

ELEMENTS OF SOCIAL CREDIT

*An introductory Course of Lectures
published with the authority of
The Social Credit Secretariat.*

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THE SOCIAL CREDIT SECRETARIAT
(Advisory Chairman—Major C. H. DOUGLAS)

ELEMENTS OF SOCIAL CREDIT

An introductory Course of Lectures published with the authority of the Social Credit Secretariat, "a non-party, non-class organisation neither connected with nor supporting any political party, Social Credit or otherwise."

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**SOCIAL CREDIT SECRETARIAT
LECTURES AND STUDIES
SECTION**

Constitution

(1) The Lectures and Studies Section is constituted a sub-department of the Department of Information of the Social Credit Secretariat.

(2) The responsible officer is a Director responsible to the Deputy Chairman.

(3) Services to the Section are voluntary.

(4) Organisation of the Section is based upon the geographical distribution of groups of individuals collectively affiliated to the Social Credit Secretariat, and upon the acceptance of individual responsibility to the Director for Lectures and Studies for the effective delivery and management of the courses.

Deputy Chairman: Tudor J. Jones, Sc.D., M.D., (Glasgow), F.R.S.E.*

Director for Lectures and Studies: Mrs. B. M. Palmer, B.A. (Lond.).

Ordinances

i. **Courses.** There shall be an elementary and an advanced course of study: Course A and Course B.

For Course A, classes will be held where suitable arrangements can be made, and where not fewer than twelve persons apply for instruction.

For Course B, classes will not be held. The required course of study covers a wide range, and is subject to special conditions. (See Ordinance ii below).

ii. **Admission to Courses.** Students seeking admission to Course A shall

(1) Signify their intention of making at least four-fifths of the possible attendances at lectures, and of completing such other work of the class as may be required by the lecturer, and

(2) Pay the prescribed fee.

(See further the announcement at the end of this volume: "Note on Courses.")

They may further be required to furnish evidence that they are likely to profit by the instruction given.

*The lectures were compiled, with the exception of Lecture XV, by the Deputy Chairman.

Students seeking to enter upon Course B shall be required to have passed the prescribed Examination terminating Course A, unless this formality is dispensed with by Regulation applying to their special case, and to fulfil such other Regulations as may be in force at the time of their entry for Examination.

(See further the announcement at the end of this volume : " Note on Courses.")

iii. **Diplomas.** There shall be two degrees of qualification : an Associate's Diploma and a Fellow's Diploma.

iv. **Examinations.** (a) Subject to the provisions contained in the Ordinances, diplomas will be granted to those who have satisfied the examiners appointed by the Social Credit Secretariat concerning their proficiency.

(b) Diplomas issued shall not be valid unless signed by Major C. H. Douglas, or by someone else nominated by him for the exercise of this power.

(c) For the protection of the public and to safeguard the prestige of diploma-holders, it shall be within the power of Major C. H. Douglas, or of someone else nominated by him to exercise it on his behalf, to withdraw any diploma at any time, and to announce his action publicly in such manner as he deems expedient.

(d) Candidates for examination in Grade A may be admitted on payment of the prescribed fee covering the expenses of their examination, *whether they have attended the prescribed course or not.* If successful, such candidates shall be admitted to the proper degree of qualification subject to the provisions of paragraphs a, b, and c of this Ordinance.

(e) Candidates for examination in Grade B may be admitted on payment of the prescribed fee and compliance with the Regulations in force at the time of entry.

v. **Lecturers.** Appointed lecturers shall have individual responsibility to the Director for securing satisfactory attendance upon the courses of lectures they deliver, and the concordance of the instruction given with the order, extent and accuracy of the instruction prescribed, to the extent that the due preparation of students for examination is dependent upon such concordance. They shall further be responsible for the organisation of the courses they deliver and for the supply of such information relating thereto as may be required by the Director.

vi. **Lecture Period.** The term lecture shall mean instruction for one hour by an approved lecturer, and tutorial work for a further period of one hour.

vii. **Order and Discipline.** Lecturers are empowered to secure the retirement of any student whose conduct is disturbing to the order of the class or to the satisfactory prosecution of the work of the class.

Fees

Class fee, Course A	..	..	..	..	..	..	£1 10 0*
Course B	..	..	..	..	..	..	None
Examination fee (Grade A and Grade B)	..	..	..	..	..	..	10 6

*See, however, Ordinances iv(d).

SYLLABUS

Introduction

Great care is necessary in introducing this course of lectures to the public and to students.

Social Credit has been the subject of study and propaganda for many years, but was not until January, 1937, the subject of organised exposition, instruction, and examination.

The propagandist aims to achieve the spread of ideas, whether right or wrong, tending to promote some action which he desires. The student tries to gain *correct* ideas. The word means different things to different people, or different things to the same people at different times. It may mean correspondence with the idea entertained by someone in a position of authority, or an idea which what we call our minds cannot dispel, or an idea which is right in the sense that it leads in execution to the attainment of a desired result. That is what is meant here by a correct idea. The efficiency of the propagandist rests upon the formation of at least some correct ideas (in this sense) : *i.e.*, it is dependent upon at least some study. But this study may best be study of the means of propagating ideas in general, or of a particular idea the spread of which the propagandist desires. He may already be in possession of that idea, and may not need to study to acquire it.

Undoubtedly a wide spread of certain ideas would facilitate the Social Credit propagandist's labours ; but it is questionable whether the spread of these ideas in a sufficiently accurate form can be effected widely enough and quickly enough to assist him very materially.

On the other hand, it is probable that in the sense in which knowledge is power, the distribution of as much sound knowledge as possible would increase the individual's power. The emphasis is on the soundness, not upon the possible extent of distribution. The course is planned in accordance with this guiding principle.

It is not primarily designed to assist those who have already experienced difficulty in understanding what the words " Social Credit " mean, or the practical proposals of Major Douglas based upon this understanding. The course may be said to be designed primarily to give opportunity for instruction to those able and willing to profit by it.

The course, then, aims at as complete instruction as possible in a limited number of matters concerning Social Credit. All the matters which concern Social Credit have not yet been investigated. It is the youngest of studies, though possibly the most vitally important. It concerns *the efficiency of human beings in association (or in society) as measured in terms of human satisfaction.*

A brief note on the method of study is desirable.

The lectures were not constructed to take the place of an afternoon's reading, light or heavy. When first used in 1937 detailed instructions to lecturers were distributed, and in most cases obeyed, prohibiting the introduction of irrelevant material and the discussion of the subject-matter of later lectures in advance of the designed place and time for its consideration. Each lecture was considered to be more than sufficient for one week. Lecturers were advised to read each sentence slowly, without oratorical emphasis, and, if necessary, to repeat it, more or less in the spirit, and for the reason, that one may read over a telegram, to make sure that each word receives its due attention. In practice, this proceeding lasted nearly an hour, and a second hour was spent in elucidation (not discussion) of points suggested by students. To enforce, if possible, as deliberate an approach to the study of the lectures, when they came later to be distributed by post, the rule was established that only one lecture a fortnight was to go to any student. This account of previous practice should convey to the reader the attitude of mind in which he should enter upon the study of the lectures, if he desires to gain from them an understanding of the principles they are designed to convey.

COURSE A

LECTURES

Lecture 1. Social Credit a fact, not a theory, by definition. Study aims at the extension of knowledge of the fact and of contributory facts. Method : direct observation, communication of verifiable direct observation by others, and orderly presentation of results gained. Society and association. Definitions. Conflicting tendencies reflected in current definitions. Elimination of definitions containing an ideal element.

Society as a complex of observable phenomena. Phenomena : observed results in nature. All phenomena appear to arise from some mode of association. Natural modes of association, leading to analysis of their characteristic results—phenomena.

Lecture 2. The increment of association in its various forms.

Lecture 3. Social instances of the increment. Chief facts associated with development and transmission of increment. Modern process. Industry.

Lecture 4. Wealth defined. Sources of wealth (natural ; no other sources demonstrable, but inductive method ready to admit and describe new sources of wealth as they may appear). Capital.

- Lecture 5.** Wealth : negative aspects. Observable limitation upon human productivity. Sabotage. Restriction of production.
- Lecture 6.** The notion of cost. Relationship to assessment of efficiency. The "balance" sheet. Historical avoidance of precision in regard to the Social Credit.
- Lecture 7.** Objective comparison with implications of ideal elements in definitions of society. Policy.
- Lecture 8.** Fundamental notions of a precise nature other than those already dealt with. Precision in measurement (conformity to exact standards in a science) largely a matter of choice of relevant standards. Douglas's use of the notion of "sufficiency." Organisation.
- Lecture 9.** Organisation and control.
- Lecture 10.** Control in relation to efficiency. Natural and artificial (planned) control. Agency of control. Sources of power available to controlling agent. Some examples analysed.
- Lecture 11.** The "arts" of government.
- Lecture 12.** Exchange and barter. Simple consequences arising from introduction of additional terms. Chain barter. Nature of money.
- Lecture 13.** Forms of money. Elementary observations on the use of money in its various forms.
- Lecture 14.** Price.
- Lecture 15.** Book-keeping conventions.
- Lecture 16.** Simple instances of the principle of mechanical similitude applied to human association : force and momentum in society. Brief outline of sphere of Social Dynamics.
- Lecture 17.** Current propaganda assessed from the point of view of its effect upon the Social Credit.
- Lecture 18.** Current symbolism in use among financiers. Objective assessment of the working of the financial system.
- Lecture 19.** General review of power available to individuals to affect the Social Credit.
- Lecture 20.** Conclusion. Suggestions for future study.

Every student should have read carefully the brief Introduction to this Course.

Our objective is stated there to be "as complete instruction as possible in a limited number of matters concerning Social Credit", and Social Credit is defined as "the efficiency, measured in terms of human satisfaction, of human beings in association (or in Society)".

The student should study that phrase word by word until he is satisfied that he is familiar with it. He will soon discover that so far from being a theory, Social Credit, if it is what the definition indicates, must be a fact.*

Let us go over that. "Efficiency", according to Chambers's *Dictionary*, is "power to produce a result intended". There is no other word that offers any difficulty, although the phrase "measured in terms of human satisfaction", may have an unfamiliar ring. It means that the power is to be considered as being measured in a particular way. Let us suppose then, that we can remember the original definition well enough to repeat it and that in it we substitute the dictionary meaning of "efficiency" for the word. The expanded definition is :

"The power of human beings in association to produce the result intended, measured in terms of their satisfaction."

You may decide now whether human beings have or have not any such power : whether two or more persons can help each other to produce a result they intend to produce. If they have no such power, Social Credit does not exist : if they have it does.

What do we decide? We cannot study something that does not exist, and if we decide that human beings inevitably help each other to produce a result which they do not intend and do not find satisfactory, we had better give up, for we have nothing to study.

*Until the present revision (1946), this sentence read as follows :— "He will soon discover that so far from being a *belief*, or a *religion*, or a theory, Social Credit, if it is what the definition indicates, must be a fact." The words here italicised have now been removed because, though still true and important, they tend to conceal the relationship which exists between Social Credit and not only religion but a particular religious system, namely that variously called the Christian or Catholic. This relationship, confirmatory (we would say) of the truth of both the Social Credit and the Trinitarian Philosophy, has been made evident and clear by experience of the recent development of Social Credit thought, and is the subject of some passages in a POSTSCRIPT at the end of the Lectures, which bears the same date as the emendation (such as there has been) of the text. The student is advised to master the argument of the Lectures before he ventures upon this more advanced territory.

Social Credit, then, is a fact, not a theory. We shall try in this course to get to know as much as possible about this power—about every means of increasing it and every means of diminishing it. The result will be more power in our hands to control it, whether we use that power or not.

How is this plan of extending our knowledge to be carried out?

There is not much doubt that wherever practicable direct observation is the readiest means of gaining knowledge. That is to say: our own direct observation. Verifiable direct observation by others may supplement our own observation. The method we shall follow, therefore, is direct observation, extended by verifiable observation by others in combination with the orderly recording of our results.

Essentially this is what is called the "scientific" method: the method adopted by Faraday in getting to know many useful things about electricity: he just watched events happening and wrote down an account of the precise circumstances in which they happened.

Most scientific studies require a specially constructed laboratory in which events may be made to happen and may be watched. Social Credit is no exception; but you need not be disappointed to find yourself beginning the study of Social Credit in a room, instead of a laboratory. There is scarcely anything that will be mentioned here that you cannot go and try out in a laboratory—the very specially constructed laboratory. That laboratory is the civilized world as you know it, and most of the things you will be asked to watch you already have watched in one sense or another. It is true you may find that you have looked at them without seeing them distinctly. Or you may find yourselves so full of thoughts about them that the things—events—your thoughts are about have become covered up. There are reasons for that. They explain why the "power of human beings to produce the result intended" is so little as it is. They are part, therefore, of the study of Social Credit.

If we are quite clear in our minds that in studying Social Credit we are really engaged in making careful and accurate observations concerning matters of common experience, which we may test over and over again, we can move forward. We know what it is we are studying, and we know we are studying it in order to increase our control over it.

Some of you may not find it easy to proceed in the way suggested—*i.e.*, by making careful and accurate observations or even to follow steadily with your mental eye the observations made by someone else. The method entails a good deal of self-discipline. Really one can learn to practise the scientific method only by applying it. It is no use talking about it. Many large and almost unintelligible books have been written about it: but they contain scarcely more than half-a-dozen really useful statements about it. It is not very helpful here to say what

they are, but it may be helpful to give a hint concerning the nature of this difficulty you may experience.

To use language which is undeniably metaphorical, once we get any single thread of the universe fairly into our hands to observe it, we are certain to find that it "pulls" upon some other thread, and the great guiding principle which we ought to adopt (because others have demonstrated its soundness), is that we must never let go *even when we have felt, as it were, that "pull"*. That, simply stated, is a profoundly important principle of scientific method (which is our method). In studying Social Credit, some of you are studying not only a science, but an exact science for the first time. There may be no name for the principle just referred to; but it is very important. It is impossible to find out where the threads of experience lead without taking a firm grasp of them. It is of no use to jump impatiently from one thread to another. Yet it is difficult to retain one's grasp very often. There are many temptations to let go. One of the commonest is what is called an "idea"; and many a man who has fast hold of a really important thread can be persuaded to let go if an idea so much as winks at him. Take Care.

Now, with our definition still, as it were, in our hands for observation, notice the end of it:

"in association (or, in Society)".

The letters italicised are the essential letters of both words: but one word begins with a capital letter. Why? We are not really concerned, of course, in merely examining words—that would land us in a mere logical argument and we are concerned, as scientific people, with events rather than with symbols. We want to get past words, if we can, through them, beyond them: we want to reach *events*, experienced *as events* directly by ourselves. Is it possible, by direct observation, to gain useful notions about Society (or, if you like, about association)?

We, at the present moment, are associating. Is there anything exceptional or different in the nature of what is called "human Society" which distinguishes it from this little bit of human Society or association? Let us look for it. If we find it, we find the difference. If we don't find it we can only say *we have found no difference*. We cannot say more than that. This is what is called the "inductive method" of proceeding. It brings to light facts that matter, instead of assuming that all that matters is already contained in some general statement. We are looking for facts that matter, and we had better behave in this way. We should, of course, test everything that is said for ourselves. Some matters may take a long time to test. For example, it will take a long time to test the statement that nothing is discoverable in human Society that establishes an essential difference between it and the society, let us say, of two families on an island, excepting the number of people concerned and the variety of their modes of association. No other

difference has been discovered so far, and on that account we are justified in saying at present that the phrases "human society" and "human association" mean exactly the same thing, that one is as good as the other and that whenever we refer to one we might call it by the name of the other. If human society were stricken by some sudden strange disease and were reduced to a bare half dozen individuals, instead of the 2,000 millions who at present inhabit the earth, Society would not necessarily be destroyed. It would still continue to be human Society, provided that the six individuals co-operated with one another, or unconsciously affected one another if only in a single instance. The variety of ways of co-operating would have been reduced in number; the associations of the six people would be changed: but they might, and if they were wise they would, still be six associating people, in other words, a human society.

