opportunity that limits the scope of effective employment of a factor of a given quality. But the supply-price of labour even here appears to be determined *absolutely* by the standard of living of these sweated toilers. The influence that disutility exerts is that it affects the relative supply-price of labour over different occupations. Disutility acts psychologically upon the labourers of the same standard of life and living, and makes them seek for services least disagreeable. In order that all the branches of production can get the service of

these labourers to their fullest requirement, it is necessary to attract or maintain the requisite supply in each branch by an extra inducement to overcome this differential disutility. For the same grade of labour or skill the remuneration varies with the disutility incidental to an employment to a certain extent only, but not in any definite proportion to the degree of its varying disutility.

Disutility can thus explain the relative difference in the remuneration demanded by a homogeneous factor in its different uses. But it cannot explain the absolute necessity for or the minimum level of its remuneration. Different pain-costs explain the difference in the income of labour of the same grade with an equal opportunity. Similarly risk or uncertainty will explain difference in profit and interest of capital in different industries. Disutility in the case of labour is risk as well as pain-cost, while disutility in the case of capital (or property) consists mainly in risk or uncertainty, with slight traces sometimes of pain-cost like social odium that prevails, for instance, against wine-selling in our country, and money-lending amongst the Mohammedan communities.

The extra disutility is balanced against an additional reward. Disutility is, in other words, a separate and a subsidiary influence in the determination of supply-price, the main factor being the necessity for an income to live on an accustomed

standard of life. That the reward necessary to attract capital to risky enterprises need not be proportionate to risks, has been conclusively shown by the evidence of experts before Colwyn Committee.

Unequal disutility, through its effect upon relative supply-prices, affects the relative distribution of a given factor into different kinds of employment, just as unequal productivity does through its effect upon the demand price. The different uses, notwithstanding its different supply-prices, preserve a kind of equilibrium. The nature of equilibrium is similar to what Turgot illustrates in the case of the unequally productive uses of capital: "The different employments of capital, therefore, produce very unequal products: but this inequality does not prevent the exercise of a reciprocal influence one upon the other, or the establishment between them of a sort of equilibrium, as between two liquids of unequal gravity which communicate with one another at the bottom of a reversed syphon of which they occupy the two branches; they will not be on a level, but the height of one cannot increase without the other also rising in the opposite branch."⁹

The standard of living determines absolutely the standard of income expected and disutility modifies it as an additional influence and works for

⁹ Turgot : *Reflections*, sec. 88.

a relative differentiation between different kinds of service; opportunities limit the scope of employment and circumscribe the sphere within which these influences can effectively operate. This is fully true of labour. With regard to property income, the influence of the standard of living, as we have seen, is only partial and indirect and sometimes remains suspended, chiefly because property is often a subsidiary source of income and it is increasable without limit, and there is often a concentration of resources. A customary standard rate of price, to which the people have got accustomed and habituated, is thus substituted as the standard of general expectation, and it is modified in particular cases by attendant risks as a differential influence. Thus customary rent and government loan-price becomes the standard of expected incomes from property as the standard of the labourer's living forms the standard of expected income of labour.

If the above analysis of the true relation between the supply-price of saving and the real cost behind it is substantially correct, we are entitled to draw the following corollary from it: in countries where the concentration of land or capital in the hands of big proprietors is sufficiently large, rent and interest, the prices of their hire, can be reduced by legislative measures without any or, at any rate, much hardship in the real enjoyable life of these classes. Whether the redistribution would

react upon the future growth of capital and thus restrict the growth of national dividend is a topic outside the scope of the enunciation of the proposition as to the real basis of supply-price. But in passing we may point out that the real need of capital goods in a progressive society can be met to a certain extent by levying a compulsory saving by monetary measures, whenever it is found necessary. D. H. Robertson has demonstrated its presence in modern society. But this is only an indirect method of creating capital by stimulating private initiative and enterprise. The requisite capital goods may also be created in the form of public enterprises by the direct initiative of the State. The trouble in the present progressive communities however is not with *under-saving*, but with *over-saving*, as is shown by J. M. Keynes.

CONCLUSION.

The net result of our critical survey of the underlying assumptions of the various pure-profit theories may now be briefly and broadly summarised.

The marginal productivity theory is, in its inner essence, a law of maximum physical productivity, based upon an assumed distribution of social resources according to their marginal effectiveness in contributing to the material product of

society. The point of view is social and industrial; it seeks to maximise social output in terms of the physical products to the best possible utilisation of national resources. It would have been a true theory of distribution of resources in production, had the motive of the entrepreneur's activities been the maximisation of physical productivity in place of financial profits. To a certain extent, the entrepreneur has to follow the physical law of technical production, for one of the factors that determine profits is the cost of production, which depends upon the efficiency of the technical process of production adopted. But he has to modify it in the light of the relative prices of different factors and the output he can dispose of by sale. And in the determination of the hire-price of any factor, the influence of its marginal productivity is only partial, though important. Production under the modern "business economy" is carried on with the prospect of money profits and hence arises the necessity of subordinating physical productivity and output to financial profits.

The risk theory seeks to explain the difference of profits by the difference of risks. Now as risks really mean in many of the pure-profit theories, the range of fluctuations of business incomes, the explanation is tautologous. But when risk is regarded in the sense of a psychic disinclination to put business ability or loan-capital to risky

ventures, the necessary inducement is included in an increased supply-price. It thus loses its significance in the narrow definition of *pure profit*. To proceed further than a mere statement of risks and to seek to explain them, leads to an investigation of the broader and more difficult problem of business fluctuations and cycles. The risk theory has, therefore, failed to explain profit. The failure of the pure-profit theories has been due to their running after the will-o'-the-wisp of a fourth factor of production, distinct from "land," labour, and capital. It was an analytical surplus that they defined as pure-profit. But they soon forgot that it was their own creation and they thus meandered after the mirage of its source.

The statement that competition wipes out profit is misleading. If it means monopoly or quasi-monopoly profit, the proposition is tautologous. If it means competitive profit, it is untrue. Competition snatches each other's custom, and thus affects both receipts and costs, leading to a greater fluctuation of profits. The statement seems to be the result of an over-abstraction of the very process by which a business man can take remuneration for both his ability and property. "It is necessary, then," wrote Turgot,¹⁰ "that besides the interest of his capital, the undertaker should every year draw a profit to recompense him

¹⁰ Turgot: *Reflections*, sec. 87.

for his care, his labour, his talents and his risks, and to furnish him in addition, with that wherewith he may replace the annual wear and tear of his advances,—which he is obliged to convert from the very first into effects which are susceptible of change, and which are moreover exposed to every kind of accident." Each of these items, no doubt, is a cost from the long-period point of view. Any excess over the immediate and actual payments legally binding upon him, is an income to him—profit in common parlance. Each of these items of Turgot is to be met from the excess of his sale proceeds over his business expenditure and legal obligations. It is immaterial what we call any of these items—cost or profit; the entrepreneur has one way only to meet this cost or realise this profit, *viz.*, by the surplus of business receipts over business costs. We may define or refine the term *profit* in any way we like, but we cannot ignore the actual process open to a business man to take his share without confusion and blunder. Both costs and surpluses have to be realised by the volume of his sale. Competition causes fluctuation of this volume, although it stabilises prices.

The long critical survey of the theories of our predecessors seems to point out that the more fruitful way of looking upon profit would be to regard it not as an uncertain income, nor as a residual income, nor as the income of any specially created

factor of production, but to consider it as an income *indirectly acquired* by social resources through the sale of some economic goods, which provide for the needs of society and which require co-operation of all these resources for purposes of production. The true nature of profit is thus to be associated with the *indirect mode of acquisition* of income. The receiver of profit is he who submits his economic resources to earn an indirect income. The service for which he receives it is the provision for social wants. The ultimate means by which he acquires it are the very same resources which earn rent, interest and wages; only the *mode* of earning is different. The immediate medium however is the commodity he supplies and sells. The provision for the needs of society requires the co-operation of all three physical sources of productive services. But some owners, by option or compulsion, choose to co-operate for a stipulated rate, directly determined by the market processes of exchange. Some others, by pleasure or pressure, have to earn their living or leisure by the sale of goods needed by society. This method of earning income, by the conversion of their productive resources into wares for sale, and not by the direct sale of their services, constitutes what we call *business enterprise*.

Society places no economic value on businessmen's services as such, except through the valuation of their wares. The organisation which seeks

to satisfy social needs mainly through the sale of wares made by one in expectation of its being needed by another, is called exchange economy or money economy or business economy.

The peculiarities of this type of economic organisation which characterises our modern society and its relation to the necessary functions of a modern business man will be briefly indicated in the next chapter.

CHAPTER VIII

THE PECULIARITIES OF THE PRESENT ECONOMIC ORGANISATION AND THE MODERN ENTREPRENEUR'S FUNCTIONS

Economic activities, though they spring from the same human needs and pursue the same ideal of economising efforts, have undergone a distinctive change in the modern organisation of production. Neither the institution of property, nor of money, nor of division of labour, nor even of factory labour is a new experience of economic life. It was known even in Roman civilisation. But with the invention of machines and mechanical means of utilising non-human power, the whole scheme of economic organisation has assumed a new character. There seems to be no limit to the possible division of human labour, until it can be substituted by an inanimate machine. The practice of money-exchange had facilitated no doubt the separation of different kinds of labour, but the possibility of such division was always limited by the market of the consumers. Cheap and rapid transportation has extended the market in space. Mechanism of credit transaction has expanded the market in time. Machinery driven by steam and electricity has divided each craft into minute processes, has

made the employment of labourers more inter-dependent; has rendered the process of production of a commodity more complicated. Mechanised process of production with its increased subdivision of processes necessitating exchange, and the monetary system facilitating such exchange, have interacted upon each other and have considerably hastened the progress of modern society. The consequence is that the productive unit has been continually growing in size, the venue of production has shifted from family to factory, and people now work with the direct aim of obtaining money. "The more money came to stand for everything else, the more possible did it become for each person.....to think only how he could obtain as much money as possible by the sale of his fruits or his labour, very sure that by means of this money he can get all the rest."¹ This reflection of Turgot has been substantiated to a degree probably undreamt of by him. It is to emphasise this peculiarity of the present economic organisation that Prof. Mitchell describes it as "Business Economy." Its dominant feature is "that economic activities are now carried on mainly by making and spending money."

"Instead of making the goods their families need, men 'make money' and with their money incomes buy for their own use goods made by

¹ Turgot : Reflections, Sec. 48.

unknown hands. The exceptions to this rule presented by the domestic work of house-wives, by the consumption of their own produce by farmers, and by agricultural leases for shares of the crops, are continuations of an earlier order, in which most families subsisted chiefly upon goods produced by their own efforts and themselves consumed most of what they produced.”²

For an adequate understanding of the entrepreneur's functions and his income, it is necessary to remember that the motive behind his economic activities to-day is money-making first and foremost; and the concrete satisfaction of his real needs is an indirect and comparatively remote factor.

The second feature that requires attention and emphasis, because of its systematic neglect by the orthodox economists, is that the mechanisation of the productive processes has opened up new possibilities of creating property or means of ownership, that is, newer opportunities for converting saving into income-earning investment.

Thirdly, while the family is still the dominant unit of consumption, the productive unit to-day is not the family, but what we now call “business enterprise.”

A business enterprise is defined by Professor Mitchell as “an organisation which seeks to realise pecuniary profits upon an investment of capital

² Mitchell : *Business Cycles* (1927), pp. 63-64.

by a series of transactions concerned with the purchase and sale of goods in terms of money. The goods dealt in may be commodities of any vendible kind from coal to newspaper; they may be services, such as transportation, storage, or technical advice; they may be rights, such as bank credit, securities, or insurance against specific risks. The enterprise may 'produce' or fabricate, or store, or transport, or distribute, or merely hold the title to the goods in which it deals."³

The reader, who has been trained in Marshallian phraseology like the writer himself, will kindly note that Prof. Mitchell in the above passage means by "profits" the income from an enterprise, and "capital" means not "capital goods" or wealth besides "land," but money-values of the entire resources devoted to production. There is no essential contradiction between this definition of Prof. Mitchell's "business enterprise," and Marshall's "business;" the only difference is that one is defined in terms of money-values and the other in terms of goods produced for consumption. For according to Marshall,⁴ "business may be taken to include all provision for the wants of others which is made in the expectation of payment direct or indirect from those who are to be

³ *Ibid.*, p. 86.

⁴ Marshall : *Principles of Economics* (6th edn.), p. 291.

benefited. It is thus contrasted with the provision for our own wants which each of us makes for himself, and with those kindly services which are prompted by family affection and the desire to promote the well-being of others."

Fourthly, the size of the business units is exercising a significant influence upon the organisation and commercial aims of the enterprises. The industries, of which the typical enterprises are small in size, are less dominated by purely commercial aims, less characterised by "business" method and are less dependent upon credit and money-market.

Fifthly, all business enterprises are inter-related industrially, commercially and financially, so very intimately indeed that none can suffer or prosper without involving others with them. There are different industrial series, each of which seeks to supply us with a particular finished product, like bread, cotton shirts, woollen coats, leather shoes, buildings, cycles or motor cars. The raw material of one enterprise of such a series is the finished product of another. One such series, for example, dealing with cotton, would embrace cotton farms, ships, railways, spinning mills, weaving factories, wholesale dealers, retail sellers, and tailoring shops. Again none of these series are self-sufficing. The above series, for instance, from cotton farms to tailoring shops, is dependent upon other industrial series, e.g., buildings, mechanical

equipments, power, furniture, stationery, transport, professional services and sundries.

Now these different enterprises within an industrial series as well as enterprises belonging to different series are connected with one another by commercial bonds of purchase and sale. These commercial bonds which unite the different enterprises and industries lead to an inevitable financial relationship with one another, often of a complex character due to the credit system of exchange. Financial interrelation further arises to-day from the corporate form of business organisation, which enables the same capitalist or group of capitalists or a holding corporation to acquire a controlling interest in apparently independent enterprises.⁵

These are some of the most important features of the present economic organisation, in which entrepreneurs have to earn an income for their resources, personal or material. This income constitutes profits and the mode of earning it is what we have described as business enterprise, that is, provision for divergent needs of society. But provision for these needs or "the wants of others which is made in the expectation of payment direct or indirect from those who are to be benefited" (in Marshall's definition of 'business')

⁵ For a detailed analysis, see Mitchell's *Business Cycles* (1927), pp. 100-5 ; and Veblen's *The Theory of Business Enterprise*, Chaps. 2, 3, 5 and 6.

must be interpreted broadly to include all kinds of needs, present or future, actual or ideal, for consumption or accumulation, for living or for rest or leisure. It is necessary to realise that the entrepreneurs' profits are earned not only by the provision of goods for consumption or satisfaction of wants, but also by the provision of various kinds of producer's goods needed for producing consumption goods, and by the provision for converting people's necessary means of *living* into durable means for purchasing *leisure* or *vice versa*.

Men in a society need means for purchasing leisure as much as they need means for living. By leisure, let us remember, we mean freedom from compulsory labour. We all want not only (i) to procure the means of our satisfaction, material or moral, spiritual or intellectual, but also (ii) to secure the means for purchasing our leisure, voluntary or involuntary, such as accident, disease and unemployment; or education, culture, or any other intellectual, moral or spiritual pursuit which may not bring to us any pecuniary fruit; or mental rest and recreation, or even idleness.

Now the traditional means for procuring this leisure, is property. The older *forms* of property were chiefly land, cattle, and precious metals. Mechanical revolution has placed at the disposal of society newer forms of property in the shape of

plants and machineries of all kinds and newer products obtained with their aid.

We should distinguish however between the two main motives of saving or accumulation of property. From time immemorial, foresight and prudence led men to save a part of their income either (a) to meet contingencies, or (b) to procure further income for greater comforts. And here we have to remember that all kinds of property are not capable of achieving both these objects. Contingencies like accident, sickness or old age or other kinds of compulsory idleness may be tided over by means of a hoard of precious metals, or even some durable utensils or furniture or such movable property as live-stock and cattle. These may be exchanged at the time of need. But these kinds of accumulated wealth are not income-bearing and hence they cannot be reckoned as productive capital.

The first mentioned motive of saving is future provision to insure for a possible need. The effectiveness of saving must be relative to the proportion between the durability of the commodity representing the saving and the length of time for which insurance is to be made. This is why the scope and opportunity for saving depends upon the discovery of durable goods.

Primitive man perhaps saved in food. But food like hunted game or fish does not keep. This 'keep' or durability is however necessary in

saving, if it is to satisfy the future need it is meant to serve. Thus when food improves from perishables to storables, the purpose of saving is better served and the scope and opportunity for saving is much enlarged. This mode of saving was discovered in reared animals. A stormy day or illness thus did not necessarily mean starvation for primitive man, because there was the saving of stored food—in the form of live-stock to satisfy the need that was foreseen and provided for. The saving is effective to the extent of the durability of the commodity saved up. This explains why for purposes of saving perishable goods have always been sought to be replaced by articles of a more durable nature, “whose value would not be destroyed by time.” This explains why early accumulations took the form of money or precious metals. It is to be noted also that the effectiveness of an individual saving which is chiefly wanted for future food and clothing, depends on the possible exchange of the commodities saved with these consumable products. They would be available from those who would desire to make a similar provision at the time by the interchange of their surplus consumables for some durable goods.

But the second object of saving, *viz.*, a further gain of income, cannot be achieved by mere *durability*. A greater income is obtainable only from higher productivity. This means that the form that saving must take should be a kind of

investment that can secure a higher return than the current one. This evidently depends on inventive and progressive factors. In other words, the effectiveness of saving for this second purpose is dependent upon a higher productive capacity.

Orthodox economics teaches us that saving depends upon (a) the motive or will to save, and (b) the capacity to save, that is, the surplus productivity of the present efforts over essential present needs. But it does not point out that saving depends as well upon the opportunity to invest. Where the motive of saving is an income, there can be no saving unless an opportunity to invest renders this motive of saving realisable.

In the *Principles of Economics*,⁶ Marshall points out that in India people do indeed save at great sacrifice, but they spend all their savings in lavish festivities at funerals and marriages, and not for any permanent provision for the future. This is all true. But the reason is that their motive of saving could not reach the stage of permanent provision for the future, because they had no scope or opportunity for investment. The knowledge as to how to transform saving into investment which could enable them to provide for the future was lacking. The only form of income-earning property they know of is land, which is beyond the

⁶ Sixth edition, p. 225.

capacity of ordinary peasants to own, even in the somewhat improbable event of a transfer of the land from the land-owning class to them. So their motive of saving is necessarily confined to such future contingencies as funerals and marriages—expenses, not optional as Marshall thought, but compulsory, enjoined by religious and social decrees.

Marshall overlooks here the bearing of saving upon investment and forgets that the motives of saving are limited by the possibility of their realisation and these motives are frustrated whenever the end is unrealisable. Motives of saving can never take the shape of a future provision, unless there exists a possibility of turning saving into investment.

So, in the case of Indians, the only way of providing for their future lies in having male children, who are bound to provide for their subsistence and comfort to the best of their ability through the pressure of social injunctions as well as religious fear. The necessary provision for old age or misfortune among the poor people of the East is thus made not by saving in property but by founding a family. Children to them are not a luxury, but a necessary type of insurance for old age. The son succeeds the old father in the farm or in the profession, as the case may be. Apart from its social aspects, the arrangement in a stationary society is economically sound and advantageous.

The son gets the benefit of an assured employment for his living, the father gains the assurance of leisure in old age. A poor man who is childless has to hoard for his old age and to obtain his subsistence with difficulty even with his hoarded silver, in a society which knows no residential hotels or income-bearing investment, safe and sufficiently remunerative for the illiterate petty savers.

It is clear from the above that though any kind of exchangeable property may realise the object of saving for possible contingencies, it is not the only mode of making a future provision. Property is in fact a mode of luxury, open to the comparatively rich. Again, for society as a whole, the second object of saving for a continuous income depends upon the possibility that saving should take a form that can increase the productivity of the existing employable resources. Mechanical progress did not only create newer forms of property, but also the possibility of earning an income from them. Railways and ships replace bullock carts and rowing boats for purposes of transport. Not only does transportation get cheaper and more efficient thereby, but it also offers an opportunity to those who want to save and invest instead of merely hoarding, to earn an interest instead of merely accumulating in order to meet chances of rainy days or old age. Interest from investment is thus clearly the outcome of technical inventions and improved methods of production.

Marshall recognises that "progress of knowledge and intelligence furthers it (saving) in many ways,"⁷ though he does not expressly point out that the demand for, and hence the opportunity of turning saving into investment, is dependent to a considerable extent upon the discovery of investment goods in the form of auxiliary capital. Marshall clearly points out however that a rise in the rate of interest "is often an indication of an increased efficiency of our productive resources."⁸ Now, does it not recognise in a way that the rate of interest earned in productive processes depends on the progress of technical arts and their achievements in turning saving into productive investment, i.e., upon the art of improving production with newer mechanical appliances?

It will now be seen that though the facility for saving was continually on the increase with every discovery of durable goods, the opportunity of savers to earn a continuous income came only with the discovery of such goods as could aid the entrepreneurs in a more labour-saving and mechanised form of production. This opportunity of earning an income must undoubtedly have stimulated further saving to a certain extent. But it is necessary to recognise that the motive of an income is not a primary or necessary urge to saving from the

⁷ Marshall : Principles of Economics (6th edn.), p. 236.

⁸ *Ibid.* p. 236, third paragraph.

individual point of view. The motive is evidently the outcome of an alternative method of earning income that the system of private property has evolved. Entrepreneurs of the post-mechanical revolution period were in need of newer producer's goods to cheapen their processes of production and this seems to be responsible for the greater urge and incentive for saving,—saving not for such natural and necessary contingencies as old age or unfortunate days, but for the artificial greed of a greater income. The entrepreneur's need thus gave an opportunity for rich men's greed. This seems to be the essential relation between saving and capital.

SAVING AND CAPITAL.

The modern entrepreneur, in providing for the ordinary wants of the community, thus performs incidentally another service to it. He enables the community to derive an income from saving, creates the possibility of converting saving into investment and of earning interest, by reducing the cost of production through a process that requires more material aids and less labour. And what is more, he makes the purpose of saving ideally effective by giving it a form that not only earns an income but also lasts till an indefinite future enabling the saver to face all possible chances.

Fortunately or unfortunately for humanity, by deliberate choice or by pressure of circumstances,

as a result of the institution of property or by way of a series of fortuitous historical accidents, the fulfilment of both these economic purposes of society has devolved upon the shoulders of the modern business men. They have to provide for the means of living for the masses and they have also to satisfy the demand for goods that can purchase leisure for the pleasure-loving rich or for the intellectual and religious classes for whom leisure is a requirement.

From the individual view-point, saving or property-making may thus be regarded as a provision to purchase a claim to idleness, a certificate of right to make other people work for one's living, or to secure a portion of the product made by others, not as a robber, as Proudhon professed and preached, but like an honest economic trader who exchanges some present labour or claim for a future right.

Entrepreneurs' demand for saving arises from their need for some newer forms of capital goods or a greater quantity of them.

Now, any new creation of wealth means a withdrawal of resources (material and personal) from the current products to the newer ones. And this withdrawal is likely to cause a deficiency of the current products in a stationary society which follows the same method of production and which requires, therefore, the same amount of resources for producing the same amount of

commodities. The maintenance of the current products up to their usual amount is possible, however, in a progressive society that adopts an improved method of production and thus requires a less amount of the resources for producing the same amount of goods. The improved process leaves a surplus of resources that is available for the production of the new goods.

