the time or less. The object of all honest Governments should be to prevent your being imposed on in this way. But the object of most actual Governments, I regret to say, is exactly the opposite. They enforce your slavery an call it freedom. But they also regulate your slavery, keeping the greed of your masters within certain bounds. When chattel slavery of the negro sort costs more than wage slavery, they abolish chattel slavery and make you free to choose between one employment, or one master, and another; and this they call a glorious triumph for freedom, though for you it is merely the key of the street. When you complain, they promise that in future you shall govern the country or yourself. They redeem this promise by giving you a vote, and having a general election every five years or so. At the election, two of their rich friends ask for your vote for to spite the other –a choice which leaves you no freer than you were before, as it does not reduce your hours of labour by a single minute. But the newspaper assure you that your vote has decided the election, and that this constitutes you a free citizen in a democratic country. The amazing thing about it is that you are fool enough to believe them.

UNIT 2

Now mark another big difference between then natural slavery of man to Nature and the unnatural slavery of man to man. Nature is kind to her slaves. If she forces you to eat and drink, she makes eating and drinking so pleasant that when we can afford it we eat and drink too much. We must sleep or go mad: but then sleep is so pleasant that we have great difficulty in getting up in the morning. And firesides and families seem so pleasant to the young that they get married and join building societies to realize their dreams. Thus, instead of resenting our natural wants as slavery, we take the greatest pleasure in their satisfaction. We write sentimental songs in praise of them. A tramp can earn his supper by singing 'Home, Sweet Home.'

The slavery of man to man is the very opposite of this. It is hateful to the body and to the spirit. Our poets do not praise it; they proclaim that no man is good enough to be another man's master. The latest of the great Jewish prophets, a gentleman named Marx, spent his

life in proving that there is no extremity of selfish cruelty at which the slavery of man to man will stop if it be not stopped by law. You can see for yourself that it produces a state of continual civil war –called the class war –between the slaves and their masters, organized as trade unions on one side and employers federations on the other. Saint Thomas More, who has just been canonized, held that we shall never have a peaceful and stable society until this struggle is ended by the abolition of slavery altogether and the compulsion of everyone to do his share of the world's work with his own hands and brains, and not to attempt to put it on anyone else.

Naturally the master class, through its Parliaments, schools and newspapers, makes the most desperate efforts to prevent us from realizing our slavery. Fromm ou earliest years we are taught that our country is the land of the fee, and that our freedom was won for us for ever by our forefathers when they made King John sign Magna Carta –when they defeated gthe Spanish Armada –when they cut off King Charles's head – when they made King William accept the Bill of Rights –when they issued and made good the American Declaration of Independence –when they won the battles of Waterloo and Trafalgar on the playing fields of Eton –and when only the other day, they unintentionally changed the German; Austrian, Russian and Ottoman Empires into republics. When we grumble, we are told that all our miseries are our own doing because we have the vote. Whne we say: 'What good is the vote?' we have told that we have Factory Acts and the Wage Board, and free education, and the New Deal, and the dole: and what more could any reasonable man ask for? We are reminded that the rich are taxed aquarter, a third, or even a half and more, of hteir incomes; bu the poor are never reminded that they have to pay that much of their wages as rent in addition to having to work twice as long every day as they would need if they were free.

Whenever famous writers protest against this imposture –say, Voltaire and Rousseau and Tom Paine in the eighteenth century, or Cobbett and Shelley, Karl Marx and Lassalle in the nineteenth, or Lenin and Trotsky in the twentieth –you are taught that they are atheists and libertines, murderers and scoundrels; and often it is made a criminal

offence to buy or sell their books. If their disciples make a revolution, England immediately makes war on them and lends money to the other Powers to join her in forcing the revolutionists to restore the slave order. When this combination was successful at Waterloo, the victory was advertised as another triumph for British freedom; and the British wage slaves, instead of going into mourning like Lord Byron, believed it all and cheered enthusiastically. When the revolution wins as it did in Russia in 1922, the fighting stops, but the abuse, the calumnies, the lies continue until the revolutionized State grows into a first-rate military Power. Then our diplomatists, after having for years denounced the revolutionary leaders as the most abominable villains and tyrants, have to do a right turn and invite them to dinner.