We have mentioned association and *modes* of association without finding out what it means to associate or whether, whatever it may be, it is something that can be done in different ways. The word is Latin: *Socius*, a companion. It is not profitable, however, to begin the study of association in the highly complex instance provided by human companionship.

Inspection suggests we should find it compounded of several, perhaps a very large number of subordinate associations, or modes of association. Let us begin with something easier, for even an *apparently* simple instance of association, *e.g.*, the association, or "companionship" of two apples on one plate, may reveal unexpected features. Unprofitable study is to be avoided; yet no point which may prove to have value or significance must be allowed to pass unnoticed. Each apple seems to be imperatively restricted in definable ways by the presence in its neighbourhood of the other apple. If one apple occupies one position, the other cannot occupy the same position at the same time: if either apple is moved, its movements must have a continuous but changing relationship in regard to the other: if both are apparently at rest, they nevertheless influence each other in various describable ways. The simple instance does, then, reveal on inspection, matters of some difficulty. "Common Sense" is alleged to be capable of handling such matters. In a practical sense this is probably true to some extent, *e.g.* a child of two years often gives us the impression that it is striving to secure an *impossible* result. In doing so it discovers, practically, by trial, some, perhaps most, of the *possible* results. It cannot formulate symbolically or express what it has done or how it has done it. *It can just do it again and again with increasing precision.* It is learning the *practical limitations to effective action.* They may be natural or artificial. Time and the persistent use of the inductive method will show which.

Since our objective bears a resemblance to the child's we might do the same in regard to the powers inherent in association (or in Society); but we desire greater mastery than the child possesses,

and our world is much more complicated than a plate with two apples on it. Observations show us that the relationships which exist between the two apples would be materially altered by adding a third apple, and are still more materially altered by adding the child. By the addition of the third apple fresh physical relationships are established. By the addition of the child, a new kind of relationship is established. Much time might be spent in classifying associations and reclassifying them. Do it as much as you can in the time you have; but do not waste your time. That is a counsel of perfection. The test is the *result* in regard to the value of the useful knowledge gained, and so much has, in fact, been gained in the past that we may as well examine it, while at the same time keeping an eye open for fresh sources of help.

We shall proceed, then, presently, to an examination of the major results gained by those who have studied various instances of association. But, before we do so, it is necessary to linger for a few moments over the statement which has just been made that no one, turning his attention to Society, has ever yet found in it anything but a number of instances of association. It is only by straining his imagination that he has been able to combine these and to picture them as a whole, as a single instance of association. No one has ever seen Society, or heard it, or felt it. Each of us apprehends it only in fragments, and then what we are actually able to give our attention to is a separate instance of association and its result. For example, nobody has ever seen Society do any of the things which Society is commonly said to do. When anyone has been said to be a witness of the vengeance of Society, inflicted upon one or more of its members, what was actually seen was a hangman, a rope, a support for a rope, a moveable platform, a superintending officer, a stopwatch and a victim. Inquiring into the antecedents of these things one sees books, schools, churches, fields in which hemp is growing, factories, the instruments of carpentry and joinery, wig-makers, watchmakers, and homes and so on. No one has made it clearer than Douglas in the third Chapter of "Social Credit", and elsewhere. In the work cited, he says:—

"One of the first facts to be observed as part of the social ideal . . . is the elevation of the group ideal and the minimising of individuality, *i.e.* the treatment of individuality as subordinate to, *e.g.* nationality. The manifestations of this idea are almost endless. We have the national idea, the class or international idea, the identification of the individual with the race, the school, the regiment, the profession, and so forth. There is probably no more subtle and elusive subject than the consideration of the exact relation of the group in all these and countless other forms, to the individuals who compose the groups . . . The shifting of emphasis from the individual to the group, which is involved in collectivism, logically involves the shifting of responsibility for action. This can be made, it would appear, an interesting test of the validity of the theory.

For instance, the individual killing of one man by another we term murder. But collective and wholesale killing, we dignify by the name of war, and we specifically absolve the individual from the consequences of any acts which are committed under the orders of a superior officer. This appears to work admirably so long as the results of the action do not take place on a plane on which they can be observed ; but immediately they do, the theory obviously breaks down. There may be, *ex hypothesi*, no moral guilt attributable to the individual who goes to war ; but the effect of intercepting the line of flight of a high-speed bullet will be found to be exactly the same whether it is fired by a national or a private opponent. Nations are alleged to have waged the first world war, but the casualties both of life and property fell upon individuals. There is no such thing as an effective national responsibility—it is a pure abstraction, under cover of which, oppression and tyranny to individuals, which would not be tolerated if inflicted by a personal ruler, escape effective criticism. We do not know what is the automatic reaction consequent on the killing of one individual by another, as distinct from the non-automatic and artificial reaction involved in the trial and punishment of a murderer in a court of law. But we do know that over every plane of action with which we are acquainted, action and reaction are equal, opposite and wholly automatic. Consequently there is nothing to indicate that the automatic consequences of a given action will exhibit any difference if committed under the orders of a superior officer, or not."

These passages take us further than our present topic, but they justify our present slow pace of progress. Take the sentence :

"There is probably no more subtle and elusive subject than the consideration of the exact relation of the group in all these and countless other forms, to the individuals who compose the groups."

It is subtle and elusive because something is constantly distracting the attention from actualities ; and before any headway can be made we must practise uncomplicated attention to actualities just as a cricketer practises uncomplicated attention to the movements of a cricket ball in varying conditions. This is an entirely different matter from the rules of the game of cricket. It is doubtless possible for a cricketer to learn the rules of the game and how to bat concurrently ; but he can learn nothing about batting from the rules and nothing about the rules from batting. Batting and the rules of cricket have no connection with each other. It is not the rules of cricket which cause the ball to rise for a catch ; but the relative movements of bat and ball. This, which is so obvious in cricket, has ceased to be obvious in the discussion and the practice of association, or Society ; and we can only reacquire our ability to see the plain and the obvious in this "subtle and elusive" sphere by, as it were, practice at the nets—not by study of the rule book. Finished as they are in the application of objective

standards, the passages quoted from Douglas are the work of one who has practised at the nets. So we must practise at the nets unless we have already done so until we regain facility in distinguishing between rules and strokes and can think without confusion about rules and strokes. Since the matter is plainly one which may involve the life and death of individuals it is important.

Another matter :—

Douglas asserts that "for every action with which we are acquainted, action and reaction are equal, opposite and wholly automatic". Those unacquainted with physical science may be reminded that these constitute a statement of no less important an observation than that contained in the Third Law of Motion of Sir Isaac Newton : "To every action there is an equal and opposite reaction".

A very large part of the science of mechanics is an elaboration of this law, and the demonstrations which usually accompany it are as simple as those we have used to demonstrate a simple association—two apples on a plate. Unless we can submit ourselves to the discipline of considering such simple things, "the exact relation of the group to the individuals who compose it" will always be a subtle and elusive subject.

Douglas draws attention to the fact that "the consequence of intercepting the line of flight of a high-speed bullet will be found to be exactly the same whether it is fired by a national or a private opponent". It is quite possible to express what Douglas is driving at in the statement that if there is any validity in the ideal plan of the nature of society, a bullet fired with "social" authority ought to effect some change which a bullet fired without "social" authority could not effect and that if experience fails to reveal such a difference, "Social" authority is as incapable of establishing it in any other field as it is in this. Things are either what they are or what they ought to be. Events either occur as they do occur, or as they ought to occur ; we can take our choice whether we will deal with things as they are or whether we will deal with them as they are not, but ought to be. The impossibility of establishing agreement concerning what they ought to be as well as our powerlessness to impose this *ought*, whatever it is, upon nature as a whole, determines that if we are to make any progress at all, we must consider things as they are, and we cannot do this unless we do it completely. We cannot think if our minds are in a state of perpetual conflict. The "oughts" belong to a different world from the "is's" and we shall never understand the effective nature of society unless we deal with these two worlds at least one at a time. Also talking about them, even one at a time, is not the same thing as learning to attend to them one at a time. We must practise that. Broadly speaking every mention of society which tends to endow it with a quality, apart from an observed result of association, will be found, on examination, to be contaminated by some notion which is purely ideal. Whenever a word is used to bring into the mind any notion of a difference in

quality of life, as between a civilised quality and a barbaric quality, a cultivated quality and an uncultivated quality, a better quality and a worse quality, it will be found, on inspection, almost invariably to have been used to do some violence to the individual's grasp of facts, to have deflected his mind from consideration of them—and this is practically disastrous. Our attention to the actual, to the thing seen, the action performed, the events secured, the living individual—must not be relaxed for an instant if we really mean to gain useful notions about the nature of society.

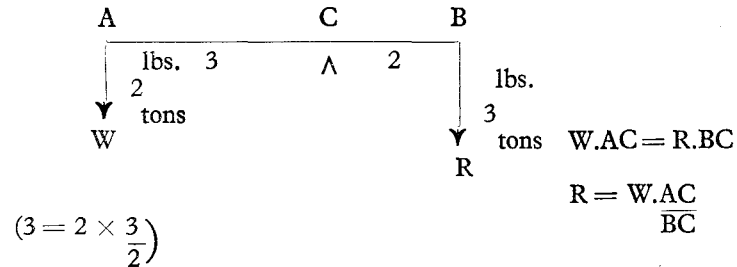
However far then we extend our observation of society, we shall never be able to observe anything, but such elements as entered into our description of a legal execution. They will not be all of this gruesome nature; but every element will be inevitably an instance of things in association. Under cloak of the phrase—"Social Phenomena", these would be admissible to any text-book of sociology—but even this phrase nevertheless tends to hide the fact that a phenomenon is merely an observed result in nature. Pursuing the indicated method, we might spend some time looking for a phenomenon, an observed result in nature, which does not arise from some mode of association. None has been discovered yet. *Society*, for us as students of it, is a complex of observable phenomena and phenomena are observed results in nature and all phenomena (all observed results in nature) appear to arise from some mode of association.

Beginning with the simplest, let us try to make a list of natural modes of association (i.e., modes we are able to observe in nature) with which we are acquainted. There are the two apples on a plate. This association is of a kind which is usually called *physical*. A very large number of useful observations have been made concerning this kind of association and some of them have led us to the construction of what we call machines. The apples and the plate are merely common objects, each with certain more or less ascertainable antecedents, related to one another in space and time in ways which are more or less definable.

Suppose we exchange the plate for some simple support, and the apples for a rod raised on the support. We have what is perhaps the simplest machine, which is called the lever. Experience shows us that the rod is moveable on the support, which is relatively fixed in the sense that it can be moved less easily than the rod. The rod may be straight or curved or crooked and is so adjusted that it has to move round a fixed axis—this is called the *fulcrum*. A natural consequence of depressing one end of the rod, is the elevation of the other end.

Let us suppose that the rod is of equal cross-sectional area and uniformly dense—that is to say, that if we cut it up into pieces of equal length every piece would weigh the same as any other piece—and let us suppose that we support it in the middle. Experience tells us that so placed it will "balance". Experience also shows that we can weight the ends without disturbing this "balance" provided we apply equal

weights to both ends at the same time, and that each addition to the weight on one side is the same distance from the fulcrum as its fellow on the other side. There is no limit to this proceeding, apart from the availability of weights and the strength of the rod and its support. This "balance" is at once disturbed if a weight is added or subtracted without corresponding addition or subtraction to the counter-balancing weight, or by moving the weight on one side nearer to the fulcrum or farther away from it. This has the same effect as shifting the fulcrum and then we find that this "balance" may be restored by increasing the weight on the shorter arm without increase on the longer arm. If we made a careful record of what was done in this way, provided the weight of the rod is negligible in comparison with that of the "weights", we should find that the length of the arm in the "balancing" position on one side, multiplied by the weight on that side, was always equal to the length of the other arm multiplied by its weight. In other words, a smaller weight at the end of the long arm will "balance" a larger weight at the end of the short arm.



(Since you will find it hard to obtain a rod which has practically no weight, your result might differ from this.)

If the rod weighs nothing, the larger weight is equal to the smaller multiplied by the ratio of the long to the short arm of the rod.

Everyone knows the uses of the lever and that it is *advantageous* to use it, e.g., a man applying his own weight to the end of the long arm can lift a greater weight than his own. Something is gained in efficiency—i.e. in the power to produce an intended result—and this something is measured by the ratio of the long to the short arm. This is called the *mechanical advantage*.

For the same reason that a halfpenny has to revolve oftener than a penny if the two, rolling side by side, are to keep abreast, the end of the short arm moves more slowly than the end of the long arm; or, in the same time, the end of the long arm moves farther than the end of the short arm. Thus it is often said that "what is gained in efficiency is lost in time."

The anxiety of physicists to emphasise the counter-balancing of a gain by a loss must not be misunderstood. It is not a denial of the advantage gained in the use of the lever. It is an attempt to discover

the true source of this gain. The true source of this gain is *the natural properties of the association which permits us to vary the opposing weights to our advantage. What we cannot vary are these natural properties.*

Levers have been divided into three classes according to whether the Fulcrum, the Resistance or the Driving Force occupy the middle position. A crowbar or a spade are levers of the first kind: a pair of nut-crackers, or a wheel-barrow, and an oar, are levers of the second kind; a pair of sugar tongs is a lever of the third kind. The Balance and the Steel-yard are modifications of the lever; the other simple machines are the pulley, the inclined plane, and the screw, each with its characteristic mechanical advantage.

Every simple machine consists of more or less massive parts and its characteristic action is displayed only in the presence of something which produces, or tends to produce movement in these parts.

Inspection of one of these machines in action elicits curiosity in the observer concerning it, and this is quite enough to know that physical association is a very respectable subject for investigation and a fruitful source of observed results which are advantageous.

Results.

Phenomena = observed results in nature (of association).
Association = the apparent source of phenomena.
Society = complex associations into which human beings enter with each other.

Additional Notes.

The lecture is planned to serve as an introduction to the inductive method "go on looking until you find it is not so. If you cannot find it is not so, say 'no case has been found'". Students unfamiliar with the methods of the natural sciences will be prone to revert to logical argument or to seek for ultimate causes, *e.g.*, *why* is $W.AC = R.BC$? This is the constant *result* obtained by the actual measurement and it arises out of the association. Students should make this point of view familiar to themselves and should resist the temptation to enter into argument or philosophical discussion. Social Credit takes account of everything relevant to social life, *but* from the definite point of view of "the power to produce the result intended". The *effects of beliefs* in modifying efficiency are thus matters for consideration. But each effect must be treated in its own place lecture by lecture.

II

We are trying to learn something about ASSOCIATIONS, because human society is AN ASSOCIATION . . . the most complex association we know: a vast construct, or complex, of separate associations.

A simpler association than a ruler balanced on the edge of a knife it would be hard to find, yet results of great importance have been gained by paying attention to this very simple instance. By watching what happens when similar very simple associations are established, a vast amount of useful knowledge has been acquired by man — knowledge of HOW TO DO THINGS. A short name for man's knowledge of how to do things is *Culture*.

The men who did most of this work were wise in that they made haste slowly. They found that they were most successful when the job was easy, so they stuck to simple easy matters. All the great practical achievements are due to their persistence in this course: modern technology, engineering, chemistry, agriculture. The most wonderful thing about these is THE RESULTS: each of the steps taken to reach these results was a childishly simple and easy step.

