

Clear Thinking

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	Introduction	vii.	Induction
i.	The need for clear thinking	viii.	Deduction
ii.	What is thinking?	ix.	Common Fallacies
iii.	Thought and language		Epilogue
iv.	Prejudice		Miscellaneous Questions
v.	Propaganda		Problem Corner
vi.	Thinking material		Appendices
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Introduction To The Fourth Edition (1948)

IT is now nearly twelve years since *Clear Thinking* first appeared. It was the result of an experiment tried out with a Lower Sixth Form, comprising boys drawn from every 'side,' during the time devoted to the consideration of Current Affairs. It was designed primarily to prepare pupils for the intelligent and responsible exercise of their duties and rights as citizens. I had in mind the words of Sir Ernest Simon (now Lord Simon of Wythenshawe) in *Training for Citizenship*: "The citizen of democracy also needs certain intellectual qualities. It is not enough to love truth; he must learn how to find it. It is easy to teach students to reason correctly in the physical sciences; it is much more difficult to teach them to reason correctly in the social sciences where their own prejudices and passions are involved. They must be taught habits of clear thinking in order that they may acquire the power of recognising their own prejudices and of discussing political and economic

questions with the same calm, the same desire to understand the other person's position, the same precision and absence of overstatement, as they would bring to the discussion of a problem in mathematics."

And I adopted the method of approach recommended by Professor Field in *Education for Citizenship*, in which he said: "It is probably more helpful to consider typical instances of the lack of clear thinking than of its presence: very often the best way of clearing up a general notion is by consideration of its opposite. If we are trying to teach our pupils how to think and to express their thoughts it is essential to remember always that we are trying to teach them to think for themselves. It is desirable to avoid, therefore, as far as possible, laying down any positive rules about how they are to think. The teacher can be more useful by warning them against obvious errors and pointing these out when they are committed, while leaving the pupils to make the positive effort for themselves."

In thus emphasising the negatively critical and destructive sides of reasoning, there was an obvious danger that the positive contributions of constructive reasoning might be lost sight of. Moreover, I found that in my pupils little transfer in reasoning powers seemed to take place from one 'subject' to another, and that one cause at any rate of this was failure to realise that the fundamental processes of constructive reasoning were common to all knowledges.

In this new edition, therefore, I have included a chapter entitled "What is thinking? ", in which I have analysed what might be called a unit of constructive thought, with the aim of demonstrating not only that *clear* thinking is a necessary preliminary to *creative* thinking, but also that the basic methods are common to all 'subjects.' *Clear Thinking* can, in fact, be made a means of correlating and integrating the school curriculum on the logical plane. In my own experience I have found it to provide a satisfactory common ground on which the various V11th form specialists can meet with mutual advantage. No opportunity should be neglected to show pupils that all knowledge is one, that the common aim of it is the furtherance of human welfare, and that clear and purposeful thinking is a common instrument for the achievement of that aim.

The chief reasons for failure to think clearly appear to be three: inadequate training in the use of words, the tendency to succumb to irrational influences, and the inability to grasp the essential structure of an argument. The portions of the book which deal with these have been greatly enlarged and re-arranged in a more appropriate order. The

first three sections of the chapter on Deduction have been entirely re-written: the object has been to give some help towards the acquisition of a technique by means of which the essential structure of a deductive argument can be laid bare and its validity or invalidity more easily discovered.

Questions and examples have been multiplied and brought up to date. In the School Edition I have reprinted in the Appendix an article on the use of the newspaper in school which originally appeared in *The Times Educational Supplement*.

The book was intended originally for use in the upper forms of grammar schools; but it has also been used with success by first-year students in University philosophy classes, in Teachers' Training Colleges, in W.E.A. classes, in Discussion Groups, in Continuation classes, by the Services' Educational Units, and by various youth organisations. It is hoped that the new Adult Colleges will find in it useful material not otherwise available.

I am glad to repeat my obligations to Dr Thouless's *Straight and Crooked Thinking*, Creighton's *Introductory Logic*, and Professor Field's *Prejudice and Impartiality*, and my indebtedness to Mr B. A. Howard and his publishers, Messrs Ginn & Co. Ltd., for permission to reprint a passage from *The Proper Study of Mankind*, to Dr W. H. S. Jones and the Cambridge University Press for allowing me to use a passage from *How We Learn*, and to the Editor of *The New Statesman* and to Mr Hubert Phillips for permission to quote some of his problems which have appeared in that journal.

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I am particularly indebted to my former colleague, Mr. G. C. Allen, for much valuable advice, and to my old pupil, Mr. R. G. G. Price, for many pertinent suggestions, of which I have made generous use.

NOTE TO FIFTH EDITION (5th July, 1954)

Before his lamented death on 29th March, 1954, the author was fortunately able to prepare the material for this new edition. Although his book had been largely rewritten for the fourth edition in 1948, he felt that Chapter V was already badly out of date, and that it did not do justice either to the modern attitude to Propaganda, or to the post-war Press. In this fifth edition, therefore, he has provided a new chapter on Propaganda and an additional [Appendix II](#) on "Reading the Newspaper".

1. The Need For Clear Thinking

"You may, indeed – and I trust you will – show yourselves as ingenious in organising men as you have been in dominating Nature." *Lowes Dickinson: Letters from John Chinaman.*

MR Lowes Dickinson put these words in the mouth of "John Chinaman" criticising the institutions of the western world. Scientific investigators, often in the teeth of ignorance, suspicion, prejudice and even persecution, have by their labours and researches during the last three centuries immeasurably increased our knowledge of the resources and powers of nature. Moreover, this knowledge has been ingeniously and practically applied to the service of mankind to such a wide extent that no man, easterner or westerner, can fail to be impressed when confronted with such a record of solid and steadily accumulative achievement. There is no need to labour the point: we have become so accustomed to the rapidity of material progress that we have ceased to wonder at it.

"But the knowledge of man, of the springs of his conduct, of his relations to his fellow-men, singly or in groups, and the felicitous regulation of human intercourse in the interests of harmony, fairness and peace of mind have made no such advance."—J. H. Robinson, *The Mind in the Making*

Workers in the field of natural science have overcome the opposition of ignorance, suspicion and prejudice; but these forces still block the way to progress in the social sciences. In our international relations, in politics—the science of government—in economics—the science dealing with the production and distribution of the endless variety of ' goods ' made possible by our progress in natural science—in education, in religion, in all these departments of life where we have to deal with our fellow human beings, and not with machines, the progress made has not been worth the name—it

has been a mere muddling through.

For evidence that in international affairs ignorance, suspicion, and prejudice are still active we need look no further than in the recent [Autumn 1946] [proceedings](#) of the Peace Conference at Paris. We may disapprove of the 'open diplomacy' methods adopted there; but at any rate they succeeded in revealing the desperate need, even among late allies, for wider knowledge, more mutual sympathy and understanding, and a clearer and less prejudiced appreciation of other nations' points of view.

The annihilation of space and time, the enormously increased productivity of nature and the harnessing of atomic energy—to name but three of the results of recent achievement in the domain of natural science— have brought with them problems which still await solution. At home, it is true that plans have been made to achieve 'social security' and to reorganise education; but we have still to discover how best to effect an equitable distribution of the products of industry and agriculture, how to provide for the increased leisure which mechanical efficiency and shorter hours of work make possible, how to treat the insane and the criminal and how to bring up the homeless child. In the international field, the problems of 'security,' 'disarmament,' the 'freedom' of the seas, and untrammelled trade and commerce are still unresolved. But the end of the second Great War and the first years of an uneasy peace, have thrust others to the foreground— the control of atomic energy, the feeding of vast numbers of starving people, the finding of homes for so many thousands of 'displaced persons,' and the resettlement of a disrupted, disillusioned and disorganised Germany. The solution of all these problems will require a good deal of ingenuity and clear thinking, if the mistakes made in the years 1919-1939 are to be avoided and if the foundations of a just and durable peace are to be laid.

Our material progress has outstripped our mental progress. It is not that we have made no attempt to deal with the problems that beset us; but we have not so to speak, overhauled our mental equipment before doing so. It is no doubt a painful process, but we have lacked the energy and courage to face it. Perhaps it is not to be wondered at that we have shrunk from the task, seeing that the obstacles to be overcome are far more numerous and formidable than those successfully faced and surmounted by scientists in their pursuit of truth; human affairs are far more intricate and perplexing than atoms or molecules; and it is far more difficult for people to change or abandon a habit of mind or a firm conviction or a cherished belief than to scrap, say, antiquated

weapons or outworn designs of ships or vehicles. Not that the latter process is an easy one. The means of attack in warfare have always been in advance of the means of defence. The invention of gunpowder made armour and castles useless. The interceptor aeroplane must possess a higher speed than the bomber. Gas masks lag behind new developments in poison gases. And now the atomic bomb threatens to revolutionise the whole conduct and apparatus of warfare. Those who put their faith in armaments seem to forget that there is always a continual race against obsolescence and a continual waste of material that has to be scrapped. The old design of a horse carriage remained long after a new motive power had been discovered; and in the course of mechanical invention in other directions innovators have found it difficult to break away from tradition and convention and have had to contend with vested interests, prejudice, and shortsightedness. How much more difficult it is to get rid of this 'inertia of stupidity,' as it has been aptly termed, and ignorant, shortsighted and interested opposition, when innovation in ideas and modes of thought is suggested!

One of the ways in which we may hope to solve the political, social and economic problems that confront us is to reform our minds; and to examine these problems in the same critical, disinterested and unprejudiced attitude in which scientific men have carried out their labours and researches and reported the results of them to the world. We want more honest and purposive thinking and the results of it expressed in clearer and unequivocal speech and writing.

In thus first emphasising the need for honest thinking, I have not forgotten that it will all be of no avail if the will and desire for reform are not present. There is no place, we are told, for emotion in honest and clear thinking. True, emotion cannot take the place of thought, but it can stimulate, inspire, and clarify thought, if the emotion be noble. All great reformers, men like Wesley, Howard, Wilberforce, Shaftesbury, were inspired by a noble passion: with *love* for their fellow-men, *hope* of establishing the Kingdom of God 'on earth, as it is in Heaven,' and a *faith* that could remove mountains.' A modern philosopher says:

"Men fear thought as they fear nothing else on earth."