UNIT 3

Now though this prodigious mass of humbug is meant to delude the enslaved class only, it ends in deluding the master class much more completely. A gentleman whose mind has been formed at a preparatory school for the sons of gentlemen, followed by a public school and university course, is much more thoroughly taken in by the falsified history and dishonest political economy and snobbery taught in these places than any worker can possibly be, because the gentleman's education teaches him that he is a very fine fellow, superior to the common run of men whose duty it is to brush his clothes, carry his parcels, and earn his income for him; and as he thoroughly agrees with this view of himself, he honestly believes that the system which has placed him in such an agreeable situation and done such justice to his merits is the best of all possible systems, and that he should shed his blood, and yours, to the last drop in its defence. But the great mass of our rack-rented, underpaid, treated-as-inferiors, cast-off-on-the-dole workers cannot feel so sure about it as the gentlemen. The facts are too harshly against it. In hard times, such as we are now passing through, their disgust and despair sometimes lead them to kick over the traces, upset everything, and have to be rescued from more gangsterism by some Napoleonic genius who has a fancy for being an emperor and who has the courage and brains and energy to jump at the chance. But

the slaves who give three cheers for emperor might just as well have made a cross on a British or American ballot paper as far as their freedom is concerned.

So far I have mentioned nothing but plain, natural and historical facts. I draw no conclusions, for that would lead me into controversy; and controversy would not be fair when you cannot answer me back. I am never controversial over the wireless. I do not even ask you to draw your own conclusions, for you might draw some very dangerous ones unless you have the right sort of head for it. Always remember that though nobody likes to be called a slave it does not follow that slavery is a bad thing. Great men, like Aristrotle, have held that law and order and government wuld be impossible unless the persons the people have to obey are beautifylly dressed and decorated, robed and uniformed, speaking with a special accent, travelling in first class carriages or the most expensive cars or on best-groomed and best bred horses, and never cleaning their own boots or doing anything for themselves that can possibly be done by ringing a bell and ordering some common person to do it. And this means, of course, that they must be made very rich without any other obligation than to produce an impression of almost godlike superiority on the minds of common people. In short, it is contended, you must make men ignorant idolators before they will become obedient workers and law-abiding citizens.

To prove this, we are reminded that although nine out of ten voters are common workers, it is with the greatest difficulty that a few of them can be persuaded to vote for members of their won class. When women were enfranchised and given the right to sit in Parliament, the first use they made of their votes was to defeat all the women candidates who stood for the freedom of the workers and had given them years of devoted and distinguished service. They elected only one woman –a titled lady of great wealth and exceptionally fascinating personality.

Now this, it is said, is human nature; and you cannot change human nature. On the other hand, it is maintained that human nature is the easiest thing in the world to change if you catch it young enough, and that the idolatry of slave class and the arrogance of the master class are themselves entirely artificial products of education and of a

propaganda that plays upon our infants long before they have left their cradles. An opposite mentality could, it is argued, be produced by a contrary education and propaganda. You can turn the point over in your mind for yourself; do not let me prejudice you one way or the other. The practical question at the bottom of it all is how the income of the whole country can be distributed from the day. If the earth is cultivated agriculturally in vast farms with motor ploughs and chemical fertilizers, and industrially in huge electrified factories full of machinery that a girl can handle, the product may be so great that an equal distribution of it would provide enough to give the unskilled labourers as much as managers and the men of the scientific staff. But do not forget that when you hear tales of modern machinery enabling one girl to produce as much as a thousand men could produce in the reign of good Queen Anne, that this marvelous increase included things like needles and steel pens and matches, which we can neither eat nor drink nor wear. Very young children will eat needles and matches eagerly –but the diet is not a nourishing one. And though we can now cultivate the sky as well as the earth, by drawing nitrogen from it to increase and improve the quality of our grass –and, consequently, of our cattle and milk and butter and eggs –Nature may have tricks up her sleeves to check us if the chemists exploit her too greedily.