It is not because Social Credit is "mechanistic" (whatever that may mean), or because it is a branch of the science of Mechanics (it isn't) that we are at present considering some of the better-known results of elementary mechanics. It is because they are very simple in themselves, and illustrate the properties of associations of all kinds as nothing else can do.

Every association has a RESULT. This is its INCREMENT OF ASSOCIATION.

At the close of the present lecture, we shall have reached two important conclusions:

- (1) Each of the ELEMENTS in an association is effective in its own way.
- (2) Knowledge of the RESULT of an association is, and can be derived PRACTICALLY by observing the CIRCUMSTANCES IN WHICH IT OCCURS.

Both of these generalisations are of supreme importance to anyone who wishes, let us say, to control the Social Credit. They are well understood by those who wish to diminish it. Anyone who wishes to increase it had better be as well-informed, and it is impossible to be well-informed about matters of this kind without considering them carefully by easy stages.

The chief instance of association and its result considered last week was one which involved the tendency of matter to move in certain circumstances. We saw that some of these circumstances might be controlled, leading to the gain of an advantage called the mechanical

advantage. There was one general circumstance that was rather overlooked. It affected everything in the experiment: the ruler, the support and the pennies . . . everything. The tendency of the ruler to move would have been displayed by everything else which was not supported so as to prevent movement, and if it had occurred this movement would naturally have been downwards. All the objects we were considering seemed to lie in something which disposed them to move in the same direction. This was not the air. As a matter of fact the tendency would have been more marked if there had been no air. It is something called the "field" . . . in this case the "gravitational field".

A "field" is something which can dispose material objects which lie in it to move.

The whole association we were considering therefore concerned materials parts which were free to move in a field which tended to produce motion in them. We were able to contrive an arrangement of these parts so as to secure a definite result, but we were unable to do anything to the "field". It was just there all the time, tending to produce similar results in similar circumstances. It was "constant" but the arrangement of the moveable structures was variable in it.

MEN HAVE BEEN ABLE TO CONTRIVE USES FOR WHAT HAPPENS NATURALLY APART FROM THEMSELVES: by varying the variable elements in a natural association.

Both the constant and the variable elements in association must be observed in order to be known. They may be "expected", but this is a very different thing from being known.

The so-called laws of motion, first stated by Sir Isaac Newton, are deductions from observations and experiment. Their truth cannot be demonstrated by mathematics. The usefulness of mathematics can be demonstrated by applying mathematics to them. It is what is done that is true; not what is said about it.

The relationship:—

$$\frac{30\text{-ins.}}{2\text{ lbs.}} \quad \wedge \quad \frac{20\text{-ins.}}{3\text{ lbs.}} \quad (2 : 3 :: 20 : 30)$$

is invariably found to be so. When the conditions are as stated the beam balances. If it did not, everything that occurs in regard to matter and motion would occur differently.

Pure machinery is the result of the search for mechanical advantage and how far along this single line it is possible to go may be inferred from Kropotkin's remark as follows:—

"Just as there are in science some notions and methods which are preparatory to the study of all sciences, so there are also some fundamental notions and methods preparatory to the special study of any handicraft. Reuleaux has shown . . . that there is, so to

say, a philosophy of all possible machinery. Each machine, however complicated, can be reduced to a few elements—plates, cylinders, discs, cones and so on — as well as to a few tools — chisels, saws, rollers, hammers, etc., and, however complicated its movements, they can be decomposed into a few modifications of motion, such as the transformation of circular motion into rectilinear, and the like, with a number of intermediate links. So, also, each handicraft can be decomposed into a number of elements. In each trade one must know how to make a plate with parallel surfaces, a cylinder, a disc, a square and a round hole; how to manage a limited number of tools, all tools being mere modifications of less than a dozen types; and how to transform one kind of motion into another. This is the foundation of all mechanical handicrafts . . ."

(Fields, *Factories and Workshops*, 1906).

"HOW TO DO THIS, AND HOW TO DO THAT!"

Your observation may have led you to the association of this little phrase with the totally unrelated idea of work. We have not so far mentioned work, and although some work may have been done in the little balancing experiment last week, none was intended to be done — at all events in the experiment itself.

The purpose of this part of our course is to illustrate the use of the inductive method in directions in which it has been amazingly fruitful of results, and at the same time to provide a real knowledge of some phenomena of great importance to the life of man in society which are often misrepresented.

We shall not deal with anything very difficult: but it is necessary to be precise about the things we do observe. Let us go slowly.

- (1) Work is something that must be done in order to move anything.
- (2) Work is *not* done unless something is moved.
- (3) Work is "an observed result in nature", *i.e.* it is the result of association.

We must not allow ourselves to be confused about this matter, because the most absurd notions are current about work. People talk about kinds of work . . . *e.g.* physical and mental work. The physical work done by so-called mental workers is very little in amount and largely involuntary, purposeless and wasteful . . . *e.g.* in restless movements of their bodies, and harmful contractions of their blood vessels as well as in useful ways which must occur in any case to keep the so-called brain-worker alive. Fatigue need not arise from doing work, and is *not* a measure of the work done. A man may tire himself out without doing any external work at all. On the other hand he may do an enormous amount of work and not tire himself at all.

- (3) Work is an observed result in nature, *i.e.* is the result of association.

(4) What association?

This :

(a) A tendency to impart motion to some material body.

(b) Actual motion in that body.

Notice that the tendency may be small or great, and the actual motion may be little or much (as measured by the distance moved).

Thus, in the experts' language,

THE MEASURE OF WORK — THE TENDENCY TO MOVE A PARTICULAR BODY × (multiplied by) the distance it is moved.

Arbitrarily this tendency is called a "force", let us say the force of a lb.-weight.

Thus : The unit of work = 1 lb. × 1 ft. = one foot-pound.

It is the amount of work done in lifting one pound one foot. If the piece of matter weighing one pound does not move, no work is done, if it moves one inch, 1/12th of a foot-pound, if 20 feet, 20 foot-pounds, and so on.

There are some very important names given to derived associations. They lead straight on from one to the other, and we had better write them down and remember them.

The **CAPACITY** for doing work may be small or great.

It (the capacity for doing work) = **ENERGY**.

A doer (an agent) can expend his (or its) energy in doing work = its **POWER**.

For the moment, although you should learn these definitions (energy = capacity for doing work ; power = rate at which the capacity can be expended), the meaning of these things is less important than an appreciation of the fact that

AN IMMENSE AMOUNT OF WORK IS DONE WITHOUT THE INTERVENTION OF MAN.

Remember work is always done when anything is moved. Therefore instances of work done without man's assistance are :—

(1) All instances of growth.

(2) The natural movements of wind and water.

Now note that the capacity for doing work may be stored up. That is to say, *there are natural stores of energy*. Such are Solar light and heat. This light and heat is being expended in work done all the time on the earth. Thus a constant circulation of water is effected, movements of the air, and the manufacture of food materials by plants, which food materials are thus made available for animal consumption. Some of these materials are not so used, or were not so used in the past, and they are slowly converted into highly combustible substances, coal, peat and oil, capable of liberating heat energy, a particular form of the

capacity for doing work, whenever the appropriate circumstances are established . . . or that is to say, the *appropriate associations*.

This brings us to the fundamentally important matter in relation to the Social Credit.

The establishment of the appropriate associations admittedly involves some work.

(1) **HOWEVER GREAT OR SMALL THIS AMOUNT OF WORK MAY BE, THE CAPACITY FOR DOING IT IS NOT THE STORE OF ENERGY MADE AVAILABLE BY DOING IT.**

(2) **UNLESS THE ENERGY MADE AVAILABLE IS GREATER THAN THE ENERGY EXPENDED IN MAKING IT AVAILABLE THE UNDERTAKING IS UNECONOMICAL AND USELESS.**

Some people profess to believe that the work done in the establishment of appropriate associations for the release of energy from stores "makes work" instead of making available an increased capacity for doing work. This is the same as saying that a man who had spent half his time in work to provide himself with the energy to get coal would find that by that time its energy would have been dissipated and that the coal would not burn. It is of course true that a train-load of coal can be consumed in keeping the train running in a circle so long as the fuel lasts. But so long as it is true that it is not the energy of the food-materials consumed in collecting and liberating stores of energy which is stored in the store collected, *one store is an addition to the other store, not a transference of it*. The availability of the capacity for work in any store of energy is independent of the capacity for work already stored or in process of being released elsewhere. To prove this it is not necessary to collect elaborate statistics relating to the engineering, mining, building, manufacturing and agricultural industries. Such statistics may be largely or wholly concerned with the maintenance of motion in trains consuming their own loads of coal. All that is necessary is to observe that men can and do support life and that at the same time they acquire stores of capacity for doing work. They do this in virtue of the operation of a large number of associations which all yield an advantage. This advantage, in the aggregate, complex as it is, is the *increment of association in its most familiar form—e.g. the fruitfulness of the earth*.

We may have noticed that each fresh instance of association that we have considered had some concealed element in it. Take the last for example. Evidently it is possible to expend energy so that no more is accomplished than a rather long train journey. Or instead of the train journey someone might be kept warm for a long time. We are apt to look at these divergent results from the point of view of their personal meaning to ourselves—their usefulness.

Both in the long series of associations (mechanical, industrial, etc.) leading to the running of a train, however purposelessly, and in the judgments passed by us are hidden increments of association. We call these mental. They are established apparently within ourselves by the association somehow, of a very large number of elements; inherited physical and related elements, past elements of the individual's experience, present elements of his experience, and what we may call expectations of future experience of a desired or undesired kind. Thus along many different lines, the past and as much as possible of the present are *brought into some relationship, or association, which economises our own expenditure of energy and facilitates the release of our own and extra-human energy in ways we call intelligent. This is, perhaps, the most amazing increment of association we know; but its effective range has scarcely begun to be explored.*

An association of apparently the simplest nature which we might have considered first is *mass association* and the peculiar and rather elusive increment of association which arises from it. Special consideration will be paid in a later lecture to the importance of a thorough understanding of this increment in the study of Social Credit.

Let us suppose that we have available a rather more elaborate form of balance than a simple rod surmounted on a support considered in the first lecture. A domestic pair of scales will do. Assume that the scales are properly adjusted and in working order, and that an iron or brass weight is placed in one of the pans, while granulated sugar is poured very slowly into the other. *Some time will elapse before anything happens.* The whole system appears to be rigid until at last the weight of the sugar increases until it is equal to that of the "weight", and then the beam moves suddenly and the two pans come to rest suspended in air on a level. If now some of the sugar (a small amount) is removed, the weight will fall again, to rise time after time as often as the sugar is replaced after its removal.

Observe how easy it is to create the illusion that it is the removal and addition of the small quantity of sugar that leads to the falling and rising of the opposite pan. This is, of course, demonstrably false, for in other circumstances these actions will produce no result at all. There is a difference between the same *action* and the accumulation of the same *mass* of sugar.

Whenever this accumulation is completed, enough *mass* is accumulated to equal the *mass* of the weight (iron or brass). One might say that nothing but enough sugar is enough; but this too would be wrong, for enough of anything heavy would do. It is the *mass* which has to be enough, and experts therefore define this as the **QUANTITY OF MATTER**. One quantity is said to be equal to another quantity, one mass the same as another mass, when they tend to be affected to the same extent in the same way in the same "field". This **MASS IS INDEPENDENT OF OTHER PROPERTIES OF MATTER**:

in other words the quantity of matter is independent of the colour, taste, boiling-point, melting-point, physical structure and chemical structure.

Do not imagine that this is something that is so obvious and simple that everybody knows it and has always known it. The famous "leaning tower" of Pisa is said to have been the scene of quite a bitter argument about it, settled, mistakenly, by trying whether feathers or lead fell the faster. But again we are not trying to make engineers or physicists of ourselves, and we must not be led away from the point that is of importance to us.

In considering instances of the increment of association which occur in human society, as we shall do later, it is of the greatest importance that we should be well acquainted with the point just illustrated and practised in discriminating the essential from the accidental in the elements associated. We must be able to **IDENTIFY** the **EFFECTIVE** elements in an association. If human society (as some people assert) is something "higher" than beeswax and string, it is unlikely that we shall manage it very successfully without a thorough understanding of matters which are by no means easy even in relation to beeswax and string.

It is often asserted that there are many ways of doing the same thing, and people who entertain this misconception point to the possibility of precisely the kind of thing that is involved in balancing a metal weight on a scale by sugar, or sand, or lead, or something else. These, they say, are different *ways*. They are, it is true, different *substances*; but, as we have seen, it is not the sugar or the lead or the sand or the anything else but the **MASS**. The equality of the **MASSES** in certain circumstances produces the result of a balanced beam.

Think about it.

Another point: you will find that by no means everyone knows what to expect in regard to the simple relationship:—

$$\frac{W}{a} \quad \wedge \quad \frac{b}{R}$$

They cannot *predict* that $Wa = Rb$

To say this is so because the laws of motion are what they are is misleading, for these laws are *merely statements of the results of observation. Unaided by previous observation we cannot infer any result in nature.* Now we should know:—

- (1) That of all the elements of a single natural association **EACH IS INDEPENDENTLY EFFECTIVE IN ITS OWN WAY**; and
- (2) That **KNOWLEDGE OF THE RESULT OF AN ASSOCIATION IS PRACTICALLY DERIVED FROM OBSERVATION** of the circumstances in which that result occurs.

Knowledge of associations enables us practically

- (1) To control the motion of bodies (machines).
- (2) To control the flow of energy (power).
- (3) To apply these controls for intelligent ends.

Since the motto of the Institution of Civil Engineers has a wider application than engineering, we may say the knowledge we are seeking would enable us more effectively to *apply the powers in nature to the use and convenience of Man* (the motto of that famous institution).

ADDITIONAL NOTES.

Students of a metaphysical turn of mind should resist the temptation to stray from the simple demonstrations of the lecture. Their motto at this stage should be "Study what is said first until it is understood, memorise definitions; take full notes and go over them and over them until the subject matter is familiar". The importance of the lecture lies in the multiplicity of instances of the greatest importance to man, of the principle that each element of association is effective in its own way.

Note in regard to this. It is not the *name* of the medicine that cures the patient. "Hell is paved with good *intentions*."

A man may put his foot on the accelerator with complete sincerity, but the car will not accelerate unless the appropriate associations are established within its mechanism. All of these are external to the driver. Pressure from the foot of the least sincere of men will cause acceleration of the car if the appropriate associations are established. So-called "effective causes" are in no sense of the word *like* the results which ensue from them, nor are the results which ensue from them *like* them.

Associations and phenomena, although indissoluble (inseparable) belong to entirely different categories. The man who says "I knew that would happen", or "That is what I expected", speaks *after* the event. It is true that instances of apparently the same association that has been observed before are expected to give the same results, and experience suggests the belief that they do so if they are the same.

Students who have read something of the history of beliefs may remember the many instances of the belief that because A is like B it will do all that B does or that B is alleged to do, (*e.g.* the belief that because a particular shell appears to resemble the organs of reproduction a string of them hung round the waist will promote fertility).

The students should recognise this superstition in various insidious forms current in modern society, *e.g.* that because A wants B and is an 'X'-ist, 'X'-ism is B.

The nature of the relationship between associations and their results is not for us a matter of speculation but of observation. Social Crediters, like all other individuals, may depart from this standing

ground in their spare time. The speculations concerning such matters have nothing to do with us as Social Crediters, unless they can be shown to *affect the power of society to produce the result intended as measured in terms of human satisfaction*. It is the definition of Social Credit that limits our technique. We are engaged in an objective, not a subjective study.