The first course involves a sacrifice of the accustomed quantity of consumption; an abstinence is here necessary for the sake of a new variety. But the second course does not lead to the sacrifice of the accustomed standard while introducing the new.

In a stationary society, therefore, a new product or variety always means a sacrifice in the consumption of the accustomed quantity. But this does not result in any new saving or accumulation of the resources, any new creation of capital goods, for the amount of resources available for income-bearing investment has not increased.

But if the new product is not a direct good of consumption, a direct means of satisfaction, if it is only an indirect good for production, a produced means of improving production, this withdrawal of resources means a real sacrifice. It will have no compensating satisfaction, and will result in a new investment and creation of capital goods.

Similarly any restriction of consumption in any society, stationary or progressive, results in a

release of resources which can be devoted to a possible creation of new capital goods—new by quantity, quality or variety.

We should remember however that restriction of consumption does not necessarily lead to the creation of new capital goods ; creation depends on the released resources available being actually so realised.

It may be helpful to remember here that there are chiefly three forms of business capital: (a) workmen's subsistence, or consumption goods that support labour on an accustomed standard of living, (b) raw materials to work upon, (c) plants, tools, machineries, powers, etc., that aid labour. The two forms (b) and (c) constitute capital goods or producer's goods proper.

Restricted consumption and a lowering of the standard of life of people, releases a part of land as well as of labour that can be utilised for the creation of new capital goods. Thus land may be devoted to raising new (in the sense of an additional quantity or a variety) raw materials, and labour to new work. But plant and machineries, thus released, are likely to remain idle as an immediate effect. This is because machines are highly specialised tools, too immobile to take to any new use. Similar considerations may also apply to land as well as labour. Lands released may not be made to grow any and every kind of raw material, and labour, unless

unskilled, cannot be directed to every kind of new work.

This is why a sudden restriction of consumption, if forced upon society, may sometimes cause a dislocation of industry by dearth of labour, idleness of some lands, and even unemployment of skilled labour. It may not lead to an immediate creation of new capital goods.

The conclusion that is sought to be drawn from the above, is this: a sudden whim of the consuming society to grow more thrifty may not mean any fruitful saving or creation of capital, unless there is a real demand for it in industry.

All that the consumers can do under the circumstances is to hoard specie, if any, or money, that is, certificates of purchasing power reserved for any prospective use in industry.

But if there is any real demand for new capital goods, that is, produced means of production (not means of satisfaction) in an industry, the consuming public can be forced to make a saving. This has been pointed out by D. H. Robertson and some German economists. The device for doing it is to lower the value of money or to increase the price-level. This may be regarded as the second method of creating capital.

The maker of new capital-goods is put in possession of a quantity of purchasing power, with which he is in a position to withdraw the necessary amount of land, labour and capital goods from

their accustomed employments. The result is a dearth of the products, from the production of which these resources are withdrawn, and an increase of their prices (assuming that no improvement in methods makes up the effect of the decreased resources in their production).

This dearth of consuming goods and the consequent restriction of consumption is the necessary price for the creation of the new capital. The new capital is thus formed out of "abstinence" of consumption.

Now if this creation of capital is financed by bank-credit through the process of inflation, *i.e.*, by uncovered reserve, this saving is forced upon the public against their will. But if this is financed out of the accumulation or voluntary saving of the public due to their deliberate restriction of consumption, the labour thus thrown out of employment by the restricted consumption may find employment in the creation of new capital goods and the purpose of saving is realised in the investment.

But a third way of creating capital or turning saving into investment is also possible, when there is an improvement in the production of consumption goods. For the saving of labour thus effected may easily be utilised for creating new capital goods without any restriction of consumption or abstinence. Society here gets an opportunity of increased consumption, but it prefers to

wait for it till some future time. Here saving is effected through a surplus of income over unrestricted expenditure and hence it is a reflex of progress. Inventors and discoverers create this possibility and entrepreneurs materialise it into actuality.

"The demand for capital goods" must not, therefore, be regarded as "the demand for future income," as Prof. Knight asserts in his *Risk, Uncertainty and Profit*.⁹ But the demand for saving may be so interpreted. The demand for capital goods is the entrepreneurs' demand for business extensions or opportunities for earning profits.

The above analysis makes it clear that the function of the entrepreneur is not confined to the provision of the means of living in the form of various consumable commodities and services: it extends to the provision of the means, by which people can live a life of leisure (a life free from compulsory labour), in the form of various kinds of productive goods.

From the broad social point of view, besides the two functions mentioned above, *viz.*, (a) provision for consumption goods as means of living, and (b) provision for production goods as means of procuring leisure for people who want to live without compulsory labour, the business man does also perform incidentally some other important services. He acts as the employer of the social

⁹ See p. 163.

resources, land, labour and capital. He is the distributor of the national dividend and the paymaster of all who co-operate to meet the social needs. He is the risk-taker in production, organising production of a commodity in anticipation of its demand. If we look at him through the eyes of a consumer, he is the consumers' trusted agent, on whom they rely for the satisfaction of their needs. He is the social house-keeper, the centre to which the productive activities of entire society converge, as well as the centre from which the individual satisfaction of every co-operating member of the community radiates. Society relies upon him to distribute its productive resources to the best possible advantage. He is expected to apply the social resources, according to the theory of the mathematical maximum. Now in Robinson-Crusoe economy, one's satisfaction is maximum when the marginal utility of efforts or of any homogeneous kind of sacrifice, is equal in all kinds of enterprise. This is the source of our belief that a position of equilibrium is also a position of maximum well-being. In a society based upon money-economy, satisfaction and sacrifice are alike measured in money, and the demand-price of commodities and the supply-price of co-operating resources act as the only barometers of consumers' needs and producers' sacrifice to guide the entrepreneurs in their task of maximisation. That a position of equilibrium between the market demand

and supply prices need not mean a maximisation of social well-being is shown by Marshall in his doctrine of Maximum Satisfaction. This is elaborated by Prof. Pigou in his *Economics of Welfare*. Subject to these restrictions and qualifications, rather large and wide, social efforts and sacrifices are brought to a state of equilibrium through the guidance of the business man. This is however true only imperfectly and in a very broad sense.

The distribution of the resources of production, we should remember, is the counterpart and reflex of the distribution of consumers' purchases. This distribution depends, as Marshall points out, upon three classes of decisions as to (i) the relative urgency of wants, (ii) relative advantages of different means to attain each end, and (iii) the margin of application of each means to each end.¹⁰ And this kind of economic distribution based upon these classes of decisions is enforced upon the business man by the very logic of "business economy," for his incapacity in this respect will land him in bankruptcy or loss.

From the technical view-point of production, the business men are simply labourers of "a highly skilled industrial grade," who 'arrange' or 'engineer' its general plan, and superintend its details.¹¹

From the financial view-point of production, they are "middlemen" intervening not only

¹⁰ See Marshall's *Principles of Economics*, V, iv, 4.

¹¹ *Ibid*, IV, xii, 2.

between "the manual worker and the consumer," as Marshall describes them in a passage,¹¹ but middle-men between the owners of all social resources that seek employment and the consumers as a whole. In the language of Marshall, "they 'adventure' or 'undertake' its risks; they bring together the capital and the labour required for the work."

From the view-point of individuals struggling for an income in the present "business economy" of our society, they are merchants first and foremost, purchasing the services of land, labour and capital of various kinds and grades on the one hand, and selling the commodities needed by the consumers on the other, the difference of money-values in the transactions contributing to their income or profits. This constitutes "the relation between the making of goods and the making of money within each enterprise. A business enterprise can serve the community by making goods only on condition that, over a period of years, its operations yield a profit."¹²

The "subordination of service to money-making," Prof. Mitchell¹² rightly points out, "is not grounded in the mercenary motives of business men, but is one of the necessary results of pecuniary organisation." The entrepreneur,

¹¹ *Ibid*, IV, xii, 2.

¹² Mitchell : *Business Cycles* (1927), p. 105.

whether a farmer or manufacturer, or a speculator or merchant, can only earn his income in one way, namely, as a merchant, by purchase and sale and by a difference between his expenditure and receipts. This explains the peculiarities of his income and the various ways and means he has discovered to swell it. This we shall review in the next chapter.

It is necessary to add a few words on the complex composition of the modern class of business men who play such an "active rôle in determining what use shall be made of the country's natural resources, industrial equipment, investment funds, brains and brawn." The classical business man, or capitalist-employer, who employed labour and pocketed the profits and who combined in him the ownership and control, is now a disappearing, though by no means an extinct, species. In the joint-stock company or corporation form of business organisation which dominates the bulk of large-scale enterprises, it is difficult to identify any one who closely resembles in his function the simple capitalist-entrepreneur of private enterprise. According to Prof. Mitchell, "the old capitalist-employer has evolved on the one side into a business management" and "on the other side into a set of technical experts."¹³ The "management" includes "the more active

¹³ *Ibid*, p. 159.

directors and high officials, often with the addition of one or two financial advisers, legal counsel, and large stock-holders.”¹⁴ Sometimes a single man dominates affairs; “the stock-holders elect his candidates to office, the directors defer to his judgment, the officials act as his agents.” Here everything is a “one-man” show. Another development of modern organisation is the growth of a class called “promoters.” The promoter’s special function is to exploit new resources, to develop new processes, to create new products, to cultivate new tastes. This he does often by controlling a substantial part of the fluid funds of the market and is thus in a position to exploit both the investing public and the entrepreneurs working with an insufficient capital. The technical experts, who attend to the industrial side of production stand in a purely advisory relation to the business men who undertake the financial responsibility of production. “That is an inevitable result of economic organisation on the basis of money-economy in its present form. For the crucial factor in deciding the fate of a business enterprise is not the perfection of its mechanical processes, the excellence of its personnel work, or even the cleverness of its selling methods... The final test is the ability of an enterprise as a whole to make profits.”¹⁵

¹⁴ Mitchell : *Business Cycles* (1927), p. 158.

¹⁵ *Ibid*, p. 162.

This fact is responsible for the mechanical character of conducting business enterprise and this explains the necessity of the financial interests dominating over the industrial.

The test of economy from the social view-point is the saving of human energy and labour to purchase a given volume of satisfaction. The test of efficiency from the view-point of the entrepreneur is his saving in money costs. Society is interested in the maximum utilisation of the whole of the social resources, land, labour and capital for the benefit of mankind, that is, in their fullest possible employment consistent with social welfare, present as well as future. But the entrepreneur is interested only in utilising them to the extent of his personal advantage and pecuniary gain. This kind of sacrifice of social interests is inevitable in any economy which seeks to satisfy all kinds of social needs through private enterprise, open in practice only to a particular section of the community. This is why we find that the state has often to supplement the activities of the private entrepreneur in the maintenance of roads, canals, ports, or lighting houses, etc. This is not the result of money economy. It is due to the economic enterprise being dependent upon the resources which are the object of private property. In some agricultural areas as in Bengal, the farmers had to be protected against the neglect of their interests by landlords by recognising their

right of occupancy in the lands they had been tilling for a number of years. For want of a similar protection the Scotch husbandmen and fishermen had to leave their country for American woodlands—just to make room for the deer forests of their landlords. In the case of capitalist-entrepreneurs the neglect of labourers is not so wanton or whimsical. The mechanical mode of earning their own income by protecting their own or their clients' capital necessitates no doubt the neglect of other interests. The unemployment of labour however is not a wilful device of the entrepreneurs ; nor is it due to the monetary economy. It seems to be due to modern enterprises being, firstly, financially dependent upon private capital, and secondly, industrially dependent more upon capital goods than on labour, as a result of technical inventions and large-scale production. But in the larger interest of society the labourers are now protected in all civilised countries by the recognition of a right of occupancy, analogous to that enjoyed by the cultivators of the soil in Bengal, to the industry they have worked in for a time, in the form of Unemployment Insurance. This has been wrongly christened as "doles" by an unthinking or hostile capitalist press that looks at it from a wrong angle.

The so-called mercenary motives of the business men are the inevitable outcome of the necessity of their having to earn a living or income through

the sale, not of their ability or property directly to society, but of some economic product produced with their aid. When a man works to satisfy his needs directly by his own exertions, his motive of course is utility, pure and simple. But when he obtains his satisfaction not by producing commodities for his direct consumption, but by getting them in exchange of the wealth he commands, be it labour or property, his sacrifice merely purchases an income whose utility is 'instrumental' in the phraseology of Pantaleoni. But this objective income is still subjectively related to the sacrifice which is the means of its acquisition. In the case of a business man his income is totally torn off from any subjective relation to his sacrifice. His income has a direct relation only to the commodity he provides with his sacrifice. He cannot say, nor can he think, that more sacrifice will bring him more income. There is no direct correlation between his income and sacrifice except through the mediation of his saleable ware. Thus, not only is his economic remuneration a mere indirect means of his satisfaction, as is the common lot of almost all income-earners in modern society, but even his economic means of acquisition is not his sacrifice but an objective means, *viz.*, the product of his business enterprise. The very method of earning his living, therefore, forces him to think not only of his income, but also of all economic resources he applies, including his own, in terms of pounds,

shillings and pence. To denounce him as mercenary on this ground is not only unjust but also senseless. This is the only way in which production can be carried on and social needs satisfied in an economy based upon private property and enterprise, specialisation and exchange.

The money-motive of acquisition has an inherent tendency no doubt to regard all means of acquisition as mere mechanical aids to income-earning. From a moral or subjective point of view, this is undoubtedly undesirable. But the exchange-economy engenders this feeling, and it is further encouraged by large-scale production which increasingly divorces the association of producers from the consumers by production for markets unknown and distant, both in space and time. The corporate form of organisation, by facilitating a kind of "absentee" capitalism, analogous to absentee landlordism, makes the shareholders' attitude towards investment much more mechanical. They look more to the rate of return than to their necessity for the income or their capacity for consumption. And the Directors, as the managers of the shareholders' capital, are forced to become in return more mechanical in their aim: they have to satisfy their employing capitalists with a satisfactory return for their capital, as a mark of business ability or on pain of dismissal. Thus the modern development in business organisation makes it habitual for the entrepreneurs and capitalists

to think and expect in terms of a rate of return in place of the aggregate income itself, unlike the habitual attitude of the poorer wage-earners of society.

The critical reader is likely to feel dissatisfied, and rightly too, that no straight answer has yet been given to the question as to who are the entrepreneurs in the present organisation. He will possibly observe that a division of labour has taken place in the present regime not only among the common labourers but among the entrepreneurs as well. Nevertheless the functions they used to perform must still be there. All this is no doubt true. But it is necessary to remember that although the functions may not have essentially changed, the mode of performing those functions, which is as much associated in our minds with the conception of an entrepreneur as the functions themselves, may have considerably altered. And this fact prevents us from identifying the modern entrepreneur with his early prototype simply by the mark of productive functions.

Marshall notes that the "employer" is often identified with the receiver of profits. But an "employer" need not be the same as the receiver of profit.¹⁶ If we remember the origin of 'entrepreneur' in J. B. Say's dissection of the employing capitalist and its adoption by Walker in America, we should identify him as a business manager,

¹⁶ Principles of Economics (6th edn.), p. 297.

who 'engineers' the business (in Marshallian phraseology) industrially and not as one who undertakes risks, that is to say, financial responsibility. Marshall however always looks upon a business man in both these aspects, and distinguishes the employer in the sense of the technical organiser of production from the undertaker of financial risks. He cites instances¹⁷ where an undertaker, like one who collects supplies from the cottage industries, can pocket profits and still he is not an employer. On the other hand, directors and managers of modern corporations are mostly employers, paid in wages and not in profits. There is a mental reluctance on the part of many of us to regard them as entrepreneurs, so well-established has been our association of the idea of entrepreneurs with independent employment and profits. With the growth of corporation forms of business enterprise, we, therefore, find a tendency to regard the entrepreneur as a financial risk-taker (Marshall's undertaker) rather than a technical supervisor or organiser. This accounts for Hawley's definition of enterprise as risk-taking with profit as its reward.

All these different associations of ideas about the entrepreneur are summarised by Edgeworth,¹⁸ when he distinguishes between its four types :

¹⁷ *Ibid.*, p. 295.

¹⁸ *Papers*, Vol. I, p. 16.

(1) The classical writer's capitalist, "who from funds in his possession pays the wages of labourers, or supports them during the work; who supplies the requisite buildings, materials and tools, or machinery; and to whom by the usual terms of the contract, the produce belongs to be disposed of at his pleasure." (J. S. Mill, *Principles*, II, xv, 1.)

(2) Walker's entrepreneur, "not an employer because he is a capitalist, nor in proportion as he is a capitalist. (*The Wages Question*, p. 228.)

(3) Hawley's entrepreneur, who undertakes risks, of which class the most prominent, though not the only, species is the investor in joint-stock companies.

(4) Walras's entrepreneur, innocent of the taint of profits.

If we remember that four distinct ideas of (i) ownership of produce, (ii) organisation (technical), (iii) risk (financial) and (iv) profit are generally associated with the conception of an entrepreneur, we can leave it to the reader how he would choose to define an entrepreneur. But it is necessary to notice that neither risk nor labour function (organisation) has any direct bearing upon profit, except through their transformation into an economic product. They are both incidental services in providing the product. If we want to retain the association of the entrepreneur with profit,—and this appears to be the prevailing tendency at

present,—the best way out of the difficulty seems to be to define entrepreneurs as those who take remuneration for their co-operation in production indirectly through the product of the enterprise. From the view-point of material production, the conception appears to be rather shadowy, for it makes no essential difference in the concrete productive function whether the capital is supplied by a shareholder or a bond-holder, or the management is conducted by capital-owners or by their salaried officials. The only difference between the two groups lies in the financial responsibility involved in the material or physical production: one group undertakes financial risks incidental to production, while the other group co-operates on a contractual basis. The distinction between profit-earners and contractual income-earners thus appears to lie in the financial processes of production and not in the industrial. Shareholders and bond-holders are not to be supposed to furnish capital in the industrial sense of concrete economic goods other than "land," but capital in the financial sense of all kinds of property, tangible or intangible, which helps to secure a money income. Capital in this sense forms the financial basis of production. That is why profit is calculated on capital. From the financial point of view, the whole of the property or the resources which are invested in production is the means for earning profits. The method of production in modern society is not

a communal co-partnership of the different agents of production. It is conducted under a system of private property and private initiative of a person, natural or legal. The industrial organisation of every productive enterprise is thus based upon a necessary frame of the financial interests of those who acquire the right to its products. The interests of the owners as owners must necessarily be financial.

To repeat the argument in other words.—From the social view-point of physical output, production is a co-operation of the owners of different agents of production. From the private individual's view-point of earning an income, productive enterprise is only a financial investment, the necessary means of obtaining money-profits. Capital in the financial sense is thus the natural basis for calculating profit. M. H. Dobb¹⁹ is quite right in complaining that no satisfactory calculation of profits is obtainable on a basis of percentage rate on capital. For the value of capital is itself governed by its income and in the long run the capital of a business is merely the capitalisation of its expected profit. This however is the inevitable outcome of corporation securities emerging as a property. This is why Veblen²⁰ ironically

¹⁹ Capitalist Enterprise and Social Progress, p. 73.

²⁰ Veblen : The Vested Interests and the Common Man (London, 1924), p. 67.

remarks: "intangible assets will not hold water." The modern method of corporation finance, he explains, has eluded the charge of "watered stock," for one cannot find what is "capital" in the old classical sense.

The financial view of a business enterprise,—that is, the private individual's as opposed to the social view of it,—has led some American writers²¹ to look upon "the ownership of the business unit" as "a distinctive function of the entrepreneur," of which the remuneration is profit. A superficial analogy naturally suggests itself, *viz.*, that as the ownership of land, labour and capital yields rent, wages and interest, why should not the ownership of a business unit be regarded as yielding the income of profit? The obvious error in this kind of thinking is that though anything that is economically valuable is owned in a regime of private property, yet ownership cannot account for the value of the property: it is rather owned and made a property because it is valuable. Land, capital and labour earn an income, not because they are owned but because they are valuable. Ownership is an incident of income of all kinds. For, the medium of earning it, in common with every item of wealth, is the object of private acquisition, and is regulated by the law of a land with regard to

²¹ See Charles A. Tuttle's article, *The Function of Entrepreneur*, *American Economic Review* (1927), pp. 13-25.

property. Any saleable commodity forms the medium of earning profits. Sale of human beings, wherever slavery exists, may yield profits. The ownership of enterprise or its product is thus a mere incident of profits.

But this mental attitude seems to stress an underlying truth, *viz.*, the necessity of getting an economic control over the resources before they can be organised for production. What orthodox economics generally stresses and emphasises is the entrepreneur's position and importance in his industrial function of physical or material production. What the general emphasis fails sufficiently to impress is that the task of organising the different factors for purposes of production is impossible within the present legal structure of society, unless someone first brings them together. First a possible union of different factors; then the organisation. The usual way of bringing them together in the present regime of private property is to own or hire them. The full economic control over their use alone makes it possible for the work of organisation to be proceeded with and applied. There is unfortunately no term to describe this important preliminary service of linking up the different factors that the owner of a business enterprise or business capital performs. Promotion is more an exploration of the possibility of an enterprise than an acquisition of control over the resources that the preliminary financing does.

Enterprise refers to the attempt of production and organisation refers to the arrangement of the assembled resources to ensure economical production. But the intermediate form that this process assumes, the concrete embodiment of the attempt that enterprise makes and the possible source of the economic arrangement that organisation seeks, seems curiously neglected as of no economic moment.

In a socialistic regime where everybody is a virtual government servant and all the resources are government property, production will take place through a union of economic factors by mere dictation. In a communal society (not of the Russian type of a communist-dictator's regime) production will continue through a co-operation of resources, regulated by tradition and custom, as interpreted perhaps by a council of headmen. But in the modern society of private property and free initiative, the union of resources preparatory to production can only take place through the transference of control of the requisites of production from their original owners to those who propose to utilise them for purposes of production. Now these are no other than the capitalists who undertake the financial responsibility and assume the risks of production. This is why there can be no business without capital.

Unless we take care to distinguish between the industrial and the financial aspects of a business

undertaking and unless we hold firmly to the fact that the primary function of a business man is to provide goods, needed directly or indirectly by society, as a means to secure a money-income for his property and labour, the subsidiary or incidental function such as risk or labour of organisation is sure to lead us to confusion. Whatever services may be required of a business man or of his hired associates, they are all to be devoted to one purpose, *viz.*, money-income through a commodity needed by society.

Let us attentively read, for instance, M. H. Dobb's description²² of the entrepreneur's function: "Though the *Entrepreneur Function* is connected with the bearing of *uncertainty*, it is connected *incidentally* rather than *essentially*..... The *principle elements* of this function, as applied to any economic society, will be the capacity for *Adjustment* and *Innovation*.....they are concerned primarily with *deciding* things rather than with *doing* things..."