If that is so, then we lack that 'perfect love' which 'casteth out fear.' The thinking of the national representatives at Peace Conferences and United Nations assemblies will be much less muddled if they are all inspired with unselfishness and a genuine anxiety for

universal human welfare and if they are not compelled to contend with prejudices in the peoples they represent — prejudices which they themselves have often taken no small part in arousing or strengthening.

But if, as Vauvenargues said, great thoughts rise from the heart, it is better, said John Morley, that they should emerge from the head. The rousing of the right kind of emotion is not enough; the emotion must stimulate the mind to think clearly and courageously; and the thoughts thus framed must be translated into energetic and purposeful action. There is little doubt that there exists to-day in Britain, as in other democratic countries, a strong hatred of war and an equally strong desire for peace. But hatred of war will never, of itself, secure peace; nor will desire for peace of itself abolish war.

"To make men desire peace requires that we should reach the human heart. To help them to translate that desire into practice requires that we should reach the human intellect."

When we are confronted with perplexing problems in our social and political life, how often do we hear the man in the street exclaim: "What we want is the practical man, the man of action; oh, for a government of 'business' men!" But apart from the fact that often the so-called practical or business man's experience may be in a limited field, and that he is often the last man capable of taking a wide view, he too has to think; to be faced with any problem is to be compelled to think. And it does not matter whether the problem is a practical or a theoretical one, the thinking process is just the same. We need the practical man no less and no more than the theorist; and there is no point in trying to discriminate between them. The distinction that needs to be drawn is between idle dreaming and purposive thinking. Purposive thinking is that which is directed towards the solution of any problem, practical or theoretical. Idle dreaming accomplishes nothing.

It is clear, I hope, that I am not disparaging the practical man; but in this country especially the 'theorist' has usually received much undeserved abuse and derision. I well remember the sneering comments of a well-known popular newspaper at a remark of Lord Haldane's soon after his appointment as Minister of War in 1905. He said that the job would need six weeks' hard thinking! Yet Haldane, according to Haig, was our greatest war minister since Pitt. The 'practical' man, on the other hand, has been held up as a paragon, and his opinions accepted with credulity. I am only attempting to redress the balance. The conclusions of the theorist, if well-founded, deserve to be

accepted as willingly as those of the practical man. Too often do we come across people who will assent to all the reasoning of the theorist, and then coolly remark that it may be theoretically true, but is practically false; like the boy who, having gone through and seemingly understood Euclid's proof of the Theorem of Pythagoras, remarked to his teacher, "But it really isn't true, is it, Sir?" If a theory fails in practice, then we should condemn it, not for being a theory, but for being an unsound one.

Lastly, we often hear it said that all our problems can be solved with a little common sense. This is true enough, as long as we do not confuse common notions with common sense; and many of the people who profess to order their lives according to the dictates of common sense, are really conforming merely to currently accepted modes of thought. The mental processes, by which the scientific results referred to earlier in this chapter have been attained, are not rare, uncommon or abstruse processes peculiar to the scientific mind, but differ in degree only, not in kind, from those practised by every one of us in the humblest and meanest affairs of life. What is called scientific method is merely trained and organised common sense. As Thomas Huxley said, the same mode of reasoning was employed by Newton and Laplace in their endeavours to discover and define the causes of the movements of the heavenly bodies as the ordinary man, with his own common sense, would employ to detect a burglar.

If therefore you agree with my premisses, [we](#) may fitly address ourselves to the following tasks: to examine and analyse the process of thinking; to learn a little about the methods in which the human mind works; and to find out how knowledge is acquired and widened, how judgments are formed and how they should be applied, and how mistakes are made—in other words, the mental processes of common sense. In the course of this examination and analysis we shall find ourselves learning a little psychology and a little logic.

Rationalising

But a knowledge of logic will defeat the object we have in view, if it is used merely to find arguments to justify our present judgments, instead of to find out whether our judgments are securely founded on fact, or are only the results of personal preference or prejudices. Prejudice is a far more serious obstacle to overcome than illogicality, because our own personal feelings are involved. Where the topic of controversy is

academic, or remote from us, where the issue of it will not affect our pride or our pockets or any other 'tender spots,' we can be trusted to consider the pros and cons detachedly, to weigh them impartially and to test the processes of argument logically.

But when consciously or unconsciously we have already made up our minds, *i.e.*, prejudged the matter, then our 'reasoning' is merely a 'rationalising' process, and does not contribute at all to honest enlightenment. Prejudices arise from feelings and emotions, good and bad, noble and base. We have already seen how valuable, in fact how indispensable, feelings and emotions are which really stimulate and inspire us to discover the truth. In our treatment of prejudice we shall consider what are the harmful, misleading and illegitimate uses of emotion in argument.

The next formidable obstacle to honest thinking is laziness—the reluctance to face "the insupportable fatigue of thought." For thinking is a painful process: it requires effort.

How easy it is for us to take the line of least resistance and allow others to do the thinking for us! How much easier it is to fall in with accepted opinion than to question it! Hence is derived the tendency to accept without question whatever one sees in print, or the expressed opinions of so-called 'authorities'; hence the credulity of the masses, their impressionability and susceptibility to suggestion. It is fatally easy to succumb to the cleverly worded advertisement, the sophistries of the quack, the catchphrases of the politician, the 'slogans' and axe-grinding propaganda of the popular Press.

And thus we are brought naturally to the last obstacle —language. The English language is perhaps the richest and the most elastic and adaptable in the world; but even so, it is inadequate to express our thoughts, far more our emotions. How often differences arise merely through the misunderstandings of words and phrases! How easy to be misled by ambiguities! Again, words have their difficulties: besides their currently accepted or 'dictionary' meanings, they often carry with them associations, an atmosphere or 'aura,' difficult to define in exact terms. Words with *relative* significance, *i.e.*, words which chameleon-like take colour from their surroundings or context, are frequently used absolutely in a vague and misleading sense. Other words carry with them not only a meaning, but also a feeling of approval or disapproval in varying degrees of strength: they have an emotional value and, as such, arouse prejudice. Words, too, can be used to conceal or disguise thought, not to elucidate it. There is, again, a fascination about some words: they weave a magic spell, legitimate in the realm of poetic fancy, but dangerous in the sphere of cold thought. Such is the power of words, that frequently men will accept as an explanation of a difficulty a mere statement

of it in other words. And it is a common form of self-deception to imagine that, because we are familiar with, and constantly use, a word or phrase, we are also familiar with what it represents. Familiar acquaintance with a term is perpetually mistaken for accurate knowledge of its implications. As Jeremy Bentham put it,

"When we have words in our ears, we imagine that we have ideas in our minds."

I have said little about the capital difficulty of conveying our thoughts, opinions and judgments in clear and precise and concise speech or writing. But the processes of thinking and speaking are so closely connected as to be almost inseparable. Accuracy of observation and clarity of thought are generally accompanied by clarity and accuracy in language: and muddled writing is nearly always the result of muddled thinking.

QUESTIONS

N.B.—The following questions are intended to indicate possible lines on which class discussion might be initiated and developed at this stage.

1. "Clear Thinking is a very rare thing, but even just plain thinking is almost as rare. Most of us most of the time do not think at all. *We believe and we feel, but we do not think.*" (Leonard Woolf.)
Explain and comment.
2. What are the limitations of the scientific method in its application to political and social problems?
3. "As a cure for present ills, Clear Thinking is not enough." What more then is required?

2. What Is Thinking?

"I DID it without thinking." When we come to reflect, this remark would apply to most of the actions we perform in our ordinary daily routine. Many of our actions are [instinctive](#) or automatic responses to certain situations: thus we blink if a threatening fist suddenly approaches close to the face, we shade our eyes in an unaccustomed glare, and we step out of the way of some obstacle in our path. Many again are matters of habit—having discovered the way to act, either for ourselves or by learning from others, we have performed the action so often that when the appropriate situation occurs our response is almost involuntary and requires no more perhaps than a momentary thought.

But when we are confronted with a difficulty, perplexity, or problem, that is, an unfamiliar

situation to which we have no response ready, either instinctive or habitual, then we 'put on our thinking cap'; for thinking is the characteristically human method of seeking a solution, as opposed to the haphazard, hit or miss, trial and error method common in the rest of the animal world. It is this power of dealing with a novel situation by reflection, without overt action, that is the distinguishing mark of *homo sapiens*.

Thinking therefore should first of all be distinguished from day-dreaming, in which we allow our minds to wander at random or to indulge in idle fancies or to build castles in the air without the direction exercised by the will-power. Thinking is essentially purposive— directed and controlled, at any rate in its earlier stages, by the conscious exercise of will, and set in motion by the conscious realisation of the existence of a problem demanding solution. It is true that if a solution is slow in forthcoming, the thinking process thus initiated may be continued, without any conscious direction or interference on our part, at times when our conscious thoughts are otherwise occupied or even when we are asleep. At these times, the solution might be said to be 'hatching,' so they are known as 'incubation' or 'gestation' periods; and as a result of this non-conscious process, often the solution occurs to the conscious mind when we least expect it—in a flash or inspiration, as we say, comparable to that experienced by Archimedes in his bath. But it is seldom that such Eureka's come 'out of the blue': they are more often the unexpected, but nevertheless merited, results of previous conscious hard thinking and concentration. And 'intuitions,' often regarded as peculiarly characteristic of the feminine mind, probably occur in a similar way— that is, when they are not idle guesses or outlets for prejudice.

The kind of thinking then that we are considering is controlled, constructive thinking, directed towards the solution of a problem. The problem may be a practical or a theoretical one. It may be to repair a faulty piece of mechanism in a bicycle or a motor-car, to find the answer to a problem in Arithmetic or Geometry, to arrest the spread of an epidemic, to discover the secrets of atomic energy, to find the missing 'light' in an acrostic or the hidden clue in a crossword, to ease the congested traffic in a large town, to find an explanation of the existence of evil, to translate a piece of Ovid or La Fontaine, to track down a criminal, to find a quicker, more convenient way home from the office, to decide what candidate to vote for in an election, or to find out why Athens or Rome declined and fell.