Students should observe associations and their results (phenomena) which occur apparently as integral parts of social life during the week following the lecture and determine for themselves:

- (a) whether they have in fact anything at all to do with human society.
- (b) whether they could not occur independently of Human Society altogether, and
- (c) in what sense, *if any*, they might occur differently in a state of nature, from their mode of occurrence in the state of society.

III

- (1) Broadly speaking, human beings, whether in or out of a State of Society, cannot do anything more in regard to natural associations than arrange for their occurrence and make provision for reaping the natural increments. "Un-natural" associations are associations of which we have no experience.
- (2) No one living has seen human beings apart from the State of Society.
- (3) Most of the associations which yield an increment for man are associations which occur naturally apart from Society.

The present lecture is to deal with social instances of the increment of association, the development and inheritance of increment, modern process and industry.

Any large mass of matter—a tree trunk, a rock needed for building may be too heavy for one man to lift, even with the aid of levers and pulleys (simple machines). With or without assistance from such devices, several men applying their force may move it. This can only be done if their force is applied at the same time as well as in the appropriate way.

This is unquestionably an instance of human association yielding its characteristic increment. It is a *mass* association. The force exerted by one man is multiplied by the number of men exerting an equal force *at the same time*.

In all cases where the capacity for work concerned is human muscular energy, this increment is important.

The first words of Adam Smith's "Enquiry into the nature and causes of the Wealth of Nations" read:—

"The annual labour of every nation is the fund which originally supplies it with all the necessaries and conveniences of life which it annually consumes."

This statement was false when the words first appeared in print in 1776 and has been false ever since, if what is meant by the annual labour of a nation is the work done in one year by its inhabitants. The necessaries and conveniences of life are naturally more plentiful every year in all countries and the work done by human beings, if they are economically (conservatively) employed, is less every year. It has been calculated that upward of 11,000,000,000 man-power is available (power = rate at which capacity for doing work can be expended) for the 2,000 millions of the earth's population in addition to their own man-power, which, owing to the inclusion of infants in the population, is considerably less than 2,000,000,000.

Mass association for doing work is therefore of decreasing importance as a part of human society and is relatively of small account.

If the primary characteristic of mass association in society is that a number of men shall do the same thing at the same time, a reverse mode of association would be one in which a number of men did different things at the same time, each individual doing the same thing all the time. This embodies a well-known and useful principle: the principle of the *division of labour*.

As in the case of mass association, some aspects of the division of labour, particularly those which concern the doing of WORK, for obvious reasons, are less important than they were. If the DOER of the work be disregarded and yet the economical (conservative) spending of the capacity for work be insisted upon (whatever its source), the principles underlying the division of labour are of great importance. Essentially the division of labour is a TIME-SAVER.

When Adam Smith wrote, power-production was relatively so unimportant that he almost completely disregarded its effects. He was, perhaps for the same reason, able to give a description of the division of labour which is concise, clear and still valid:—

"To take an example, therefore, from a very trifling manufacture, but one in which the division of labour has been very often taken notice of, the trade of the pin-maker; a workman not educated to this business (which the division of labour has rendered a distinct trade), nor acquainted with the use of the machinery employed in it (to the invention of which the same division of labour has probably given occasion), could scarce, perhaps, with his utmost industry, make one pin in a day, and certainly not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which in some manufactories are all performed by distinct hands, though in others the same men will sometimes perform two or three of them. I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day. There are in a pound upwards of four thousand pins of a middling size. Those

ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day. Each person, therefore, making a tenth part of forty-eight thousand pins, might be considered as making four thousand eight hundred pins in a day. But if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly could not each of them have made twenty, perhaps not one pin in a day; that is, certainly not the two hundred and fortieth, perhaps not the four thousand eight hundredth part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations."

Do not let your mind be preoccupied by the details cited in that passage. We are not considering at the present time anything that strictly has to do with the efficiency of association *as measured in terms of human satisfaction*, but with the efficiency of association; and we see here, owing to time saved and skill enhanced, an increased power to produce results from association; an increment from the division of the work to be done into small parcels and the distribution of these small parcels, one each, to those associating.

Observe also, that while the workers in the pin factory were doubtless working under some form of pressure, comparable instances of association can be seen where the division of the labour is undertaken voluntarily, and then it is found to yield a corresponding increment of association. In other words, it is not the inducement to adopt a particular method of working that yields the increment of association but the association, *and this is independent of all other elements*.

REMEMBER: EACH EFFECTIVE ELEMENT IN AN ASSOCIATION IS EFFECTIVE IN ITS OWN WAY.

To extend our observations on this point: Adam Smith said there were "about eighteen distinct operations" undertaken by different operatives. Each "operation" consisted of the means to reach a certain definable objective: *e.g.*, making the heads for the pins, or sharpening the points. In other words, each operation involved a number of associations of which those resulting in mechanical movements were probably most numerous.

Not one of these associations is affected to the slightest degree in its *result* by its being an incident in the social manufacture of pins. In the association of men with one another, we have not yet discovered, then, anything more than agreement to use the increment of natural associations for a definite end, or objective. Adam Smith noticed, further, that "a great part of the machines made use of in those manufactures, in which labour is most subdivided, were originally the inventions of common workmen, who, being each of them employed in some very simple operation, naturally turned their thoughts towards finding out easier and readier methods of performing it." In other

words, most, at all events, of these instances of invention were very highly individual matters and had no more to do with human society than that the individuals who did the inventing lived in a state of society and applied themselves to the study of natural associations which disclosed themselves in their work.

The use of the phrase "common workmen" suggests that there may be "uncommon workmen" whose associations were more definitely social. Adam Smith mentions them as those "whose trade it is not to do anything, but to observe everything; and who, upon that account are often capable of combining together the POWERS OF THE MOST DISTANT AND DISSIMILAR OBJECTS."

Note "the powers of OBJECTS": what are they but the powers of association to produce results? Here then, as before, it is a highly individual function that is performed: an association of "the powers of the most distant and dissimilar OBJECTS".

Adam Smith goes on to comment upon the large NUMBER of people co-operating with one another in this way; but we must not lose sight of the fact that this *way* is:—

- (1) By agreement, voluntary or otherwise, among men to
- (2) Reap the largest possible result from natural associations. So far as we have discovered, up to the present point, the HUMAN association lies in the agreement. The wood is under heading (1) and the trees under heading (2).

The point may be emphasized that an agreement to reap or to forego the natural results of associations affects the extent to which such associations are established; but not their nature or characteristic increments.

We must look therefore for instances of purely human association first of all, to associations which either favour (by agreement) or disfavour the USE of available associations which, strictly speaking, are external to man and to society.

There is reason to believe that the total effect of such associations (the agreement associations) is UNfavourable to the full use and development of associations of the second (external) kind; but this is a matter for assessment later on, and what we have to do at present is to state categorically the headings under which these associations (human associations) fall.

The most important is what is called LAW.

Law in the social sense is an entirely different thing from law in the scientific sense. In the latter sense, law is merely the briefest possible statement of the results of observation, and since such statements are always discarded as soon as the inductive method reveals any instance of departure from them (breach) it may be said that if they are ever "kept" they certainly cannot be "broken".

Law in the social sense is something—some rule of conduct—which can always be “broken”, but a penalty is exacted for breaking it. Such penalties are exacted by an association of persons within the total association concerned, and this inner association is often termed “the constituted authority”. In extreme cases it is easy to see, but in other cases less easy to see, that the penalties attached to every breach of law can only be exacted by consent of those of whom, collectively, they are exacted, since the exaction depends ultimately upon the exercise of a force internal to the association, not external.

Law is variable. On passing from country to country one finds systems of law which differ widely; while periodical additions to the law in all countries show the hand of the law-maker, who can be named with the place and date of the making of the law, and the place and the date of the beginning of its operation; *i.e.* the time and place when penalties other than natural penalties begin to be exacted from those whose behaviour varies from that prescribed.

The lack of duration and uniformity in the social law is thus in marked contrast to the “always and everywhere” of so-called scientific law. It is useful to regard social law as a body of prohibitions of courses of action which are physically possible. Disobedience may thus have two kinds of consequences: a natural consequence, which (being the result of an association) is inescapable, and a social arbitrary consequence which is a penalty escapable in some circumstances if not in all.

Douglas’s illustration is piquant:—The natural consequence of driving a motor car twice as fast is that it covers the distance in half the time. There is no connection between the speed of a car and a fine.

Law has various forms: the statute law, case law and regulations made by persons permitted by law to make them (called by Lord Chief Justice Hewart ‘Administrative Lawlessness’). A more insidious (and more effective) form of prohibition is that derived from the laws supporting financial practice. Convention and custom constitute additional associations which yield their characteristic increments, and it is to be noticed that all the associations we have been considering are capable of yielding a “negative” increment, from the point of view of the number and variety of the things done: that is to say a “DECREMENT.”

We must not, however, infer from this formal treatment of strictly human associations that their result is all loss; loss of what and to whom? We are not able yet to begin an account of man’s gains and losses. All that we have shown is that some human associations aim at restricting the full use and development of natural increments of association.

There is one function of human association which those we have named have not succeeded in prohibiting, and although efforts have

often been made to penalise it they have failed to eradicate it. One might therefore be led to suspect that (assuming the objective of human association as practised to be chiefly restrictive) this function belongs rather to the natural order than to the order of ‘constituted authority’. At the same time it is indubitably an instance of human association: a true FUNCTION OF HUMAN SOCIETY. If it is an inevitable natural association as well, (for man is a part of nature) one might say, without impiety, ‘Thank God’, for it is a function of the greatest consequence. It concerns THE CONSERVATION OF INCREMENTS—or the conservation of knowledge of the USE of increments (*L. conservare*=to keep together).

The essential elements of this association are revealed in the following sentences from Elliot Smith’s “Evolution of Man” :—

The germs of civilisation were planted when Man’s attention first became fixed upon specific problems, which he was able to deal with in an experimental manner, and, in co-operation with other men, to solve in a way more or less satisfying to him and his contemporaries, and to hand on his solutions of them to those who came after them. Once this process began, a new era in the manifestation of the human spirit was inaugurated. Every serious research, in whatever department of enquiry, leads to unforeseen results; it opens up new lines of investigation and suggests new trains of thought. So that once this method of groping into the unknown secrets of Nature was inaugurated, the human mind entered a new and ever-expanding world of ideas; and with many vicissitudes and fluctuations of zeal and insight, it has pursued this new direction, and has ever striven to attain the goal of new desires.

We may sum up the meaning of this passage by saying that the conservation of discovered increments of association in human society—or among human beings—is secured by *inheritance*. There are, of course, no ‘generations’ of men. There are large numbers of people living of approximately the same age, and as many ‘generations’ are living at once as the duration of life of the oldest inhabitant and the onset of reproductive powers in his descendants permit. The handing-on “from generation to generation” is a constant process: the handing-on is something done at once, as soon as there is something to hand-on. The inheritance is a *constantly increasing power to do things*. This constantly increasing power to do things is, together with a constantly increasing power to undo them, the *CULTURAL INHERITANCE*. The doing and the undoing parts seem to be of a different nature one from the other. The whole matter is one which had never been properly studied, but what we know about it suggests that we shall find that broadly speaking the doing part is concerned with natural associations and the undoing part with social prohibitions. Very definitely it seems, however, that the doing part

is stronger than the undoing part : that the tendency of the inheritance to increase is for some reason not susceptible of complete control. This does not mean that the restrictive action of prohibitions is always ineffective. Many arts, countless observed associations have, together with their increments, been lost as well as gained. We might find a key to the tenacity of man's grasp of natural associations, however, in the fact that their advantage is self-evident, and it is possible to reap the advantage, for example, of using a lever without knowing what it is called or what the mathematical representation of its properties is. Also, very important associations and their increments rarely reveal, when they are first observed, the whole of their power *in association with other cultural elements* to yield what may be called compound increments, and the imagination of those who invent prohibitions does not therefore suffice very often to nip the flower in the bud. The complex process of the development and inheritance of a knowledge of how to do things is therefore stronger than the power of prohibition confronted with the accomplished fact of a result of obvious advantage to man.

The fact of a cultural inheritance is peculiarly associated with human life. This breeding of abilities by abilities is one of his unique blessings.

Many factors in the development of the cultural inheritance are unconscious in the sense that they are unexpected associations which, together with their characteristic increments, claim the attention of some human being to whom they are immediately accessible. (*cf.* Adam Smith's description of the origin of inventions among "common" workmen). These factors, together doubtless with many which are the outcome of long and difficult search for a means of reaching a definite goal, tend irresistibly to add themselves together into more and more efficient, although complicated, ways of doing things. Such "strings" of the cultural inheritance elaborated for the efficient accomplishment of given productive ends constitute the "processes" of modern industry. Every industrial process would, on inspection and enquiry, reveal an unexpectedly large number of such inherited cultural elements, the origin of many of which, would, without any doubt, long ago have been forgotten.

ADDITIONAL NOTES.

The lecture is shorter than the preceding two. It contains matter which most students are relatively more familiar with than with the questions discussed before, and may appear easier. It is not really so, and familiarity should not be allowed to disguise the difficulty of some of the matters discussed. It is often said that SPEECH is the great distinguishing feature of man. It is not easy to see without a good deal of special information to lead the student, that speech is itself an instance of inherited culture. So is tennis. Observe the differences between old established games and games newly invented. On the whole the old games are simpler but more interesting. Possibly analysis might

reveal that they showed greater economy (conservatism) in the use made of a few associations. The famous physician, Sir Henry Head, said there was essentially no difference between the processes involved in learning to speak and those involved in learning to play tennis but the use to which the aptitude was put. Tennis playing might easily be elaborated into a technique for communicating to others our understanding of external relationships ; it might be used symbolically to express relationships which have been formulated in the same symbolic terms. The mention of the inherited cultural nature of speech, leads us to the other associations of speech, whether pictorial, written or spoken. This would lead us to an examination of the explanations commonly given to "explain" things, to beliefs, systems of ideas built up as time goes on. These constitute an accumulating RECORD of something quite different from the record of man's material successes represented, *e.g.*, by the pyramids of Egypt and the Forth Bridge or the Mersey Tunnel. Note that a record of these things also exists (although it is rarely examined) side by side with the constructions—as plans and formulæ. It has been asserted that what we may call the "belief" records, as distinct from the "plan" records, are related to each other in this sense, that man's unsuccessful plan and formulæ records gain currency and accumulate as beliefs which, having little bearing upon the successful construction of anything, pass to a large extent untested by those who have (division of labour) little to do with the constructing of anything. Students are not asked to adopt this view but they should notice it, if only as a pointer to the complexity of the cultural inheritance, and its effectiveness in determining the efficiency of society as measured in terms of human satisfaction.

IV

John Ruskin, in the preface to "Unto this Last", wrote that "the real gist of these papers, their central meaning and aim, is to give, as I believe for the first time in plain English, . . . a logical definition of WEALTH: such definition being absolutely needed for a basis of Economical Science." He went on to quote J. S. Mill, who, after saying that writers on political economy professed to teach or to investigate the nature of wealth, gave his opinion that "everyone has a notion, sufficiently correct for common purposes, of what is meant by wealth", and further protected himself by asserting that it was no part of the design of his treatise (Principles of Political Economy) to aim at "metaphysical nicety of definition".

Ruskin's comment is that "metaphysical nicety, we assuredly do not need; but physical nicety and logical accuracy, with respect to a physical subject, we as assuredly do."

Such a need for "physical nicety and logical accuracy" was met in Ruskin's opinion by the statement that "there is no Wealth but Life. Life, including all its powers of love, joy and admiration."