UNIT 4

And now to sum up. Wipe out from your dreams of freedom the hope of being able to do as you please all the time. For at least twelve hours of your day Nature orders you to do certain things, and will kill you if you don't do them. This leaves twelve hours for working and here again Nature will kill you unless you either earn your living or get somebody else to earn it for you. If you live in a civilized country your freedom is restricted by the laws of the land, enforced by the police, who oblige you to do this and not to do that, and to pay rates and taxes. If you do not obey these laws the courts will imprison you and, if you go too far, kill you. If the laws are reasonable and are impartially administered you have no reason to complain, because they increase your freedom by protecting you against assault, highway robbery, and disorder generally.

But as society is constituted at present, there is another far more intimate compulsion on you; that of your landlord and that of your employers. Your landlord may refuse to let you live on his estate if you go to chapel instead of to church, or if you vote for anybody but his nominee, or if you practice osteopathy, or if you open a shop. Your employer may dictate the cut, colour and condition of your clothes, as well as your hours of work. He can turn you into the street at any moment to join the melancholy band of lost spirits called the unemployed. In short, his power over you is far greater than that of any political dictator could possibly be. Your only remedy at present is the trade union weapon of the strike, which is only the old oriental device of starving on your enemy's doorstep until he does you justice. Now, as the police in this country will not allow you to starve on your employer's doorstep, you must starve on your own –if you have one. The extreme form of the strike –the general strike of all workers at the same moment –is also the extreme form of human folly, as, if completely carried out it would extinguish the human race in a week. And the workers would be the first perish. The general strike is trade unionism gone mad. Sane trade unionism would never sanction more than one big strike at a time, with all the other trades working overtime to support it.

UNIT 5

Now let us put the case in figures. If you have o work for twelve hours a day, you have no freedom at all. If you work eight hours a day you have four hours a day to do what you like with, subject to the laws of the land and your possession of money enough to buy an interesting book or pay for a seat at the pictures, or, on a half-holiday, at a football match, or whatever your fancy may be. But even here Nature will interfere a good deal; for if your eight hours' work has been of a hard physical kind, and when you get home you want to spend your four hours in reading my books to improve your mind, you will find yourself fast asleep in half a minute, and your mind will remain in its present benighted condition.

I take it, then, that nine out of ten of us desire more freedom, and that this is why we listen to wireless talks about it. As long as we go on as we are –content with a vote and a dole –the only advice we

can give one another is that of Shakespeare's Iago: 'Put money in thy purse.' But as we get very little money into our people are taking money out of it, Iago's advice is not very practical. We must change our politics before we gassing about freedom because the people of England in the lump don't know what freedom is –never having had any. Always call freedom by its old English name of leisure; and keep clamouring for more leisure and more money to enjoy it in return for an honest share of work. And let us stop singing 'Rue Britannia', until we make it true. Until we do, let us never vote for a parliamentary candidate who talks about our freedom and our love of liberty; for whatever political name he may give himself, he is sure to be at bottom an anarchist who wants to live on our labour without being taken up by the police for it as he deserves.

And now suppose we at last win a lot more leisure and a lot more money than we are accustomed to. What are we going to do with them? I was taught in my childhood that Satan will find mischief still for idle hands to do. I have seen men come into a fortune and lose their happiness, their health and finally their lives by it as certainly as if they had taken daily doses of rat poison instead of champagne and cigars. It is not at all easy to know what to do with leisure unless we have been brought up to it.

I will therefore leave you with a conundrum to think over. If you had your choice, would you work for eight hours a day and retire with a full pension at forty-five, or would you rather work for four hours a day and keep on working until you are seventy? Now, don't send the answer to me, please! Talk it over with your wife.

KNOWLEDGE AND WISDOM

(fairly advanced. Concise and lucid thought, in subtly-devised sentences) Most people would agree that, although our age far surpasses all previous ages in knowledge, there has been no correlative increase in wisdom. But agreement ceases as soon as we attempt to define 'wisdom' and consider means of promoting it. I want to ask first what wisdom is, and then what can be done to teach it.