But whatever the problem, practical or theoretical, grave or trivial, the thinking process

is essentially the same and usually passes through the following stages:./p>

1. Interest: the thinker becomes aware of the problem and his interest is aroused.
2. Attention: the problem is formulated and the relevant data collected and examined.
3. Suggestion: possible solutions occur.
4. Reasoning: the consequences of each suggested solution are worked out.
5. Conclusion: the most satisfactory solution is adopted.
6. Test: the adopted suggestion is submitted to trial.

Here is a trivial situation which illustrates the process at work.

1. Jones looks at his watch. "Heavens, I shall be late for the meeting."
2. "How can I get to the Hall in time? It's now six o'clock and pouring with rain. The buses are full. Look at that long queue at the bus-stop. There's not a taxi in sight. Hallo, there's a subway to the Tube across the road."
3. "Train? Bus? Taxi? Tube?"
4. "Train? Shall I make a dash for it? No, I can't catch the 6.5 and I shall get wet. Bus or taxi? It looks pretty hopeless. Tube seems more promising."
5. "Tube it shall be."
6. "Here goes," and he dives down the subway.

Here is another example—this time a more serious problem presented to a medical officer. As you read it, try to pick out the same six stages in the development of its solution.

"A medical officer is summoned to investigate an epidemic of scarlet fever in a town of 20,000 inhabitants. His object is to discover the cause of the outbreak, in order if possible to remove it. He first has a list made of all the cases, with the addresses of the patients and the dates of their coming under medical supervision. There are in all 530 cases. These are not confined to one quarter of the town, but certain streets suffer very severely, although widely separated, while other streets close to one another scarcely suffer at all. Houses seem to be attacked rather than single individuals. There are many houses in which nearly every inmate, with the exception of those immune through having had the disease before, has fallen a victim. A fortnight before there were no cases at all in the town; for the last

four days they have been occurring at the rate of over 80 a day."

[Such is the evidence before the Medical Officer. It has been collected by his co-workers. If he doubts either the capacity or the honesty of any one of them, he will, of course, first verify all the testimony received from him. In this case, we will assume that such verification is unnecessary.]

The officer now proceeds to frame a tentative or working hypothesis. Is it an instance of simple infection from patient to patient? This hypothesis is at once rejected because of the officer's past experience and the knowledge he has gained from the experience of other observers. It does not account for the suddenness of the outbreak, nor yet for the simultaneous seizure of whole families. An epidemic caused by repeated contact would be gradual, and would probably spread from district to district surely but slowly. The swift onslaught of the epidemic under consideration points to a cause affecting large numbers of people at one and the same time. So the officer frames another hypothesis. He has heard that at a village five miles away scarlet fever has occurred several times during the last few months. Once more the evidence is but testimony depending upon the authority of others, but there seems to be no reason to distrust it. This village sends milk to one of the chief milk distributors of the town. Accordingly the new hypothesis is that the epidemic is due to contaminated milk. The officer knows that outbreaks are often caused in this way. This hypothesis is tested by a deduction which will correspond to facts if the hypothesis be correct. If milk be the cause of the outbreak, the 'fever niap' will correspond to the 'round' of some milkman. Investigation shows that the infected houses are in every case supplied by the milkman who gets his milk from the infected village. The hypothesis is now almost certainly correct, but in order to be quite sure of his ground the officer makes inquiries at the suspected village, and finds one of the chief milkers suffering from scarlet fever in its most infectious stage. This man is isolated, the supply of milk from the village is suspended and the epidemic rapidly declines."⁽¹⁾

It should not have been difficult to follow the course of that investigation. I propose now to consider each stage in the thinking process separately and in greater detail.

STAGE The first stage, in which the thinker's interest is aroused, is an
I. indispensable preliminary to all purposive thinking. Mere curiosity is not

enough to stimulate constructive thought. For example, we may hear a strange sound which causes momentary curiosity, but our interest may not be aroused and we may dismiss the occurrence from our minds as being of no consequence to us. In these circumstances no thinking follows. Interest also is the secret of effective observation: it adds point to what we see; and the preexistence of interest is necessary to the acquisition and retention of any new knowledge.

- STAGE 2.** In the second stage the first step the thinker takes is to analyse the situation—to break it up into its constituent elements in order to separate those that do and those that do not present any difficulty. Then he proceeds as it were to crystallize the problem and to put it into words in the form of a question or in the case of a complicated problem of a series of questions. It is essential to the success of the whole operation that questions should be framed as clearly, as definitely, and as precisely as possible. Indeed in many problems this may be the crucial stage; for very often when we have got down to the heart of the problem and propounded the *fundamental* question which is causing perplexity, the solution will be reached without difficulty. Asking ourselves vague, indeterminate questions will lead us nowhere.

It is also very easy to confuse two questions that are rather like each other on the surface but fundamentally are very different. If, for example, we were interested in the problem of William Joyce (" Lord Haw-Haw ") and wondered whether he was really guilty of high treason, we should be careful not to confuse that question with whether or not he deserved to be hanged, for that is really another matter. We should also beware of asking a question framed in such a way that it takes for granted the answer to another question which may in reality be the fundamental one. Until it has been proved beyond doubt that a man has been murdered, it will not lead a detective very far in the investigation of the cause of his death if he propounds to himself the question "Who was the murderer?" [Complex questions](#) should therefore be avoided. Again in some problematic situations, the question may be framed for us, and here it is essential that we should spend a little time in pondering over the terms carefully and in finding out exactly what is required. Examination candidates have often been known to come to grief because of failure or neglect to discover the point of a question, with the result that their answers are irrelevant, i.e., they collect the wrong data. Indeed, the data to be collected in the second part of this stage are the data which bear upon the question in which the problem has been formulated: facts acquire significance and importance *relative* to the questions asked. It is possible, however, that the significance of a fact does not appear until stages 3 and 4, when a tentative solution or hypothesis may send

the thinker back to stage 2 for a fact he has overlooked, or even to search for evidence that was not then apparent. For example, the medical officer, when reasoning out his second hypothesis, remembered that he had heard of cases of scarlet fever in a village five miles away from the town, and this fact immediately acquired significance in the light of this hypothesis. In *The Memoirs of Sherlock Holmes* there is an occasion when the famous detective poked about in the mud and unearthed a half-burnt wax vesta which proved to be the vital clue. The police inspector could not think how it had escaped him; but Holmes said he saw it only *because he was looking for it*. This is another example of the importance of knowing what we are looking for when we are collecting data—not only as here when we are relying upon personal observation, but also when, as we often have to do, we tap the experience of others by interrogating them in person or by referring to their written works. In either case ability to ask the right questions will serve us well in eliciting the relevant information we require. For example, in C. K. Chesterton's story, *The Invisible Man*, referred to on p. 109, if the question asked of the four observers had been more explicitly framed in this way, "Has anyone, I do not mean anyone whom you suspect, but *anyone at all*, entered or left?", then the answers might have been different. It is important, too, that when we have occasion to consult books of reference we should have very clearly at the back of our minds the purpose we have in view and the points on which we require enlightenment.

As I shall have occasion to mention [later](#), fruitful discussion and argument depend largely on sticking to the point, and a necessary preliminary is the careful and precise definition of the issue in dispute. When the issue is formulated in words, it is important to avoid using vague, ambiguous or loose terms, or, if this is not possible, to define strictly the sense and application of such terms for the purpose of the discussion in hand. When the preliminary ground has been thus cleared, very often the cause of a dispute will disappear. It is no less important to see that the question in dispute when formulated does not rest on assumptions that one party or the other is not prepared to accept; for again very often the radical cause of difference may lie, not in the question itself, but in the assumptions on which it is based.

When the medical officer has propounded the problem, he proceeds to collect, or to have collected by his assistants, all the relevant information bearing on it—the number of cases, their geographical distribution, the dates on which the cases were notified, etc. If necessary he would take steps to see that the information was verified; for he knows how essential it is that it should be based on facts and should be the result of accurate

and objective observation. He would probably have the information classified, arranged and tabulated, and a large-scale map of the infected area made showing the distribution of the cases: he would thus have the data in a handy and accessible form for reference and consideration. As to what facts are relevant, his previous knowledge and experience of similar situations will have guided him. He knows, for instance, that the Christian names and surnames of the victims are not likely to have any significance, nor the fact that one infected district is a continuous row of houses with basements and another a tree-lined avenue of semidetached villas. He also realises the importance of *negative* evidence, e.g., information about areas not visited by the epidemic.

In thus selecting the data for examination, the clear thinker is guided by two primary considerations—they must be based upon objective fact and they must be relevant. He does not allow his personal feelings to enter into his choice. He does not, after a casual glance at the evidence, jump to any conclusion, nor does he approach the problem with a preconceived opinion, with the result of confining his attention to those data only which seem to point to this conclusion or to confirm this opinion. In other words, he is not actuated by *prejudice*, but by a genuine desire to get at the truth. This second stage in the process of thinking is often made ineffective by prejudice, for prejudice tends to concentrate attention in one direction and to inhibit attention in others. The prejudiced person selects facts, not for their relevance, but because they fit in with preconceived opinion; and he shuts his eyes to inconvenient facts. Prejudice, too, may be operative at this stage in affecting the thinker's power of objective observation under its influence he may see, not what really exists, but what he wants to see; and his interpretations of his sense impressions will be coloured or distorted by his feelings.

In selecting data for examination we must also beware of other possible irrational influences. In much of our thinking, we are necessarily dependent on second-hand sources of information—on what we read in books or newspapers, on what we hear on the wireless, or on what we see on the cinematograph screen. Judging the value and validity of such evidence is no easy matter. To doubt everything and to believe everything we read, hear or see in these ways are equally convenient but equally irrational solutions, as both dispense with the necessity for reflection and circumspection. Nevertheless we need to be aware of the human susceptibility to suggestion and reiteration which are part of the stock-in-trade of propagandists and used by them to influence our choice of facts and the course of our thinking generally.