The description is unimpeachable if we look at it from the industrial view-point of material production. But Adjustment and Innovation are no less incidental to production of money values as the uncertainty-bearing is to the production of physical output. The analysis of the entrepreneur's

²² Dobb : Capitalist Enterprise and Social Progress, pp. 38-39.

functions as an industrial agent, however accurate and penetrating, does not furnish us with any direct clue for explaining his profits. It is necessary to realise that he earns his income not as a producer but as a virtual merchant. The production means to him only acquisition for purposes of sale. The whole of the productive process is to be looked upon as a complicated process of purchasing the commodity he seeks to sell to society. The direct means of acquiring his income or profit is the commodity produced and not his services in production. So whenever we try to explain his remuneration by his productive functions (in the industrial sense), we fail, as we stop our analysis a little too short. A cheap purchase of goods does not enable a merchant to earn an income by itself, for it is only one part of his mercantile transaction, *viz.*, its acquisition. If he has to sell it cheaper still for want of a demand, his success as a purchaser all goes to nothing. Similarly with the entrepreneur: his cares, skill and ingenuity, his "sleepless nights," and agonising anxieties may all fail to secure him a living, although they may succeed in producing an excellent product, unless he can find a market for it. The instances of poets and writers living in misery, while their publishers roll in luxury, amply illustrate the futility of the industrial function of an entrepreneur as an explanation of his income.

The financial function of the entrepreneur is

equally impotent to explain his remuneration. Financial responsibility points to the fact that whether the product can be sold or not, he must pay the agents which serve him to procure the product. Now this is the inevitable outcome of the contractual arrangement by which he obtains their co-operation. They give up their respective claims to the product of their joint sacrifices, only on the condition that they will have their stipulated rewards. The financial responsibility is thus an alternative description of the price by which the entrepreneur acquires his exclusive title to the joint-product.

Similarly risk in the financial sense points to the fact that the costs incurred for production, that is, the price paid for acquiring the title to the product may not be adequately covered by the price of its subsequent sale. It refers to unstable prices to which the owner of every economic good is subject. Risk of loss, like the chance of gain, inheres in any kind of property or ownership. As the product must be his, before he can sell it, risk is incidental to production or acquisition of a commodity.

Profit can, therefore, be explained only by the virtually mercantile nature of his social function as a whole. His main function in society is to provide commodities for the satisfaction of specific social needs. This means that he has to sell the commodities to consumers. But he cannot sell

unless he produces them first. His production and cost are thus nothing but a virtual method of acquisition or purchase and its price. Both his physical and financial sacrifices—his labour and risk function or responsibility—refer to the cost of his acquisition or production. Thus they relate only to a part of the process by which he serves the community, and secures his profits. These are thus functions merely incidental to his main social service.

Profit is thus secured as the combined effect of his skill both in production-purchase and sale. Profit is the result of his skilful provision of social needs. Production is to be so manipulated that the sale-price of the product to its consumers remains higher than the money spent by the entrepreneur.

Commodities are the commonest medium of earning profits. But the meaning of commodities need not be confined to produced goods only. Profit may be earned by land as well as by legal rights or securities, that is to say, by anything that is marketable; and they are all commodities in the broad sense of economics. Farmers and manufacturers earn it in the same way as a merchant or a speculator. But the method of acquiring the commodity is different. Industry acquires it by production and commerce by purchase.

In the light of these discussions, it seems

advantageous to identify entrepreneurs as the receivers of profit and to associate profit with the mercantile method of earning one's income. The source of profit however lies, as we shall find later, not in the method of earning it but elsewhere.

We can now sum up the distinction between the earners of profit (entrepreneurs) and those of other incomes provisionally as follows :

First, we may broadly distinguish between them as those who invest and those who merely lend their resources. Secondly, we can differentiate the two groups by the nature of the distribution between them of risks that are inherent in production. The risks of a fluctuating or unremunerative rate of income are mainly undertaken by those who invest their resources. These risks are usually known as financial risks. The risks of unemployment are chiefly shouldered by those who lend them for a stipulated rate. Thirdly, from the stand-point of social consumption we can distinguish those who actually supply the diverse means of social satisfaction from those who merely assist the former. Fourthly, from the view-point of direction and control, we can subdivide society as follows : (a) those who acquire exclusive control of the entire social resources in order to distribute and organise them with a view to maximise their "private net product ;" (b) those who surrender their personal or material resources to be so controlled, to earn an assured income. Fifthly,

we may draw a line between the two groups by the limited or unlimited nature (legal) of the transfer of one's property which is devoted to production. Profit is earned by the unconditional transfer of one's resources to all kinds of risks incidental to production. The hire-price incomes are earned by the conditional transfer of the resources one owns. Lastly, a distinction may be made between (a) those who acquire the exclusive right to a joint product by purchasing the claims of other co-operators, and (b) those who sell their right to it in return for a pre-determined price of collaboration.

This last distinction seems to be most helpful in elucidating the nature of profit.

CHAPTER IX

THE PROCESS OF EARNING BUSINESS INCOME OR PROFITS AND THE FACTORS THAT AFFECT THEM.

A brilliant analysis of the sources of profit from the business man's point of view is given by E. Atkinson.¹ He points out three distinct sources of profit in a productive organisation, e.g., a factory :

- (i) Speculation in the stock of the factory,
- (ii) Manufacture of the product, and
- (iii) Subsequent dealings in the produced good by middlemen after the owners of the factory have sold them.

Now Atkinson's analysis obviously refers to the fact that the earning of profits need not be confined to an industrial organiser : they are earned by the merchant and the speculator as well. And the common method of them all is to acquire the ownership of some goods they choose to deal with and sell them higher. That is to say, the process by which profits are procured is in its essence mercantile.

If we take speculation in the broad economic sense of dealings based upon fluctuation in prices,

¹ The article, *The Margin of Profits*, in *Century*, Vol. XXXIII.

J. M. Keynes' *profits*, defined in Chap. IX of his "Treatise on Money" as the increased "value of the accumulated wealth of the entrepreneurs,"² resemble profits of the first class in Atkinson's classification. They are not a part of the national income, if we measure that income in terms of industrial goods and services. From the social view-point they are mere paper-profits, an inflated value of the same volume of goods measured in terms of the money-of-account. But they are not identical. Profits of the speculator in stocks may come from the previous output while Mr. Keynes' profits are obtained from the current output including both consumption and capital goods. There is a second difference as well. By speculation we mean dealings in anticipation of a change in price. Keynes considers results from any actual change in price. Following a classification suggested by Prof. Seligman³ we may name Mr. Keynes' profits as *aleatory* or *chance* profits. *Speculation* profits are really a variety of aleatory profits, with this important difference that while chance profits are all sporadic, speculation profits may be both sporadic and regular. Mercantile profits may be regarded as due to place speculation. But it is more important and usual to mean by speculation "time speculation based on price fluctuations after the

² See p. 124, Vol. I.

³ Principles of Economics, Chap. 23.

lapse of an interval of time." The regular speculation by *bona fide* experts tends to steady prices.

Monopoly profits are secured by obstructing the free play of competition by some natural barriers or artificial restriction.

An eulogium of *competitive* profit may be read in its description by Prof. Seligman :⁴ " Thus in ordinary enterprises profit is the great lure of energy, and competition the great destroyer of profit. Competitive profits, the union of both, are hence the symptom of progress. They exist only by being continually renewed : they are not a tax on the community, but a draft on nature. Profits are a result of price, not a cause of price. Production at a lower cost creates profits ; competition forces price down to lower cost and eliminates profits. Profits can be maintained only by the creation of a continually newer cost level lower than the new price."

Here the underlying supposition is that profit can be earned under competition only by lowering cost and the cost can be lowered only by improving organisation for production. But as we have already noticed in Chap. VI, this need not be the only method nor is it the usual method for earning competitive profits. With the same up-to-date method of production followed by competitors, cost of production may differ with the different volumes

⁴ Principles of Economics, p. 358 (1929 edition).

of output, and profit depends as much on a price-cost margin as on the volume of sale. A competitor, with the better technique and skill for alluring and deceiving his clients, for intimidating both his rival producers and his unfaithful customers who would bestow occasional favours upon others, may extract profits at the expense of other producers, whose goods might be technically superior but whose capital or cunning is relatively inferior. The typical characteristic of competition to-day is that the productive capacity of each competitor is usually greater than his marketing opportunity. This is why the individual cost of production often decreases, as the output increases. The cost falls continuously as the actual output approaches the individual optimum.

With this background in our mind's eye, we can with equal propriety draw the following picture of competitive profits, imitating the language of Prof. Seligman :

In ordinary enterprises profit is an index of great waste of social energy, and competition the great producer of profits. Competitive profits are hence the symptom of decay and deterioration of social economy. They are a tax upon the community, being the outcome of the robbing of some entrepreneurs by their rivals of a legitimate return for their productive energies, with a prodigious waste of social resources that might have been turned into useful products of social benefit.

Profits are thus a part of the social cost of production and price; the huge waste of competitive activities doubling the injury done to social welfare, as they divert resources not only from productive channels but also direct them to ignoble ends. The capacity of robbing custom from one's competitors creates profits. Competition thus forces the price up to the higher cost of wasteful advertisement or other tactics equally costly and unproductive socially. Competition yields profits for the successful, though only at the cost of inflicting corresponding losses upon those who fail. Competitive profits can be increased or maintained only by a continual renewal of the wasteful cost for increasing or maintaining custom by invading the market of the competitors, by persuading, flattering, deceiving, intimidating, robbing or by any other means equally unfair.

Prof. Seligman's eulogy is therefore blind of one eye. Let us read for instance the equally blind denunciation of the business man and his profits by Thorstein Veblen:⁵ "The all-dominating issue in business is the question of gain and loss. Gain and loss is a question of accounting, and the

⁵ Veblen : *The Theory of Business Enterprise* (1904), pp. 84-5.

accounts are kept in terms of the money unit, not in terms of livelihood, nor in terms of the serviceability of the goods, nor in terms of the mechanical efficiency of the industrial or commercial plant. For business purposes.....the last term of all transactions is their outcome in money-values. The base-line of every enterprise is a line of capitalisation in money-values.....The businessman judges of events from the standpoint of ownership, and the ownership runs in terms of money." The description is no doubt an accurate and faithful account of facts. But is the businessman in any way responsible for the environment? And is it not the environment that determines for him the mode of his activities? The institution of property in society forces him to own or occupy the resources, and he is unable to fulfil his function without owning or acquiring the right of control over them. The money-exchange determines for him the standard in terms of which he has to calculate the productivity and organise the resources for the purpose of particular production. An animal can live its life and seek its food upon land only by securing a *terra firma* for its feet, and by learning how to use them. Similarly the business man can live his life and seek for his living in modern society only by securing a *terra firma* of private ownership (temporary or permanent) and by learning how to transact business in terms of money-unit:

Now all these four kinds of profits—Aleatory, Speculative, Monopoly and Competitive—can be earned by the same industrial unit, e.g., a factory. And the *mode* of earning them all is the same, *viz.*, to acquire the ownership of a product and then to sell. The mercantile nature of transaction makes it essential that the cost of acquisition should be regulated to the prospective price of subsequent sale. The calculation is necessarily made in terms of the monetary unit. The cost of production of the commodity of a factory owner,—which is his cost of acquisition—consists of the money prices he has to pay for the raw materials, labour, loan-funds, power, buildings and ground-space, transportation, taxes, etc. Besides these costs of acquisition he has to incur other expenses for distributing the commodity to his prospective customers and also for storing it until they find it convenient to purchase. From the proceeds of the sale he has to recoup these expenses before he can pay for the resources, material (capital) or personal (business ability), of those who have submitted them for production without stipulation or sale.

Two sets of persons and two sets of resources thus co-operate for the production of goods needed by society. Those who *lend* their resources get their remuneration in the shape of predetermined contractual rates, such as rent, wages and interest. Those who *invest* them (that is to say, employ them

in the hope of securing an indirect income through the commodity they have acquired or converted into) get their remuneration in the shape of profits.

If the amounts of "land," labour and capital goods—the three classes of physical sources of productive services,—are denoted by N , L and C respectively, and the small c added as a suffix signifies the mode of their employment for national production by *contract*, while the suffix e signifies their employment by *investment* or *enterprise*, the aggregate return may be represented in terms of the national resources as follows:—

$$\begin{array}{rcl}
 & (1) & (2) \\
 \text{Land} & = Nc + Ne & \left. \begin{array}{l} \text{yield a net return,} \\ \text{consisting of con-} \\ \text{sumption and new} \\ \text{capital goods.} \end{array} \right\} \\
 \text{Labour} & = Lc + Le & \\
 \text{Capital} & = Cc + Ce &
 \end{array}$$

The vertical series (1) earn rent, wages and interest, whose monetary rates may be represented by r , w and i . The vertical series (2) obtain returns out of which the wastage of old capital goods has to be first replaced, before they can earn profits. Let the rate of profit earned be represented by p . The amount available for distribution as the national dividend must thus be considerably less than the aggregate return obtained. The total money-value of the national income, as earned by these investors, enterprisers and lenders of resources, will thus be:—

$$(r.Nc + w.Lc + i.Cc) + p(Ne + Le + Ce).$$

Now the employment of these resources produces a current output O , consisting of consumption goods R and the net increment of investment goods, C . Let P and P' denote the price-levels of R and C goods respectively. The actual money-value of these goods forms the monetary source of all social incomes and particularly determines the level of profits.⁶

Profit can thus be earned as a difference between the money-prices of the goods produced (both consumption and investment) and the total payments made by the entrepreneurs or enterpriser-producers as a class in the shape of the hire-prices of the properties and services loaned by their stipulating co-operators (besides the cost of replacing the capital goods used up, or providing against their obsolescence, deterioration and decay). That is to say,

$$(Ne + Le + Ce)p = (R.P + C.P') - \\ (r.Ne + w.Lc + i.Cc)$$

The factors which directly affect the aggregate profits of the entrepreneurs as a class are, therefore, price-levels of the goods, volume of goods sold, loan-prices of the different kinds of

⁶ The notations which are used in this chapter are the same as those of J. M. Keynes and are taken literally from his "Treatise on Money," so that the reader can find out easily the differences and interrelations between profits in our sense and profits in Mr. Keynes' sense.

resources, and the amount of the resources borrowed for employment (besides the factors that determine the wastage due to obsolescence and depreciation of capital). If we remember that the aggregate receipts from the goods supplied by business enterprises are obtained and obtainable only from the incomes earned by the lenders of resources as well as by the enterprisers themselves, it is clear that for society as a whole the total money-value of the products must be equal to the total money-value of the productive services.

Now those who define pure profit as the surplus, if any, in excess of the aggregate rate of remuneration of land, labour and capital and do not distinguish, as we have done, between the returns obtained by the alternative modes of their employment by *contract* and *enterprise*, and lump together their incomes earned in both of these ways as rent, wages and interest, will obviously find that for the closed economy of society as a whole, there exists no profit at all. This will explain the exposition of pure profit by Walras and Pareto. It becomes an obvious truth when we reflect that for the entire community the producers and consumers are the same persons: what they produce is all consumed; the individual savings, so far as they are invested, are only entrepreneurs' consumption in the form of capital goods. Again, as there are only three classes of physical sources of productive services, no profit is discoverable as the

remuneration belonging to a fourth factor, unless one re-defines pure profit as the excess of the remuneration earned by the entrepreneurs' land, labour and capital above the level stipulated for the lenders' contractual share. As Walras' system comprises an interweaving of the markets for three types of products,—commodities, services and new capital—and his productive services are land, labour and capital, there can be no separate remuneration *ex hypothesi* for the *entrepreneur* in the community as a distinct factor. This explains why we have attempted throughout to keep the conception of an excess or surplus off our mind with a view to getting a true insight into the nature of profit.

Walras' equilibrium system brings into prominence the interdependence of social incomes and activities. Expressed in terms of our equations, this equilibrium postulates that .

$$R. P. + C. P'. = (r. N_c + w. L_c + i. C_c) + p(N_e + L_e + C_e)$$

where p is to be interpreted as the normal rate of remuneration for the entrepreneurs' resources, which induces them to continue producing the same amount of output, and contractual prices are such as to ensure their fullest employment. Any disturbance in the price-level will affect profits, which will affect the scale of production, which

again will affect in its turn both the price of the resources and the income of the lenders and this last again will react upon profits. A kind of continuous process of disturbance like wave-motion tends to be propagated thereby.

A normal rate of profits with its corresponding equilibrium in the output of production is, therefore, dependent upon (i) a stable price-level, (ii) an unaltered process of technical production or alteration of such a kind as requires the employment of the same amounts of the different resources, (iii) an unvarying taste of consumption goods or variation of a kind that demands no alteration in the quantity of resources employed, together with an unchanged taste in the desire of saving in relation to consumption, (iv) a stability in the rates of rent, interest and wages, a change in any of which is bound to disturb the demand for consumption goods or the demand for saving and investment, and thus react upon the cost of the process of production, profit, price-level and so on, (v) even a stability in the relative competitive strength of the producers.

We thus see how a normal level of profits, as a share of the annual national income, is dependent upon a stable behaviour of the economic system for the pursuit of production.

In other words, when the price-level and the volume of output of both the consumption and investment goods are so related to the productive

system that every factor of production including the entrepreneur's resources gets its normal rate of remuneration, the money-value of the national income becomes exactly equal to the incomes expected and we have industrial equilibrium. At this equilibrium position or normal state, the national income, the earnings, and the money cost of production become identical from the view-point of society. This is possibly why Keynes defines them as identical. "All regular expectations such as regular monopoly, speculative and competitive profits are to be included in the national income and identified with costs, for production cannot be maintained at this normal level unless these expectations are realised. This normal equilibrium value of national income is Keynes' E.

Now supposing there comes a sudden change in price, which has not had the time to influence the volume of production, a fortuitous profit will result. The name *profit* is applied by Keynes only to this kind of profit.

Regular monopoly, speculative or competitive profits are thus excluded from his definition of profits, and are to be included in the normal national income, E. A normal level of wages, interest and rent, together with a normal level of regular profits that influences the motive and regulates the activity of the entrepreneurs, presumes for the national income a normal value of E. Chance, aleatory or fortuitous profits thus appear

with a change in the value of the national income from its normal volume (E).

Actual money-value of the national income depends on the price-levels and volumes of goods, and its normal value is determined by profit, rent, interest and wage levels and the volume of resources employed. Keynes' E stands, as we have seen, for the normal volume of the national income, identified with the normal money cost of production (from the view-point of society) and normal earnings of the factors of production. The deviation of the actual volume of national income (as measured by $RP + CP'$), from the normal volume E (as determined by the normal wages, rent, interest and profit levels, and total volume of the resources employed), measures fortuitous profits for the entire community. Keynes' Q in the following equation represents this deviation and measures the volume of these fortuitous profits.⁷ Thus,

$$\begin{aligned}
 Q &= RP + CP' - E \\
 &= CP' - (E - RP) \\
 &= \text{Value of the new investment goods (I)} \\
 &\quad - \text{surplus of the aggregate income over} \\
 &\quad \text{the expenditure on consumption, goods,} \\
 &\quad \text{i.e., savings of the community (S)} \\
 &= I - S.
 \end{aligned}$$

⁷ Keynes: "A Treatise on Money," Vol. I, pp. 135-7.

So far we have a curious parallelism of thought between Walras and Keynes. At the state of equilibrium there can be no profit. *Profit means with both an excess above the cost of production* (a quantitative concept). Keynes' E, the normal national income or receipts must be equal to the total normal cost of current output including the normal remuneration of the entrepreneur. So there is no possibility of profits for society as a whole. Similarly with the system of Walras, the conclusion of which is thus summarised by Gide and Rist : ^a

".....We have this curious result : the *entrepreneur*, receiving for the products which he sells just exactly what he paid for producing them, makes no profit at all.

Both Walras and Pareto fully admit the paradoxical nature of the statement. Of course it is understood that it can only happen under a *regime* of perfectly free competition, care being also taken to distinguish between profits and interest, a thing that is never done apparently by English economists, who treat both interest and profit as constituent elements of cost of production. But it is not so wonderful as it seems at first sight. It simply means a return to the well-known formula that under a *regime* of free competition selling price

^a A History of Economic Doctrines (1915), pp. 534-35.

must necessarily coincide with cost of production."

So there can be no profit, according to Walras, because there is no excess of receipts over costs under conditions of perfectly free competition at the position of equilibrium. Actual profits can, therefore, exist owing to the prevalence of the conditions of disequilibrium.

It is regrettable that Mr. Keynes has practically discarded the healthy English tradition of defining profits as the business income earned by any factor of production and has joined those who want to define profits quantitatively as the excess of receipts above the cost of production. The reader will note that the statement of Gide and Rist that English economists never distinguish between profit and interest requires a qualification. We have shown by numerous quotations that all English economists from Adam Smith right down to Marshall distinguish between profit and interest as the business-income and loan-income of trade capital respectively. The modern scientific schoolmen are however too prejudice-blind to see and read a plain meaning into their plain language.

It is also necessary to notice that competition makes the selling-price coincide with the cost-of-production, only when cost refers to what Seligman calls "socially necessary cost" from the viewpoint of society and not to the cost of an individual producer. And it is this difference between the

common selling-price and the individual cost of an entrepreneur which the English economists understand by profit.

But Keynes has done a great service to the elucidation of the theory of profit by indirectly pointing out a great truth with the greatest possible lucidity : it is that profit, in the sense of a surplus above the cost of production, cannot exist for society as a whole but for monetary disequilibrium. His Q is the index of this disequilibrium and is measurable, as we have seen in the formula quoted above, by the difference between I and S , the value of the new investment and savings.

Here in the analysis of the relation between savings and the value of new investment, we have a remarkable difference between Walras and Keynes ; and Keynes' conclusion is radically divergent. Walras assumes that the amount of investment is necessarily equal to the amount of saving, but according to Keynes, this is not the case. " Saving can occur without any corresponding investment." ⁹ Again investment can exceed saving, not by " voluntary abstention from consumption," which alone is saving in Keynes' sense, but by " involuntary abstention," ¹⁰ or " forced saving " as we now call it in imitation of the German authors.

⁹ Keynes: " A Treatise on Money," Vol. I, pp. 172-3.

¹⁰ *Ibid*, p. 175.

It is therefore clear that we can look upon Q, the fortuitous profits, both as a kind of "forced saving" extracted out of the unsuspecting public without their knowledge and against their will, and as a kind of unexpected, unsolicited, but not unwelcome, surplus gains which "come showering" upon the entrepreneurs "as rain from clouds," as described by J. B. Clark. Mr. Keynes points out that the entrepreneurs "cannot but get rich quick whether they wish it or desire it or not,"¹¹ as a result of these occasional showers of wind-fall profits. This is all due to inflated prices or monetary disequilibrium.

These fortuitous profits or losses, though they do not add to or subtract from the aggregate concrete wealth of the community, cause nevertheless individual financial gains or losses, by transferring command over wealth from one set of persons to another. This is fully explained by Keynes in the sections on "Savings and Investment" and by Prof. Pigou in *Economics of Welfare*.¹² The entrepreneurs gain at the expense of the consuming public by a forced-up level of prices. What is important for us to remember is that the process by which these fortuitous profits are obtained is an inflation of monetary prices, and this can be measured in one way as the difference

¹¹ The Economic Consequences of the Peace, p. 221.

¹² Pigou : Economics of Welfare (1920), p. 812.

between the volume of voluntary saving of the community and that of the value of new investment.

Now business men, as individuals anxious for earning an income, cannot but take advantage of any divergence in the prices of goods which would bring them monetary gains. The prices and exchange are the only media through which they can earn their income—all kinds of profits, aleatory, speculative, monopoly or competitive. The different nomenclature or analytical subdivision of an economist does not alter for them the process by which they can pay for the resources lent or invested, or replace the capital wasted and consumed in the productive process.