This is doubtless an admirable definition to those who know the work in which the words appear, but open to some misunderstanding by others. Ruskin scarcely meant to assert that wealth and life were interchangeable terms, *e.g.*, in the statement that a man in danger of his wealth escaped from captivity among Cossacks, leaving all that remained of his life among them. Ruskin went on to say that "that country is richest which nourishes the greatest number of noble and happy human beings."

It does not matter much here whether the riches lie in the number, the nobility or the happiness. The people of a country can hardly be numerous, as well as noble and happy, without something to nourish their numbers, nobility and happiness upon. And so Ruskin understood it: and bringing the matter thus down to various kinds of nourishment it is at once brought down from the abstract to the concrete.

All the needs of man are in respect of the exercise of his powers, and in respect of the exercise of each power he has probably many needs. He is properly nourished in Ruskin's sense (and his own) when these needs are supplied at will.

Wealth is, strictly speaking, not the source from which the needs are supplied but the supplying of the needs. In other words, a nation's wealth is what its citizens consume. An individual's wealth is what he consumes. Apart from wealth a community or an individual may have assets, but these are not wealth. No nourishment results from the meat in the pantry; but only from the consumption of the meat in the pantry. Endless confusion results from the admission of wider

definitions of wealth, which may all be avoided by observing the precise function performed by each item in its turn which our definition excludes.

Clearly between the meat in the pantry and the nourishment of life various stages intervene, *e.g.*, preparing, cooking, bringing it to the table, carving and serving. And so other stages preceded these; retail delivery, dressing, butchering, killing. In the retail shop the meat was "consumable"; but on the farm, not consumable yet.

The phrase "production of wealth" properly covers all these stages which prepare for the receipt of wealth by the individual.

Indistinguishable in respect of technique—*i.e.*, in respect of the associations yielding the increment—is the production of goods which are themselves not consumable: the fittings of the butcher's shop, his instruments, and so on. These wear out and have to be replaced; but they never reach the consumer. On the other hand, the wealth he consumes would not be forthcoming were it not for them. It is also true that collectively the community consumes them in the sense that they are used up in its service; but this consideration must not tempt us from our definition which has this merit, that it concentrates attention upon the production of *the result intended*, which is the nourishment, not the means of possible nourishment.

At various stages short of the actual fruition of the production system in wealth (as defined) there are *goods* (and, it may be added, services, which differ from goods only in respect of the function of the individual which they increase or maintain, *e.g.*, the organised communication to the individual of some part or other of his cultural inheritance is effected by supplying him with goods which result from this inheritance—at least in part—but also by instruction, which is a service). Commonly such goods are designated.

- (1) Capital goods.
- (2) Intermediate products.

In common language, then, the descent or ancestry of wealth may be summed up in the sequence:—

Men to make things,
Things to make things with,
Things half-made,
Things made,
Things consumed (wealth).

The place of men themselves in this sequence is noteworthy. They may be enumerated under this heading of things to make things with, *i.e.*, as instruments of their own for wealth production, *i.e.*, as capital. Further, not only as items of capital but as things self-consumed for the exercise of some power (action) they may be regarded as being, at different stages of their individual lives, half-made, or made; and all the time as being in process of consuming themselves. In other

words they appear at every stage of wealth production and are themselves wealth. It is curious that economic orthodoxy, which tends to restrict the meaning of wealth to cover everything *but* the wealth actually appreciated by man, nevertheless accords man a place among the things to make things with and sets a "value" upon him as though he were "worth" something to make things for nothing.

The relative importance to individuals of various forms of wealth differs from individual to individual within wide limits, without affecting the necessity of some forms of wealth to all people, *e.g.*, a sufficiency of food, air, water, sunlight, clothing, is necessary to all individuals at all ages, while such things as tennis racquets and the printed scores of orchestral music may occupy relatively very different positions, if any, in different individuals' lists of wealth items arranged in order of their importance. Indeed, such a list, if it could ever be compiled for even a single individual would never be strictly applicable to his life at any given moment and would tend to change from hour to hour. This fact, which very little examination of the subject is needed to verify, is itself a demonstration of the soundness of our rule that wealth only discloses itself in consumption, for consumable goods capable of being converted by consumption into wealth at one moment of the life of an individual are quite incapable of realising any wealth at another. In other words, all questions of *value* are incapable of settlement because there is no possibility of fixing a standard of value and all that we can say of anything is that at a particular moment it was presumably valued by an individual consumer because he consumed it.

Notions of utility, likewise, arise from confusion concerning the nature of wealth. The usefulness of wealth lies in the fact of its being wealth and how useful it is can no more be assessed than how valuable it is. On the other hand the usefulness of a tool (simple or complicated) or of an intermediate product can be measured by ascertaining its effect in making consumable goods available.

The abstractions, value and utility, have been a source of great hindrance to the advancement of knowledge of the efficiency of society but it should be noticed that appropriate standards of measurement are not rendered less appropriate because we detect the inappropriateness of a standard which has failed to serve us. Because value is indefinable it does not follow that people have no power to produce a result in association which is satisfactory to them. Probably that power will be increased if they eliminate from their discussion of it a useless, ideal conception.

Many people in the community seem to associate matter more prominently with that particular form of it which we call mud than with any other, and the same people show sometimes a strong inclination to disregard the fact that wealth which they are willing to interpret in the broadest terms has usually a lowly origin. Thus the greatest

poetry is usually printed on ordinary paper with ordinary ink and cannot become wealth but through the medium of the printed book. Similarly the greatest music cannot become wealth but through the medium of a large variety of material instruments made of steel, brass, silver, copper, wood, gut, horse-hair, ivory, etc. Stone, linen, oils, paints and varnishes are items in the medium for conveying wealth through the visual sense, and spiritual wealth is characteristically associated with special and elaborate buildings, mural and other decorations, and other things of a material kind. It will be observed that the wealth made available through such media is relatively intangible, and that the vehicles are either relatively permanent, like some of the instruments of production, or are transient, like the sound of music, if the sound be regarded as a source of wealth.

Such considerations, however, only drive us back to the consideration that the availability of wealth is dependent upon the establishment of all the kinds of association we have considered in previous lectures. Examined minutely every instance of wealth (which observe is essentially individual in its nature) is traceable to a number of antecedent associations; the cultural heritage, industry and process, mental association, mass association, the agreement associations, material associations, all yielding their characteristic increments (some of which may be decrements). Throughout, each effective element in association has been effective in its own way.

The peculiar associations between the seed and the soil, the growing plant and sunlight have resulted in a *redistribution* of energy (the total energy of the universe is not believed to be susceptible of increase or decrease). Man makes arrangements for this natural event to occur at times and places advantageously to himself. The capacity for work is increased by providing the conditions in which energy may be released from stores, and, by the use of mechanical associations inherent in the properties of motion, this capacity is directed into useful channels. The knowledge of how things can be done embodies a *conservative* force which results in their continuing to be done as it is known they can be done and the result is constantly accelerating power to do things. There is no other ingredient in wealth-production. We have not mentioned money, which superstition places among the items of wealth. It is neither wealth (it is never consumed) nor is it capable of producing wealth. Apply the experimental method to it and see. All the associations which lead to the production of wealth can be established independently of money. We could, of course, agree not to provide for the occurrence of any natural associations unless, let us say, all the pavements were painted pink, and so, by agreement, we might allow any other arbitrary rule to intervene between us and the reaping of the natural increments of association which are advantageous to us. If we did we should not call the process one of *wealth-production*.

In a modern community the tools assume great prominence, *i.e.*, capital is prominent. Thus Ruskin said :

“Capital signifies ‘head, or source, or root material’—it is material by which some derivative or secondary good is produced. It is only capital proper (*caput vivum*, not *caput mortuum*) when it is thus producing something different from itself. It is a root, which does not enter into vital function till it produces something else than a root : namely fruit. That fruit will in time again produce roots : and so all living capital issues in reproduction of capital ; but capital which produces nothing but capital is only root producing root ; bulb issuing in bulb, never in tulip ; seed issuing in seed, never in bread ; The Political Economy of Europe has hitherto devoted itself wholly to the multiplication, or (less even) the aggregation of bulbs. It never saw nor conceived such a thing as a tulip.”

Clearly, a society that knows no difference between an apple in a barrel and an apple in its mouth, between the soil from which the apple-tree grew and the human being enriched by eating an apple, can hardly distinguish the bulb and the flower.

But to say that we must distinguish between capital and wealth is not to say that capital is unimportant. Capital is, however, relatively easy of definition if we stick to the doing part of life in society and avoid the purely recording part. All the associations which enter into wealth production—man’s inherited knowledge of how to do things, the increase he is able to effect in this knowledge, the natural and mechanical associations he establishes, the stores of energy available to him, plant and equipment, transportation systems—all these are capital. Many items involve work and the use of materials. Plant wears out, becomes obsolete, and must be renewed. Note two points : that a disproportionate amount of energy may be expended on capital which, after it is produced, may remain largely unused, and that the obsolescence of capital is not something that directly affects its power to produce wealth.

V

The Associations we have considered are :

<i>Kind</i>	<i>Increment developed</i>	<i>Conditions</i>
(1) Material.	Mechanical Advantage.	Freedom of material parts to move on application of force.
(2) Mass.	Absolute (all or nothing).	Sufficiency of elements.
(3) Energetic.	Work and Power.	Multiple and derived, <i>e.g.</i> , (1) and (2) plus availability of free energy.
(4) Agreement.	Effective application of natural instances of association and gain by Man of characteristic increments.	Psychological : (appreciation of the use of associations and the will to use them).
(a) General.	Productive advantage.	Derived from (2) (time-saving) and psychological sources (enhanced skill).
(b) Division of Labour.		
(5) Cultural Heritage.	Increased power to do things in human association.	All the conditions enumerated above plus persistence of results in society (in the community) (CONSERVATION OF MEANS).

Of the above (1), (2), (3), and to a great extent (5) are (a) constant and (b) instantaneous in the development of their characteristic increments. That is to say, the same result ensues from association whenever it is established, and it ensues at once. If the association can be established, the increment is always available. There is nothing erratic about the action of forces. Coal does not burn sometimes, and not at other times, in the same circumstances. The distance of the Sun from the earth varies seasonally ; there is alternation of night and day, the angle of incidence of sunlight varies periodically ; but green leaves transform the same amount of solar energy in the same way in the same circumstances, and if these circumstances are present the transformation is immediate.

There is no reason to believe that the same constancy does not attend every other kind of association ; but, since the nature of mental action seems to involve DELAYED response (suspense of action—or of reaction) IN ITS END RESULT, it may be said that while the agreement increments are probably constant, they do not all display themselves instantaneously. Such considerations suggest that apparent

variability in the results of agreement associations arises from our ignorance concerning the elements in effective association rather than from any other cause, *e.g.*, human "idiosyncrasy", the "psychological factor", *etc.*

The ease and success with which "government" of very large numbers of people by very few people has been practised during historical times suggests that accurate knowledge of a few relatively simple principles is of more effective consequence than ignorance of others more complicated in their nature. Without interruption throughout history, and with surprisingly few periods of a doubtful nature 'strong' governments have been the rule—that is to say 'weak' peoples have been the rule. The essence of government is governing: a Norman word for a Saxon word, or rather a Norman termination for a Saxon termination.

It does, doubtless, require considerable imagination to picture what would at any time in the past or in the present have been the RESULT (as measured in terms of human satisfaction) of the free use of all the increments of association available to Man, if as many as possible were used advantageously. It is to be observed that every increment CAN be used *disadvantageously*. Thus it is possible to convert the mechanical advantage of a crowbar into a "disadvantage" by placing the fulcrum nearer to the hand of the user than to the mass to be moved. It is possible for nineteen men to tire themselves considerably by persisting in refusing the assistance of one man in a task for which the mass association of twenty men would suffice. Ammunition dumps can be exploded without reaping a useful harvest of work, and it is not necessary to dump the ammunition to secure the same useless end. Coal dumps can be made to evolve great heat; but it is not necessary for the energy thus made available to be converted into industrial power. Since wealth only displays itself IN CONSUMPTION the *productive* advantage arising from the division of labour need not result in any increase of wealth, for production can be dissociated from consumption. In considering the agreement associations it is important to realise that the fact that they *must* be effective (the increment of association: "every effective element in association is effective in its own way") does not mean that they *must* be effective in securing any particular END. And, finally, in regard to the cultural heritage, it is of major importance to realise that at every past time since civilization began it has been affected by the operation of all these sources of DECREMENT; that what it would have been in the absence of this pruning is beyond imagination and that only advanced mathematical treatment could suggest even what KIND of diminution it has suffered in this process. For example, it has been asserted that the industrial revolution of the nineteenth century COULD have occurred in Europe in, at latest, the fourteenth IF certain agreement

associations had not intervened to sabotage the mathematical and physical knowledge then accumulated by the Moors (Hogben).

Leave that for the moment. We have in this lecture to give some account of what the Syllabus calls "negative" aspects of wealth, and it is important in the first place to gain some idea of WHAT wealth is prevented, and HOW it is prevented, before the question WHY it is prevented can have much meaning for us. This is by no means an easy matter. In a jig-saw puzzle it is easy to see, when the available pieces are put together, that one piece is missing. One sees the empty space. It is difficult, unless you know how many pieces there should be, and count how many there are, to see that a piece is missing without putting those there are together. And it is impossible to guess all that may be painted on the missing piece. So it is difficult for most people to form any idea of the difference between what is and what there might be in regard to wealth (which, again, only displays itself in consumption).

The best we can do, probably, is to try to identify some of the ways in which wealth is prevented from expressing itself.

Although it discloses the answer to the question "why?", which we ought not to consider until we are better prepared to understand it, you should read, in the first place, the sixth chapter of "Economic Democracy" (Douglas), and then the first twenty-six pages of Thorsten Veblen's "The Engineers and the Price System", and, after that, "The Great God Waste", by J. L. Hodgson. But read to get some idea of the facts, and the intricacy of the facts, and the meaning of the facts from the point of view of the efficiency of human society as measured in terms of satisfaction to individuals (for all of those who support human society, or participate in human association, are individuals).

Do this first, from the objective point of view we have taken up in these lectures, before you begin to theorise about money. We have scarcely mentioned money up to the present, and it is as important to understand that the sources of wealth are NOT money as to understand what use is real wealth, actual or potential.

Douglas's chapter, then, is as follows:

It will be readily understood that the difficulties which are seen to be inherent in the policy of super-production are only an accentuation of those with which we were only too familiar prior to the outbreak of war,* and it may be contended and, in fact, it frequently is stated, that even with the unemployment statistics at their minimum point and the nation at its maximum activity in Industry, there is still not enough product to go round. Recently, for instance, Professor Bowley has estimated that the total surplus income of the United Kingdom in excess of £160 per annum is only £250,000,000, which would mean,

* 1914-1918—Editor.

if distributed to 10,000,000 heads of families, £25 per annum per family, assuming that this distribution did not reduce the production of wealth.

The figures themselves have been criticised ; but, in any case, the whole argument is completely fallacious, because it takes no account whatever of loan credit, which is by far the most important factor in the distribution of production, as we have already seen. What it *does* show is that the purchasing power of effort is quite insignificant in comparison with its productive power. But it may be advisable to glance at some of the proximate causes operating to reduce the return for effort ; and to realise the origin of most of the specific instances, it must be borne in mind that the *existing economic system distributes goods and services through the same agency which induces goods and services, i.e.,* payment for work in progress. In other words, if production stops, distribution stops, and, as a consequence, a clear incentive exists to produce useless or superfluous articles in order that useful commodities already existing may be distributed.