I have mentioned two possible sources of data—the raw material, so to speak, used in the thinking process. There is a third—the knowledge stored in the mind and accumulated in the course of experience—the records not only of past personal observation, but of previous teaching, reading, study, and interchange of knowledge and ideas with others in the way of conversation and discussion. The value of such data will depend upon their reliability and that of the memory, for memory can magnify, minimise and distort. And their availability for use will depend upon the efficiency of the power of recall, on the way they are organised in the mind, and the kind of associatory links connecting them.

The thinker will also be able to put to use the judgments he has previously made: his previous experience will have furnished him with a number of general rules, formulae or principles which enable him not only to choose relevant data, but also to draw inferences from them and to extract *meaning* out of them, either taken separately or in conjunction. A detective, for example, in the course of his inquiries (*i.e.*, collection of data) has learnt that the man whose death he is investigating was an autocrat. From his experience he has formed a judgment or opinion of the sort of behaviour to expect of an autocrat, *e.g.*, that he likes his own way, does not suffer fools gladly, is inconsiderate of other people's feelings, resists stubbornly when attacked, brooks no opposition, and so on. He says to himself, "Autocrats, from my knowledge and experience, act in such and such a way: the dead man was an autocrat; therefore probably he acted in one or other of these ways. Similarly a broken vase may mean to a detective that it had been knocked over by accident, or smashed in the course of a scuffle, or carelessly dislodged by a maid-servant, or hit by a ricochet bullet, or blown over by a sudden gust of wind. All these possibilities of meaning occur to him as a result of judgments he has made from previous experience, in which he has noted, not only facts, but also causes and effects, similarities, contrasts, degrees, differences, incompatibilities and relationships of all kinds. Which of these *meanings* is to be attached to the object in the particular case under investigation will depend upon other data and other judgments. One of the latter may have been, "Results such as the rucking of the carpet, the over-toppling of a chair, the spilling of ink, the disarrangement of papers, etc., frequently follow scuffles in rooms like this one." If these phenomena were present as well as the broken vase, then he might make the inference that probably the vase was broken in the course of a scuffle.

But he will not rule out the possibility that *all* these things were caused either by someone, perhaps the criminal, acting deliberately to cover up his tracks, or by a raving lunatic who had nothing whatever to do with the crime.

The processes just described are two: judgments, generalisations, formulae, principles, etc., are *arrived at* by INDUCTION, *i.e.*, the extraction of a general rule from a number of particular instances, and *applied* by DEDUCTION to the particular circumstances under investigation. There are two possibilities of error: if the generalisation is based upon limited experience, it may be unreliable and thus diminish the reliability of deductions made from it; and if the generalisation is incorrectly applied, the conclusions drawn will not be warranted and may be untrue. But the oftener a generalisation is correctly applied and the conclusion drawn turns out to be true, the more reliable the generalisation becomes, and, of course, vice versa.

Let me now sum up Stage 2. It can be called the *analytic* stage: the situation out of which the difficulty arises is broken up; the problem is isolated and formulated; the various facts and conditions bearing upon it are collected, verified, sorted, arranged, and examined; and their significance, singly or in groups, assessed in the light of previous judgments.

STAGE 3 The third stage is reached when possible solutions to the problem begin to suggest themselves to the thinker; but these will only occur after prolonged consideration of the data and their implications. In fact this and the previous stage tend to merge: data give rise to suggestions, and suggestions often cause the thinker to make further inquiries with the object of securing more data.

STAGE 4 There may also be considerable interplay between these last two stages and Stage 4, when the thinker reasons out the consequences of each suggestion in turn; for some suggestions may be dropped almost as soon as they occur, as happened to the suggestion that first occurred to the medical officer. The characteristic that marks Stage 4 is that it involves the use of a hypothetical form of argument. This begins with a supposition, *i.e.*, "If X is true, then a, b, c, d, e, etc., follow." X is a suggestion that merits consideration as a possible solution and is now called a hypothesis. If the a, b, c, d, e, etc., that follow correspond with all the relevant data, and if the hypothesis covers and accounts for all the perplexing elements which appeared when the situation was analysed in Stage 2, then that hypothesis is worthy of acceptance in Stage 5 as a reasoned solution of the problem.

It is at this and the following stages that prejudice and other irrational influences may again be operative, both in the choice of hypotheses to be considered and in the final

selection for acceptance. The clear thinker will choose a solution according to its tenability in relation to the facts and its power to account for them. The prejudiced person, on the other hand, is influenced by his feelings to choose the most agreeable or the most comfortable solution and to discard that which he dreads or dislikes. Other irrational people are apt to be influenced by all sorts of irrelevant considerations —they may, for example, choose a solution because it is novel, arresting, or sensational, or merely because it resembles other solutions recently arrived at in different situations, or because it exhibits striking coincidences, or because it seems to confirm suspicions widely spread or popularly held at the moment, or because it is in keeping with some pet superstition.

Thus at these stages also it is necessary to issue a warning against 'jumping to conclusions.' It is true, as has already been pointed out, that sometimes the satisfactory solution may suggest itself unexpectedly; but judgment on a hypothesis thus suggested should be suspended until its consequences have been reasoned out in the way described in Stage 4.

STAGE 5 This stage is reached when the thinker is able to put together all the pieces of the jig-saw puzzle, so to speak, to create out of them a composite and meaningful whole, and thus to 'make sense' of what at first was a perplexity or mystery. Hence it can be called the *synthetic* stage. It is at this stage that the detective reconstructs the crime he has been investigating, and in stories of detection he often combines it with Stage 6; *i.e.*, he assembles the persons involved, including the suspected culprit, to witness or hear his reconstruction and obtains confirmation of his solution when the guilty one confesses and is arrested, or commits suicide to avoid arrest.

This procedure on the part of a detective is analogous to a 'controlled' experiment in a scientific laboratory, *i.e.*, an experiment in which all the ingredients and conditions of a problem are exactly reproduced to see if the same original situation is repeated. Failing the successful issue of such a test in actual experience there is no certitude that the solution arrived at is the correct one. The greatest uncertainty will prevail where human beings and human relationships provide the raw material of the problem confronting the thinker, for not only are they infinitely variable and difficult to analyse or classify exhaustively, but they are not easy to weigh, calculate or assess with objective exactitude. No generalisation concerning them can ever be otherwise than incomplete

or at best more than a roughly approximate guide to future behaviour or happenings. In human affairs the incalculable is always to be reckoned with and any general rules and principles can only be applied with allowances and reservations.

This uncertainty is often made an excuse for not coming to a conclusion at all, or for refusing to put a conclusion rationally reached to a practical test. Some people when faced with a choice of alternatives will not commit themselves to one or the other, either because they fear the unpleasant consequences of being wrong, or because they mistake the attitude of 'sitting on the fence' for one of commendable impartiality. Others when faced with the consequences of a conclusion that appears to follow from a rational examination of the available facts shrink from putting it to a practical trial on the ground that 'it's all very well in theory, but it won't work in practice.' If such are the results of 'thinking' for such people, then it would be better if they saved themselves the trouble; for unless a conclusion is reached and used as the basis of subsequent action or further experiment, thinking is not complete and its primary object unattained. Those who suspend judgment indefinitely because immediate certainty is not attainable are waiting for the Greek Calends. The clear thinker suspends his judgment only as long as the circumstances of his problem permit, and no longer: when the time comes to act, he will act with courage and firmness, even if only on a balance of probabilities. He may be wrong, but it is better to be wrong than perpetually indecisive; and if he is wrong then, as Huxley says, some day he will be lucky enough to knock his head against a new fact that will set him right again. The clear thinker knows his task is never finished. He knows that there is no contradiction involved in making decisions and at the same time preserving an open mind. He knows that his judgments will have to be submitted to the test of new facts and new experience as they come along and be strengthened, modified, or abandoned accordingly.

Thus however careful, conscientious, and thorough the thinker's investigation may be, he may not arrive at the truth; but his solution may contribute to ultimate truth in one or other of the following ways: it may provide a further verification of an existent theory; it may modify or correct such a theory in some detail; or it may prove to be the first step in the evolution of a new theory and thus make a new contribution to human knowledge. Clear thinking may not succeed in arriving at the truth; but the truth cannot be arrived at without clear thinking. Clear thought is not necessarily creative thought, but it is the first step and the indispensable preliminary to it.

Familiarity with the nature of thinking and what it involves is necessary not only that we may practise it ourselves in trying to solve the problems that confront us, but also that we may follow with understanding and critical appreciation the course and results of the thinking of others—especially of those whose discoveries and achievements in scholarship, philosophy and science have added to human knowledge and have been recorded for our use and benefit in the books they have written. When we read and study their works, we shall do so with better advantage, if we realise that their results have been achieved by the exercise of the same powers, though perhaps in a greater degree, as those which we seek to acquire in order to make the management of our own ordinary affairs more effective; and we shall be in a better position to evaluate their achievements, if we can follow closely in the tracks of the thinking by which they were arrived at.

We should also realise and make use of the fact that the thinking process just described is not restricted to any particular field of study, but is an element common to all.

Thinking follows the same lines, whether in Geometry or Geography, in Science or History, in Biology or Sociology, in the lecture room or in the laboratory; the procedures of induction and deduction apply equally to all; and 'hypothesis' and are not terms peculiar to the natural sciences. It is a great mistake to regard any of the processes of constructive thought as being the proprietary characteristic of any particular branch of learning or research. Knowledge is all one: thinking is the interchangeable handle to the tools used in its various branches; and the attainment of human welfare is the common integrating aim.