Profit always comes to a business man in the form of the difference between receipts obtained by the sale of his commodity and the expenditure necessarily incurred for its acquisition. His receipts are a product of the price of the commodity and the volume of its sale. His expenditure amounts to the summation of a series comprising the price of every material or service he utilises, multiplied by the quantity he employs. Besides the hire-price for land or buildings, for credit accommodation by bankers, and for labour and skill and advice of various employees, he has to pay for the raw materials and services performed by other entrepreneurs, including the services of the government, local or central, for which he pays in

taxes, This is why we find that business fortune is affected by all kinds of influences from sun and rain, heat and moisture, sun-spots or disturbances in the electro-magnetic fields, to ladies' fashion, political agitation, or improvements in the technical methods of production, transportation, or even financing industrial needs. But they affect the business man through the prospects of his monetary receipts or through the cost of the various items of his multifarious expenditure. The factors that affect his profits may thus be physical, psychic, religious, ethical or political, that is, non-industrial in their origin, but the medium through which they can affect must be monetary and financial.

So far as the prices of any materials or services are beyond his individual control, the entrepreneur submits to them as he submits to fortuitous changes in price-level, gaining or losing as the case may turn out to be. These price-changes, in other words, stand in the same relation to the prospect of his private profits as the chance change in the purchasing power of the monetary unit itself. All that we can say is that a change in the price-level has the *possibility* of affecting his competitors equally. But actually they may affect them differently, for the burden of financial bonds will vary from firm to firm according to the nature of their contractual terms and the periods covered by their contractual obligations.

These fortuitous profits, therefore, are not dependable as a source of gain. They are likely to prove negative as well as positive. And so the activities of an entrepreneur cannot be rationally influenced or regulated thereby. These fortuitous profits, let us repeat, refer to the gains of the business men and investors as a class at the expense of the rest of the community.

But so far as any change of prices, either in the items of his receipts or of expenditure, can be foreseen, he will try to regulate his purchase and sale in terms of the anticipated prices. To the extent he is successful in correctly estimating the future, he is rewarded with speculation profits. As production is now-a-days carried on in anticipation of demand and is usually a prolonged process, profits of every enterprise are necessarily speculative to a large extent. The different trades however vary in the order of importance in which the speculative element stands to other factors of profit. In some industries the importance of speculation may be very high indeed and the business ability that can rightly read the present situation and foresee the future movements of price is often rare and can therefore secure large profits. The theory of risk, that is, fluctuation both of the price and the marketable output, as a popular explanation of profit, is, as we have seen, built largely on this fact. This refers mainly to relative differences of gain among

individual entrepreneurs, due to a combination of fortune and foresight.

Both the fortuitous and speculative profits are largely dependent upon spontaneous changes in the market prices. Their origin however is different. The one is due to monetary disturbances, and the other to changes in demand and supply for all kinds of causes, natural or institutional, industrial or behaviouristic, either of a general character or of individual significance to an enterprise. A third way of making profit lies in artificially controlling the price of a commodity by restricting its supply. The exclusive control over the supply of a commodity is called monopoly, and profits arising therefrom are monopoly profits. This control over supply is the surest way of obtaining profits and there is, therefore, a universal tendency to form monopolies to secure this gain. The different forms of combination, such as temporary association like 'corners' or partial associations like 'pools,' or more developed organisations like 'kartells,' culminating in the perfectly unified interests like American Trusts, are all attempts to secure this gain.

A monopoly, once formed, tries to increase profits through what are called discriminating prices, different prices being charged to different customers by dividing and sub-dividing the market in such a way that the custom belonging to one part may not be transferred to another. Railway

rates are the classical example of this method of collecting profits.

Competitive profits *ex hypothesi* cannot be secured through the factor of an inflated price-margin. Competition in the field of marketing presumes that the selling price is the same for all the competitors, though not their individual cost of production. To the extent this assumption is found to be untrue, we are to treat them as cases of quasi-monopoly. Whether the inflation in price is due to purely monetary causes or to causes that disturb the normal conditions of production or marketing, profits due to chance or speculation are not usually the primary economic motive that actuates an entrepreneur to take to business enterprise. He cannot depend on these factors to make his living. Competitive profits are gains which he usually expects and on which he mainly relies to earn an income for his labour or capital. Competitive profits are secured under conditions on which the entrepreneur can rely: he cannot afford to depend for his income on the unforeseen, uncertain or incalculable, but accidentally favourable influences that raise the market-price above their normal level.

We have seen that the margin of price over cost per unit of output is not the only factor that affects profits. More important is the volume of transactions or sale, for cost is also often affected by it. A second method is thus open to a competitor

for increasing his receipts and profits at the same market-price by securing a greater custom and a larger clientele. A considerable amount of money and skill is, therefore, usually spent to retain old custom and to attract new ones. It is necessary to recognise that what we call wastes of advertisement, etc., are the necessary means to retain or obtain custom for the purpose of keeping up the very existence of an enterprise. When we remember that not only are the rival members of an industry competing with each other to obtain a share of the consumer's expenditure, but each industry is also competing to wrest custom from others, the risk that each enterprise runs of losing its custom must be admitted to be considerable. Even disinterested scientific advice and moral preaching may favour the fortune of one set of industries at the expense of others. J. M. Keynes with his broadcasts on over-saving is indirectly encouraging in England the withdrawal of custom away from capital-goods or even durable consumption-goods industries in favour of those producing commodities of comparatively transient pleasure and satisfaction. Sir Josiah Stamp and religious churchmen, with their advocacy of saving, are encouraging production and consumption in the opposite direction. Hungry business men will preach and persuade by advertising in their own way.

The "wastes of competition" are thus the prime needs of an individual undertaking in order to maintain its existence. By tactful persuasion, fair dealing and other means a "good will" is created and a business connection is built up. Every firm establishes in this way a special "market" of its own, consisting of a number of customers who get accustomed to deal with it and whose continued favour may be confidently relied upon. With the same selling price, a firm can often exercise such a psychological influence over the minds of the consuming public that new customers will run for the manufactures of a particular brand and trade-mark, not because they have any justification for believing that the products are better, but because they feel that their purchase would be safer from those whose names are comparatively well known. Successful competitors thus continually contest for the expansion of their individual markets, invade and conquer their rivals' territories, and earn profits by propaganda at the expense of those who fail. An establishment of "good-will" and business connection is thus a standard method for the earning of competitive profits.

On the expenditure side, anything that reduces cost is evidently profitable. Every enterprise is thus encouraged to improve methods and to guard them by secrecy or, whenever possible, by law in the form of patents and brands. This method of

earning profits by continued efforts and improvements in reducing the cost of the process of production is, as we have seen, responsible for the Dynamic Theory of Profits.

This kind of industrial improvement however is now mostly a common property of the scientific world and the scope of benefiting by them individually is limited, except in the case of comparatively big businesses. But one of the most important causes that make for a differential advantage in competition is the capacity of a firm to command larger and cheaper credit. This is pointed out by both Veblen and Marshall: "The competitive earning capacity of business enterprises comes currently to rest on the basis, not of the initial capital alone, but of capital plus such borrowed funds as this capital will support."¹³ Marshall points out that a business man of ability will "increase his capital and credit; and be able to borrow more, and at a lower rate of interest."¹⁴

It has already been shown how profits depend on the volume of business or sale. The total volume of business transaction depends on two factors, (a) the magnitude of the turn-over and (b) its rapidity. The rate of sales-turn-over can

¹³ Veblen: *The Theory of Business Enterprise* (1904), p. 97.

¹⁴ Marshall: *Principles of Economics* (8th edn.), p. 601.

be accelerated by competitive success in sales. This we have already considered. The magnitude of the turn-over can be enlarged by obtaining a greater command of working capital, chiefly for materials and inventories. For this, business men generally look to the short credit-markets of the bankers, and not to the long capital-markets of the investors. The use of credit can thus increase the effective earning capacity of the capital invested by the entrepreneurs.

Now it is possible for some business men to command a larger or cheaper credit. The business man borrows by using his capital as collateral securities. The funds he can borrow thus depend on the valuation of his industrial equipment based upon its earning capacity. A prospering firm can, therefore, borrow a larger amount than another, although from the view-point of purely industrial capacity their positions might be equal. This is because its capitalised "good-will" itself stands as a separate basis for collateral securities. An initial difference in business fortune thus works to a further differential advantage in the power of borrowing for further gain. Again, the security of a lender lies not only in the present capitalised value of the enterprise, but also in its prospective position. This consideration sometimes enables a prospering enterprise to borrow not only largely but cheaply as well. The banker would furnish credit to him at a cheaper rate, on the immaterial

security of his prospective profits and anticipated good fortune.

It will thus be observed how an unequal opportunity for earning competitive profits can emerge from the differential credit capacity of the competitors. Not only the bankers but the public as well often lend their capital to different business men at different prices, nominally upon the material credit they command, but really upon the psychic credit they enjoy in the hope and faith entertained by the lenders in their continued prosperity. This is why we find it possible for corporations and large firms to borrow capital on long and practically perpetual terms at differential rates of interest in the shape of various kinds of stock graded upon different securities. From the economist's theoretical point of view, the funds assisting production are all capital, whether they come from borrowed credit or share capital. But from the business man's private point of view, credit is simply an auxiliary factor contributing to the financial productivity of his invested assets, which alone are to be regarded as capital. From the standpoint of the commercial and financial process actually operating, the money receipts and profits depend upon the total annual turnovers, built upon the entire volume of credit and capital; but as credit is paid for by interest, it is the invested capital that is legally entitled to profits.

This need not be regarded as a paradox, for this is indeed what we should expect. This is only a financial interpretation or monetary translation of the business process of earning profits, which we have described so often in terms of industrial factors. Just as "land," capital goods and labour, of both sets, which work for stipulated rates as well as for prospective gains, produce the industrial goods, but products, according to the productive-distributive arrangement, belong only to the entrepreneurs, so we have here the same thing expressed in financial terms and monetary units. One set of the resources of production, "land," labour and capital goods, is expressed entirely in terms of their aggregate market values, but the other set in terms of financial cost. The cost represents the price for which the owners of the former purchase the services of the latter to exercise complete control over the entire resources technologically necessary for production, and thus acquire the exclusive title to the joint product. The entire financial assets devoted to business are composed of two streams. One covers the industrial assets that form the nucleus of production, faces risks of loss and undertakes the financial responsibility for ensuring payment of rent, wages and interest and repayment of the principal borrowed from the lenders. The other represents the funds borrowed at stipulated rates.

The view-point of a business man is that of an owner. The method of control is financial and the commercial process involved in the technological production is carried on by purchase and sale. The business man, in order to become the exclusive owner of the product, acquires full control over the industrial agents. How? Both by the funds he owns and by the funds he borrows. His own funds are insufficient; so he borrows. He borrows by placing his own funds or the property into which it has been converted, as the security to ensure payment both of the interest and the principal of the funds transferred to him by the lenders. This constitutes his risk, and this stands for the lenders' safety, assurance and guarantee. The funds owned and invested form his business capital. The funds borrowed on the security of this business capital are what we call credit.

With the joint assets of both these funds, the businessman purchases the productive services of all the industrial agents, "land," labour and capital goods. He can acquire the right to the service of some by hiring, and the right of using some can only be acquired by owning and purchasing them outright, as is the case with all kinds of raw materials that are physically consumed in the productive process. In a sense he acquires the right of using all three factors by purchases, virtual or actual: hiring is purchasing the right of use for a stipulated time and for some limited purposes, while purchasing is

acquiring the right of use without any limitation of time or purpose. Thus both his capital and credit are the financial means of production, as the three agents are the industrial means. It is now easy to see why "business capital" must always earn profits, while credit involves only the payment of interest.

Unless we clearly remember this meaning of "business capital" and distinguish it clearly from the classical economist's industrial capital, in the sense of capital goods, confusion will ensue. Money-values of capital goods, in a sense complementary to "land" and labour, or in the sense complementary to consumption goods in Keynes' use of the terms, must not be regarded as "business capital." It is very necessary to recognise that the two terms "business capital" and factorial "capital" of the economic text-books, lie, as it were, at altogether different planes of economic thought. A large amount of error and confusion must hence occur, if we mix together these incongruous concepts belonging to different planes into our reasoning. Business capital and credit are concepts of one plane, while the factors, land, labour and capital, belong to another.

"Business capital," in other words, are the financial assets of the owner of an enterprise, which form the nucleus of productive arrangement and constitute the basis on the security of which credit is obtainable or the service of the

industrial resources which co-operate by contract is procurable.

This interpretation of the meaning of "business capital" enables us to see clearly why risk, in the sense of financial risk, is inherent in the conception of business, and also why risk is always regarded as an attribute of capital in the sense of "business capital," both in popular speech and in business language.

This explains why J. B. Clark insisted upon attributing risk to capital. He was always thinking in terms of business capital, as his writings and illustrations in connection with the controversies with Hawley unmistakably show. It explains again the insistence of Hawley on associating risk with the enterpriser rather than the capitalist, on the ground that none but the enterpriser can put capital to risks, no matter to whom it may legally belong. The fact is that it is the entrepreneur's entire resources, which are financially defined as business capital, that undertake financial risks. The source of the confusion lay in not distinguishing between the *industrial* and *financial* functions of the entrepreneur, an idea traceable to Hawley, and amplified and developed by Thorstein Veblen.

We can evade this confusion if we remember that, financially speaking, there are only two factors of production, capital and credit, of which the joint product is gross monetary receipts, and

whose net product is distributed as profits. Industrially speaking, the factors are "land," labour and capital goods, the physical product of which is the commodity produced: "land" or *durable* capital goods like buildings earn rent when hired and earn profits when invested. Consumable capital goods are always purchased outright by business men: they confer profits on those who produce it or sell, or on those who produce with it something for sale, but they can never earn interest. Interest can only be earned by the fluid form of finance funds, and not by the concrete form of capital goods themselves. Similarly labour earns wages when its services are hired, and profits when they are devoted to enterprise.

It may be helpful to consider here that the fixed capital services may be distinguished as a separate factor from the fluid capital services in more than one sense; on the same ground and with similar justification as the enterpriser's services are distinguished from those of the ordinary labourer.

The long-term and short-term capital seem to render different kinds of services and certainly come from different sources. The long-term or fixed and embodied capital provides plants, equipments and services for mechanising production or for extending the market or business connection; while the short-term or free and fluid capital financially helps to subdivide

the stages of industrial production, facilitates the flow of raw-materials through various intermediate processes till they ripen into finished goods, the flow of the finished product to the final consumer, and interchange as well as payment of services. These may be regarded as their respective industrial functions, that is, functions connected with the technological production and distribution of goods.

Again, saving or accumulation or property-creation proceeds from two kinds of motives,—(a) to expend the accumulation at a future date, or (b) to enlarge one's future income without any intention of decumulation. Smaller investors generally save with the first motive and larger investors with the second. Short-term or long-period investments are chosen according as the investors intend them mainly for contingency or income from property. These may, therefore, be regarded as their respective social functions, that is, functions connected with people's desires and needs.

Business capital, mostly though not exclusively, consists of long-term investments, while credit similarly is composed of short-term bank deposits.

Business capital may thus be broadly associated with some basic services not only in the technical organisation of production, but also in the social organisation to meet the needs of those

who require leisure, that is, an income without compulsory labour.

Is it wrong, the reader may question, to speak of rent, wages and interest as the incomes of "land," labour and capital—the three factors of production? If by capital we mean man-made goods, as we must when we speak of it as a physical factor of material production from the industrial view-point of society, evidently interest is never directly associated with it. But if we regard these factors not as society's but as the entrepreneur's factors of production, the classification is perfectly logical, and interest is certainly the remuneration paid on his borrowed money capital.

Under the present regime of private property, all wealth is owned by some one or other. The entrepreneur has to deal with the owners of "land," labour as well as "goods" other than "land." He requires fluid funds of money, as money is the medium of exchange by which he is to purchase many of the necessary goods and services. Money must be regarded as representing the right of the people to their individual share of the national dividend in the form of the undistributed goods left in the possession of the entrepreneurs. Money is thus an indispensable means for the entrepreneur to exercise his

function and is, therefore, a factor of production from his particular point of view.

The exercise of his functions necessitates financial contractual relations with the three other classes of owners, *viz.*, owners of (i) money-capital, (ii) "land" and durable capital like buildings, and (iii) labour. The fourth class is the class he himself belongs to, the class which possesses and distributes consumers' as well as producers' goods. He has to obtain goods from the members of his own class mostly by purchase and not by hire. His expenditure which forms the basis of his activities and income, does, therefore, consist of (a) purchases of goods outright from other entrepreneurs, and (b) hiring the services from landlords, financiers and labourers. These different payments to different sets of owners constitute for him the financial factors of material (industrial) production. His "factors of expense" constitute for him the financial "factors of production." Of these expenses, the purchase price of goods made by other entrepreneurs need not be considered as a separate factor ; for this payment does not go to the owners belonging to a different class. The financial factors of production for the entrepreneur as a class are thus fully represented by the payments made to the other classes of owners. When an entrepreneur pays his price for the goods and services purchased from fellow-entrepreneurs, their services for co-operation are paid for

indirectly by the profits they earn from his purchase price. The hire-prices are, therefore, the only kinds of payment, which need be assumed as financially necessary for industrial production for the entrepreneur class. The hire-prices are paid for the three classes of things owned by the three other classes of people. This is why land including all durable goods for hire, labour, and capital in the sense of loan-funds, may also be regarded as the three business factors of production, for which the entrepreneur pays rent, wages and interest.

Now the way of reducing expenditure is not confined to improving the productive process or to obtaining credit at a cheaper price. It can evidently be kept down by any manoeuvre of bargaining which can succeed in paying the other factors something less. This skill of bargaining either with labour or with other entrepreneurs who sell services or commodities is another source of profit.

The existence of differential competitive profits may also be due to the difference in the ability of management. The importance of managing skill has increased considerably, since the credit system of financing has increased risks of price-fluctuation, and since the increasing size of the representative

business units has enlarged the volume of capital put to risk. The test of skill in routine management is broadly the capacity to minimise waste of materials and idleness of labour or machinery, and to regulate output and stock of inventories to the volume of sale. All this reduces cost of production. The rent theory of profit finds its justification here.

The skill of management does also include the capacity of exhibiting a show of prosperity, which, though it may not deceive the bankers, may yet allure the public to subscribe eagerly to the stock that the firm may issue to add to its effective capital.

These are briefly the dominant factors that affect the profits of business enterprises under any conditions, static or dynamic, stationary or progressive. The importance of the factors will vary however with the prevalence of different circumstances. If profits be broadly defined as the remuneration that the resources are ordained to receive indirectly through the sale of the commodity they help to produce, there can arise no question as to whether there can be any profit in the Clarkian static state. But if we take profit, in the sense of pure profit, as the surplus of the actual remuneration over the prevailing standard of the market-rates for interest and business ability, etc., the question reduces itself to the consideration as to whether the actual rate earned by

investment and enterprise can be different from the rate fixed for the borrowed resources by the competitive process of the market. Pure profit, as an unstable short-period surplus, is obviously possible under any conditions. Actual profit at any time may evidently diverge from the level that is adopted as the standard. But pure profit, as a stable or long-period surplus, is a concept of doubtful validity under the static assumptions. As the Clarkian static state presumes a "perfect mobility but no motion" of all kinds of social resources, an inequality between the two rates is, of course, *ex hypothesi* untenable. No general statement, however, seems possible with regard to a stationary state, where capital does not grow and productive process knows no change. Some agricultural districts of Bengal remarkably satisfy the five static conditions postulated by J. B. Clark. Even the population is kept at the static equilibrium, the fecundity of the poor peasant women due to poverty being neutralised by the seasonal sweeps of cholera and malaria. Agricultural profits earned by the cultivators in these districts are often lower than the industrial wages. The following reasons will explain this anomaly : (1) first, the opportunity of employment in non-agricultural industries (which are located in towns) is limited ; (2) secondly, people accustomed to family life and sentimentally attached to hereditary holdings and homesteads are not willing to leave their hearth and

home for urban surroundings; (3) thirdly, many of them feel it more honourable to employ themselves than to be employed by others. It will be seen, therefore, that opportunity and willingness to move,—the external and internal conditions that determine the mobility of resources,—are the important factors that create a difference between the contract rates and profits. The mobility of the resources is likely to be seriously impeded, in the stationary society, where the people are custom-ridden and traditional in their outlook and are perfectly content to live the life of their forefathers and to keep to the environment sentimentally congenial to them. Again we should remember that in any *stationary* society competition is sure to be tempered by custom, and opportunity limited by heredity, as we see in any ancient village economy, and so the problem of pure profit will be replaced by one of fair and customary profit.

It need not be presumed that entrepreneurs even in a dynamic or progressive society must necessarily earn more than the wages and interest procurable in the market : first, because more "care and skill" are usually required to earn profit than to earn wages, and secondly, because they are self-appointed, self-employed and employers of other people, with free option to serve or employ others. The exchange economy of private enterprise does not care to remunerate anybody according to his "care and skill." The hypothesis of

option or "free enterprise" in theory is often falsified by the limitation of opportunities for employment in practice. Many are to be found, who are employers and entrepreneurs by compulsion, as there are none to employ the resources they own.

We have discussed in this chapter the factors that affect what are known as gross profits. This is the only real thing in the income of a business. Pure profit is simply an abstraction, obtained by deducting from the gross profits something chosen as the standard compensation and cost. The artificiality of the conception and of the arithmetical nature of the process by which it is derived are obvious: We are to deduct interest at the market-rate. But as there is no one rate for interest, which rate is to be taken? Consider a joint-stock company: its managing ability is paid by wages. So it ought to be easier to find out the rate of its pure profit. From the dividend we are to subtract the current rate of interest. Who is to decide, which rate? There are not only several bank rates, central as well as private, prevailing in the market, but the corporation itself may be paying different rates of interest to different classes of stock-holders. The rates, we may argue, vary with the degree of the risks run and the securities

offered. This is quite true; but in the case of share-holders the risk is absolutely unlimited or rather limited to the whole extent of the amount invested; there are no securities to serve as collateral. What is the rate of interest an economist will allow them? And would this be the standard rate common to all enterprises, private and joint-stock, and in all industries? Once we begin to differentiate between industry and industry, locality and locality, firms and firms, the bubble of pure profit will burst under the strain.

Similar difficulties arise if we want to deduct an allowance for managing ability from the gross profits of a private firm. The amount deducted cannot but be arbitrary to a large extent.

But however arbitrary may be the basis of the standard, or however artificial the mode of its calculation, pure profit is useful as a crude measure of differential profitability; it is helpful as an outward index of business success, and valuable as a general guide to the entrepreneurs' activities. No enterprise can be regarded as a success unless it brings an income which is higher than the interest the investment can obtain as money-capital, together with the wages that an active entrepreneur can procure as an employee. Hence pure profit measures the success and fortune of a business by the excess of income that one's property and person earn in the form of investment and enterprise over what they do as a loan-fund and as hired labour.

Our criticism of pure profit is directed to its value as an economic concept which claims to elucidate the nature of profit. It is not concerned with the concept of pure profit as a practical or handy measure of business success, nor as a palpable index of higher opportunity for earning incomes that investment or enterprise may offer over loans.

CHAPTER X

✓ THE NATURE OF PROFIT

In the previous analysis it has been pointed out that the concepts of business capital and its income called profit are financial concepts that relate to the private wealth of individuals, their legal rights and obligations over commodities or technical factors of production. Briefly, they relate to private property. These should be carefully distinguished from the economist's industrial concept of capital, that relates to a part of the aggregate wealth of the whole community—the part that is technologically devoted to further production. Confusion will result, if we put them together on the same plane of economic thought. It is thus clear that profit, the return for business capital, is a property income, in the sense of the income derived through the medium of wealth and not of personal efforts. This need not contradict our previous description, often reiterated, that both capital (in the economist's sense of capital goods other than "land") and labour, in the forms of investment and enterprise, earn profits. For it will be recalled that profits can only be earned *indirectly* through the medium of marketable wealth in some form or other. Even the business

ability of an independent enterpriser, Senior's fruit-seller, for example, with his profits of more than 7000 p.c., has to earn this income through the ownership of a saleable commodity. So profit is certainly an income from property.