There are several factors that contribute to wisdom. Of these I should put first a sense of proportion; the capacity to take account of all the important factors in a problem and to attach to each its due weight this had become more difficult than it used to be owing to the extent and complexity of the specialized knowledge required of various kinds of technicians. Suppose, for example, that you are engaged in research in scientific medicine. The work is difficult and is likely to absorb the whole of your intellectual energy. You have not time to consider the effect which your discoveries or inventions may have outside the field of medicine. You succeed (let us say), as modern medicine has succeeded, in enormously lowering the infant death-rate, not only in Europe and American, but also in Asia and Africa. This has the entirely unintended result of making the food supply inadequate and lowering the standard of life in the most populous parts of the world. To take an even more spectacular example, which is in everybody's mind at the present time: you study the composition of the atom from a disinterested desire for knowledge, and incidentally place in the hands of powerful lunatics the means of destroying the human race. In such ways the pursuit of knowledge may become harmful unless it is combined with wisdom; and wisdom in the sense of comprehensive vision is not necessarily present in specialists in the pursuit of knowledge. The essence of wisdom is emancipation, as far as possible, from the tyranny of the here and the now. We cannot help the egoism of our senses. Sight and sound and touch are bound up with our own bodies and cannot be made impersonal. Our emotions start similarly from ourselves. An infant feels hunger or discomfort, and is unaffected except by his own physical condition. Gradually, with the years, his horizon widens, and, in proportion as his thoughts and feelings become less personal and less concerned with his own physical states, he achieves growing wisdom. This is, of course, a matter of degree. No one can view the world with complete impartiality; and if anyone could, he would hardly be able to remain alive. But it is possible to make a continual approach towards impartiality: on the one hand, by knowing things somewhat remote in time or space; and, on the other hand, by giving to such things their due weight in our feelings. It is this approach towards impartiality that constitutes growth in wisdom.

Can wisdom in this sense be taught? And, if it can, should the teaching of it be one of the aims of education? I should answer both these questions in the affirmative.

I have said that in some degree wisdom can be taught. I think that this teaching should have a larger intellectual element than has been customary in what has been thought of as moral instruction. The disastrous results of hatred and narrow-mindedness to those who feel them can be pointed out incidentally in the course of giving knowledge. I do not think that knowledge and morals ought to be too much separated. It is true that the kind of skill has little to do with wisdom. But it should be supplemented in education by wider surveys calculated to put it in its place in the total of human activities. Even the best technicians should also be good citizens; and this or that sect or nation. With every increase of knowledge and skill, wisdom becomes more necessary, for every such increase augments our capacity for realizing our purposes, and therefore augments our capacity for evil, if our purposes are unwise. The world needs wisdom as it has never needed it before; and if knowledge continues to increase, the world will need wisdom in the future even more than it does now.

OF STUDIES

- FRANCIS BACON (1561 – 1626)

Studies serve for delight, for ornament, and for ability. Their chief use for delight, is in privateness and retiring, for ornament is in discourse, and for ability, is in the judgement and disposition of business. For expert men can execute and perhaps judge of particulars, one by one, but the general counsels, and the plots and marshalling of affairs, come best from those that are learned. To spend too much time in studies is sloth; to use them too much for ornament, is affectation; to make judgement wholly by their rules, is the humour of scholar. They perfect nature and are perfected by experience: for natural abilities are like natural plants that need proyning by study; and studies themselves do give forth directions too much at large, except they be bounded in

by experience. Crafty men contemn studies; simple men admire them; and wise men use them: for they teach not their own use; but that is a wisdom without them, and above them, won by observation.

Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse; but to weigh and consider. Some books are to be tasted, other to be swallowed, and some few to be chewed and digested, that is some books are to be read only parts; others to be read but not curiously, and some to be read wholly and with diligence and action. Some books also may be read by deputy, and extracts made of them by others, but that would be only in the less important arguments and the meaner sort of books, else distilled books are like common distilled waters, flashy things.

Reading maketh a full man; conference a ready man; and writing an exact man. And therefore if man write little; he had need have a great memory; if he confer little, he had need have a great memory; if he confer little, he had need have a present wit, and if he read little, he had need have much cunning, to seem to know that he doth not.