This perfectly simple reason is the explanation of the increasing necessity of what has come to be called economic sabotage ; the colossal waste of effort which goes on in every walk of life quite unobserved by the majority of people because they are so familiar with it ; a waste which yet so over-taxed the ingenuity of society to extend it that the climax of war only occurred in the moment when a culminating exhibition of organised sabotage was necessary to preserve the system from spontaneous combustion.

The simplest form of this process is that of 'making work' ; the elaboration of every action in life so as to involve the maximum quantity and the minimum efficiency in human effort. The much-maligned household plumber who evolves an elaborate organisation and etiquette probably requiring two assistants and half a day in order to "wipe" a damaged water pipe, which could, by methods with which he is perfectly familiar, be satisfactorily repaired by a boy in one third of the time ; the machinist insisting on a lengthy apprenticeship to an unskilled process of industry, such as the operation of an automatic machine tool, are simple instances of this. A little higher up the scale of complexity comes the manufacturer who produces a new model of his particular speciality, with the object, express or subconscious, of rendering the old model obsolete before it is worn out. We then begin to touch the immense region of artificial demand created by advertisement ; a demand, in many cases, as purely hypnotic in origin as the request of the mesmerised subject for a draught of kerosene.

All these are instances which could be multiplied and elaborated to any extent necessary to prove the point.

In another class comes the stupendous waste of effort involved in the intricacies of finance and book-keeping ; much of which, although necessary to the competitive system, is quite useless in increasing the amenities of life ; there is the burden of armaments and the waste of materials and equipment involved in them even in peace time ; the ever-growing bureaucracy largely concerned in elaborating safeguards for a radically defective social system ; and finally, but by no means least, the cumulative export of the product of labour, largely and increasingly paid for by the raw material which forms the vehicle for the export of further labour.

All these and many other forms of avoidable waste take their rise in the obsession of wealth defined in terms of money ; an obsession which even the steady fall in the purchasing power of the unit of currency seems powerless to dispel ; an obsession which obscures the whole object and meaning of scientific progress and places the worker and the honest man in a permanently disadvantageous position in comparison with the financier and the rogue. It is probable that the device of money is a necessary device in our present civilisation ; but the establishment of a stable ratio between the use value of effort and its money value is a problem which demands a very early solution, and must clearly result in the abolition of any incentive to the capitalisation of any form of waste.

The tawdry 'ornament', the jerry-built house, the slow and uncomfortable train service, the unwholesome sweetmeat, are the direct and logical consummation of an economic system which rewards variety, quite irrespective of quality, and proclaims in the clearest possible manner that it is much better to 'do' your neighbour than to do sound and lasting work.

The capitalistic wage system based on the current methods of finance, so far from offering maximum distribution, is decreasingly capable of meeting any requirement of society fully. Its very existence depends on a constant increase in the variety of product, the stimulation of desire, and in keeping the articles desired in short supply.

Veblen remarks that in America stress has been laid upon the "less amiable" manifestations of sabotage (syndicalist sabotage : violent obstruction to the productive system) in order to discredit its use by workmen. He points out that this is unfortunate, for "it lessens the usefulness of the word by making it a means of denunciation rather than of understanding." But the pressure of events has widened the meaning since "manoeuvres of restriction, delay and hindrance have

a large share in the ordinary conduct of business." "It describes a certain system of industrial strategy or management . . . a resort to peaceable or surreptitious restriction, delay, withdrawal (of efficiency), or obstruction."

Observe, however, that all this is quite a different thing from natural limitations upon wealth, life and production. In the past these have been alleged to be the unwillingness, except under compulsion, of men to work. The displacement of this view has resulted from the growing unemployment problem and most people now realise that a shortage of available energy (capacity for work) is not the cause of poverty (a shortage of wealth).

Similarly, natural disasters, floods, droughts, disease affecting crops, variations of climate and weather, are of diminishing importance as scientific controls become more effective, available energy more abundant and transport facilities more rapid and certain. But no direct measure is possible of the total effect of sabotage and the restriction of production. We should expect that the latter is greater than the former, if Douglas and Veblen are right, and they are essential parts of our system, for destruction is evident and, with the possible exception of war, objection is raised to it by most who do not benefit artificially from it.

Nevertheless, an approximation (obviously a rough one, which falls far short of a correct representation of the full effect of restriction) can be gained from the fact that the reorientation of productive industry can be so quickly established on the outbreak of a modern war, that as many of the earth's inhabitants remain fed, clothed and housed as are fed, clothed and housed in "peace"; but an enormous volume of production is destroyed. That is to say, an approximation to the power of the community to produce wealth is made under war conditions, and at the same time there is a fall in the proportion of total production converted into consumable wealth of a desired kind (true wealth). The form of consumable goods is largely a matter of human determination. The chief differences between a torpedo and an aeroplane are differences of design. We might say, then, that *design* determines whether the population of the earth is rich or poor.

VI

In our modern community, the possession of goods (implying the possessor's ability to convert them at will into wealth by consumption) is related to three things :—

- (1) Availability of the goods.
- (2) The individual's desire to possess them.
- (3) His ability to pay for them.

We need not concern ourselves with the phrase "to pay for them" at the moment, beyond saying that it is usually interpreted in the sense of paying money for them. If the individual stole them, he may be said to pay for them in terms of personal insecurity.

In any case, this condition boils down to one involving what is called "cost". It is of great importance that we should examine this notion carefully, and attach, if possible, a precise meaning to it.

Note that it appears that the "cost" or "costliness" of goods and services is something that may operate to prevent individuals from converting them into wealth. It seems to be a potential limitation upon association effectively to satisfy individual requirements. It is therefore a Social Credit factor. We must decide whether it is a natural or an arbitrary factor. In a state of nature do things ever "cost" anything? Or is it only in human association that they are endowed artificially with this property? We must remember that current usage gives "cost" another meaning than a purely monetary meaning. Things are said to be done "at the cost of great effort". But this is only to say that effort is sometimes required to effect a result. It would serve our turn to say that the thing done was hard to do.

The notion of "cost" is obscure. One can go back to Imperial Roman times—probably much further—without finding anything but double-meaning in the words used for cost, and rather significantly, the same double-meanings persist today. Thus *sumptus* meant cost and also expense; *impensa* (from *impendo*, I lay out) expense, outlay, cost; *praemium*, that which is taken *first*; advantage (which, in the natural world, is not taken first but *at the time* an association is effected). The word also meant gain, profit (the increment of association), an honourable reward, recompense, a promise and (ironically) *punishment*. *Merces* meant wages, hire, pay, fee, salary, reward, interest, rent income. It also meant *punishment*. *Caritas* meant costliness, dearness, high *price*, scarcity of money, and also affection and the dearness of *e.g.*, one's children; while *carus* signified high-priced and also dear and beloved.

There is no natural connection between the high price of (say) tomatoes and natural affection. The rest of the meanings indicate either the plain effects of monetary customs (agreement associations) *e.g.*, the reward for services in negotiable money tokens instead of in kind, or they are ironical.

Legend attaches to the discovery of fire-making the punishment (said to have been for theft) inflicted upon Prometheus, whose liver was eaten in the day-time by birds, regenerating at night. This suffering might be regarded as the "cost" of the fire. Quite another "cost" of fire is the fuel to stoke it. This, however, only transfers the "cost" to the fuel. If the "cost" of the fire is its fuel, what is the "cost" of the fuel? Did the invention of money render costly what was costless before?

The cost of fire to Prometheus was a penalty arbitrarily fixed by divine decree. If we go back to our treatment of the distinction between the two kinds of law, the laws with variable sanctions attached to them and those (scientific) which are *altered* by breach, we may gain some useful notions of "cost."

Let us suppose that the gain of wealth is invariably accompanied by penalties exacted from the consumer. A few minute's work in our "laboratory" will show that this is untrue, for instances of wealth will disclose themselves to which no obvious penalties are attached, *e.g.*, the wealth generated by the consumption of fresh air and sunlight. Also, natural associations yield their characteristic increments unbidden, whether the appropriate associations are established by accident or design, and independently of the agency establishing them.

Wealth itself is the increment of such an association, and ensues from association between consumer and the thing consumed. Wealth, therefore, is costless: a notable conclusion.

If we look around, however, we shall soon discover that the same distinction as we established between consumable goods and wealth holds in regard to cost, and penalties *are* exacted for the accumulation of consumable goods—natural penalties.

We must guard against assumptions. To discover whether or not a penalty of any description is *naturally* attached to goods and services is not to discover the nature of the penalties or the names and addresses of the natural payees. Natural penalties are not, in fact, payments made *to* anybody. They are the natural conditions in which a desired result may be secured.

Let us take, then, any desired result and see as far as we can what are the natural conditions in which it may be secured. Broadly, they are the establishment of the appropriate associations.

Take the case of a loaf of bread. Loaves of bread are consumable goods, resulting, under modern industrial conditions, from a long and complicated train of associations, *e.g.*, the cultural heritage (knowledge of effective methods of irrigation, breeding of desirable strains of wheat, the discovery of the aerating properties of yeast, natural mechanical principles embodied in the construction of machinery for mixing and transportation, fire-making, the modes of rendering heat energy available, the art of brick-making, traditional knowledge of

the behaviour of artificially implanted grain, and so on.) No natural observable penalty is exacted in regard to any of these associations or their increments, unless it is the penalty of having to do work to establish the associations anew in order to profit by them. Energy is the capacity for this work.

We may say, then, that the penalty exacted for using the cultural heritage (which, we see, is a large item in the production of a loaf of bread) is the work done by men in establishing the appropriate associations. Let us say, for it is the traditional symbol, that bread itself is the source of the energy providing the capacity to do this work. In other words, the cost, or penalty, exacted naturally, here is consumption by living men engaged in establishing the appropriate associations made available by inheritance. A part of this cost may have been "paid" in respect of some men who have died, let us say, since they established the appropriate associations for producing bricks or some other part of the capital equipment of the bakery.

If we take the land on which the wheat is sown, there is no discoverable penalty attached to its use. If there were, we should have to say that man had to pay a natural penalty for living. If we consider anything done to the soil, either to drain, clear, or irrigate it, or to increase its fertility, we find that the natural penalties here are the same as before; consumption by the men involved of energy-producing substances.

So in regard to transport of grain *etc.*, so in regard to the actual making of dough and the handling of it in cooking; so in regard to the wood or coal for heating ovens: the natural penalties exacted are the sum of consumable goods consumed throughout the process. These consumable goods are not all bread; nor strictly, are they all energy-producing: they may be goodwill-producing, increasing efficiency in the application of energy available or determining the direction of its employment. The consumption is of produced goods. Thus we may say that in regard to physical realities:

THE TRUE COST OF A GIVEN PROGRAMME OF PRODUCTION IS THE CONSUMPTION OF ALL PRODUCTION OVER AN EQUIVALENT PERIOD OF TIME.

As everybody knows, a standard method is in use of evaluating cost in terms of money. Before we try to discover the correctness or otherwise of the use which is made of this method, let us try to see what is involved.

It is always better to take very simple cases whenever the objective is to discover fundamental principles. The modern industrial system is complicated, and it is fatally easy to lose track of the events occurring within it and of their real meanings.

Suppose we go to that paradise of economists, an island. Let it be an island where cocoanut palms grow, and where a small population

subsists entirely upon fruit. The pulp, let us say, provided the people with food, the shells with houses, the fibre with clothes. If the island did not produce enough for a large population, the excess of population would die, so we need not concern ourselves with the sufficiency of production. If the population of the island cared to concern themselves with this matter, they might increase production and increase their own numbers, though doubtless not indefinitely.

In this case, the cost of production of all the cocoanuts of the island would be all the cocoanuts of the island, or the cost of a cocoanut would be a cocoanut. But suppose the islanders to be capable and willing to produce more cocoanuts than sufficed for their needs, let us say twice as many, then the production would be twice the consumption, and the penalty exacted for making two cocoanuts available would be one cocoanut. It is never possible for the mean consumption rate to be greater than the mean production rate in any period without there being a source of goods not revealed in the production figures—that is to say without extending the period considered to cover an excess of production of goods which could be stored.

Now this is a very remarkable result, which must surprise some of us, who have so prominently in our minds notions of equity that we recoil from the plain fact that it is possible for the true cost of a volume of goods to be a fraction of the goods. We are in the habit of thinking that since one cocoanut is as good as another, more or less, no exchange is equitable that is not on the basis of cocoanut for cocoanut. Yet it is evident that in certain circumstances, namely a higher mean rate of production than of consumption, the true cost of production is a fraction of itself.

Now, we do not need to know much about money to see that if the islanders are "rewarded" (quite unnecessarily in this case) for their production of, let us say, a hundred cocoanuts with a hundred little pieces of paper, upon each of which is written a letter "M", the "cost" in "M's" of one hundred cocoanuts is one hundred "M's". To quote from C. H. Douglas :

"The true cost of a programme of production is in general not the money cost, but considerably less than the money cost, and a given programme of production can only be distributed to the buying public if sold at its true cost."

Why? In the case of the nuts an "M" represents the *monetary* cost of one cocoanut ; but one cocoanut represents the *real* cost of two.

Now, it goes without saying that no estimation of the "power to produce the result intended"—*i.e.*, the efficiency of a system, can be correct that is based upon a wrong standard.

The productive system is producing the results intended by those who participate in its working, when it supplies the goods and services they require with a minimum of trouble to themselves. If the require-

ments are to be satisfied, consumption must be continually expanding and if consumption is continually expanding, true cost is continually expanding, and so must production be, for consumption cannot occur without production. Efficiency cannot be measured, therefore, by the degree to which increased production can be secured without increasing consumption—"keeping down costs."

It is the "minimum of inconvenience" clause that reveals where an index to efficiency must be sought. To measure the money costs does not establish "efficiency". A falling money cost indicates the degree to which the consumers attached to industry can be reduced in number without reducing the volume of production.

What kind of a statement would interest the community in regard to these matters?

Clearly one which showed the real, actual and potential income of the community as measured in consumable goods and services, and the real expenditure as measured in consumption. A material item on the first account would be the degree to which the power of the community to produce had been extended—not by the addition of additional workers, but by the increase of their powers *per man*. Covering a long list of items, this may be called capital appreciation. Owing to the nature of the cultural heritage, it is naturally much greater than its opposite, capital depreciation, which is chiefly the wearing out of tools. There is a depreciation of the heritage through the inability of the community to transmit accurate and sufficient records of the means whereby various increments were discovered. It transmits chiefly the results. But this decrement is certainly not preventable at present, and may never be so.

No balance sheet of the kind indicated has ever been constructed, at all events in regard to the total availability of wealth in a developed community. This essential information concerning the true state of efficiency of social organisation has been unsought and untabulated.

Clearly it is a matter which affects very closely the power of men and women in association to make the most of association—*i.e.*, of society, and it is a scientific rather than a cynical inference to draw that the reason must be that the origin and purpose of human association have somehow been obscured in the sense that the only possible motive which man could reasonably entertain for associating—to gain the full increment of association—has not been allowed to operate. This matter will be pursued in the next lecture.

ADDITIONAL NOTES.

What is the meaning of the excess of production of cocoanuts on the palm island?

- (1) Leisure for a period covering their consumption.

- (2) Applied to a more highly organised productive system, the consumed nuts and the unconsumed nuts may be taken to represent consumable and unconsumable goods. Then total product = the sum of consumable *plus* non-consumable goods. Total consumption = sum of consumable goods only. Non-consumable goods cannot enter into consumption.

True cost of non-consumable goods, therefore = a PART OF CONSUMABLE GOODS.

True cost of consumable goods = *the* OTHER *part* of consumable goods.