But all varieties of income derivable from property are not profits. Concrete capital goods like land, buildings, tools or machines earn *rent*, when loaned. Money capital earns *interest*, when lent. The income obtained from the *loan* of property, in other words, appears in the form of rent or interest. But the income that property yields by the excess of its market-value over the cost of purchasing the claims of other people who have co-operated in its production or acquisition is profit. When one property is deliberately utilised to secure an indirect income through another property, the former is said to be *invested* in the latter. Similarly when the labour-power of a man is deliberately devoted to obtaining a share in any property with a view to earning an income through it, it is called *enterprise*. Investment and enterprise mean the deliberate employment of one's property and person respectively in acquiring a new property with a view to obtaining an income from it. The investor is one who so employs his property and the enterpriser is one who so employs his labour or personal efforts. The entrepreneur is either an investor or enterpriser who receives this income of profit.

The value of property and labour so devoted is called *business capital*. The expenses of purchasing the claims of other people who have co-operated in the production or acquisition of the new property are called *costs*. If the value of the new wealth so procured is higher than the cost of acquiring all foreign interests in it, the excess is termed *profit*. So profit is the surplus of the selling value of any deliberately acquired property over the price of its purchase from other proprietors. It is thus an income that one attempts to realise as an actual or virtual trader.

Now an enquiry into the nature of an income involves an examination of one or all of the following questions with regard to it :—

- (a) Who receives the income ?
- (b) What is the mode of earning it ?
- (c) What is the medium through which it is obtained ?
- (d) What is the necessity for its payment ?
- (e) What is the nature of the service that is rendered by its recipients to individuals or to society to justify its receipt ? That is to say, what is the utility of their service to the community, or what is the disutility experienced by them in rendering it ?
- (f) Wherein lies the possibility of securing this income ? What are its possible sources ? What are the conditions of its appropriation ?

It has been shown already¹ that disutility can only explain the difference of incomes earned by men of the same grade of skill possessing equal properties and opportunities in different employments relatively to one other. It cannot account for the absolute level of an income. The economic organisation does not care to remunerate anybody according to his toils and cares. Physical fatigue may sap his health and strength, mechanical monotony may stupefy his intellect, social odium may depress his feelings, degrade his character, or drive him to despair; but they do not necessarily bring him an income. Economic value or income has little to do with ethical justification based upon any kind of pain-costs, physiological or psychological. In defining profit so as to bring out its nature, we need not, therefore, take account of risks or other kinds of disutility that may accompany investment and enterprise. It is accordingly proposed to define profit as follows:

Profit is the indirect return that a property brings to its owner for the labour or capital employed by him in acquiring it exclusively, by production or by purchase of all the titles to it from all other claimants who may have co-operated in its production. Profit always accrues in the form of a difference between the actual market value of the property thus acquired and the cost

¹ See Chapter VII, p. 244 *et seq.*

of purchasing all foreign claims to it. The amount of profit is determined by this difference.

It will thus be seen that profit is the income of entrepreneurs as investors or enterprisers, only because they realise their income indirectly with the help of an acquired property. It may be regarded as the income accruing from the sale of vendible goods or as the income emerging from the ownership of any kind of property, simply because they form a part of the indirect process by which the income is to be gathered. The income is earned or obtained in the process of selling a property specifically acquired for future gain. The necessity for earning or obtaining this remuneration lies in the need of the enterpriser or the investor for an income to live upon, to provide for contingencies and accidents, and to enjoy rest, leisure and amenities of a civilised life, or opportunities for self-expression, self-development and self-realisation, cultural or spiritual, intellectual or aesthetic. The utility of the different kinds of service that is rendered by the entrepreneur to society has been fully discussed in Chapter VIII. His main function is to supply the various means for satisfying the consumer's needs or to provide commodities. Incidentally he procures also an income for those who need or seek to live upon property. The value of his services to consumers depends on the urgency, importance as well as cheapness of the means of

satisfaction supplied to them. The value of his services to individual labourers and capitalists lies in the opportunity he provides them for the employment of their person and property. The sole and sufficient economic justification for his income lies in the value of his service to society and not in any real cost or pain-cost sacrifice with which his service may be associated.

The cause of profit, that is to say, the possibility of earning or obtaining this income is not to be ascribed really to the incident of money or exchange, if we take profit in the wider sense of the classical economists as the income of the capitalist class who "advances the whole expenses, including the entire remuneration of labour." The profit of the capitalist as well as the rent of the landlord owe their origin to the same cause, *viz.*, the condition that makes it possible to procure an income from the possession of property. The cause of profit, in this sense, like that of any property-income is "that labour produces more than is required for its support."² J. S. Mill is certainly justified (if we remember the sense in which he uses the words "capital" and "profit"), when he says: "the reason why capital yields a profit, is because food, clothing, materials and tools, last longer than the time that was required to produce them; so that if a capitalist supplies

² J. S. Mill: Principles of Political Economy (Ashley's edition, 1909), p. 416.

a party of labourers with these things, on condition of receiving all they produce, they will, in addition to reproducing their own necessities and instruments, have a portion of their time remaining, to work for the capitalist. We thus see that profit arises, not from the incident of exchange, but from the productive power of labour; and the general profit of the country is always what the productive power of labour makes it, whether any exchange takes place or not. ''³ That the source of a possible income from land, that is to say, property in the form of land, arises from the surplus produce of the "cultivator's labour alone," was also shown by Turgot⁴ much earlier.

But if we confine profit to the sense given to it by our definition, the cause of profit will be found to lie, associated with the mode of earning it, in a possible divergence between the selling value of a property and its cost of acquisition. Evidently the phenomenon of profit in this sense is essentially bound up with the system of private property and exchange. The importance of profit among economic incomes will increase in a society with the growing volume of interchange, that the efficiency of transportation on the one hand and the facility of currency and credit on the other tend to bring about. Communism abolishes

³ J. S. Mill : *Principles of Political Economy* (Ashley's edition, 1909), p. 417.

⁴ Turgot : *Reflections*, § 17.

profit, not really by abolishing the consumer's freedom of choice, as Messrs. Foster and Catchings argue ; but by abolishing private property as the alternative source of earning an income and by obviating the necessity of exchange as the channel of distributing the national dividend. For if the workers are paid in money and not in kind, and if the communistic society produces articles of consumption, that can serve even as partial substitutes for each other, any particular department of production cannot possibly avoid occasional losses. The consumers' purchase may certainly fail to exhaust the entire output produced, if a commodity is unable to adequately satisfy their tastes or wants.

Now, the divergence of the aggregate selling price of an acquired property from the cost of purchasing all foreign claims to it, which yields profit in our sense, may arise from several causes :

(a) The selling prices of a commodity may spontaneously differ in different markets, and the entrepreneur may purchase it from one market and sell it in another. This is the source of commercial profits.

(b) The prices may also spontaneously differ in the same market owing to changes in the conditions of demand or monetary causes. Aleatory, fortuitous or windfall profits owe their origin to these causes. But to the extent these changes are foreseen, they may give rise to speculative profits.

(c) The prices of different commodities, formed out of the same materials, often differ, because they occupy different places in the scale of our subjective preference or valuation. We prefer fruits to vegetables though they grow on the same soil. Vegetables are more important to us as table delicacies than as rank vegetation. We value a chair more highly than the log of wood, of which it is made. Iron is more useful as steel than pig-iron. These differences in the form-utility of a raw material, *i.e.*, its value in the shape of various useful products, offer scope of enterprise for its advantageous cultivation, extraction or transformation, and give rise to agricultural, mining and manufacturing profits.

The process of growing or extracting a raw material and its subsequent exploitation into saleable goods invariably entail expenses. The probability of positive profits, therefore, depends on the condition that the consumer's price and demand for the finished product leave a surplus above the actual costs incurred by its producer.

All these three sources of profits may be regarded as natural or spontaneous sources, for they are the outcome of broad social causes.

(d) The prices of commodities may sometimes be made to differ between places or periods of time by the artificial control or deliberate manipulation of the physical or financial conditions of production or marketing. Monopoly and

illegitimate speculation profits are derived from this source.

(e) The costs of production of the different entrepreneurs who supply a given commodity in any particular market, mostly differ, due to differences in the productive processes adopted and in the efficiency of organisation and management; or to differences in the terms of contract, on which different materials or services or money-capital are secured; or to luck, that is to say, fluctuation in physical returns, as in agriculture, or accidents or opportunities of connection, custom and credit, etc. Ordinary or competition profits are secured from these sources.

(f) Lastly, the quantity actually marketed may differ from the individual optimum output, affecting thereby both receipts and costs, and thus affecting profits. This is also an important source of ordinary profits or losses.

The sources of profit may, no doubt, be classified according to the nature of economic dealings from which profit is sought to be earned, as (i) production (including fishing, raising of live-stock and cultivation, extraction and manufacture of materials), (ii) exchange or commerce, (iii) storage or speculation, and (iv) transportation. This is merely a classification of enterprises.

They do not indicate however the cause of profit, that is to say, the financial conditions which offer the possibility of entering upon enterprises, and

of earning an income from them. From this latter standpoint, the sources of profit may be enumerated as (a) variations in the general price-level, or disturbances or disequilibrium of the monetary system ; (b) divergence between the tastes of the different consumers, together with the unequal distribution of the purchasing power amongst them,—which makes the individual demand-prices vary between customers, places or periods of time ; (c) differences in the costs of production, due to (i) the unequal efficiency of entrepreneurs, (ii) their dissimilar processes of production, or (iii) their diverse contractual relations with labourers and capitalists ; and (d) varying opportunity or capacity of business men for manipulating prices. The cause of profit in this sense may be said to lie in a net price difference—the difference between the prices of the same commodity, or difference that exists between the price of a given commodity and the prices of other commodities and services of which it is the product.

But the explanation may appear at first sight to be no more than a piece of circular reasoning. That the prices of the innumerable variety of goods, services and legal rights (circulating within the system of exchange) form an interrelated system, that all the prices are mutually interdependent and are continually influencing each other,—are the common ideas of economics to-day. We can easily extend this analysis of the mathematical school and

point out further as its corollary, as Prof. W. C. Mitchell⁵ has done, that there exists a definite margin between the buying and selling prices of consumer's goods in the hands of retailers, wholesalers and merchants; a margin between the prices of the consumer's commodities and those of the various producer's goods and services required to produce them. Now "these diversities in the margin are themselves established and kept tolerably regular by the quest of profits," according to Prof. Mitchell.⁶ But we have asserted that the possibility of profits lies in the price-margins.⁷ So here the reasoning appears to be moving in a vicious circle: price margins determine profits, and profits determine price-margins. But the argument in its inner essence is not really circular. Price margins determine profits in the sense that the possibility of earning profits lies in price-differences, natural or artificial, spontaneous or manipulated. The assertion that profits determine price-margins, refers however not to the opportunity of earning this income but to the necessity of an income for those whose services, both material and personal, are utilised in the process of satisfying social needs. The immediate cause of profit, in the sense of conditions that give rise to this income, is certainly

⁵ W. C. Mitchell : *Business Cycles* (1927), pp. 108-16.

⁶ *Ibid.*, p. 109.

⁷ This is also the view of Prof. Mitchell. *Vide Business Cycles*, p. 107.

a price-margin, but the necessity of a price-margin and hence of profit lies ultimately in the entrepreneur's need for living.

It is no doubt true that these price-differences are an integral part of the system in which the prices of economic goods of all sorts are inter-related. It is also true that this price-system with its price margins is to be necessarily maintained in the industrial system so long as the system of private enterprise dominates society and so long as the entrepreneurs have to earn their means of living in the shape of profits. But this alludes to the indispensability of profits as the necessary income of the entrepreneur for livelihood in the economic system as a whole. The prospects of securing positive profits on the part of an individual entrepreneur, that is, the circumstances which insure him an individual income for himself in return for his investment and enterprise, depend upon the condition that his individual assets exceed his individual liabilities, that the value of the property he sells exceeds the cost of its acquisition. This implies not only a harmonious price-system, but also the entrepreneur's technical competence, commercial ability and marketing facility commensurate with his individual output. The factors which affect the profits of an individual business unit have been fully analysed in Chapter IX.

The cause of profit may sometimes be understood in another sense. It may refer to

the cause that explains the origin of the system of enterprise and wages, of investment and hire, of employers and employees appearing in the economic order. Prof. Frank H. Knight⁸ regards uncertainty, as we have seen, as the cause of the existence of the "enterprise and the wage system" and of profit in this sense. But it has been shown⁹ that the system of enterprise and wages is not an inevitable consequence of uncertainty. The necessity of employment or enterprise is rather the outcome of large-scale administration ; of the necessity of insuring for a class of proprietors an income from property without personal efforts ; or of the economy of planning and organising, of the specialisation of men and machinery, of social division of labour ; or of absence of opportunities for independent employment. It has also been pointed out that the concentration of uncertainty (uncertainty that is inherent in production) upon the entrepreneur's income is a pure convention : it depends largely upon the arrangement of distributing the produce. The cause of profit, in this particular sense of the necessity of maintaining a body of employers, may be found in a complex of considerations such as, the difficulty of administration, the necessity of

⁸ F. H. Knight : Risk, Uncertainty and Profit, pp. 270-71.

⁹ See Chap. VI, pp. 179-83.

assuring an income to property-holders without labour, as well as the wisdom of entrusting the work of organising production to those who can do it best. However paradoxical it may appear, the employers do sometimes appear in society as a result of unemployment. People sometimes get self-employed, as they find no opportunity of earning an income by hiring their property or person to somebody else. Thousands of Indian peasants doomed to ploughing their petty holdings with the help of usurious loans and upon payment of rack-rents, are instances in point.

✓ The cause of pure profit, that is, the deviation of the entrepreneur's actual profits from the standard profits calculated on the value of the entrepreneur's invested capital and labour at the market rates of interest and wages—has to be looked for elsewhere. This deviation can be explained on the grounds of uncertainty of physical or financial returns for one's investment and enterprise, that is, by causes whose effects are unknown, immeasurable or uncontrollable. But this explanation, as we have seen in Chapter VI, is tautologous; for it only shows that a surplus results because of the fluctuation of the aggregate returns.

✓ The cause of pure profit in this sense cannot obviously differ from the complex of causes that are responsible for industrial fluctuations.

The appearance of pure profit, in the sense of the deviation of the actual profits from the standard of cost-profits,¹⁰ can also be accounted for in another way. A surplus may ensue, when the money expenses incurred upon the so-called factors of production are reduced as a result of the improved process of production or organisation adopted by the entrepreneur, or if the expenses entailed in attracting custom are more than offset by the net returns accruing therefrom. The surplus profit (*i.e.*, the arithmetical excess above the standard profits) earned by these individualistic efforts of the entrepreneur is often called Efficiency profits, in contrast with the Scarcity profits or profits that arise from broad social causes such as changes in population, in savings, in tastes, in technology or in industrial structure of business organisation—causes that cannot be traced to the purposive activities of an individual entrepreneur.¹¹ The Efficiency and Scarcity profits may also be described in a sense as Earned and Unearned surpluses, as is done by Prof. Foreman.¹² This is merely a division of profits according as they are a product of individualistic efforts or not. It echoes the sentiment of the

¹⁰ See Chapter IV, pp. 107-8.

¹¹ See Foreman's Efficiency and Scarcity Profits (University of Chicago, 1930), pp. 44, 148, 279-80, 286-88.

¹² *Ibid*, pp. 15, 40-2.

superannuated socialistic ethics that no economic income is justifiable unless it is the fruit of physical fatigue or the product of mental toil.

The division of pure profit into dynamic and differential profits seems to be a more scientific description of this surplus than Scarcity and Efficiency profits, or Unearned and Earned surpluses. For, here we can look upon the surplus profit as a kind of disequilibrium index, as a measure of maldistribution of the Clarkian factors, capital and labour, between the diverse industrial employments. Here we can locate the sources of this surplus as (a) dynamic changes that cause inequality in the marginal return of the factors in different enterprises, or as (b) conditions that are responsible for the temporary immobility of the factors, that often exists even under static conditions and hinders the equality of returns. The former refers to conditions that disturb the state of equilibrium and the latter relates to frictional circumstances that obstruct its establishment. Both of these indicate absence of equilibrium, or of equality between the returns of the resources, invested and hired, and account for the divergence between the entrepreneur's actual and estimated returns, the money receipts and money costs, his actual income and standard profits—that is to say, pure profit. These two kinds of pure profit, dynamic and differential, may thus be described also as disequilibrium or non-equilibrium pure-profit.

Now, it is very necessary to note that equilibrium here refers to the state of the equality of marginal returns of each of the three factors of production. Disequilibrium means the disturbance of this equilibrium by new conditions or causes that make the marginal returns unequal. Non-equilibrium means non-attainment of this position due to the obstructions that confront a given set of conditions or causes that tend to produce this equilibrium. The standard cost-profits of the pure profit theorists refer to the income of the entrepreneur earned at this equilibrium position of equi-marginal productivity of all three factors. They form the base-level from which pure profit is measured. It presumes perfect mobility of the factors between diverse kinds of employment in the long run. The mobility of factors, as a matter of fact, is never equal between the diverse kinds of employment. Unequal opportunities for employing them as well as unequal disutilities incidental to different occupations impede the flow of the factors from one position to another. Broadly speaking, the employer's resources are less mobile than the resources which he hires. The hired resources earning contractual incomes have their mobility equalised over different employments by an additional reward, so far as the disadvantages peculiar to an employment obstruct their flow; and opportunities for their employment become equal by the competition of entrepreneurs.

But in the case of the employer's resources, the opportunities for independent employment are never equal. This inequality of opportunity will explain the difference in the levels of income earned by the hired and invested resources.

Competition equalises opportunities for employment of the hired resources, but not of the invested ones. Competition compensates however for the excessive disutility of an occupation by an extra payment in both cases. Competition need not, therefore, enforce perfect mobility or equality of marginal productivity of all three factors. But the pure-profit theorists assume perfect mobility and equal marginal productivity along with competition and equilibrium. This assumption precludes them from taking account of the divergence between the marginal productivities of the hired and the invested resources. They are, therefore, unable to explain pure-profit except as a short-period phenomenon. Now it is easy to see that the system of property in lands and other natural resources together with various kinds of legal rights and privileges, is a permanent source of the inequality of opportunity between one member of society and another, besides their inborn talents and mental gifts. It has been already pointed out that the conventional arrangement for the distribution of the national dividend has concentrated upon the shoulders of the entrepreneur the entire financial burden of uncertainty

that inheres in production. Now, talents of men naturally, and the systems of property and enterprise conventionally, limit the supply of entrepreneurs and of business capital. They restrict the free movement of the factors from dependent services to independent employments.

The classicists' conception of equilibrium however does not involve a mechanical equality of the marginal returns of the factors between the diverse employments, in terms of concrete commodities. It implies instead the equality of the net marginal profitability to entrepreneurs. "Differences in the risk or agreeableness of different employments and natural or artificial monopolies"—that is to say, unequal disutilities and opportunities—may cause inequality of the physical or financial returns and hence of profits in different employments. Inequality of returns or profits is not, therefore, incompatible with classical equilibrium. The position of equilibrium with the classical school connotes a state of "no motion," but not of "perfect mobility." It refers mainly to the effective motive of the entrepreneur to move the factors. The factors are not *moved*, either because the entrepreneur who has command over them has no opportunity to transfer them, or because such a transfer would not add to his net advantages and net profits. Within the limits of individual opportunities, offered by a given social distribution of wealth

and privileges on the one hand and natural distribution of talents on the other, this position of equilibrium may well be described as the state of psychological equilibrium in the minds of the entrepreneurs as a class, which leaves them under no motive to alter their individual scale of production. The remuneration that the entrepreneurs severally expect to earn at this position of equilibrium is what is called *normal profits*. It thus refers to the amount of expected (not actual) profits, which does not induce the entrepreneurs "either to increase or decrease their scale of operations."

Not only the dynamic changes of J. B. Clark but also monetary disturbances and improvements in the individual business ability or marketing facility, may disturb this equilibrium and give rise to *abnormal profits*.

Normal profits are different from the standard profits, with reference to which pure profit is calculated. Standard profits, it may be repeated, presuppose equality between the returns obtained from the hired and the invested resources, due to perfect mobility. Pure-profit theorists implicitly assume that competition enforces this mobility. Normal profits admit inequality between them even under the stress of competition; for competition does not involve the conception of perfect mobility with the normal-profit theorists, but only the presence of numberless rival producers with small individual outputs.

The cause of pure profit is thus attributed by all the pure-profit theorists of America, from J. B. Clark down to Prof. Knight and even Prof. Foreman, to want of competition in the sense of immobility of labour and capital. The English writers on the other hand, both classical and neo-classical, recognise the existence of the differences in profit even under perfect competition in the sense of innumerable rival producers.

It may be observed in this connection that two things seem to distinguish the classical analysis from that of the modern school. First, the classicists thought in terms of the active agents of production; while the modern school think in terms of the entrepreneur's passive instruments and materials of production. Product is a mathematical function of the diverse materials and services, or the mechanical result of some passive elements according to the modern theorists; while product is the creation of some active agencies, according to the classicists. Differences in productivity were, therefore, always attributed to the quality of an agency by the classicists and not to the quantitative variation of a homogeneous factor, as with the modern school of marginal analysts. The change in the method of analysis may have something to do with the change in the method of production. The preponderatingly mechanical nature of modern productive processes may have influenced the modern

economists to look upon the product as the mechanical effect of some passive elements rather than the deliberate result produced by an active agent. Secondly, the classical writers looked upon profits as a class income, the income that the capitalist-employer required to keep up his activities. The mobility of labour and capital could not, therefore, be regarded by the classicists as being mechanically dependent upon the arithmetical differences of the marginal productivities of a factor in two different employments. The movement of factors in their line of thinking could not but depend upon the motive of the entrepreneur; and his motive was always net profits, not gross products. The earlier economists did not, therefore, fail to notice that the movement of factors was affected both by the entrepreneur's opportunity and disutility in different occupations.

The conception of classical equilibrium, for the same reasons, centered round the motive of the entrepreneur. For, according to their analysis, society depended upon the entrepreneur for all kinds of productive activities.

The economists who think and reason in the terms of the three factors have to conceive of the equilibrium somewhat differently. Obviously there can be no equilibrium, so long as the factors can move from one employment to another. Now the factors naturally move after the lure of their remuneration; and every factor, according to the

marginal productivity (theory of distribution they worship, is remunerated according to its marginal productivity. So the movement of factors cannot cease until their marginal productivities in different occupations become equal. Thus the equilibrium position is with them one of equi-marginal productivities.