It is said that we tend progressively to know more and more about less and less. Knowledge is continually developing and expanding, and specialisation is the order of the day. There is a danger therefore that knowledge may develop in watertight departments and thus suffer fragmentation. For many years now this danger has been present to the minds of philosophers. who have put forward this or that 'subject' as the true co-ordinator and integrator, embracing the whole. But that is only inviting the development in turn of this 'subject' into another fragment. Is it not preferable to develop an interchangeable technique of thought and to orientate all departments of study to a common aim? Then if the specialists share this common aim and system and research deeply enough into their own subjects, they will eventually discover how they interact and are interdependent, by regarding themselves as fellow-workers in a common held, dividing the labour. For this common aim and technique will provide a

common ground on which they can meet to interchange the fruits of their work, and thus by communal and collaborative thinking, knowledge may escape disintegration and unreality, and retain its essential coherence and relevance to life and its pressing problems.

QUESTIONS

1. Decipher the following cryptogram, giving full particulars of your thinking at each stage in the process:

DSVIV ZIV GSV HMLDH LU BVHGVIBVZI?

2. Something happens (*e.g.*, a change of occupation or residence) which necessitates a considerable change in your normal daily routine. State in full how you think out the best way to adapt yourself to it.

3. Thomas A. Edison said that creative genius involved 2 per cent inspiration and 98 per cent perspiration. What do you think he meant?

4. Let me call your attention to the curious incident of the dog in the night-time."

"The dog did nothing at all in the night-time."

"That was the curious incident," said Sherlock Holmes.

Comment.

5. Here are three problems. In one, all the relevant data necessary for solution *no more* given. Of the other two, one contains some irrelevant data, and the other omits some relevant data.

Solve the first and the second. Re-state the second, omitting the irrelevant data. Try to solve the third, and by doing so discover what data must be supplied if a solution is to be found. Then re-state this one also.

N.B.—The problems are *not* set out in this order.

(a) On the 15th of April, 1946, the day after the commencement of British Summer Time, a man started from his house at 2.30 p.m. and walked to a village, arriving there when the church clock indicated 3.15 p.m. and when, according to the sundial on the front of the church, it was just after o'clock. After staying 25 minutes, he borrowed a bicycle and cycled back against a m.p.h. head wind by another road, half as long again as the first, at a speed twice as fast as he had walked, and reached home at 4.5 p.m.

How far wrong was the church clock?

(b) At an election 10 per cent of the people on the voting list did not vote, and 60 votes recorded were rejected as invalid. The successful candidate's majority was 308, and it was found that he had been supported by 47 per cent of the whole number on the voting list. What was the number of valid votes cast for each candidate?

(c) In a certain district there are two evening schools. In the first 20 per cent of the students are adults, 50 per cent are boys and the rest are girls. If the two schools were amalgamated there would be 8 per cent adults and 56 per cent boys. Find the percentage of boys and girls in the second school.

6. Here are two *obiter dicta* of Sherlock Holmes. What have you to offer in the way of criticism?

(a) "When you have eliminated the impossible, whatever remains, however improbable, must be the truth."

(b) "When a fact appears to be opposed to a long train of deductions, it invariably proves to be capable of bearing some other interpretation."

7. "But you spoke just now of observation and deduction. Surely the one to some extent implies the other."

"Why, hardly," Sherlock Holmes answered. "For example, observation shows me that you have been to the Wigmore Street post office this morning, but deduction lets me know that when there you despatched a telegram."

"Right on both points. But I confess that I don't see how you arrived at it." "It is simplicity itself," he remarked, chuckling, "so absurdly simple that an explanation is superfluous; and yet it may serve to define the limits of observation and deduction. Observation tells me that you have a little reddish mould adhering to your instep. Just opposite the Wigmore Street office they have taken up the pavement and thrown up some earth, which lies in such a way that it is difficult to avoid treading in it on entering.

The earth is of this peculiar reddish tint which is found nowhere else in the neighbourhood. So much is observation. The rest is deduction. I knew that you had not written a letter, since I sat opposite to you all morning. I see also in your open desk that you have a sheet of stamps and a thick bundle of post cards. What could you go into the post office for, then, but to send a wire? Eliminate all other factors, and the one which remains must be the truth."

—Conan Doyle, *The Sign of Four* (abridged).
Critical comments, please.

8. THE NATURE OF BURNING—I

From the earliest times the mechanism of fire had been a matter of some experiment and much speculation among the curious-minded. By the end of the seventeenth century it was generally accepted that:

1. Burning required the presence of air.
2. The calcination of metals (*i.e.*, their conversion into calx or ash) required the presence of air.
3. The conversion of a metal into its calx resulted in increase in weight, the ash being heavier than the metal.
4. The calx could be changed back to the original metal by heating with combustible material, *e.g.*, charcoal.

In 1731 Georg Ernst Stahl put forward "The Phlogiston Theory" to account for these facts. His ideas were

1. Combustible materials were compounds of ash (calx) and 'phlogiston' (a hypothetical 'spirit of fire').
2. Burning and the calcination of metals were the giving off of 'phlogiston,' which was absorbed by the air, more or less, as water is absorbed by a sponge, and the leaving of the ash or calx.
3. The restoration of a metal calx to the metal itself was due to the calx absorbing 'phlogiston' from the combustible material with which it had to be heated to bring about the change.

This theory was widely accepted because it seemed to explain many quantitative facts about burning; but it did not account for the increase in weight on the calcination of metals. When this was pointed out to the holders of the 'phlogiston theory,' they gave four 'explanations':

1. They pleaded that 'phlogiston' had explained much, and that therefore, though the increase in weight on calcination was a phenomenon that defied explanation at the moment, some solution to the difficulty would no doubt be ultimately found.
2. They said that 'phlogiston' had negative weight or 'levity.'
3. They denied the reality of the supposed fact. The increase in weight, they said, was only

apparent and was caused by the greater density of the calces than of the metals; and on weighing in air, the smaller volume of air displaced by the calx made the apparent weight greater.

4. They admitted the fact, but said that it was of no importance.

(N.B.—In most cases calces have smaller densities than the metals from which they are formed.)

Give a reasoned critical estimate of the value of each of these 'explanations.'

9. THE NATURE OF BURNING—2

In 1777 Lavoisier, as the result of many years careful experiment on the calcination of metals, in which he attached great importance to weighing and measuring volumes, and enlightened by Priestley's discovery of oxygen, put forward the 'Oxygen Theory' of burning. His chief points were:

1. Burning was a combination with a portion of the air, this portion probably being identical with Priestley's 'oxygen.'
2. Calcination was this same combination of metal with a portion of the air.
3. The increase in weight on calcination was a measure of this combination.
4. The restoration of a calx to the original metal was merely the removal of the combined 'oxygen,' by making it combine with some readily combustible substance.

Lavoisier's theory was so utterly opposed to the 'phlogiston theory,' which had been accepted for so many years and was firmly held by such famous chemists as Priestley (d. 1804) and Cavendish (d. 1810) until their deaths, that it met with the bitterest opposition. However, Lavoisier embarked on a series of confirmatory experiments, so brilliantly conceived and executed and so conclusive in result, that his theory was finally accepted.

His chief experiments were as follows:

He heated mercury in contact with 40 cu. ins, of air until no further change took place. This took twelve days and nights. He found that the mercury became covered with a red powder, mercury calx, all of which he carefully collected; and that 8 cu. ins, of air had disappeared.

He then strongly heated all the mercury calx which he had collected. He obtained a small quantity of mercury and 8 cu. ins, of a gas which was identical with the gas, oxygen, which had recently been discovered by Priestley. He also showed that the 32

cu. ins, of gas left in his original apparatus would not support any form of burning. What other confirmatory experiments were required to make the theory completely 'watertight'?

10. "One of the most interesting examples of scientific thinking is to be found in the history of malaria. Malaria is a fever which from the very earliest times has afflicted dwellers in the neighbourhood of marshes. Naturally the ancients concluded that the disease was caused by the water, or by exhalations from it. This view was held until quite recent times, and as the avoidance of marshes was followed by excellent results, there did not seem to be any reason to abandon the theory. But modern science was not satisfied and search was made for another hypothesis." *Continue the story.*

- 11.** You are entrusted with the task of investigating the cause of
- (a) a fire in a furrier's warehouse
 - or (b) a derailment on the B. and N. Railway
 - or (c) a collision between a 3-ton lorry and a baker's van.

Outline your method of procedure. (N.B. Such an inquiry could be staged as a class exercise.)

12. Outline the means you would adopt to solve the following problems:

- (a) Why is the Winnipeg area in Canada suited for wheat-growing?
- (b) What has been the effect upon history of the invention of new instruments of war?
- (c) What connection is discoverable between industrial and political changes?
- (d) What causes iron to rust?
- (e) What is a suitable district and site for (i) a particular light industry, (ii) a school holiday camp?

3. Thought And Language

"For words are wise men's counters, they do but reckon by them; but they are the money of fools."—Hobbes: *Leviathan*.

"When we have words in our ears, we imagine that we have ideas in our minds."
—Bentham.

THINKING, as we have seen, is a process which in a practical problem obviates or postpones the necessity for overt action: it saves us the trouble of actually handling tools or materials—we need only picture them in the mind's eye. Therefore thinking is

impossible without symbols of some kind to represent these tools and materials. And when we are dealing with a theoretical problem, such symbols are even more indispensable, because we want some means of representing not only concrete objects, but also abstract conceptions—qualities, relationships, associations, and so forth.

The symbols most commonly used in thinking are Words. Words are not the only symbols used by thinkers, and so it cannot be said that they are absolutely essential to thinking. But they make thinking much easier; they enable us to label not only concrete objects and abstract qualities, but also classes, distinctions, similarities, relations and combinations; they make it easy to recognise these when they form part of larger wholes, and thus facilitate the analytic and synthetic operations noted in Stages 2 and 5 of the thinking process. As symbols, they are convenient, manageable, compact, and portable; they are capable of expressing fine shades of 'meaning'; and they are producible in speech and writing both for our own use and for communication to others. In these qualities lie their virtues and advantages, and, as we shall see later, their vices and their drawbacks.

But when we come to express our thoughts and communicate them to others in speech or writing, these labels by themselves are inadequate. They must, with the aid of other word-symbols, be fitted into the framework of language units, *i.e.*, sentences, paragraphs, etc., before their significance can be understood, in fact before the thinking represented by them can be clearly conveyed. Thus it comes that language which already serves the primary purposes of expressing our feelings, influencing the activity of others, and establishing sociable relations with them, is also used as a conscious vehicle of knowledge and thought. The fact that it does serve all these purposes also has its difficulties and drawbacks.