Many people have in their minds the picture presented by the over-elaboration of the means to produce (production of capital goods, through some misdirection of effort) and consequent diversion of effort from production of consumable goods. Not only industrial mal-adjustment but financial and political factors may determine such an event. **BUT NOTE THAT, IF CONSUMPTION IS REDUCED, THE TRUE COST OF TOTAL PRODUCTION IS REDUCED,** and willy-nilly the community has provided itself with assets the true cost of which is already covered.

- (3) Note that neither individuals nor the sum of individuals in the community can go into "debt" for cost. If cost is consumption, it is "discharged" on consumption. If consumption goods are available they can be consumed, not otherwise. Tomorrow's dinner may be small or nothing, but it cannot be eaten today: it becomes today's.
- (4) People (other than expert producers trying to gauge future demand) worry about what "ought" (ideal conception) to be the relationship between capital and consumption goods. The answer is the "correct relationship" as indicated by the availability of goods for consumption. It does not matter what the degree of elaboration of means to produce is, provided they are correctly related to the "power in association to produce the result intended" (that is to say, intended by those associating). Their intention may cover economy of effort and of resources. Only they know.

VII

Unless you have thought a good deal about the subject matter of the preceding lectures it may not be apparent that while the vast complex of associations involved in what is broadly termed Human Society (with capital letters) has been stripped bare of ideal elements, nothing actual has been touched or altered or belittled in any fashion.

Even if some of them have received only a bare reference, all the means whereby the individual may receive wealth or contribute to its production for himself or for others have been submitted to observation. Not one of them has been dislodged. No disrespect has been paid to any of them. The bloom is still on the grape, without so much as a finger-mark to mar it. The actual data of human experience are intact and undisturbed. No mental association has been condemned because its resultant in human satisfaction might be negative, with one exception, and that not because of its effects but because our examination of other instances of association shows it to be unnecessary and gratuitous. We must not invent unnecessary terms in associations just to please ourselves. Nothing ensues from them as increments, although something may ensue from our invention as an increment. The right name for such an increment is error, as surely as if a figure were invented to read into a column of figures in an addition sum.

Each effective element in an association is effective in its own way. Whenever we are able to trace observable results in nature, phenomena, to the associations of which they are the increments, we find, not the total of associations, but simple effective associations. It is not an abstraction, association in general, that yields increments, but individual concrete instances of association, each yielding its own increment. Human Society is an abstraction of this kind, and it is only the idea of it as an individual instance of association that is capable of yielding any increment. That is to say, Human Society acts, when it acts at all, as an idea capable of associating with other ideas to yield an ideal increment. This increment, being ideal, must be generated in individuals, since the only things we know capable of entertaining ideas are human individuals (whether or not some other animals can be immaterial, since among them the same kinds of phenomena would ensue, and we should only extend our study of society to cover animal association if we took notice of this matter). The biological function of ideas is to assist their possessor in living—or, as someone has said, "the biological end of life is action, not thought". Possibly, the entertainment of an idea may give satisfaction of some kind to the individual who entertains it; but from the point of view of the Social Credit this is irrelevant unless, directly or indirectly, action (behaviour) is affected. Thus, for us, ideas may facilitate, postpone, inhibit, direct, prompt or otherwise provide the means for either more effective and purposeful action or for inaction, and, so far as we are concerned,

action can only be taken by individuals. In a mass association it is individuals who act together at the same time, and in every instance of the division of labour, whether in the factory or in the various "bodies" which function in the community, individuals are concerned in all the doing of things, even if the doing is only the contacting of a switch or the signing of some threat of penalties against an associate member of the group.

It was in regard to the cultural heritage of man that we found the most definite association of an increment with the whole range of human life and with its continuity in Time. We may, therefore, examine the phenomenon of the cultural heritage again from this point of view (the abstraction called Society). If we do so, we must seek for instances of the cultural heritage (*i.e.*, not the abstraction, inheritance in general). So, quite apart from the fact that the case breaks down at the start, our attention is again directed to constituent associations, yielding their characteristic increments. Let us take the case of water transport. The present generation has inherited knowledge of the means of passing across the Atlantic in less than five days, without discomfort, except such as is inseparable in some individual instances from particular kinds of enforced movement, and in relatively large communities at a time, without great uncertainty in regard to the keeping of appointments. It would be hard to suppress the essential parts of the knowledge of how to do things from which this convenience arises, although the date fixed for the launch of the next large ship may, by agreement, be a very moveable feast. By far the greater number of individuals now living know next to nothing of any of the details entailed in the construction of such a ship, and if the total accomplishment is analysed it will be found to embrace an amazingly large number of items, which no one living understands in their totality. It seems then to have been a very tiny stream which bore the knowledge of how to do all the things done in and for the *Queen Mary*, and to say that Human Society was this tiny stream is to exaggerate the part into the whole.

Yet it is said that there are still identifiable in the *Queen Mary* elements peculiar to the construction of the first ships that ever sailed, thousands of years ago, and it is only within living memory that other significant features of naval architecture have at last fallen into disuse. What, for example, had "Human Society" to do with, on the one hand, the designer who at last reduced the figurehead to a neat, meaningless gilt scroll on the bows of the last ship to carry it, or, on the other hand, is there to be found recorded the decision of "Society" to discard it altogether? These were individual actions taken, possibly in consequence of discussion prompted by the same or some other individuals who voluntarily raised the question. If in addition there operated some factor inextricably associated with the phenomena of the descent of culture from time to time, it, in its turn, was an increment

of association which we might fruitfully study. It was not an abstraction. It was not "Society".

We said that the increment of association of cultural inheritance was increased knowledge of how to do things, and that its essential feature was the conservation of means. This intense conservatism operating to retain as a visible element in human culture items which originated in the distant past is represented in Africa by a cross bar of wood affixed to the bowsprit of canoes. From the natives who build their boats in this way, no elucidation of the meaning of this transverse bar can be gained, and their profound ignorance of its meaning is only surpassed by the intensity of the superstitious reverence accorded to it. But this fear of losing what may once have possessed practical significance is not "Society". (It is suggested that the bar described is a representation of the horns of horned cattle. When it was discovered that a cow's milk was not poisonous to Man, a special significance was attached to this animal, who, having demonstrated her virtues as a foster-mother, was deemed to be capable of affording protection to the daring navigators of the first ships. Hence the figurehead. The elusive sea-maiden still remembered on the bows of wooden ships was her cultural descendant). Before 1693, while money still represented at least the goods consumed in making it, the symbol for the Pound was a small letter "l" with a line above it, indicating that the "l" stood for a word. An old merchant's journal of 1693 in the possession of the Bank of England contains the first known use of a *capital L*, with a line or lines drawn *through* it. The graceful lines of the modern symbol are well-known.

Even in human society, natural laws cannot be suspended. Men and women can apply their knowledge of natural associations, or they can neglect to apply it. They can increase it, or they can diminish it by forgetfulness or failure to transmit it to others. They cannot alter the natural increments of associations which they establish or which are established without their aid. You remember: "For every action with which we are acquainted, action and reaction are equal, opposite and wholly automatic."

So, to the action indicated by the persistence of cultural elements, there is a reaction which is equal and opposite. It is abundantly shown that these "forces" maintain a dynamic, not a static equilibrium; the heritage increases: the system moves.

What maintains its motion is direct perception of advantage and the opposite is absence of direct perception of advantage. The perception once gained is not, evidently, the only effective element in the association which conserves the flight of culture down the ages. The bowsprit and the figurehead have almost the same "momentum" as the ribs, the keel and details of the rigging. Once there it is *actual*; it may almost be said to induce perception of advantage even when there is none.

This is evidently a matter affecting the mental attributes of Man. What is material is that something has to be done to induce action in the absence of perception of advantage (direct perception) and that equally something has to be done to inhibit action which is customary, even in the presence of direct 'perception' of disadvantage. But this is strictly impossible, since it implies perception of a negative. What individuals can perceive is discomfort, not disadvantage, and to be prevented this result must be traced to some definite association. Ineffective associations get, as it were, an acquittal. But all associations are, and must be, effective, and what actually occurs is that an association once "acquitted" of generating some disagreeable increment is acquitted of responsibility for generating any increment at all.

We should inspect then with particular care the 'discharged' among the accused, and among the discharged, remember, is "Human Society", the redundant abstraction which we have found it to be: a whole greater than the sum of its parts. One thing that may be more disastrous to Man than the discovery and application of new associations is the false ascription of increments to old ones. Relieved of the necessity of delivering the goods supposed to ensue from them, they have a free hand to go into business on their own. (This is metaphorical; but it is not flippant).

"The evil that men do lives after them;
The good is oft interred with their bones."

Unfortunately, we have not far to seek the increment ensuing from this freedom in the case of the ideal "Human Society". It is true we have not yet proved the evil nature of its increment, and indeed such matters are properly left to individual judgment. What we have to do, in relation to the matter, is to describe the increment.

It was stated earlier (Lecture 2) that men had been able to contrive uses for what happened naturally apart from themselves by varying the variable elements in natural associations. To contrive USES. The increments of association are useful to Man. His interest in them, when it is aroused, is because of their use to him. They, apparently, are incapable of showing interest in him. They develop independently of him, and he cannot be said to be of use to them.

Yet, by the device of inventing a superfluous master association, writers, not only in Germany and Italy but all over the world, have constructed an abstract entity, "Human Society", which, under many aliases, men are alleged to exist in order to serve. Thus the conservation of Society, the State, the Nation, the Profession, the School, which are all more or less comprehensive instances of association from which normal increments should accrue, are all converted into objects for the service and attention of Man who is indeed said to find the true justification for his existence in the support and service of these abstractions. We are still not concerned with what should be,

but with what is, and it scarcely needs demonstration that here, making all allowance for the importance of the preparation and conservation of means, what has occurred is the substitution of means for ends. Measured by some standard unknown to him, which therefore he is incapable of estimating in regard to its correctness or authority, it may be that Man "ought" to find satisfaction in results with which he is dissatisfied. The matter is incapable of settlement. The fact is that once such a standard is arbitrarily defined, it is a matter of power whether or not it is successfully imposed as the objective of men's efforts. That is to say POLICY is a matter of power and determination. The word is often misused, or used misleadingly. We mean by it the end, or result, to attain which associations of all kinds are established. An element and a necessary element, therefore, in estimating the efficiency of society is acceptance of some standard in this sense.

Efficiency, remember, is the power to produce the result intended. A community whose accepted policy is tyranny is functioning efficiently when tyranny is most complete and all-embracing. It is generally believed that all associations are established in the first instance for the benefit of those establishing them. If this is true, it is apparent that many associations are preserved in action when their original intention has been reversed.

Since the power to produce an intended result cannot be estimated until the intention is known, any estimation that is made of the Social Credit at any time must be made in regard to a clearly expressed policy.

Society has no objective, since it is an abstraction. Only men and women are capable of entertaining an objective (and, of a more limited kind, some animals, no doubt). This objective is, even when it concerns other persons, in the last analysis, a personal objective, or multiplicity of objectives. The sum of these can be correctly represented in the sum of individual *actions* in an environment affording the individuals concerned free choice of all available courses of action.

VIII

In 1841 there was published "The True Law of Population, Shewn to be Connected with the FOOD OF THE PEOPLE", by Thomas Doubleday, described as the author of "Financial History of England"; "Mundane Moral Government", etc., etc.

The title page of the third edition of 1853 bears these quotations:—

"But the more they afflicted them the more they multiplied and grew". (*Exodus*).

"Old families last not THREE OAKS." (Sir THOMAS BROWNE).

"*Steriliora cuncta pinguia et in maribus et in feminis.*" (PLINY)
(Which may perhaps be very freely translated "The fatter the fewer".)

Without entering into the features of Doubleday's "law", his book ends with the claim that he has reached his conclusions by "the sure though slow method of induction", and the statement that "Through life he has found that the heart is often to be believed before the head; that there are implanted in the human bosom still-voiced monitors, dim, perhaps, and obscure, but never to be despised; and that the profoundest philosopher ought long to hesitate before he says 'no' where nature whispers 'yes'."

Surely! We must guard, however, against confusing the human linguistic statement of "law", even in so-called "natural" law, with the natural whisper. Nature never spoke Latin, Greek, or any of the languages known to us as such, and though her "whispers" are often heard, her important utterances are often unaccompanied with sound of any kind. What nature says, even when she speaks with the human voice, is of much less importance to man than what she DOES. Doing (events) may be said to be her native language. Although the chalk may fall from the hand while it is being written, nothing else falls because the formula expressing the law of gravitation is written on the black-board. The motion of a falling body is Nature's whisper, not the formula. Formulæ of all kinds are mere instruments which Man has devised, and is continually devising, to increase his effectiveness in arranging new combinations of conditions in which natural action may occur—i.e., to increase his power to produce the result intended as measured in terms of his satisfaction. When they do this, their function is discharged; when they don't they are useless if not obstructive. Formulæ of all kinds economise in the time men have to spend in "guessing the right question", to put, as it were, to Nature, in order to obtain a serviceable answer. Nature's language is action, and she only listens to questions put to her in her own language. These she never fails to answer; but if the questions are ill-advised, idle, irrelevant questions, the answers may be correspondingly uninteresting or useless.

There are many kinds of formulæ; sentences in Latin, Greek, German or English, logical formulæ, mathematical formulæ (a special kind of logical formulæ), chemical formulæ, plans and blue prints, etc. Their correct use lies in their capacity for saving time, making short cuts in action. Very often this action would never occur but for the short cuts that have been made to it, for example a modern wireless set would not have been likely to occur accidentally from haphazard movements of matter; it has a long ancestry of contributory achievements, each of which has been reached largely because of the extensive use of the "short cut" method of formularising or formulating, before a question is put to Nature in her own language.

This instrumentality of formulæ is itself a precise notion profoundly affecting the Social Credit. A great deal that we may witness in human association appears to arise from the conviction on the part of somebody that Nature has been very foolish in not listening more attentively to Man, for example, the view frequently expressed (though not always with complete intelligibility) that it is chiefly the arguments of the more profound idealistic philosophers that have prevented Nature from making mistakes gravely affecting human happiness and even placing the continuity of the Human Species in great danger. This view is capable of statement in another way, namely, that in producing Man, Nature has produced a creature only a minority of whose individuals are viable independently of the rest. The point here is not the defensibility of the doctrine that in our complex society (or any other) some men need care, but the rarity of the occasions upon which the matter is put to the test of natural experience.

We may instance one more "law", extensively known under the title "The Law of Diminishing Returns". This was originally derived from agriculture, but has been given an extended application. Briefly it is a statement of the fact that in certain circumstances the application of greater effort does not affect a proportionately greater result. All that can be usefully said at the moment about this matter is a repetition of our statement that every effective element in an association is effective in its own way. Since it is a matter of observation that the result attained varies, the truly scientific thing to do about this variation is to trace it to the variable element in the association concerned. The construction of a list of such variables would be of more importance than the questionable generalisation that returns sooner or later diminish in proportion to the effort made to secure them.

The ideal effect of Doubleday's statement of his law of population was to fortify the conviction that the establishment of a strong middle class, secure of income and limited and constant in number, was in accordance with "natural" law. The ideal effect of the statement of the law of diminishing returns is to fortify the authority of those who assert of any fall in the rate of profit-earning (fall in the expected

increment of association) that it is "natural" and arises from the "operation" of the law . . . NOT, be it noted, from a variation in the terms, or elements, in association.

Since all *statements* of law are strictly ideal in their nature, we should expect them all to have ideal increments as shown in the last lecture. In regard to correct formulations of natural laws, the real increments will be evident. Incorrect formulations will yield no real increments, but they will yield ideal increments, and these will be disproportionately effective.

To use Doubleday's remark; these ideal increments are the basis for the philosopher's lack of hesitation in saying "no" where Nature whispers "yes!".