CHAPTER XI

THE RELATION OF NORMAL PROFITS TO INDUSTRIAL EQUILIBRIUM

The employment of various kinds of social resources for purposes of production wholly depends, as we have seen, upon the economic activities of business men. They are interested in employing these to the extent that they obtain thereby an opportunity for earning an income or profit. Production and satisfaction of social needs thus depend upon profit. The system of exchange and price-margins between different classes of commodities offer the possibility and opportunity of earning profits. The prices of the consumer's goods as well as the prices of the producer's goods including "land," labour and capital should be in such a harmonious relation to one another as to ensure a satisfactory income to the employers of social resources in production. If the volume of production in any branch of industry suffers a check somehow or other, its effects are communicated to other industries in three ways: first, a diminished volume of the purchasing power now commanded by its employers and employees would check the demand of other commodities in other industries. Secondly, the industry to which

it supplies its finished goods as raw materials, would be forced to curtail production, thus giving rise to unemployment and diminished income. Thirdly, even the industry from which it draws its raw materials would suffer similarly and unemployment would be the result. Thus the misfortune of one branch refuses to remain confined to its particular locality and diffuses itself to the whole of the productive organisation. This indicates roughly how the whole mechanism of industrial equilibrium depends for its smooth working on a satisfactory earning of profits.

Not only the material well-being but also the industrial economy of society demands that the entire social resources, "land," labour and capital, must be fully employed and utilised to their utmost possibility. This does not, of course, mean that labourers must be made to work like machines. We cannot forget even for a moment Marshall's warning that "the most economic use of man as an agent of production is wasteful if he is not himself developed by it."¹ The first test of social economy is that the resources are all employed. The second test of economy is that all these resources are so devoted to divergent uses that their marginal return to social satisfaction in every use becomes equal. The corresponding test of social economy, in terms of money value (with all its

¹ Marshall : Principles of Economics (8th edn.), p. 265.

imperfections), is the maximisation of financial returns with the fullest employment of the entire social resources. But the "business economy" under the organisation of individual entrepreneurs guarantees no such employment. Society does not undertake to pay the entrepreneurs any remuneration for their efforts or activities as such, nor for employing other people or their property. The entrepreneurs are self-appointed, self-remunerated. They supply only the goods that yield them profit. They satisfy the demands of society to the extent that it pays them to do so. The employment of different social resources, both absolutely and relatively, is thus incidental to the necessity for meeting this demand in order to earn profits.

Now the fundamental condition of industrial equilibrium is that none of the employable resources in society should seek new employments. It implies that the different factors of production should be all employed and in the same ratio as they exist in society or seek employment.

The absolute volumes of employment of the factors depend upon the aggregate demand for current output on the one hand and the aggregate of the individual outputs that the entrepreneurs severally find profitable to supply on the other.

The relative volumes of employment of the factors depend on the technical processes of production appropriate to each particular kind of

goods, and on the organisation of the industry in question relative to its aggregate output.

A given output may often be produced by several alternative processes and the volume of employment available for different kinds of resources may thus change with the introduction of a new method of industrial production. Machinery may replace "land" and labour to a considerable extent without any decrease in the physical volume of the current output. If this new method becomes more profitable, the business men will obviously prefer it.

Again, there are different methods of production for different commodities, some of which may require more machines than men, while some others may need fewer machines but more men. With the same processes of production operating, if the demand for different commodities changes relatively to one another, it is likely to disturb the relative volumes of employment of the different productive resources. Any effective change in the relative volumes of employment is likely to be reflected in the demand for new investment goods. For, the entrepreneurs cannot change the methods of production without their aid. So the proportion of consumption goods to investment goods in the current output may serve as an indirect measure of the changes in the character of the consumer's demand under the circumstances.

Let us remember however that the choice of a particular commodity or a process for purposes of production is invariably made on the consideration of its profitability to the entrepreneur (within the limits of his individual opportunity and capacity).

It is, therefore, clear that the aggregate output, the technical method of production, and the nature of the commodities produced—which determine for the factors their absolute and relative volumes of employment—are each regulated to a considerable extent by profit.

Industrial Equilibrium can thus be maintained in society, only so long as the income secured from business does not supply any motive to any entrepreneur to alter his individual product or output or method of production in a way that would leave some resources unemployed.

There are thus three elements, broadly speaking, that may affect the industrial equilibrium through profit: (a) the aggregate output, (b) the technical method of production, and (c) the nature of the products for consumption.

Of these affecting elements, the aggregate current output consists of (a) consumption goods and (b) investment goods. The demand for consumption goods depends on population, volume of individual incomes and the portion of incomes devoted to savings. The demand for new investment goods depends either on the growth of

aggregate consumption, or on the prospect of profits from a more labour-saving method of production, as well as on the advance of technological arts. The aggregate output, therefore, tends to change, as population, savings, standard of consumption and productive process change. It is to be noted also that unless the entrepreneur can adjust the supply of investment goods to the proportion of individual savings, the current output changes as a result of the change in the demand for consumption goods.

Secondly, the process of production may alter as a result of the progress of science and arts in general and technology in particular.

Thirdly, the nature of consumption may change with the taste of the consumer.

Fourthly, profitability may vary from business to business as a result of (i) monetary disturbances that may change the relative prices of commodities, (ii) progress in technology and improvements of productive processes, (iii) variation in the supply of credit or labour, i.e., savings and population, and (iv) changes in the industrial organisation as well as in the quality of the agents of production.

Ultimately, therefore, the sources of disturbance to industry may be traced to the changes in the following : (a) industrial organisation, (b) technical processes of production, (c) price-levels, general or particular, (d) population, (e) savings,

(*f*) opportunity for investment, (*g*) the consumer's tastes, and (*h*) the aggregate volume of consumption.

Suppose we start with a situation where all the employable factors of production are fully employed. The maintenance of this position in an entrepreneur system implies that the amount of profits earned by each and every entrepreneur is sufficient, and just sufficient for him to keep content with producing the same volume of output. That is to say, the profit or income which is the guiding motive of business activities, is so adjusted to the volume of output and to the interconnected system of prices—of both the finished commodities supplied and of the technical factors required for production—that the net advantages or opportunities of earning profits through alternative channels of production are equal.

This equilibrium does not however point to an equality of the rate of profits on the capital invested. The same grade of labour, let us note, need not earn the same wages; wages may possibly differ from one another according to the inequality of opportunity for employment or to differences in disutility involved in the work. Equilibrium simply indicates an equality of opportunities for earning profits along diverse channels open to an entrepreneur who commands the same resources and incurs no additional disutilities or risks.

In the light of the analyses already made, it will

now be clear that the industrial equilibrium of society must imply either of the following :

(1) that there should be no change in (a) population, (b) volume of savings, (c) industrial organisation, (d) technique of production, (e) price-levels, (f) scope of investment, (g) the consumer's taste, or (h) the aggregate volume of consumption ; or

(2) that they should so change relatively to one another that the system of interrelated prices remains undisturbed and offers no new opportunity for profit to the entrepreneurs. This means that the aggregate consumption, industrial organisation and technical methods of production should so adjust themselves to the consumer's tastes, growth of population and of savings seeking employment, that (i) all the savings may find scope of investment, and (ii) all gainful workers may find opportunity for employment.

The Clarkian analysis of static equilibrium proceeds on the first set of assumptions. J. B. Clark does not mention investment or price-levels as separate factors. The reason probably is this : as the opportunity for investment depends upon (a) the organisation and technique of production, (b) population, and (c) its standard of living, it is not regarded as an independent variable. The stability of the system of prices is obviously an implicit assumption.

THE IMPLICATIONS OF INDUSTRIAL EQUILIBRIUM.

The industrial equilibrium, therefore, need not necessarily involve the *static* conditions of J. B. Clark, nor the assumptions of a *stationary* state, as conceived by the classical school,² or as modified by Marshall.

² For the classical concept of the "stationary state," see J. S. Mill's *Principles of Political Economy*, Book IV, Chapter VI. The stationary state of the classical economists, as contrasted with the static state of J. B. Clark, appears to have been grossly misinterpreted by Prof. L. Robbins of London. The learned critic claims to have independently discovered a distinction between the two concepts in 1928, which had been pointed out by Prof. F. H. Knight in his *Risk, Uncertainty and Profit* in 1921. Prof. Robbins, it seems, has failed to keep in mind the difference between the stationary state and the character of economic effects produced by it. The static state is a state of equilibrium, but the stationary state of the classicists is not. This preliminary confusion will explain his misinterpretation of Adam Smith and John Stuart Mill, misreading of Ricardo, and his misconception of Marshall's position with regard to the classical idea of stationary state.

The stationary state of Adam Smith and Ricardo refers to the situation when wealth and capital of the community cease to grow. The problem they tried to solve was this: in the absence of any improvement in the productive process, what effect would be produced on the economic condition of the people, if capital ceases to grow with the "natural growth" of population

It seems to depend on the mutual adjustment of at least four independent variables :

(1) changes in the organisation and technical methods of production ;

(2) growth of population ;

(3) stability of prices ;

(4) changes in the institutional behaviour of the community as regards (a) their tastes for different kinds of consumption goods, (b) their desire for savings, and (c) their aggregate demand for current output, that is to say, the demand for consumption, as the demand for investment goods is limited by the technical demands of industry.

at a "constant rate" ? Adam Smith found that it would be "dull." Ricardo pointed out that it would reduce wages to the subsistence-level, unless the second principle that determined wages, viz., "the prices of commodities on which they are expended," resisted this fall.

J. S. Mill complained that the assumption of the growth of population at a constant rate was illegitimate, and the classical conclusion was, therefore, untenable. The growth of population is capable of voluntary regulation and must not be thought of as the inevitable consequence of an irresistible natural law. The stationary state, that is to say, the cessation of the growth of wealth and capital, need not be, therefore, necessarily one of misery.

But it is Marshall who modifies this concept. He treats the stationary state purely as a methodological device, a tool of analysis. He turns it into a "logical

Now inasmuch as organisation and technical methods of production determine the relative proportion of labour and capital demanded for production and, together with the aggregate output, determine the absolute volumes of demand for them, we can analyse the industrial equilibrium as composed of three different kinds of subsidiary equilibrium :

(1) A tendency to a kind of equilibrium that we shall call technological equilibrium. This equilibrium means that the relative proportion of the factors, as the technique of production demands for

fiction" created for convenience of analysing complex facts. Marshall's object again is not to trace the economic effects of stationary capital (in the absence of any improvement in productive arts) upon a growing population with its standard of life changed or unchanged. His object is to trace the influence of real costs upon value, by keeping off the influence of time and the reflex influence of demand upon supply. He, therefore, changes the concept entirely except its name. He makes the stationary state a state of equilibrium, where "the general conditions of production and consumption, of distribution and exchange remain motionless." But he points out that this motionless state of general conditions need not mean absolute stationariness of population. Population and capital may both grow (as Mill assumes in his analysis), but only "at about the same rate," provided that "there is no scarcity of land ; and above all, where the character of man himself is a constant quantity." (*Vide Principles*, 8th edition, pp. 366-68.)

efficiency, should be equal to the actual proportion in which they exist, or rather seek employment in society. The technological equilibrium thus depends on a continuous process of readjustments. It assumes that the technical methods of production and industrial organisation are elastic and adaptive enough to absorb the whole of the annual increase in savings as well as in population. It may be noticed here that the economic tendency has long been to modify the organisation and technique of production so as to provide employment for new capital only, but not of labour except as an incidental necessity. The "improvements" have rather deliberately worked towards creating an increased employment for capital at the expense of labour. The criterion of "improvements" is that the cost of a machine must be less than that of maintaining a labourer or labourers whom it replaces.

(2) A monetary equilibrium in the sense of stability of price-levels, both general and relative. The general price-level must be stable enough not to give rise to wind-fall profits. The relative price-levels must be harmonious enough not to change the prospects of profits, so that they may not induce nor enable an entrepreneur to change his product, alter his output, or modify his method of production. Prices again must not so change that they force the consumers to alter their accustomed volumes of savings or expenditure on consumption goods.

(3) A kind of equilibrium between the changes in the institutional behaviour of the community and those of the industrial environment. We may subdivide it still into the following three elements :

(a) changes in the tastes for commodities must not be out of harmony with the intrinsic qualities of the natural resources, out of which they are grown or extracted. For example, the people of a country, the soil of which is most fertile for rice but unsuitable for potatoes, cannot afford to develop a taste for the latter without impairing the productive efficiency of its lands.

(b) The growth of voluntary savings and the scope of their investment, as determined by the technical requirements of industry, must be equal to each other. Keynes has drawn special attention to this element by treating it as a necessary condition for monetary equilibrium.

(c) The growth of wants, e.g., in the form of a higher standard of living, must be commensurate with the growth of population in the sense that the demand for labour created by increased consumption must be large enough to absorb the natural increase in the supply of labour. It is necessary to notice here that a mere increase in the number of ordinary labourers does not increase the demand for goods to such an extent that it would provide for their employment in full. The reason is that under the capitalistic system of production, a labourer can

produce and must produce much more than what he needs or is allowed to consume. The surplus must go to the employer as his share of the product. The employer, the entrepreneur, or the capitalist can take his share either in the form of investment goods or of consumption goods. Now the amount of investment goods produced, which only is capable of yielding a future income, is always limited by the technical requirements of industry or by the scope of foreign investment. The investment goods can, therefore, pay only a part of the capitalist's share. The remaining portion must be taken in the form of consumption goods. In the case of the richer capitalists whose standards of living are already high enough, it may often be impossible to accept their share in the form of consumption goods. This may sometimes create a serious deadlock, and disturbances in the industrial system may ensue. We shall have to examine this case a little later.

These three kinds of equilibrium must be in mutual harmony to maintain the *industrial equilibrium*, that is to say, to prevent unemployment or under-employment of any kind of social resources.

THE TECHNOLOGICAL EQUILIBRIUM.

Of these the operation of the first kind, *viz.*, of the technological equilibrium, may perhaps be better understood and its importance better realised.

if we try to follow the process as to how the problem of an increased output of goods necessitated by an increased population is differently solved in a stationary economy like the old village community of India and in a progressive economy under modern civilisation.

The growth of a stationary society like the old Indian village community follows a curious biological behaviour, as we find in the simplest living things, *e.g.*, bacteria, worms, coral polyps and sea-anemones. Growth is followed by a detachment. A part of the parent body is torn off and lives its life just like its parent. As in these lower forms of life, so it is in these primitive forms of society. The overgrown population of a village community will form another village, living the same kind of life. Their needs will be met by the same traditional methods of production, and the size of the productive unit will remain practically the same. The doubling of population will only mean a doubling of the number of the productive units which satisfied the need of the community. A brief sketch of such a community, as contrasted with that of modern civilisation, will perhaps make it clearer.

The village is self-sufficient for ordinary needs of life. The division of labour extends to main occupations only. Each caste comprises a group of workers, and it supplies a specific commodity needed by the community. The demand is certain,

market assured, choice of work limited. Hired labour and capital often assist an entrepreneur, but their remuneration is based upon a customary standard which is itself derived from a customary standard of living. The predominant unit of production is the family, as is the unit of consumption. Every working family is thus assured of an employment and an income. They seek for most of the necessities and conventional luxuries of life directly for themselves and not through the inter-medium of money. Their normal habit of thought runs in terms of commodities and not of money. As the process of production is mechanised to a very slight extent, the saving, which is open however only to the comparatively prosperous, usually takes the form of land and precious metals.

The wants are simple, limited to a few staple commodities; and their total volume is small, being confined to a single village. The scope of subdivision of labour is thus narrow, the market being so small and so little diversified. Thus one or two potter families are sufficient to supply the entire demand for all kinds of cooking pots, water jugs, and storing jars of the whole village. Similarly with the cultivator, milkman, oilman, weaver, priest, barber, washerman, carpenter, cobbler, blacksmith, goldsmith, musician, astrologer, writer and fisherman. Though the interdependence between different classes or castes

is very close for purposes of consumption or common needs, they are less dependent upon one another for plying their individual crafts.

The raw materials needed for each craft are mostly within its own competence to provide for. The potter commands his clay, the farmer his plough, bullocks and seeds, and the fisherman owns his boat and makes his own net. Implements to aid labour were quite simple and rude. As a native of the city of Dacca, the writer can personally attest the truth of the remarks of Karl Marx that the '*muslins* of Dacca' (spelt as Dakka in '*Das Kapital*'), which "have never been surpassed in fineness" were "produced without capital, machinery, division of labour, or any of those means which give such facilities to the manufacturing interests of Europe."

This means that each occupation representing a separate industry is an almost independent whole. The consumer again is so near to the producer. The primitive rural economy is thus little dependent upon trade or exchange. Commerce or trading was necessary only for the disposal of the surplus produce or rare products of one village or town to another, as is the case in modern international trade.

As the industrial organisation was so simple, so small in size, so self-sufficient, so little mechanised and capitalistic as to be manageable mostly with the resources of an individual producer,

and as it was so little dependent on commerce, the modern financial-commercial-industrial interdependence of industries was unknown and inconceivable.

When industry is organised on such a small scale, and the representative size of a productive unit is so small and so independent, it is no wonder that an extension of demand is here met by a multiplication of the microscopic productive units, and the growth of such a village community is to be attended by a separation of the inconveniently overgrown part to form an independent entity and replica of its parent, just as the growth of many bacteria is followed by binary or multiple fission.

But the growth of the modern industrial organisation is never followed by the simple process of separation, division, fission. It reorganises itself in a way that it may better meet the needs due to its growth. Its structure gets more complex during the process. The growth of the size of an industry is, therefore, always attended with a reorganised complex structure and a different process of production appropriate to it. The representative business unit has to follow suit and change its method and structure, and a growth in its size is often the result.

It is, therefore, clear that there are generally two ways open to a productive enterprise to meet a

growing demand,—ancient and modern, stationary (in the Marshallian sense) and progressive. Its size is always—in the ancient as well as in the modern—determined by the optimum size of production relative to a particular process of production prevalent at a particular time, *i.e.*, in a particular environment. It is the law of life and growth that a thing tends to develop to the extent of its capacity to benefit by its environment. The industrial capacity of a society in any particular branch of production is reflected in the art of *organisation* and in the *process* of production. The size of the productive unit naturally tends to be one at which maximum economy of the productive resources is available: this is what we call the optimum size. This tends to be the representative size of any branch of production under competitive conditions, unless there are present in the industrial environment conditions which offer an unequal opportunity to the different productive units. A particular process of production is thus associated with a corresponding size of the most economic method of production. A *process* of production, let us remember, is nothing but an organization of the industrial technique for utilising various productive materials to their utmost possibilities. A particular process of production involves an organisation of its co-operating factors, both qualitatively and quantitatively, in such a way that the utmost possible

productive economy is realised thereby. If the qualities of the factors are assumed to be given, the condition of maximum economy relative to a particular process can well be expressed in terms of their quantitative relation alone. Suppose that the different technical factors of production (in contradistinction to the three sources of these factors, *viz.*, "land," labour and capital) are related quantitatively in a certain proportion to one another. Now if we want to measure the quantity of these factors in terms of the social resources with which the material interests of the markedly distinguishable classes of society are associated, it is necessary to reduce them to the terms of "land," labour and capital. The condition of the most efficient material production can thus be mathematically expressed in a form that we introduced in connection with our analysis of the theory of marginal productivity (Chap. V). If the quantities of the three factors actually employed were measured in terms either of their money-costs or of their common equi-marginal return at the point of maximum efficiency in a given process of production, and if these quantities were related to each other under the given circumstances in the proportion of 1 : 2 : 3, the conditions of maximum material productivity as realised by the optimum size of production would be given by the equation,

$$P = A x^1 y^2 z^3$$

where P = the total product and A an arbitrary constant.³

The conditions of technological equilibrium which demands that all the employable factors should be employed fully and in a way that brings out their maximum productive efficiency in terms of physical output, can be easily obtained from the above equation. If we find the average (properly weighted) of all the proportions of the factors, as it is necessary to employ them in the different industries according to the different processes of production followed, the proportions being expressed in terms of equations analogous to the one that is given above, this average proportion will indicate the conditions of technological equilibrium. If the average proportion, thus calculated, differs from the actual proportion of the factors seeking employment, there can be no equilibrium consistent with the maximum productivity of social resources in terms of material goods and services.

The technological equilibrium is thus wholly dependent upon the industrial *art* of production. It has no direct relation with monetary factors nor with the socio-psychic tendencies or institutional behaviour of society.

Suppose there are two processes of production open to a representative entrepreneur to meet an

³ The significance of the constant has been fully explained in Chap. V, pp. 134-5.

increased demand : one, let us assume, on which he organised his business unit, and with which he produces his individual optimum output. (The optimum output or the maximum return position is to be presumed, for otherwise the question of adoption of an alternative process cannot arise. With a pre-optimum output of production, he will evidently follow the same process with an increasing advantage till the optimum limit is reached.) The other is a new process, more economic, but requiring a larger size for optimum output. If the demand upon his productive unit is persistent and shows a prospect of permanency, evidently he will reorganise his productive unit, i.e., adopt the newer process, provided monetary and financial considerations do not otherwise block his way. And if this represents the general tendency prevailing in the industry, we say that the normal size of the productive unit has increased. The form of the equation expressing the conditions of technological equilibrium has changed. Instead of $P = Ax^{\frac{1}{2}}y^{\frac{1}{2}}z^{\frac{1}{2}}$, P is now, say, equal to $Ax^{\frac{1}{3}}y^{\frac{1}{3}}z^{\frac{1}{3}}$. That is to say, the new technique requires the factors in a different proportion. From the stand-point of the technique of production, the position of equilibrium is the point of optimum output and maximum productivity, the point where the increasing return ends with an increasing association of any particular factor and diminishing return sets in.

The conceptions of increasing and decreasing returns of the physical factors (not their money costs) in terms of material products (not their money values) are relative to this point of maximum productivity and optimum output, corresponding to the particular process of production in vogue. Agriculture is subject to diminishing returns only in this sense: relatively to the process of production current to that industry, the productive units of supply have all reached their optimum sizes of maximum productivity. The scope of increasing the aggregate output by a simple multiplication of the present type of establishments, akin to the biological method of "binary fission" common to primitive life, is presumed to have reached its limits. Increased production thus enforces a disproportionate association of the productive factors, "an inappropriate apportionment of appliances for production," and diminishing return is the outcome. Land is the nucleus of agricultural production, as plant is that of the industrial. The limitation of land, therefore, destroys the optimum proportion of the requisite resources, when an increased demand forces an increased production upon the agricultural organisation. Diminishing return thus begins to operate. Diminishing return is thus the result of the limitation of a *factor's* capacity to expand as required by the *technical process* of optimum production in response to an increased demand,

that is, its inelasticity of supply. But supply here refers to the amount of a given quality. The diminishing return may also operate, when the supply of a factor is not limited absolutely, but relatively to a quality. It also operates, for instance, when the additional supply available is of an inferior quality. The classical concept of diminishing returns is based more directly upon the qualitative scarcity of a factor than upon its absolute quantitative scarcity.