The connection, however, between thought and language is necessarily close. Until a thought is translated into language, it remains vague, nebulous and indeterminate: language crystallises it and gives it form and substance. Thus language is an almost indispensable aid to clear thinking: the very process of having to put our thoughts into speech or writing, and the effort entailed in discovering adequate expression for them, are of themselves thought-clarifiers. We do not realise the depth or the shallowness of our thoughts until we try to utter them or put them down on paper. And if we are to share our thoughts with others, we can only do so (outside the imperfectly explored sphere of thought-transference) by using the medium of language. Thoughts that 'lie

too deep for words' cannot be put to serious or practical use: people who claim to reach conclusions by way of them are often merely admitting that they have shirked the effort without which ideas cannot be clarified. Clear expression and clear thinking are complementary; and there are no short cuts to either.

In Chapter Two stress was laid on the importance of wording clearly, accurately and precisely the problem facing the thinker or the point at issue in a dispute or discussion. But clarity, accuracy and precision of language are necessary at all stages in the thinking process. Therefore we must look to our words.

In the first place, we must never forget the true nature of words—that they are symbols. We must rid ourselves of the belief that a name is an integral part of a person or thing, or that there is identity, or some natural, organic, inherent, or mystical connection, between things and the names given to them: the only connection that does exist between them is in the mind of the individual speaker, writer, reader, or hearer. This belief is to be found among primitive peoples, and still exists as an unconscious survival among those who consider themselves civilised. For instance, there are still people who cling to the notion that the names given to children determine their character or destiny, or that the 'fancy' name of a commercial product is a clue to its quality; and it is not a great step from this to believing that if a certain label (like *democratic* or *fascist*) is applied to a measure or an institution it must therefore be good or bad, as the case may be. When we once realise the fundamental fact that words are formal and arbitrary symbols—convenient reminders of persons and things—then we shall not lose our grip on reality or be guilty of verbalism, *i.e.*, playing or juggling with words and deluding ourselves that we are dealing with the actual things and people they represent.

This warning is to be heeded particularly when we are thinking, reading, speaking, or writing about abstractions and generalities, for words representing them tend to become mere names unconnected with reality. They will remain mere names unless we keep in mind particular concrete examples of their application. These and other words therefore whose 'meaning' is vague and indeterminate must be used with care, and never unless we are clear in our minds what we mean' by them and unless we are prepared to point to the *referents*, *i.e.*, things meant. It is a useful discipline to frame definitions of such terms; but the mere ability to translate a word by a set of other words is not in itself enough to prevent vagueness: we must at all times be able to anchor it, so to speak, to objective fact.

Again, we must realise that as the only connection between a word and its referent is in the mind of the person using it, the 'meaning' he attaches to it depends very much on his own experience. It is important therefore that in thinking we should try to dissociate from the 'meaning' of a word that part which is subjective, *i.e.*, peculiar to ourselves.

In using words which symbolise a variety of referents, there is always a danger of *equivocation*, *i.e.*, shifting the referent of a particular word in the course of reasoning or argument. The referents of some words like *post* and *box* are so markedly different that confusion between them is unlikely to arise; but there are other words like *law* and *nature* whose referents resemble one another but differ in some important particular. We run the risk of vitiating a whole train of thinking or argument if we use such a word more than once without guarding against the possibility that unconsciously we may be deceiving ourselves and others by shifting its referent. Similarly, we must guard against risk of confusion between the literal and the metaphorical 'meanings' of words, and we must remember that when we use metaphors we are in fact tacitly assuming some comparison or analogy that may not necessarily be based on objective truth.

Lastly, there are words which in our own or others' minds excite feelings and convey notions of approval or disapproval and the use of which may arouse prejudice or set in motion other irrational forces. Such words have their place in poetry and in emotive prose—language appealing to the feelings or to the aesthetic sense—but they can only lead to confusion when used in reasoning.

Thus language, subject to certain safeguards, is a means of clarifying thought for ourselves. It is also the only medium by which we can understand and appreciate the thoughts and aims of others in the course of conversation, discussion, and reading. But for complete mutual understanding, it is essential that the parties should 'speak the same language'; *i.e.*, they must see eye to eye when they come to interpret fundamental terms—they must use the same label or symbol for the same referent.

Even among the inhabitants of two countries that speak the same tongue, like England and the United States, the referents of words are not always the same. Here are a few examples:

<i>Word</i>	<i>Meaning</i>
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	England	U.S.A.
nasty	unpleasant	disgusting
homely	unsophisticated	ugly
hypothecate	pawn	frame an hypothesis
politician	a would-be statesman	a political agent
billion	a million millions	a thousand millions
solicitor	a legal consultant	a tout

When it comes to translating one language into another, the possibilities of confusion are greater: a term may admit of two or more interpretations, and the wrong one may be taken. This happened not long before the second Great War in the British interpretation of a German dispatch, and there ensued what the newspapers are fond of calling "an international crisis of the first magnitude."

Hitler followed up his dramatic coup of reoccupying the demilitarised Rhine zone by making proposals for a general settlement of Europe, including an offer of a twenty-five years' peace. A further communication from him in response to an invitation to attend a meeting of the Council of the League of Nations summoned to consider the situation contained the following passage:

"The German Government assumes that its representative will take part on equal terms with the representatives of the Powers represented on the Council in the discussions and decisions of the Council. The German Government can participate in the Council proceedings only if it is assured that the powers concerned are prepared to enter into negotiations *alsbald* in regard to the German proposals."

When this communication was first published in English, the word *alsbald* was translated *forthwith*, a word with an impatient, peremptory, threatening connotation, with a

suggestion of an ultimatum. The immediate effect on public opinion in England was little short of consternation at such an apparently glaring and gratuitous breach of diplomatic etiquette. When the German Government explained that *alsbald* meant also *in due course* and that this was the meaning intended, the result was almost an anticlimax.

Again there are some words which have forms alike or nearly alike in two languages, but different meanings and associations. Such a word is *grotesque*, which in English means 'ludicrous' or 'absurd,' but which in French has the far more derogatory meaning of 'clownish.' At an international conference on war reparations held at The Hague in 1929, Lord Snowden, then Mr Philip Snowden, the head of the British delegation, referred to a proposal of Monsieur Cheron, a French delegate, as "grotesque and ridiculous." There was consternation in French circles at this unwitting affront, which nearly caused what is euphemistically called an 'incident'; and in the French press the opponents of Cheron caricatured him as a clown. Explanations followed and apologies were proffered; but for a time the incident looked as if it might have ugly consequences.

There is a great deal to be said for an international language which would have made impossible such misunderstandings as these. But as it is, in the present babel, there are some vocabularies common to all languages—chiefly technical and scientific terms, which are understood alike in different countries. There are also an increasing number of words, common to a great part of the world, about whose referents there is general agreement—words like coffee, tea, chocolate, cigar, cigarette, alcohol, paper, which stand for things in common use. But apart from these and outside the spheres of science and technology, there is no guarantee that the use of a common vocabulary implies a common interpretation of the terms comprised in it; and this is nowhere more evident than in politics. Democracy, Fascism, Communism, Socialism and Imperialism are terms common to all political vocabularies, but the recent Peace Conference in Paris showed wide divergences in their interpretation. The Hon. Harold Nicolson, in a commentary on the conference broadcast in October, 1946, pertinently referred to such divergences thus:

"Among the many lessons which I have learnt from the Paris Conference, perhaps the most significant is that the west and the east do not speak the same language. . . . I mean that even those words which are common to English and Russian mean totally different things. Take, for instance, the word 'democratic'. . . . If you translate the English word into the Russian word *demokratichesky*, you are, linguistically speaking, translating with perfect accuracy, but you are not, in fact, conveying meaning any more than you would be conveying meaning by using the word 'large' to describe a large inkpot or a

large railway station. To us who have been trained in the Liberal tradition of some three hundred years, democracy implies the fundamentals of personal liberty—that the people, if they so desire, can change their government; that no individual can be imprisoned, executed or exiled without public trial; that every citizen should have the right to express his own thoughts freely and to have free access to the thoughts of others, and so on. . . . But to the Russians, all these things which seem to us so precious and so essential are no more than outmoded bourgeois inhibitions. To them 'democracy' implies the classless state in which the means of production are owned in common. . . . It seems in no way inconsistent to them that supreme power should be vested in the hands . . . of a tiny oligarchy. . . Let me take another word. . . . Over and over again I have heard the Russian delegate denounce Great Britain for being 'imperialistic.' Now, if that word has any meaning at all, it means an attempt on the part of a Great Power to impose its rule by force upon peoples who do not wish to accept that rule. Well, at the moment, we are clearing out of Egypt, and according to India her full independence; we are keeping to the pledge we gave in the Atlantic Charter, that we should not seek any territorial aggrandisement. We shall come out of the war owning far less territory than we possessed when we entered it. And what about Russia? Apart from the hold she has obtained over Poland, Czechoslovakia, Hungary, Yugoslavia, Rumania, Bulgaria, Albania and eastern Germany, she has either annexed or intends to annex vast areas upon her western frontier."

Political terms are notoriously unstable and their referents change as we and our environment change. When the word 'democracy' first appeared in Ancient Greece, the kind of rule it stood for is described by Aristotle as a degenerate and perverted form of government—the unbridled rule of the mob. It entered modern European vocabulary through France, where it appeared in the early days of the French Revolution as the opposite of Aristocracy, an object of veneration to the Greeks, but to the French revolutionaries a target for venom and execration. To early nineteenth-century England, democracy was associated with the worst excesses of the Reign of Terror in France, or at best with the vague aspirations of the French revolutionary movement. A democrat then was one who made a direct appeal to the mass of the poor. As late as 1866 Gladstone, when supporting proposals to enfranchise the upper ranks of the working class, was at pains to discourage the notion that such an extension of the electorate was democratic, assuming that to his audience the word would call up pictures of mob rule. But from 1870 democracy begins to rise in public esteem until the days of the first Great War which was commended for its purpose "to make the world safe for democracy." As regards its present ' meaning,' this is what Mr Stuart Chase says in his book *The Tyranny of Words*:

"The concept 'Democracy' may have useful meaning in a given context with severely limited characteristics, but it has no fixed and absolute meaning. One can intelligently discuss political groups labelled 'democracies' conducted in a given setting, at a given place, at a given time—how citizens,

for instance, participated in the Athenian state or in the New England town meeting. But when one affirms categorically 'Democracy is thus and so, here, there, and everywhere he enters Clouduckooland.'