We have seen something of nature's "yes" and its emphasis in regard to the physical availability of wealth. Since the opposing "no" is a matter of importance in estimating the Social Credit, it is of interest to trace the history of what we may call "no-production". The motive for seeking instances of natural law in the working of society is advantage. Any precise knowledge of the application of law in society will yield advantage to those who possess it, and possibly to others.

It is therefore a curious fact that the search for the origin of the increments of all kinds of association has led to the identification of very few which could be termed either Social or Economic. The attempt to discover "laws" for Society (or association) or for wealth-production and distribution has been beset by pitfalls of which possibly the deepest is the ideal doctrine that because Man is Man, mysterious and incalculable, subject to wide variations in regard to his aptitudes, tastes, wishes and desires even within the single individual, there cannot be much precision in any account of his movements. In comparatively recent years the growth of the doctrine that Man as an organism was susceptible to scientific study had the effect partly of displacing but also of strengthening the view that even if one could estimate his physical temperature within narrow limits, it was quite impossible to estimate his political temperature, or his economic temperature, *e.g.*, the intensity and direction of his demand.

Closely associated with this line of argument was a strongly marked tendency to try to do just what was said to be impossible of performance, and "laws" of economics began to gain currency often with little more to recommend them than that they were themselves arguments for the material "lawfulness" of Man. Even when these "laws" were loosely stated and of doubtful application they were often lumped together, the adjective "inexorable" was affixed to them in bulk, and they were used to dissuade men from doing what could physically be done—a practice which is not the most convincing testimonial to

their "inexorability". More apparent still is it that the phrase "economic law" was widely used in the absence of any definition of "economic".

The claim has been made for our study that it is a scientific study and that it is exact. If, then, it is admitted that one cannot measure immeasurable quantities or qualities, this claim must appear absurd unless it can be shown that it is not necessary to try to do the impossible in order to reduce to intelligibility matters affecting the power of individuals in association to produce the results they intend to produce.

An enormous development and expansion in the use of statistics in recent years is associated with the public presentation of data of a politico-economical kind, and it is to be noticed that the method largely followed in this alleged scientific search for means of public betterment is of a kind which departs in essential particulars from the methods which led to the development of more materially productive studies such as chemistry and electricity. Neither of these great bodies of knowledge began with a mere counting of, as it were, chemical or electrical "heads". Taking not quite, perhaps, its first beginnings, each of these studies was initiated by an enumeration of the NECESSARY entities (*entia*) which forced themselves upon the recognition of investigators. It was very strictly held before the minds of these men that it was something akin to sin to admit any such entity to recognition except under pressure of necessity. The origin of the clearly formulated injunction to the contrary in the fourteenth century is one of the greatest cultural inheritances of later times: *Entia non sunt multiplicanda praeter necessitatem* (things are not to be multiplied beyond what is necessary). The author was an Englishman, William of Occam.

In strict accordance with this profoundly important principle, re-stated inaccurately and ineffectively by Newton to the grave embarrassment of scientists ever since, the behaviour of matter chemically and electrically forced investigators to take cognisance, not of the named features visible to previous ignorance, but of a few *unnamed* terms, the elements of association to which each characteristic increment was constantly traced. So every science elaborates a necessary nomenclature peculiar to itself. The names are arbitrary like the names given to the chemical elements, carbon, hydrogen, oxygen and so on; atoms, molecules, volts, ohms, electrons. When necessity operates no longer in the minds of investigators, such entities are discarded, and knowledge is advanced, being always the greater, the fewer its parts.

So each science finds the bases for its own standards of measurement. Once established there is precision, before there is none. Before this process is fairly advanced all fields of experience present the same appearance of lawlessness. There is no reason why every possible field of experience should not in its turn discover its own relevant standards: what is fairly surely indicated is that they will not be the cast-off clothing

of some already developed science. (The present unsatisfactory position of the science of biology is probably due to neglect of attention to this consideration).

It is Douglas's great contribution to Life and Science that he has discovered the NECESSARY notions pertaining to the wealth of individuals in Society (all forms of wealth) and has elaborated relevant instruments for dealing with them. One, which we must particularly consider here, is the notion of sufficiency. You will remember that in dealing with MASS and mass associations, we drew attention to the constant feature that these became instantaneously effective when there was a SUFFICIENCY of the elements acting in association. There is nothing in nature more precise than this. It is merely indicative of a state of mental confusion to say that because some totally dissociated and irrelevant fact or facts have not been given numerical representation this quality of being "enough" is somehow indefinite. It matters to no one *what* other measurable quantities are lying about, unless estimation of them is desired upon some other ground, the testing of mass associations by their result is a method of precision and as such it is known to everyone. How much is enough production? How much is enough consumption? How much is enough money? What is the rate at which this should occur? What is the rate at which that should occur? The precise answer is "When it is enough". The natural question arising is again the right question: "enough for what?" Enough to secure the intended result, and this depends upon individual action revealing it in an environment in which all possible action is permitted to occur.

When these factors operate, social organisation is complete and natural. Inherent forces will determine the whole life and later history of Man. Notice that there may be an alternative answer to the question "Enough for what?" When that alternative answer is the answer given organisation is incomplete and arbitrary.

ADDITIONAL NOTES.

The uses made commonly of sufficiency as a method of precise measurement are numerous and it is possibly on account of their very familiarity that their applicability to problems of production, markets, *etc.*, was not readily seen, even after Douglas had drawn attention to this principle.

- (1) The ball-valve control of cisterns; there is enough water when there is enough water: (the rise in the level of the incoming water shuts off the incoming water by lifting a float.)
- (2) In domestic cookery ingredients are added until "there is enough" to secure some identifiable result, *e.g.* colour, consistency, *etc.*
- (3) In medicine drugs (*e.g.*, digitalis) are "pushed" until a definite physiological result is secured, *e.g.*, fall in the rate of beating of the heart.

IX

At the close of the last lecture it was emphasised that only individual action in circumstances affording free choice of action within natural limits could reveal the true policy of a community.

Sufficiency, as a method of precise measurement, is related on one hand to policy, to the objective the attainment of which is intended, and on the other hand to mechanism. If we examine again, the instances given last week of the adoption of the sufficiency method in our present society, we shall see that this is so in each case, and following the inductive method we may test it over and over again in other cases. The instances were:

- (1) The ball—or float-valve control of cisterns.

Enough water to raise the float to a level at which its own movement shuts off the supply = enough water in the cistern for the purpose intended. By bending the arm carrying the float, the height of water necessary to secure closure of the valve can be varied. Note, however, that the mechanism, however adjusted, is a COMPLETE mechanism. The associations involved in its invention and use are agreement associations. The associations involved in its mechanism—in its actual working—are natural mechanical associations. In all its aspects it shows the influence of the cultural heritage, *e.g.*, in the mechanical associations conserved in it, in its labour-saving motive, in the frequency of its occurrence as a working mechanism in use, revealing inherited customs related to the uses of water for cleanliness and sanitation, in its conservation of many details concerning the art of metal working.

- (2) In the case of ingredients added in domestic cookery until "there is enough" to secure some identifiable result, there is the same completeness of the mechanism, however simple—mechanical stirring with a spoon—and the same definiteness in the result (which may be only a partial or contributory result to the objective entertained—*e.g.*, properly modelled and palatable decoration on a cake).

- (3) The medical use of some drugs shows the same features.

Notice that in case (1) the fact that how much water flows into the tank may be unknown, the fact that how much water flows out when it empties completely may be unknown, the fact that how much water is necessary to lift the float to the effective level to shut off the supply may be unknown—not one of these facts interferes in the least with the effectiveness of the mechanism, with the frequency of its use in practice, or with its adjustment to secure some slightly different INTENDED RESULT. Just as surely, the fact that the inflow has not BEEN measured, and the outflow is not GOING TO BE measured

and no one IS MEASURING the volume of water in the cistern—all this does not prevent anyone from measuring it if he wishes to do so, and knows how to do so ;

BUT IN EACH CASE THE MEASUREMENT WILL BE EITHER THE MEASUREMENT OF A GIVEN INSTANCE AFTER THE MECHANISM HAS WORKED, or IT WILL BE A MERE EXPECTATION OF HOW IT WILL WORK AGAIN.

Take a simple instance affecting human consumption of consumable goods : suppose it is desired to ascertain how many buns are enough to supply the requirements of ten children at a party. We must rule out all opinions concerning what OUGHT to be the requirements of the children, *e.g.*, the baker's opinion, based, possibly, upon his need to gain a livelihood, that ten children OUGHT to want sixty buns ; the entertainer's opinion, based upon financial cost, that they ought to want thirty ; the collective opinion of the children's parents that they ought NOT to want enough to make them ill ; and a dietist's opinion, based upon a supply of data and calculations involving the children's need for energy-forming substances that the RIGHT number is seventeen and a half. We must also rule out the polite expressions of the children themselves, who have been taught to say " No, thank you ". It seems, now, that we have ruled out everybody concerned and, in so far as opinions are concerned, so we have (though there may be a train of other individuals behind the baker and parents, *etc.*, who also think that bakers OUGHT, and that parents OUGHT, *etc.* We must ignore these).

The fact is we can only ascertain the answer by letting the children, free from all restraint or, on the other hand, inducement other than their own wishes, eat buns as much as they like. This implies NO restrictions, and since exhaustion of the supply would be a restriction, there would have to be some buns left at the end of the experiment. At present, it is probable that only certain sweet manufacturers who apply this method to their work-girls, know, as an average, the real demand for sweets, and they only know it AFTER the sweets have been consumed and in circumstances where, no doubt, the desire to cope with the wage-earning amount of work is to some extent in conflict with the pleasures of idleness. (It is said the girls in these circumstances soon lose their taste for sweets, at all events in unhealthy quantities, and may perhaps lose it altogether). Now, let us suppose that the children of our experiment ate nineteen buns, thus falsifying the predictions made on their account or in their interest (as estimated by others), this would be the RESULT REVEALED BY INDIVIDUAL ACTION IN AN ENVIRONMENT IN WHICH ALL POSSIBLE ACTION WAS PERMITTED TO OCCUR. Organisation would be complete, as in the case of the cistern. Enough

buns would have been shown to be nineteen in number, and if the experiment were repeated this number might never recur again. The effective objective of the experiment was the satisfaction of the children's demand for buns.

Strictly, the real objective of men and women in association can only be revealed in a similar way. If it is assumed that the objective of men and women in society is government (or tyranny), or if, on the other hand, it is assumed that it is the gain of the maximum of wealth possible with the least inconvenience, the FACT can only be ascertained by an initial acquirement of a SUFFICIENCY OF FREEDOM. A sufficiency of freedom, in this sense, has never yet been acquired by men—that is to say, by anyone at all, so far as we know. The point must not be obscured by reference to a lonely man acting in circumstances of great natural or artificial restriction in regard to permitted action. We are not considering the lone survivor of a shipwreck, but the multitudinous survivors of some thousands of years of civilisation. The circumstances of the one are admitted to be disadvantageous. The circumstances of the peoples of the world are alleged to be advantageous. And we must not lose sight of the fact that the actions (if we truly knew what they were) of the lone man on a raft would probably disclose faithfully what his objective was, even if it were not attained.

We may say then that organisation is the increment of the association between available (naturally or otherwise) means and policy, whether policy in its turn is real (as revealed in action freely undertaken by individuals) or imposed (the opinion of some or all individuals of what OUGHT to be).

In every direction, sufficiency is reached when the intended result is attained.

The intended result HAS BEEN ATTAINED WHEN THE SUM OF INDIVIDUAL ACTIONS SHOWS IT TO HAVE BEEN ATTAINED, a sufficiency of freedom being postulated. It is not arguable that there is in present society sufficiency of freedom in this sense, and we have already drawn attention to the great limitations of means practised in regard to the increments of all kinds of associations : that is to say, to a cumulative negative heritage, or disinheritance, side by side with the cultural heritage.

Nevertheless, organisation merits our attention all the more because it occurs apart from, and possibly contrary to, real policy. Subject to this limitation, organisation does imply the use to the full of available means.

Affecting the Social Credit, organisations occur in a wide variety of cases, of which the most important are Industrial and Political organisations. The organisation of Finance is a part of Political organisation, rather than of Industrial organisation, if only because

it has nothing to do with the production of consumable goods or with the production of any of the goods used in the production of consumable goods (capital goods). True cost is a useful index to apply to production. All production has a true cost, whatever it is, in consumption, and in the case of credit instruments (the "production" of financial organisation) the true cost (as we shall see later) is negligible, like the true cost of the Royal Assent to an Act of Parliament. From this point of view, then, Financial organisation is a department of Political organisation.

Since existing organisation implies full use of available means, subject only to imposed policy, the aspects of organisation which primarily concern us are those associated with policy.

The student here may consult his own experience. He may make a list in his leisure for, let us say, one week, of all the objectives or partial objectives he detects behind the actions of himself and others, if he is attached to industry, in the industrial sphere; if he is a politician, in political action; or in any case through his favourite newspaper, which gives an account of various actions, public and private. Let him write down, whenever he observes some significant act, the objective, the policy behind it, and he will soon, if he is attentive and reasonably precise, come to some understanding of the matter. On the other hand, if he has time, he may read, from the political point of view, "Democracy and the Organisation of the Political Parties", by M. Ostrogorski (London: Macmillan, 1902) or, from the industrial point of view, F. W. Taylor's "Shop Management" (New York, 1911. McGraw-Hill Book Co.)

Ostrogorski's book, which has not been widely advertised, in spite of an impressive introduction by the late Lord Bryce, is in two volumes, with a total of 1,400 pages. Very briefly it may be said to be a documented statement of the devices of caucus government in Britain and America to determine the expressed objectives of the people composing those so-called democracies (that is to say, self-governing communities). He defines caucus as "a word adopted in American political terminology from the eighteenth century onwards, to denote a small committee of men who settle electoral affairs beforehand." That is enough to assess the bearing of political organisation upon the Social Credit.

Students may also read the chapter on the influence of governments on society in Buckle's *History of Civilisation with profit*. The chapter, to express the matter in the language we are learning, was written to show that legislators lower the Social Credit, and that no positive increment in it can be traced to them.

The chief objectives revealed in Taylor's book are three in number: (1) Production, (2) Economy in the use of money in production, and

of all things costing money, (3) Avoidance of all actions tending to increase the necessity for the use of money, *e.g.*, waste of time, energy and materials, friction and disputes.

The student should at this point consider whether there is, strictly, anything from the point of view of "the power of human beings in association to produce the result intended"—that is to say, from the point of view of the Efficiency of Society (or Association) which must be economised except all forms of effort made without choice.

In what circumstances, let us ask, is there any real meaning in the statement that society gains in efficiency through economising in (a) energy, (b) time, (c) materials, (d) capital?

ADDITIONAL NOTES.

The questions at the end of the Lecture take us back to first principles stated in earlier lectures, and should focus attention upon the *result*, as the only thing that matters to individuals.

There are, broadly speaking, two kinds of results of human association:

The wealth made available.

The trouble (to individuals) of making it available.

Thus individuals must strike a balance between consumable goods as a source of wealth to themselves and leisure as a source of wealth to themselves. If natural inducement were allowed to determine the use to which all available associations were put, there would be a constantly increasing enrichment until an optimum was reached (but possibly indefinitely). Unless sources of energy ran short there would be no point in economising them as such: the meaning is in the effort necessary to establish associations for their conversion. Taking longer to do anything than is necessary usually means working longer or harder. It is only of consequence from the individual's point of view as a worker. If a machine is run at less than its full speed there may be a shortage of production. Materials and capital goods matter in regard to quantities used, as these affect the production of consumable goods, or leisure of human beings, not otherwise.