The laws of returns are relative to a given process of production, and to the optimum proportion of the factors qualitatively appropriate to the process. Suppose that the industrial processes operating in the community require the factors in the proportion 1 : 2 : 3, but the amounts of actual supply stand at a different ratio. Now a time is bound to come with a progressive increase in demand, when some one factor will be found to be in relative scarcity compared to others, with reference to the industrial demand for them all. The relative scarcity of one factor implies however that another factor must be in relative abundance to it. This means that if we try to get at the optimum position with the full employment of this relatively abundant factor, an increased supply of the scarce factor will continually increase the productivity of their combination till the appropriate proportion is arrived at. That is to say, the elastic factors yield increasing return as a result of their increasing

co-operation with the limited amount of an inelastic factor, till it just begins to be scarce in relation to them; the productivity becomes maximum at this position. The diminishing return sets in, when an increased production is attempted on the limited amount of this scarce factor in an increasing association with the other ones. This is why agriculture may offer increasing return in a new country for some time. The return is increasing so long as land is relatively abundant and the appropriate amounts of labour and capital that are technologically necessary for the maximum return are relatively scarce. So long as the productive factors are all abundant, productive units of optimum size may multiply with an increasing demand for their products without evoking diminishing returns, till the total amount of any one factor available is all exhausted. Once that limit is surpassed, we have to face production under diminishing returns. We cannot evade this catastrophe except by our ingenuity in devising another process of production which can attain the same result with a less amount of that resource, whose inelastic supply is causing diminishing marginal productivity of the other co-operating agents. Imagine the case of an economically insular England, (regarding her as a closed economy with no foreign trade); the subsistence of her population has to be obtained from her own soil. Suppose the process of agricultural production

remains the same as the traditional, but population continually increases. The demand for more food will lead to the multiplication of farms with a *proportionate increase* in the demand of all factors, land, labour and capital. But when all the available acres of cultivable soil are taken up, any further increment of food supply can only be obtained on a diminished return. The simple test as to whether diminishing return prevails or not would be to find out from the census statistics if a greater percentage of population have taken to food-supply, or if a greater proportion of capital is now devoted to it. (Our hypothesis is that it is a closed economy.) If we look at the problem from the industrial view-point of physical output in relation to human labour—which is roughly the view-point of the classical school—the conception of diminishing returns (with its implicit counter-part increasing returns) is very definite and real. But it relates to a particular factor of production (as it related to human labour with the classical school) and not to the volume of all the factors summed up in terms of any abstract unit or to their aggregate money-cost. The fact of a maximum rate of material return obtainable from a particular process of production is the real source of the economic laws of returns. The laws of returns lose much of their definiteness and social significance when we associate them with the money cost of an entrepreneur,

in place of the different kinds of social resources utilised for production. For there may possibly be many processes of production contemporaneously existing, from which the entrepreneur may extract the same amount of money profits : limited as his capacity is to earn profits by the amount of financial resources he can command, he may adopt such a process as will give the greatest employment to a particular factor in which he is specially interested. Money-prices, both of the products and their producing factors, form a mutually interdependent system, as a result of which the maximum point of financial returns and profitability may be in a constant flux, due to purely monetary causes, irrespective of the position of optimum output or maximum productivity in terms of material goods.

It is always preferable not to associate our ideas of increasing or decreasing return with the ideas of money costs or money returns. Returns should refer to the physical output, and outlay to the volumes of the different types of industrial requisites for production. Dr. Sraffa's strictures⁴ on the laws of returns are appropriate, as they refer to money-costs of the entrepreneur in the sense of diminishing and increasing costs. But his criticism would have missed its aim, had it referred to the amount

⁴ P. Sraffa : The Laws of Returns under Competitive Conditions. (The Economic Journal, 1928, p. 536 *et seq.*)

of material produce and not to its value, correlated to the amount of the physical resources employed and not to their money costs. The classical school evidently referred to the physical volumes of the productive resources and not to money costs. Marshall relates them to concrete amounts and not to money values: "Increasing return is a relation between a quantity of effort and sacrifice on the one hand, and a quantity of product on the other."⁵ "To measure outlay and output in terms of money," Marshall warns, "is a tempting, but a dangerous resource: for a comparison of money outlay with money returns is apt to slide into an estimate of the rate of profit on capital."⁶ Similarly with decreasing return. Marshall recognises that "the tendencies.....of diminishing return have their roots.....in the technical conditions of industry."⁷ He also ascribes increasing return specifically to economy of *organisation*. Marshall admits the presence of increasing returns in agriculture when land is inadequately developed or an improvement takes place in the process of production. He even treats the diminishing return as an ultimate tendency in agriculture.⁸ Still he does not correlate the two laws as the pre-maximum or post-maximum tendencies of returns with

⁵ Marshall : Principles of Economics (8th edn.), p. 319.

⁶ *Ibid*, pp. 319-20

⁷ *Ibid*, p. 170, note (1).

⁸ *Ibid*, p. 153.

reference to a particular method of production. He treats them as two distinct and opposite tendencies, one due to man's efficiency in organisation and the other due to nature's resistance. This obviously indicates the influence of Ricardo.

The laws of return appear to be most definite when we think of them as quantitative relations between the returns in shape of concrete goods on the one hand, and a particular varying *factor* of production (in its industrial relation to some given quantities of the other factors in a given process of production) on the other. This is the way we have represented them ; for thus they throw a greater light on the technological equilibrium. Prof. Pigou follows Marshall and defines them also as quantitative relations, but between the total physical output and the aggregate real costs of all the factors of production.⁹ He points out however that the conception sometimes gets hopelessly vague, when thus defined. "When changes in the relative value of the factors of production are liable to occur in consequence of changes in the scale of production of an industry," concludes our learned Professor, "it is not possible to assign a clear meaning to costs, and therefore, is not possible to construct a costs function."¹⁰ The clear meaning is lost because of the very process

⁹ The Economic Journal, 1927, p. 193, note (1).

¹⁰ *Ibid.* p. 192.

the Professor adopts for the expression of total costs in terms of the units of a particular factor. But the loss of meaning is only relative and not absolute—relative to our present situation. The return and cost are of practical significance to us as units of benefit and sacrifice. The entrepreneur's means of acquisition or medium of sacrifice is money. Society as a whole is most interested at a time in a factor which is comparatively scarce and which hinders for the time the most efficient utilisation of other resources. The relation of the product to an abstract aggregate of all the factors is, therefore, of no practical significance to society. But if a particular class of society, representing the ownership of or other interests in a particular factor, acts as the entrepreneur, or if a particular factor somehow or other becomes the common medium of payment in society, the expression of aggregate cost in terms of the units of a particular factor will have a clear and definite practical significance for that class, or at that stage of society. Prof. Pigou's illustrations will make this clear. The two processes of production are considered : "the cost of producing 500 units of output is a units of factor A *plus* b units of factor B *plus* c units of factor C, while that of producing 1000 units is $2a$ units of A *plus* $4b$ units of B *plus* $\frac{1}{2}c$ units of C."¹¹ Now suppose "when 500 units of

¹¹ *Ibid*, p. 190.

output are being produced, a units of factor A, b units of factor B and c units of factor C have equal values, but that when 1000 units are being produced, a units of A, $\frac{3}{4}b$ units of B and $1\frac{1}{3}c$ units of C have equal values."¹² "There is no reason," remarks our Professor, "in reckoning aggregate real costs, for preferring either of these relative valuations to the other. But, according as we choose the one or the other of them, the ratio between the aggregate cost of producing 500 units and 1000 units will appear entirely different." On the data given above the Professor calculates that "with the former valuation 1000 units will cost $2\frac{1}{3}$ times as much as 500 units: with the latter $2\frac{5}{9}$ times as much." With the latter valuation the latter process costs 2^5 times, only if we calculate the aggregate cost in terms of the units of A. Similar calculations in terms of the units of B and C give us $1\frac{1}{3}$ times and $3\frac{1}{3}$ times as much respectively. To a modern entrepreneur these calculations will not be helpful for deciding as to whether he should adopt the latter in preference to the former process of production. But suppose that the entrepreneur is a medieval feudal chief who undertakes production by payments in the shape of a grant of lands, —even to-day a Bengal landlord pays his priest, barber, washerman, domestic servants, etc., by a grant of lands; or, suppose that he is a capitalist,

¹² *Ibid*, p. 191.

who pays in concrete consumable goods—this is a nearer approximation to our present position ; or suppose that he is a proletariat dictator, who pays the landlords and the capitalists by the amount of labour-hours at his command ; this calculation will now be found to have a helpful meaning. With the latter valuation the latter process will not be profitable to anybody except the B class entrepreneur, who makes his payments in units of B. As passive recipients of income and with the former valuation, the A class will have an indifferent attitude, for the volume of employment of A is the same with both processes : B will gain enormously, for its employment will be $4b$ instead of $2b$: and C will lose employment. If production is dictated by class-interests, this kind of calculation will have an immense practical value for the advancement of particular class interests. But if society is interested in the economy of a particular kind of resource—for instance, it may aim to provide greater leisure for the workers or it may be necessary to economise its land or a particular kind of capital—no kind of valuation in a common unit is helpful or necessary. It will adopt that process of production which will economise the resource which calls for economy. Once we agree that it is the economy of human efforts that society should aim at, the valuation of cost in the common unit of human labour will acquire a helpful meaning to the social economist.

These considerations will show why the concepts of increasing and diminishing returns are of better service to a social economist, when they are defined in terms of the industrial relation that the physical volume of the product bears to the concrete volume of outlay of any one factor with reference to the position of maximum return or the optimum output appertaining to a given process of production. A particular factor yields increasing or diminishing return according as its increasing association takes place in a pre-optimum or post-optimum position of production according to a particular process.

From the stand-point of the community, the returns are to be regarded as diminishing or increasing, according as the production of each unit of output involves the employment of a greater or smaller quantity of one factor, while the employment of others remains the same. Whenever the actual outputs of the typical enterprises of an industry surpass their individual optimum outputs, appropriate to the processes of production prevailing and pursued, the diminishing return results. An industrial firm which is forced to produce an amount greater than its individual optimum output, is as much subject to diminishing return in this sense as an agricultural farm producing beyond its optimum. A curtailment of production in either will alike result in increasing the returns. Firms or farms that are producing on the other

hand below their optimum fail to realise their full efficiency. The most efficient position of material productivity, therefore, points to production of this optimum output. If production took place under the guidance of this kind of industrial motive, *viz.*, getting maximum possible returns out of the physical resources, the *normal equilibrium* position would have coincided with the output where their material return was the highest.

It is necessary to realise that increasing as well as diminishing returns, as defined above, have the same social significance, as far as the economy of productive resources is concerned. Both mean production under *diminished* (not diminishing) returns or *increased* (not increasing) cost from the view-point of the community. Production under increasing returns means that the cost is higher or the return is lower than that obtainable at the optimum position. That is to say, when the actual output happens to be lower than the optimum, the loss of productive materials to society is not in any way less than when the actual output surpasses this optimum.

The normal condition prevailing at present, as Foster and Catchings have asserted (with supporting quotations from President Hoover) is a greater productive capacity of the industrial plants than there is a demand for their product in the market. Hence competition at present normally forces a manufacturing enterprise to produce less than its

capacity, *i.e.*, to produce at an increased cost. Similarly the writer can assert from personal experience that agriculture in India is normally conducted under increased costs. The reason is the uneconomic position of the representative agricultural holdings with an average size of five acres. If we remember that every process of production has a corresponding optimum output, and the size of the holding occupies the same position in agriculture as the plant-capacity does in industry, in its relation to output, the cause of increased cost in our agriculture will be found in the under-employment of the farmer's managing ability, the corresponding cause in the case of modern manufactures being the under-employment of the industrial plant. The true relation of output to outlay or cost can only be understood in its proper light, if we compare it with the optimum size and optimum output. The laws of returns, as defined above, are relative to this optimum. Increasing or decreasing returns are descriptions of the same state of things: returns *increase* when the actual output moves towards the optimum, and *diminish* when it moves away from it.

But this is not the sense, the reader may be warned, in which economists usually use the terms or the common man understands them. The two laws of returns have never been symmetrically stated by economists in a way that they form an antithesis. They convey to the common

mind a kind of historical association between the output and the price of the main classes of commodities. The common man associates diminishing returns with agriculture, simply because the home-price of agricultural products shows a historical rise with the growth of population and demand. Similarly he associates manufacture with increasing return, as its price shows a fall historically with the expansion of its output. Economists at present protest however that the laws of returns are logical relations, and not historical ones; and the relation is between the physical output and the cost of production—not the price.

The most fashionable economic interpretation of these laws, in other words, is that they express a logical relation between the physical output and its money cost of production. The meaning we have adopted also points to a logical relation. But the most significant difference is that while our meaning implies a given process of production, the current interpretation assumes different processes for different output. The only rational explanation that can be attempted to account for the diminishing return applying to agriculture, if we accept this latter meaning, would be that while newer methods have succeeded in reducing the cost of manufactures, they have failed to do so in agriculture. This explanation seems reasonable. It can explain the increasing returns of the massive agriculture in Russia and in America.

Suppose we accept the economist's common interpretation of these laws. Let us assume that there are different processes of appropriate production corresponding to several different outputs. Even in that case, Marshall's distinction that one is due to human organisation and the other is due to inelasticity of nature's response, seems to be capable of being absorbed under one and the same organisation, as expressed in the *art* of production in any particular branch of industry. The art of production may be less developed at any given stage of civilisation in one branch than in another. When Neolithic man discovered agriculture, it must have been regarded as yielding an increasing return to his industry or labour, for it provided a greater scope of organisation than in hunting for meat and skins. When we think of increasing returns mainly as a result of general economic progress and not of an increased scale of production, we simply compare the productive capacity of different ages with different skill in organisation and different processes of production. Just as the concepts of diminishing returns in agriculture and of increasing returns in manufacture are reflective of an unequal development in the two spheres of the same *artfulness* or organising skill in production, the economic progress of modern age is similarly a relative concept indicative of man's greater *artfulness* in production, compared to a past age, such as the Neolithic.

The technological equilibrium, therefore, points to production not under decreasing nor under increasing returns, but under optimum conditions. Internal and external economies lose their significance at this position of maximum economy of social production. Again an economy which is *internal* to a particular enterprise is *external* to all others who utilise its product in their production. Thus it is that the internal economy in the industry of transportation appears as an external economy to other industries which profit by it. Even if we look to the financial economy in place of the industrial, we can see how the internal economy in the supply of credit by banks acts as an external economy to all who require its aid.

If every entrepreneur is producing his individual optimum output with a process of production to which his resources are equal, he will have no motive to alter the output. Why ? Because profit depends on output and on prices. With a stable price-system assumed, his profit will be maximum when his output is optimum, for his receipts and disbursements will be simultaneously highest and lowest at this optimum position.

If the prices differ, a different process of production may yield him greater profits, thus tending to change output and relative volumes of employment of the different factors : this means industrial dis-equilibrium.

If the organisation and processes of production undergo a new scientific revolution as in the application of non-human power to machinery, this will again disturb the equilibrium. For here the employment of resources will not be affected by mere gradual readjustments, but by a wholesale reorganisation of industry on a new basis. Industrial Revolution was due to this kind of innovations.

Technological equilibrium, therefore, presumes an absence of this kind of new scientific inventions that may revolutionise the relations of the factors *inter se*. It presumes, in other words, an absence of all kinds of *dis-continuous* changes of the industrial environment.

MONETARY EQUILIBRIUM

Industrial equilibrium, we have seen, depends also on the stability of the system of prices, or monetary equilibrium.

Monetary equilibrium does not call for any further remarks here besides those already made, except to draw attention to Keynes' condition for equilibrium, *viz.*, $I=S$. That is, the value of new investment goods must be equal to the value of savings, in order to maintain the stability of general price-level. We shall presently¹³ examine the cause of their deviation.

¹³ See pp. 409-15 below.

Let us now proceed to consider briefly the importance upon industrial equilibrium of the changes in the institutional behaviour of the community, particularly in its habit of consumption of commodities, and of spending and saving incomes.

THE EQUILIBRIUM OF INSTITUTIONAL BEHAVIOUR

It is easy to see that any sudden change in the habitual behaviour or customary conduct of the consuming public will throw the whole machinery of economic organisation for production out of gear. A change in the apparently non-economic behaviour of the people, such as preference for urban life, or modification in religious practices, superstitious observances, and social tendencies like birth-rate or death-rate, may mean an enormous dislocation of economic equilibrium. Our village priests and astrologers as professional classes are having harder times with the growing efflux of the middle class people from villages to towns, with younger generations being less orthodox in religious observances and less superstitious in believing in planetary influences. An epidemic may benefit doctors, nurses, medical stores, and funeral undertakers, while a sudden fall in the birth-rate may inflict hardships upon midwives and may affect the fortune of the manufacturers

of child's wares from feeding bottles to perambulators. When we come to a change in the taste for foods, the styles in dress, or the fashion in dwelling houses, it may sometimes lead to a national disaster. The growing taste of the German people for wheat in place of rye has at present adversely affected the fortune of Germany's agriculture; the rye-fields are unsuitable for a profitable cultivation of wheat and the prospective wheat competition from Russia is being regarded as a menace. The Indians' preference for Khaddar (home-spun cloth) has affected the fortune of factories in Manchester. The Bengal peasants' fancy for corrugated iron roofs in place of thatched ones has destroyed an important rural industry and has created a new import trade.

These instances are intended to show generally how certain tendencies in social behaviour may affect the industrial equilibrium.

Let us now enquire, why the habitual standards of saving and consumption must harmonise with the needs of industry for the investment of capital and the demand of society for the employment of labour.

We shall particularly examine in this connection how the habit of the capitalist class to accept the bulk of their income in investments may affect the industrial equilibrium of society.

HABITS OF SAVING AND CONSUMPTION AS RELATED TO INDUSTRIAL EQUILIBRIUM

Individuals work in society with a view to secure both their living and leisure. The means for purchasing leisure is a primitive discovery, *viz.*, property. Land perhaps was the first form of property by which the owner could make others labour for his living. The limit of property's share in the national income has long been pointed out by the Physiocrats. It is their much ridiculed *produit net*. Income from property can never exceed the difference between the total income and the income that is necessary to maintain the actual labourers—this is the substance of their teaching. Turgot explains: "These laws [human conventions and civil laws] could guarantee to the man who took no part in the work himself only that portion of the produce which the land gives over and above the recompense due to the cultivators."¹⁴

Civilisation has since progressed much further, money-exchange has replaced barter, credit has superseded gold, the possible forms of income-earning property have extended, not only to durable consumable goods like houses and cars, and investment-goods like plants and machineries, but also to intangible rights like corporation

¹⁴ Turgot: Reflections, Sec. 17.

securities based upon good-will. Savings have now come to mean a demand for an income from property, a demand for earning leisure or a mode of living without compulsory labour. Besides finding the means of society's maintenance, the task of meeting this demand for leisure, *i.e.*, the task of finding the appropriate forms of property that can purchase leisure, has also devolved upon the entrepreneur somehow or other. The entrepreneur meets this demand by the "round-about" method of production. The needs for livelihood and leisure are both satisfied by the same process. But here, as in the Physiocratic agriculture, the share of the proprietor has to be limited to an amount, not exceeding the surplus over the worker's needs for consumption; and the form in which the property-holders can take their share is also confined to the actual products turned out by the productive organisation.

Let us try to think of it a little more concretely. Let us assume that the 10 p.c. of the population of a community lives on property-income and the 90 p.c. on wages; and that both the labour and the capital of society are fully employed. Suppose that the organisation and the technique of production so improve that, with an increased volume of capital (income-earning property) formed out of the capitalists' savings, the needs of the whole community can now be met by the labour of the 50 p.c. of the population

instead of 90. The unemployment of the 40 p.c. would be its inevitable consequence. The volume of unemployment here may be taken as an indirect measure of the technical economy effected, as the aggregate volume of the social demand for goods is assumed to remain unchanged.

Now what would be the effect of this technical economy in production upon the distribution of the social income? The real income of the community in the form of concrete goods and services does not alter in amount *ex hypothesi*. The money-income too need not alter, if the general level of prices continues unchanged. Supposing that the level of wages remains the same as before, the share of labour, financially speaking, would now shrink in proportion to the contracted volume of its employment. The whole of the amount saved by the entrepreneurs in wages, viz., the wages of the 40 p.c., would now go to swell the capitalist's share. This is no doubt true, so far as the financial distribution of social income is concerned. But how can the capitalists actually realise their share in a concrete form under the given circumstances?

It is easy to see that if there is a further scope for new investment within the community or outside it, the capitalists can take their share in the form of investment goods. So long as their savings, i.e., the excess of their income over the accustomed expenditure on consumption,

does not overreach the scope of investment, no difficulty arises from the growth of income and savings. But when there is no such scope of investment, the capitalists must appropriate their share in the form of consumption-goods. For, if they insist upon saving the amount of their increased share, though there is no scope of employing it in the form of an investment, the result will be that a portion of the consumption goods produced will be locked up as inventories or as an unsold stock. This portion will be equal to the value of the wages of the 40%—the increase of the capitalist's share as the result of improvements. The purchasing power of labour is limited to the volume of their wages. They can spend on consumption the full amount of their wages, but they cannot spend more. The portion of the total output they can buy must be necessarily limited, therefore, to the amount of wages. So the capitalists must agree either to consume their share instead of saving it or hold it in the form of unsold stocks or inventories. The holding of unsold stocks is evidently a loss. The only way in which they can escape out of this *impasse* is to sell the goods in a foreign land.

But within the country itself there is no chance of getting these commodities sold without losses. To avoid these difficulties, the production may no doubt be curtailed. But the curtailment is to be pushed not only to the limit of the consumption of

the 50 p.c. wage-earners, but to a lower figure still, for the reduction of output must mean less employment of labour, reduction of wages and hence of sales. This means also unemployment or under-employment of technical plants, *i.e.*, losses in rent, interest and profits. Hence one inevitable result of technological improvements and new investments is to create both unemployment and losses, unless production can be extended in response to an increased home-market or to a demand for investment in foreign lands.

This result, let us repeat, is conditional upon the capitalists' refusal to take payments in consumption goods. Of course, their consumption need not be confined to perishables or semi-perishables like food or motor-cars, it might extend to durable goods like castles, Tajmahals, or Pyramids. So long as their share of property is realised in the form of goods includible in the current output of society, this demand can be met.

But if the capitalists refuse to take this share in the form of non-investment goods, even when no new investment is possible,—when their greed for investment, in other words, exceeds the limits of the entrepreneur's need for them—there is no way of satisfying their claim. It is a sheer physical impossibility.

The drift of our previous analysis may be summed up as follows: First, within a closed

economy the scope of new investment and hence of an increased share of property is not only limited by the technical advance in capitalistic production, but also by the aggregate demand for consumption goods. Now inasmuch as the purchasing power of labour is limited by the volume of their wages, production should be undertaken not on the basis of the aggregate population and their needs, but on the basis of the employed section of the community and their income destined for consumption.

Secondly, with the concentration of capital in a comparatively few hands, the income of the capitalists practically ceases to be realised in the form of consumption goods. Their income swells the volume of automatic savings, and it cannot but seek realisation in the form of new investments. In the absence of any scope for continual investments of a progressive kind, either at home or abroad, the savings of the community cannot but exceed the scope of new investment.

Disequilibrium may thus result not only from the volume of savings running ahead of current investment, but also from the previous investment exceeding what the aggregate demand of the community for consumption goods should warrant.

In cases of overinvestment, however, the obvious remedy is to increase the capitalist's standard of consumption. The products of the

overinvested capital, that cannot be disposed of to the wage-earners, must be consumed by the capitalists themselves.

“ Why not sell to labour at a lower price? ” one may question. The answer is that a lower price means a virtual transfer of the capitalists' share to the labourers. The same fixed money income of labourers will buy them a greater volume of the physical product—now at a lower price. If the whole surplus of the capitalists' share that they are unwilling to consume, has to be disposed of at prices low enough for the labourers, this means that they forego their share. Financially speaking, it would mean that the investing capitalists suffer so much losses.

The income of the labourers is limited by the wages they have received from the entrepreneurs as their due share. How can they buy with it the produce that belongs to the other share ?

This clearly shows that in a society where and to the extent that there is no scope or opportunity for new investment, the capitalist class or savers (meaning all who earn an income through property) must take their share of the national dividend in real products, or they must forego their share in favour of the non-savers or non-capitalists, if they care to maintain the normal rates of income from their property. That is, they must spend on consumption goods the entire amount by which the opportunity of new

investment falls short of the value of their proper share.