Very often to-day, 'democratic' is little more than a term of approval or abuse. A competitor in a recent competition in *The New Statesman* put it neatly thus:

In Cleon's time meant "Government by the mob,"
Now, in the changing course of use and wont,
Means, just according to your bent and job
The Government by those you like—or *don't*.

Words, in fact, tend to remain fixed, while the things they represent tend to change. Even a word like *ox*, whose meaning we might think stable and permanent, meant very different things to a farmer in 1800 and his great-grandfather a hundred years before. To the latter it meant an animal tall, long-legged, raw-boned and wall-sided, valued for its power of draught and built to "traverse miry lanes and foundrous highways." To the former it meant an animal with short legs and a solid, square body, valued for its capacity to produce rich meat for the table.

But such shifting values due to changes in ourselves and our living conditions exhibit only one possible cause for confusion. There are two other causes: ambiguity and vagueness. Let me attempt to classify some examples.

Some words have a specialised technical meaning and a loose popular meaning. In some cases, the common word has been borrowed for use in a technical sense: in others, the technical word has come into common use (or misuse) and acquired in the process of transfer a loss of precision and exactness. Examples of the former are *work*, *energy*, *force*, *metal* and *acid*, which have specialised meanings in Physics and Chemistry. Examples of the latter are *instinct*, *complex* (noun) and *allergic*, which are popularly used in senses far removed from their technical senses. *Value*, *wealth*, *labour*, and *capital* all have very closely defined meanings in economics, whereas their ordinary senses are much more vague. *Value*, in the economic sense, means *exchange value*, which when measured in terms of money is termed *price*; whereas in everyday language we often use *value* as a synonym for *utility*; but the price we pay for a thing is not always a measure of its utility to us. In ordinary speech *wealth* is contrasted with poverty; it is another name for riches; we call a man wealthy when he has a large income or

possesses an abundant supply of the good things of life. But economically wealth applies to everything that has the power to satisfy a want and at the same time is the result of effort, *i.e.*, cannot be obtained without giving something for it in the form of labour or of goods. In economics both the rich and the poor have wealth, the difference being that the rich have much and the poor but little. *Labour* in popular parlance is frequently connected with *labourer*, a man who works with his hands. In economics *labour* is not restricted to manual labour, but applies to all efforts made by any class in the community to secure the satisfaction of their wants. The strict meaning of the word *capital* is wealth devoted to some purpose with the intention of obtaining an income from it; in this sense a plumber's tools or a coster's barrow form part of his capital. On the other hand, the popular idea of capital is associated with people who are richer than they ought to be, with fat cigars or luxurious limousines.

Then there are words like *nature*, *law*, and *justice* which are used to stand for so many varied referents that extreme care must be exercised to make it quite clear, from the context or otherwise, which particular referent is intended, to avoid shifting the referent ourselves in the course of reasoning or argument and thereby making it inconclusive or inconsequent, and to prevent ourselves from being deluded by any unconscious or deliberate attempt on the part of others to score a debating point or to effect persuasion by word-juggling. If we have any doubt, we should consult a good dictionary, like the Oxford English Dictionary, which gives examples of the various uses, and these we should study with great care. For example, if we look up the word *nature*, we shall find the following senses distinguished:

- (i) The active supreme power in the universe. In this sense it is often personified and written with a capital letter and used as synonymous with God.
- (ii) The material things created by (i), *i.e.*, mountains, lakes, trees, flowers, clouds, rainbows, etc.
- (iii) The qualities or attributes or characteristics of anything, or of mankind.
- (iv) The unregenerate condition of man, *i.e.*, his state before the organisation of society; the qualities he shares with brute creation, or the qualities he would have if he had not learnt to regulate his passions and appetites and to submit to moral discipline.
- (v) The opposite of Art and artificial, *i.e.*, not fashioned by man.

Hence Wordsworth enjoins you to "let Nature be your teacher " (sense i or ii), Tennyson speaks of "Nature, red in tooth and claw" (sense iv), Whistler says "Nature is usually wrong" (sense v), the advocates of *Laissez-faire* said that trade should be left to take its

natural course (sense v).

But someone who feels strongly that there is something wrong and unsatisfactory about modern civilised life might be tempted to argue that such a life was unnatural (sense iv) and therefore contrary to the Creator's wishes and designs (sense i). Not perhaps in so many words; but one frequently finds references to the "golden age" enjoyed by primitive peoples, which probably spring from confusion of this kind; the cry "Back to nature!" is often used as synonymous with "Back to God." In Pope's *Essay on Man* we find:

"Nor think in nature's state they blindly trod;
The state of nature was the reign of God."

It is too often taken for granted, especially by advocates of war as an instrument of national policy or by those that believe that international peace is an impossible ideal, that human nature (in sense iv) is both unchangeable and depraved. "Fighting is a natural instinct of man," they will say; "fighting is the natural way of settling disputes. You cannot change human nature." A saner and more optimistic interpretation of the history of civilisation would lead us to believe that human nature, on the other hand, is indefinitely modifiable and that "the modification of existing tendencies is the essence of all intelligent activity." Incidentally, the word *fighting* can bear two interpretations: on the one hand, it may be used to describe man's instinctive effort to master the difficulties of a changing environment; on the other hand, its sense is often narrowed down to that of enforcing his will upon his fellow-men by recourse to weapons. In the statement just quoted these senses are confused and the argument is worthless.

As for *law*, there is common law, canon law, statute law, international law; there are moral laws, natural laws, economic laws, laws of evidence. Think for a moment: do all these laws have equal force? Are offences against them at all comparable? Economic laws are merely convenient generalisations, statements of general tendencies, often hedged about with reservations; yet the fact that they are termed laws may suggest that there is some legal or moral sanction about them that makes them inviolable, and that any breach of them will be visited by severe penalties.

There are in fact three different senses in which law can be used:

1. An arbitrary regulation made by human consent in particular circumstances for a particular purpose, capable of being promulgated, enforced, suspended or rescinded without interference with the general scheme of the universe. According to such laws, certain events follow on certain others, but the second event is not a necessary consequence of the first—the connection between the two is merely arbitrary. The validity of such laws depends upon their endorsement by public opinion and upon their not running counter to the law (sense ii) of nature (sense i).
2. A generalised statement of observed facts inherent in the nature of the universe. According to such laws, certain events follow on certain others, but the second event is a necessary consequence of the first, and the connection between the two is one of cause and effect. Their validity depends on observed facts, not on human consent or opinion.
3. A handy expression to sum up a general tendency in cases where a given effect usually, but not necessarily, follows a given cause.

Justice is also used in widely different senses. It may mean the justice administered by judges in the law courts. It may be an abstract conception, embodying a set of moral principles which in our opinion ought to regulate human relations. When people demand justice they may mean that they have been denied something they are legally entitled to, or they may only be asking for the removal of some inequality which they have found to be a hardship and which to them is a cause of grievance. Similarly with *rights*: when people use the term they may mean rights enforceable at law or they may merely be referring to privileges they think they ought to have. There are moral rights and legal rights. We hear a great deal of the 'right to work' and the 'right to live.' And what does the latter term mean? The right to exist, or the right to a livelihood, or a right to be maintained at the expense of the community?

The difficulty with many words is that they have a *relative* rather than an *absolute*, or a *subjective* rather than an *objective* significance; *i.e.*, their exact meaning is dependent upon circumstances, or upon the person who uses them, or on the context in which they are used. The word *constitution* and its adjective *constitutional*, which have a definite *objective* meaning, are often used in argument *subjectively*, *i.e.*, the person using them gives them a special significance favourable to his contention. The constitution, according to one of the most recent authorities, Professor Laski, is "that portion of the rules (of a state) which settles (a) how such rules are to be made, (b) the manner in which they are to be changed, (c) who are to make them." Constitution, therefore, expresses something which has, or has had, a real existence. But political speakers frequently use it to signify something, not real, but *ideal*; not the existing rules, but the rules which, in their judgment, *ought* to exist. Thus "according to the constitution" is, as

used by them, merely a vague term of approbation, and a means of persuading their hearers to accept a proposal on the ground that it is in conformance with established institutions. *Constitutional and unconstitutional*, similarly, often mean merely agreeing or disagreeing with some imaginary standard of propriety set up for himself by the person who uses them.

Liberty, freedom, and equality are dangerously loose terms to use without qualification. There is civil liberty, religious liberty, personal liberty; freedom of conscience, freedom of worship, the "freedom of the seas "; in fact, whenever you use these terms, it is as well to ask yourself, "Liberty to do what? Freedom from what? " The meaning of liberty, too, changes from age to age. It is often forgotten that Magna Carta, which is often referred to as the charter of English liberty, was wrested from King John by the barons and the Church, who were anxious not to see their ancient liberty (*i.e.*, freedom from the interference of the King and his servants) impaired. There is an entertaining story of the Frenchman, who, on his first visit to the U.S.A. while Prohibition was in force, had the statue of Liberty in New York harbour pointed out to him by a proud American. " Yes," he replied, " we, too, erect memorials to our illustrious dead! " Liberty to that Frenchman, at that moment, meant liberty to drink what he liked!