Histories make man wise, poets witty; the mathematics subtle; natural philosophy deep; moral grave; logic and rhetoric able to contend. Abeunt studia in mores. (studies pass into the character). Nay there is no stand or impediment in the wit, but may be wrought out by fit studies: like as diseases of the body may have appropriate exercise. Bowling is good for the stone and reins, shooting for the lungs and breast, gentle walking for the stomach; riding for the head, and the like. So if a man's wit be wandering, let him study the mathematics, for in demonstration if his wit be called away never so little, he mush begin again. If his wit be not apt to distinguish or find differences, let him study the schoolmen; for they are *cymini sectores*. If he be not apt to beat over matters, and to call up one thing to prove and illustrate another, let him study the lawyer's case. So every defect of the mind may have a special receipt.

STRAIGHT AND CROOKED THINKING

If we observe the actions of men, whether as individuals or as groups, and whether scientists or non-scientists, we find that they frequently fall into avoidable error because of a failure to reason correctly. There are many reasons for this, though only a few can be dealt with here.

The first difficulty is bound up with (related to) the use of words. It frequently happens that what one person means when he uses a certain word is different from what others mean. Consider, for example, the words intelligence, oxygen, accurate and average. In intelligence we face the problem that a word may not mean only one thing, but many – in this instance a very complicated set of aptitudes and abilities whose number and characteristics area not agreed upon by the specialists who study the phenomenon, and are even less understood by the layman (non-specialist). In oxygen we have a different problem, for although both a research chemist and a chemical manufacturer identify the word theoretically with the elements with the element O, in practice they have different concepts about it. Thus if the researcher performed a delicate experiment, using the manufacturer's oxygen, it might easily be a failure since the so-called O, whether used as a solid, liquid or gas, would almost certainly contain other substances. Hence another difficulty about words is that they often do not differentiate clearly enough between several varieties of the 'same' thing.

Another common error connected with words consists in confusing a word or a name with a fact. The course of scientific progress has been frequently slowed down by(I) assuming the existence of something to account for a certain phenomenon, (2) giving the assumed substance a name, e.g. phlogiston, ether, etc. and (3) implying that the phenomenon has been satisfactorily accounted for (explained).

Apart from the misuse of words, mistakes in logic can occur. Thus an example is recorded of a young sociologist, investigating literacy in a certain community, who discovered from the official records that over(more than) 50 percent of the population were females. He subsequently found that approximately 70 percent of the population

were literate. When he had obtained this data he summed it up and drew conclusions as follows:

Most of the population are females;
Most of the population are literate;
Most females are literate.

This was, of course, an unreasonable inference, as the investigator himself realized as soon as he had re-examined his chain of reasoning more carefully.

Another mistake is to confuse cause and effect. This may easily occur at the beginning of an investigation, but if it remains uncorrected it can be considered as primarily a by-product of insufficient experimentation. To illustrate this, the following case noted over the ages that whenever an individual became ill with a fever, the body parasite left him. They therefore made the correlation that the parasites kept them healthy. Later, however, reverse was true: in fact the parasites transmitted several kinds of fever, and then left the sick person when the latter's bodies became too hot to live on.

Some other factors which may influence reasoning are (a) faulty analogizing, (b) the inhibiting effect on further research of concepts which have been widely accepted as satisfactory, (c) the role of authority as a bar to the re-consideration of a problem. As regards the first of these, it should be emphasized that the process of tackling one problem by analogizing from another has frequently yielded valuable results, as in the case of air-pressure (see unit3). On the other hand, it may lead to the adoption of a totally false hypothesis, as when the idea of the atom as an infinitely small piece of solid matter was obtained by analogizing from the world of visible appearances. This erroneous view-point blocked progress in this field for many decades. Similarly, the comparison of the movement of light to a wave – an analogy which had actually provided a satisfactory explanation of the observed phenomena during most of the nineteenth century – tended subsequently to interfere with the development of the equally valid concept of light as a stream of particles. This example also illustrates the second factor enumerated above. As far as the third factor is concerned, the history of science shows many instances in which the force of authority has operated in such a manner as to build up an exceedingly powerful resistance to