An increased consumption by the capitalist will appear to be doubly necessary, if we are to provide employment for the annual increase in the number of gainful workers of a progressive community and thereby maintain the industrial equilibrium. For, we have already pointed out that the needs of employment of a given annual increase in labour, under modern conditions of technical economy which enables an ordinary labourer to produce much more than the value of his customary standard of consumption or of wages, cannot be met except by a more than proportionate increase in the consumption of the capitalists.

Now we have already seen from Keynes' equation, how a difference between the values of I and S gives rise to fortuitous profits and disturbs the monetary equilibrium and stability of prices. Here in the above analysis we have tried to peep behind Keynes' equation in order to find out why S tends to exceed the value (I) of the new investment goods. This may be due, as we see, to the behaviour of the capitalist class in refusing to realise their share of the national income adequately in the form of consumption goods. The share of property in the national dividend is much greater than what its owners have the capacity or appetite to consume: so they naturally want to be

paid in income-bearing capital goods (C). But when entrepreneurs are unable to increase their demand for them, a deadlock is thereby created.

In view of the importance of this conclusion, we shall repeat it in a different form. Mr. Keynes traces disequilibrium (monetary) to discrepancy that may arise between the value (I) of the new investment goods and the volume of savings (S). Our analysis seeks to trace this discrepancy further up to its source, *viz.*, the motive and the conduct of the capitalist class in the acquisition and disposal of his income. When the capitalist saves or has to save, not for a flow of income to increase his enjoyments, but for a fund of capital-values for further accumulation—when the capitalist, in other words, seeks to create properties not for satisfying his future needs of consumption, but for gratifying his greed for ostentation in capital accumulation—the volume of savings cannot but exceed in the long run the scope of their investment in the home country. And this conduct is the direct outcome of the concentration of property in society.

The root of the trouble, if the above argument is valid, seems to lie deeper in the system than what appears on the surface in the form of over-investment or over-savings. Over-savings are almost an inevitable outcome of the concentration of the capital of the community. Over-investment, in the sense of the higher capacity of the industrial organisation for production than what the

community's demand for consumption warrants, seems to be a social necessity, not for the satisfaction of society's current needs, but for the employment of the entire labour population of the community under the modern technical economy of capitalistic production. The source of the troubles, therefore, seems to lie in the refusal of the property-holders to receive their share of rent, interest and profits in the form of consumption, that is to say, non-investment goods. Losses and unemployment are thus the inevitable outcome of the concentration of capital, coupled with the capitalists' ignorant obstinacy to insist on payment in investment goods only.

If our analysis is sound, the source of the evil is not to be sought in the socialist's property as such, nor in the communist's profit-economy. Veblen's attack on the "capitalised good-will" being made an over-head cost of production, and Mr. Hawtry's denunciation of "pure profits" as "the privilege of trading good-will," may appear to be morally justifiable, as profits are thereby made to earn profits on the principle of compound interest. But they do not tend to produce an instability of the economic system.

The real trouble is not with mere appropriation, nor even with mere concentration, but with the capitalist's greed for *incomes*, that must not come in to them except in the form of income-earning property. This is a demand which it

is impossible to satisfy, unless the community has an unlimited market for foreign investments.

Inexpansivity of the capitalist's expenditure on non-investment goods at a rate that the technique may demand for the full employment of society's supply of labour, thus appears to constitute the source of instability of the modern system of capitalist production.

The source of the instability of modern capitalism appears to lie in the capitalist's habit of accumulation, heedless of society's need for it, or of his own.

A question may naturally occur to us: Is reduction of interest-rate a remedy for this disequilibrium? It is a remedy, or a palliative, according to the extent that it increases the share of labour at the expense of property. But it cannot completely remedy the situation, unless the capitalists agree to forego in this way all the excess of their savings over the scope of investment. For the non-capitalist class cannot take up the capitalists' share of the product, even if it so desires, for they would always lack this extra purchasing power. Capitalists may distribute away all that is due to their share in excess of their capacity for investment and consumption, by accepting lower rates of interest and profit. Or they may increase their consumption to the fullest extent of their dues. But there is no third way by which the entrepreneurs can pay up their dues in the absence

of an opportunity for foreign investment. The demand for home investment as well as for the employment of labour can only increase with the increase of their consumption.

Let us remember that the apportionment of incomes in the form of money represents the financial distribution of individual claims over the national dividend. Savings simply represent a method of the personal distribution of one's income. Individual saving is not a method of appropriating one's share. Investment and consumption are the only two ways by which an agent of production can realise his share in the social distribution of the current output.

Industrial equilibrium, we may sum up, is attained or maintained when entrepreneurs do not find any venue of profitability in shifting the resources of production from one branch to another. Our assumption has been that every entrepreneur produces his optimum output with the particular process of production suitable to his technical and financial capacity and most conducive to his profit. We assume that though there are different processes of production with corresponding optimum outputs known to the producers, they offer the entrepreneurs no motive for a change, because the special

market they individually command will not make it profitable. The cost of production of this optimum output comes to correspond to Marshall's *normal supply price*,¹⁵ when it represents the *mode average*, i.e., the most fashionable or the most frequent individual output within the industry. The normal supply-price is the price just sufficient to produce a given output, and it is correlated to a margin of production, where "the *marginal* unit is a whole process of production rather than a parcel of goods." We say it corresponds with the *normal* price under the stipulated conditions, because "the course of action which may be expected" from the entrepreneurs under the motive force of profits realises its goal here and the force spends itself out under the circumstances.

We have broadly discussed above the main elements of the industrial equilibrium. Let us now briefly enquire into the process by which the stability is restored to the system, when its equilibrium is upset for some reason or other.

THE INTER-EQUILIBRIUM PROCESS OF ADJUSTMENT

Let us now suppose that a disturbance sets in, a rise in the demand for a particular good steadily takes place. Evidently the whole industry will

¹⁵ See Principles of Economics, V. v. 5 and 6.

tend to expand and draw the necessary resources from other industries. The whole industrial system thus disturbed will tend to reach another position of equilibrium. But any and every *firm* belonging to the industry will not give us an idea as to how the readjustment is taking place. For the forces which act upon the economy of an individual firm are quite different from those which influence the industry as a whole. An able and enterprising business man can expand the output of his firm, even when the whole industry is decaying, by swallowing up the custom of the dying firms and taking to a newer process more suitable to his new scale of production. His individual growth is only limited by his individual managing ability or capacity of commanding credit or capital on the one hand, and by the custom it can cater for on the other. It may rob the custom from a fellow-producer, by what we call competition, provided the capital and credit at his disposal together with his ability come up to what is needed by the new process and new output. We have seen how every advance in the expansion of his business places him at a position of greater advantage than his competitors, how he can even obtain credit at a cheaper rate. Thus a change in the individual ability or fortune or competitive advantage may sometimes lead to a readjustment of individual sizes of business without any change in the

aggregate output of the industry or in the proportion of the different resources needed for it.

The demand for a greater output of an industry as a whole is in most cases due to a gradual change in the taste or habit of the people, or a slow introduction of a new means for satisfying a taste of the consumer or a need of the producer in his technological process of production. The demand for electricity and wireless, steel and gunpowder, petrol engines and aerial transport planes, are illustrations of such a demand creeping into our society. But these are instances of progress, where human taste and industrial technique react upon each other. Let us turn our eyes to cases where taste and technique remain practically the same, but environment changes in a way that encourages the demand for a particular means of satisfying the taste to obtain a greater economic expression. Let us think of a tendency of hackney carriages being replaced by taxi-cabs, bullock carts by motor lorries, and rowing boats by steam launches. The instances are apparently those of a demand for a better quality of goods rather than a quantity. But these are really often the outcome of efforts to meet the demand of a quantity by means of a quality. The population of a city grows gradually. Its demand for extra accommodation in housing may be met by more buildings of the same height, or newer buildings of a higher height. Its demand for extra transport may be

met by more horse carriages and bullock carts, or by taxi-cabs and motor lorries. The former method is the *stationary* way akin to the biological process of "binary fission," the latter is the *progressive* way akin to the biological process of "evolution." The former is the method of invariant reproduction and the latter is the method of productive variation, a fruitful field for a kind of competitive selection, analogous to that of Darwinian "Natural Selection."

Now the very fact of the growth of population postulates a certain change in the economic environment. This change of environment is likely to offer unequal facilities to different producers with different types of productive processes existing at the time, who would try to profit by this intensified demand. The new capital and business ability that would be attracted to this industry, or the old firms that were planning re-construction, would obviously select that process which would hold out hopes of highest profit. Taxi-cabs and motor lorries are replacing hackney carriages and bullock carts in Calcutta. The growing population has led to the growth of the city area. Normal distances of transport, both for passengers and goods, are continually increasing. Time-cost which was an indifferent item at the period of short destinations, has turned into an important consideration, even when the money-cost of the two alternatives is equal. This is a factor on the

side of demand, the influence of which is continually favouring the one at the expense of the other, with the changing environment. On the supply side, these inequalities are growing more serious still : the contraction in the volume of the old trade has been accompanied by a diminution in the economy of the organisation available to it. The cost of obtaining feed for the animals and the cost of repairing carts and carriages are growing higher ; while the wages of the drivers of motor vehicles, the cost of repairing and replacing parts, and even the price of petrol are getting gradually lower. The improvement of roads of suburban areas is another factor that favours the motor traffic. This is a simple instance of how a changing environment may favour a particular process of production to develop and flourish. The influence of this environmental selection of a particular variety may also be seen if we look at the present competition between the railways and the bus companies of England. The railways with all their swiftness cannot serve the internal areas away from their lines as satisfactorily as the buses can. The factor which is favouring the buses is the environmental development of the excellent network of metalled roads all over Great Britain, and for which they have to pay no cost. Moreover, the increased traffic is improving their organisation, as in a common agent for all companies, which is minimising cost and increasing

efficiency at the same time. It is easy to see, therefore, that an increased demand for transport that is bound to develop with such a progressive and civilised country as England, is being utilised by the different means of locomotion with different advantages at present.

These simple illustrations will show roughly how the environment exercises its selective influence on the growth of particular industries. Biological environment has a similar influence upon the development of a particular species. But an analogy between the biological evolution and the economic development is not on all fours. Biological variation takes place at random; selection is guided entirely by environment; selected species itself is ignorant of it and does never seek to exercise any purposive direction of development. Here in the economy of human society, the environment no doubt exercises a selective influence upon some species of industrial processes, but the agents benefited are fully conscious of it as also the agents put to a disadvantage. The agents in human society do, therefore, seek to modify the environment in their favour. The system of protective tariffs and laws may be cited as a typical example of this modification. The progressive institution of property in patents, copy-rights, trade-marks and "good-will," is another.

Thus we see that the development of an industry is often helped by the partiality and favouritism,

that is to say, congeniality of the environment, but in the growth of an individual firm this is not a direct factor of selective promotion. Environment benefits an individual firm only as a member of a particular industrial species. An individual business enterprise, as we have noted already, thrives mainly by its individual opportunities and abilities: its success in combining business ability with the requisite capital at the initial stage, and in securing credit and building up a business connection later, determines its size, the process of production it can adopt, and the degree of benefit it can thus derive from the environmental conditions. All these determine the supply-price of the commodity it provides, and the profits it earns. Two influences, we can sum up, act upon an individual firm: one, congenial environment helpful to the growth of the industry it belongs to, and the other, its innate potentiality (including individual opportunities) and organising ability (including competitive capacity) to exploit the environment. Economies obtainable by a firm from its individual capacity and opportunity Marshall calls *internal economies* and those derivable through the industry from outside *external economies*.

Now if we want to have an idea as to how the environment, such as a changing demand, is influencing an industry, we cannot get it from a firm of the industry selected at random. For there will be

found many firms which, from misfortune or incapacity—it is difficult often to dissociate the two—may dwindle while the industry itself is prospering. Again there may be some with exceptional luck and pluck, that have prospered individually much more than what is most typical in the industry. The enterprises of Carnegies and Fords are abnormal monstrosities; they do not represent the usual tendency of the steel or motor industries. So how can we find out the general tendency of development of an industry? Marshall suggests a way, *viz.*, his well-known but much-abused, much-criticised, much-misunderstood, Representative Firm. A critic may be expected to enquire why Marshall mixes the internal and external economies' all together. The answer is simple: he does not *mix*, he simply correlates the two tendencies that are operating upon the typical firms, one exclusively due to the prosperity of the industry as a whole and the other exclusively due to its innate capacity of Adjustment and Innovation, to quote the happy expressions of Mr. Dobb. In terms of biology one reflects the influence of environmental selection and the other represents the tendency of individual mutation or variation.

But it is the type of individual variation come into being, that determines for that variety whether it can survive the selection of the environment and thrive under it. Similarly it is the type of internal economies obtainable that determines for that type

of firms which embody them, whether it can reap the external economies and thrive under them. There are many varieties of firms struggling, there are many variations in their internal economies, with the result that there are many differences too of an advantageous or disadvantageous sort in their capacity to benefit by their industrial environment, in their ability to derive the external economies. Competition selects the advantageous variations and continually removes a large majority of the disadvantageous ones, so that the average of the industrial species moves in the progressive direction. The type of the firm that represents this moving average of internal economies with which it can best reap all the advantages of the continually increasing external economies of the progressive industry it belongs to, is what we should understand by Marshall's Representative Firm.

We have already dwelt upon the essential interrelation between the optimum *size* or *output* of a firm, its *process* of production and the extent of the market ; all these are dependent again upon a proper combination of the individual abilities, opportunities and capital resources of entrepreneurs. Internal economies are associated with the size of a firm, for the size can express and represent in a shorthand fashion the individual ability and opportunity of an entrepreneur for "Adjustment and Innovation"—the type of individual variation. The extent of the

market a particular firm can capture, its capacity to withstand competition, the process of production it can adopt, the sort of plants and machineries it can utilise, that is to say, the extent of external economies it can derive—all depends on the entrepreneur's individual capacity, *i.e.*, the size of the firm. If the business unit represents the analogue of an organism in biology, struggling to hunt for food, which is profit, the internal economies may be regarded as its size, strength and the capacity of a like kind to exploit the industrial environment in its favour. It will now be clear why the external economies of an industry is to be associated with the internal economies of an appropriate size ; the proper utilisation of the external economies is not possible otherwise. The firm that realises these conditions and combines these capacities is Marshall's *representative firm*. The influence of the economic environment upon the industry that this Firm *represents* can be seen if we look to its external economies.

With the help of the conception of a representative firm, Marshall attempts to form a picture as to what types of business organisation, what methods of industrial process, and consequently what sizes of a business unit are expected to flourish best when the industry shows a certain tendency of development. The representative firm simply represents our optimum size of output

corresponding to a process of production that is most promising and is going to be increasingly adopted with the development of the industry. It is thus a device for forming an idea of the expected long-period supply-prices of different outputs in the industry, where different outputs presume different processes of production as well as continuous changes in organisation. Prof. Robbins¹⁰ seems to ignore this interrelation in his criticism of Marshall's Representative Firm.

The concept of the Representative Firm may be regarded as an analytical tool to help us to understand the transitional process of adjustment from one position of equilibrium to another under conditions of competition. It is immaterial whether we agree or not to recognise it as a tool helpful for purposes of understanding the process of adjustment and equilibrium, that takes place under conditions of progress. For, as Prof. Pigou often remarks, different devices might help different people quite differently. Everybody is entitled to choose his own analytical tools for the sake of clear conception or exposition. But we must remember that an increasing demand in a progressive state is never met by the stationary method of simple multiplication of any given type of plants. Every change in the demand for a product of an industry changes the whole industrial

¹⁰ See *Economic Journal*, 1928, p. 387 *et seq.*

environment ; for, as we have pointed out repeatedly, every industry is interwoven with the rest of the economic system by industrial, commercial and financial bonds. A simple multiplication of plants akin to the biological method of " binary fission " is impossible, where the physical resources are limited and restricted. An increased aggregate output is to be usually associated, therefore, with a different process of production and a different size of the firms that adopt the new process with an altered volume of the market to support it. An implicit waste of resources and ability cannot but be assumed under the usual competitive conditions to maintain the market. That is why conditions within an industry are so unstable in any progressive—and as progress takes place to-day always through the medium of machines—and capitalistic society. In semi-feudal stationary societies of pre-modern India we find, therefore, a tendency to prohibit competition within their simple village economy. Instability meant industrial waste, economic misery and moral degradation of these tiny communities. That is why the market to each producer was assured and protected with the unwritten law of communal customs.

Whether we recognise the existence or utility of a representative firm or not, we have to recognise the fact that when an industry expands, that type of firms only dominates the industry which can profit most by active adaptation or passive adjustment

to its industrial environment. The supply-price of these firms represents the supply-price for the whole industry. The competitive profits earned by these optimum-size or optimum-output firms are normal profits. These normal profits constitute in Marshall's system the supply-price—the long period supply-price of all the elements comprised in his conception of what he called "business ability in command of capital." This consists of three elements: "The first is the supply-price of capital ; the second is the supply-price of business ability and energy ; and the third is the supply-price of that organisation by which the appropriate business ability and the requisite capital are brought together." ¹⁷ Marshall explains: ¹⁸ "In long periods...all investments of capital and effort in providing the material plant and the organisation of a business, and in acquiring trade knowledge and specialised ability, have time to be adjusted to the incomes which are expected to be earned by them : and the estimates of these incomes therefore directly govern supply, and are the true long period normal supply-price of the commodities produced." It has long perplexed the writer to find out what Marshall means by his third element, *viz.*, "the supply price of that organisation by which the

¹⁷ Marshall: Principles of Economics (8th edn.), p. 313.

¹⁸ *Ibid*, pp. 377-8.

appropriate business ability and the requisite capital are brought together." The third element refers, as is shown by an article of Marshall¹⁹ himself, to "Insurance against Personal Risks," the set of risks the business man incurs in working with borrowed capital. This will show how Marshall's representative firm is practically identical with the type of firms that we described as having an optimum output and which command industrially, commercially, financially and competitively a position best suited to exploit the industrial environment.

The above analysis is an attempt to show how the normal profits of the dominant type of firms (dominant in the sense of the most capable of profiting by the environment) regulate the flow of resources from one industry to another. That does not mean, we would once more repeat, an equality of profits between various firms and trades. They will differ, as wages differ, according to the inequalities of opportunities and unequal disutilities that are faced both by capital and business ability individually and also collectively to form an appropriate union. We would also repeat the teaching of Turgot, whom we have already quoted elsewhere, that in spite of different levels of profits in different industries, there obtains a kind of

¹⁹ Q. J. E., Vol. I, p. 479.

equilibrium, "as between two liquids of unequal gravity which communicate with one another at the bottom of a reversed syphon of which they occupy the two branches; they will not be on a level, but the height of one cannot increase without the other also rising in the opposite branch."²⁰

It is perhaps superfluous to remind the reader that the equilibrium that results from the flow of resources so as to secure a kind of hydrostatic equilibrium of money profits between the diverse branches of industry, cannot be a stable position of industrial equilibrium, unless all the available resources are fully employed. In the above analysis, we have ruled out chances of fortuitous or speculative profits by assuming a stable price-system of all goods. The competitive conditions assumed excluded also the element of monopoly profits. Nevertheless an equilibrium of competitive profits of the *employed* resources alone will not be a stable position of equilibrium, unless and until it includes all the *employable* resources of society. This has already been explained in the earlier part of this chapter.

A USEFUL FORM OF THE CONCEPT OF EQUILIBRIUM

Here we are tempted to tackle a question which Prof. Mitchell²¹ raises in his *Business*

²⁰ Turgot : *Reflections*, Sec. 78.

²¹ Mitchell : *Business Cycles* (1927), p. 462.

Cycles : “ In what useful way can we conceive of the equilibrium of the whole system...when that system includes factors which cannot be combined into two opposing totals ? ”

The best way seems to us to conceive of an equilibrium in which the entire resources of the whole community find their full employment—the industrial equilibrium as we have named above. The reason is simple : does not the very conception of an economy imply the fullest employment, maximum possible utilisation of one's resources and reduction of wastage to zero ? Both unemployment and underemployment mean waste of resources, loss of well-being, and often moral deterioration, not to speak of the economic loss of wealth.

The equilibrium need not necessarily be conceived to be of a mechanical kind like the equilibrium of the two scales of a balance (its root-meaning). It can be best conceived, as Turgot conceives of it, as a kind of hydrostatic equilibrium of different liquids of unequal gravity into an inter-communicating vessel with many limbs. Under the attraction of the gravitating force of profits, the different national resources—“land,” labour and capital—*flow* into the various branches of the community's multi-mouthed industrial bowl until their movement comes to rest. There must be no clog to arrest their flow ; there must be no crack to allow

any leakage. The whole of the national resources must be utilised.

If an unfettered system of regulating industry through profits or an unbridled system of property or other kinds of vested interests, or an uncontrolled system of population leads to unemployment and waste, evidently the economic interests of society must demand a restrictive regulation to ensure their economic use. The test of equilibrium is that the volume of unemployment remains zero. The measure of disequilibrium is the volume of unemployment, not only of labour, but of "land" and capital as well. It means, of course, in a progressive society continual readjustment.

We have seen how such an *industrial equilibrium* presumes a co-ordination of three kinds of subsidiary equilibrium, besides avoiding any sudden introduction of a revolutionary type of scientific invention and an unequal competition. The industrial equilibrium demands that the natural ratio of the different resources conforms to the technological ratio of maximum productivity. It presumes that the general system of prices remains the same, and the monetary system behaves in a way that $I=S$, in the language of Mr. Keynes' equation. Thirdly, the institutional behaviour of society is to run in a way that does not upset industrial efficiency, or monetary balance or relative opportunities for employment. We have seen how the capitalists' behaviour (in insisting

upon obtaining incomes always in the form of income-yielding investment goods) may lead to disturb that balance. As the whole industrial system is guided by the index of profits, and as profits depend on the stability of the price-system, on volume of production, and on the transformation of the entire money-incomes of individuals into commodities for consumption or investment, any disturbance anywhere in the system is bound to lead to unemployment.

Now one of the most dominant causes that are working at present to upset the industrial equilibrium, seems to lie in the capitalists' habit of continuous accumulation and their refusal to take their share in any other shape than in investments.

It is necessary to remember that the whole of the goods produced have to be consumed (in the economic sense) as a whole by the consumers and producers. The limitation of the scope of investment for any reason whatsoever, makes it essential for the propertied classes to receive their share in consumable goods. For we must not forget that speaking from the physical and industrial point of view, the capitalists do not realise their share of national income until they *spend* it, though it may be in capital goods, as in the case of investment. So long as their money incomes, which represent their individual claims over the concrete goods turned out, are not *spent* (either in investment or consumption), the

corresponding quantity of goods remains locked up as unsold inventories in the stores of the entrepreneurs, leading to losses, curtailment of production and unemployment. We stress this point, because of the fact that the defect, though institutional, is curable. It is necessary for the capitalist to realise that he must take the share of his 'cake' in a concrete manner, it cannot be left to remain undistributed without clogging the whole machinery of national production. He has to realise that unless he agrees to modify his habit of consumption and accumulation in a way that the industrial system of his country may require for its equilibrium, it will stifle the life of the community and pave the way for his own destruction. This ought to be the warning of the economist to the capitalist, if the present regime of economic organisation based upon private capital is to be preserved, and if the present concentration of property is to be maintained.

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