Equality was the second of the vague aspirations of the Revolutionary movement of 1789. But what did it mean? Equality of status, equality before the law, equality of income, equality of opportunity...? *Progress, prosperity, success, growth, improvement, luxury, poverty, necessity* are also relative terms too frequently used in an absolute sense. Poverty is often used absolutely in the sense of destitution; whereas we may speak, and speak rightly, of a poor duke or a poor bishop—poor being properly applied to anyone who cannot out of his earnings or property maintain himself in the average style of comfort that obtains throughout the class of society to which he belongs. Are we justified in applying the term ' luxuries ' to a millionaire's yachts and shooting-boxes, deer forests and armies of servants, and at the same time refer to the factory worker's wireless set and weekly visit to the cinema as *necessities*? What is a ' successful ' man? Does it mean that he is wealthy, or famous, or prominent in his profession or merely that he has accomplished an aim or reached a goal?

There are other adjectives like *successful* commonly used as if they meant something definite in themselves, such as *reasonable, suggestive, expressive, subversive, destructive, questionable, significant, characteristic, creative, productive, desirable, judicious, dangerous,*

beneficial, *unfit*, and that recent creation *tendentious*. All these are favourite words in the vocabulary of those who are too lazy or too busy to be explicit—politicians, journalists, critics, reviewers especially. A suggestive book—what does it suggest? An expressive gesture—what does it express? Subversive propaganda—subversive of what?

Desirable result—desirable to whom? To anyone other than the person using the expression? Perhaps the reader is supposed to answer these questions according to his individual taste! But it is more likely that the effect on him is merely to add a few more blurred and hazy notions to a mind already confused.

During discussions on the pre-war Act for the raising of the school-leaving age, the President of the Board of Education explained that exemption would be granted only to those children taking up *beneficial* employment. "Beneficial to whom?" it was pertinently asked; to the children, to their parents, to employers or to the community generally? When we talk of the sterilisation of the *unfit*, whom do we mean? persons unfit for what? To leave the term vague and unqualified is to invite long, vain, and aimless discussions.

The course of almost any discussion or debate will reveal wide differences of opinion on the interpretation of words, the meaning and application of which might at first sight appear to be unequivocal. I was present lately at a debate on a familiar subject—"The spread of education is the spread of discontent." It was obvious that the speakers were not agreed on what constituted *education*; some interpreted it in the narrow sense of school and university training, others in the wider sense, which included reading, travel, social intercourse, etc. Nor were they agreed on the meaning of *discontent*; to some it meant grumbling and general dissatisfaction with one's lot; to others it meant what they termed *divine* discontent, the laudable ambition to remove abuses in our social life, to make the world better by our presence in it, not to rest content with present achievement but always to aim higher, in fact, a form of idealism.

Is it any wonder, therefore, that a great many questions are submitted to the B.B.C. Brains Trust which give rise at once to the familiar dictum, "It all depends what is meant by . . ."? For example, before the question "Has civilisation added to the happiness of mankind?" can be answered it is necessary for the referents of *civilisation*, *happiness* and *mankind* to be clearly stated. As soon as you begin to ask people what exactly civilisation means to them, you will get the most varied replies. One will say it means things like street lighting, main drainage, trolley buses and public libraries; to another it means a baby car, a labour-saving kitchen, a bathroom and indoor sanitation; to another, table-

napkins, finger-bowls, dressing for dinner and a large staff of domestic servants; and another will say it does not depend on any of these things but means tolerance, kindness, good manners and refinement generally. As for happiness, to some it means a clear conscience and the serenity which comes from complete adjustment to one's environment, to others worldly fame and material success, and to others mere pleasure and sensual gratification. And mankind—what specific people are referred to? Every human being? Or only those whom civilisation has reached? It does 'all depend,' doesn't it?

Thus a question in dispute often turns out to be not factual, but merely verbal: *i.e.*, when it has been cleared up, it is found that the disputants were in agreement as far as facts were concerned, and that their difference turned merely on the names to be given to the facts or on the 'meaning' to be attached to certain terms. Hence if a discussion is to be useful and meaningful and verbal confusion avoided, precise indication must be made at the outset of the sense in which such terms are going to be used: in other words, the terms must be *defined* for the purpose of the discussion in hand.

Abstract terms like *discontent*, *civilisation* and *happiness* are notably difficult to define. Heroism, Humanity, Justice, Liberty, Culture, Beauty—any attempts to define these terms in a short compass would be instantly challenged as inadequate or even misleading. Hardly anybody has sufficiently clear ideas in his own mind of the exact implications he himself attaches to any one of these terms, although careful thought and serious discussion may serve to clarify them. Such general abstract terms, as a rule, mean very little until they have been applied to particular concrete cases: *e.g.*, if you wanted to be quite sure in your own mind what you meant by *heroism*, your best procedure would be to consider very carefully a number of actions performed in various circumstances, and decide which of them you would label as *heroic*; you would need to distinguish these from the actions you would prefer to call *brave* or *reckless* or *daring*. Then, having made your own notion of heroism clearer, you would want to find out how it compared with the notions of others, and thus by the processes of induction and deduction you would arrive at a workable definition. The Socratic method can be recommended as a useful aid to building up a comprehensive definition of an abstract term. This was the method of question and answer adopted by Socrates to disconcert the Sophists. Here is an [example](#) of a Socratic dialogue in which the subject of inquiry is "Sport"

Socrates. What is Sport?

Sophists A game, of course—cricket, football, and the like.

Socrates But are all games sport? What of ping-pong?

Sophists Ping-pong is a drawing-room game.

Socrates Then it must be an open-air game?

Sophists Yes, besides, you don't get much physical exercise playing ping-pong.

Socrates Then physical exercise is a necessary element?

Sophists Yes.

Socrates Then if you take a football and kick it about in a field, it is sport?

Sophists No: I said sport was a game; you must play it against some one.

Socrates Then there is an idea of contest in it?

Sophists Yes.

Socrates But tell me, is climbing a sport?

Sophists Let me see: I suppose it is.

Socrates But where does the contest come in?

Sophists Well, perhaps it isn't.

Socrates O eminently wise one, is not the climber struggling with the forces of Nature?

Sophists Of course that had not struck me.

Socrates But the climber risks his neck; is risk, then, necessary to sport?

Sophists No: I don't think so.

Socrates But when you play cricket, you risk having your skull split by a fast ball?

Sophists Yes: but that is only incidental : it is part of the game.

Socrates What I suppose you would call a *sporting* risk!

And so on.

You can use this method in discussion or you can assume the double role of Socrates and his victim and examine yourself in this way, and the more methodical, strict and painstaking your self-examination is, the clearer and more distinct your conception will become.

In the search for a clear and distinct conception of the thing for which a term stands, comparison and classification are useful aids. For instance, if you sought a clear idea of what is meant by *dictionary*, you would find it useful to consider first what other things it resembles, and then in what respects it resembles and differs from each of these other things—things, say, like *encyclopaedia* and *concordance*. You would find that all three were

(1) books, (2) intended for reference, and (3) alphabetically arranged; but that, whereas an encyclopaedia contains information on every conceivable subject or on some group of subjects, and a concordance contains the words or subjects peculiar to some book or to an author's works, together with citations of passages, a dictionary contains the words, with their meanings, of a language or of some special department of knowledge.

You could now classify all three under the genus, or general term, "alphabetically arranged book of reference "; and, when you want to distinguish between them, you can give the special characteristics which mark out each species of the genus one from another. Such a method will be found useful in distinguishing clearly and sharply between so-called synonyms—to find first the common, and then the peculiar characteristics of the things or notions they represent.

It should be noted that such classification of things into genus and species is not comprehensive, exhaustive, or permanent like the classification used in the natural sciences, such as botany and zoology. It is made only to serve the purpose immediately in hand. What for one purpose is a species may be for another purpose the genus; for example, *dictionary* which was a species above, may be the genus of which *lexicon* is a species.

Now when you come to *frame* the definition of a term, *i.e.*, to formulate it and put it into clear language, you cannot do better than proceed on similar lines. A definition, to be satisfactory, must state the *essential* attributes of the thing to be defined; and this is best done by stating the genus to which the thing belongs and then giving the peculiar marks or qualities that distinguish it from other members of the same genus. The following definitions have been framed on these lines;

<i>Subject</i>	<i>Genus</i>	<i>Distinctive Character</i>
science is	systematised and formulated knowledge	relating to the laws and general characteristics of some class of facts
logic is	the science	of the general conditions of valid inference
economics is	the science	of the production, distribution, and conservation of wealth

It should be noted that all essential attributes must be included, and all non-essential

attributes excluded. Thus, in a text-book on psychology "inborn capacity to learn" may be taken as a satisfactory definition of *intelligence*, but the omission of *inborn* would fail to distinguish it from *acquired* capacity, and the omission of *to learn* would fail to distinguish it from other inborn capacities, such as *to grow*, etc. On the other hand, a child's inborn capacity to learn" would be an unsatisfactory definition because it would be too narrow—for the author did not mean intelligence to be confined to children.

A definition should not be tautologous, *i.e.*, it should not contain the word to be defined or a direct synonym or derivative of it; *e.g.*, it would not help much to define an irresponsible person as one lacking a sense of responsibility, or a judge as one who exercises judicial functions. As a rule also a definition should not be in negative terms: it should state what a word implies rather than what it does not imply. In some cases, however, it is impossible to avoid using negative expressions: *e.g.*, *celibacy* is an unmarried state. Lastly, a definition should not be expressed in obscure, ambiguous, or figurative language: it is obvious that a definition defeats its own end if it is more difficult to understand than the term it is supposed to elucidate.

But once again I must emphasise that ability to frame satisfactory definitions of terms is not a substitute for personal knowledge of the things for which those terms stand. It is admittedly unsatisfactory to try to define a term merely by citing examples of its application; but a parrot-like reproduction of a definition without ability to point to the *referents* is just another instance of the verbalism fallacy.

Lastly, we must in reasoning beware of being led astray by *Metaphors*. A metaphor is a compressed comparison. We shall discuss in Chapter Seven the legitimate and illegitimate uses of comparison. It may serve to illustrate, to elucidate, to add force or emphasis, to suggest profitable lines of investigation; but it must not be used as the sole or even the main basis for argument. So there is a proper sphere for metaphor; metaphors add to the attractiveness of style in writing, if they are apt and fresh, and they often will help us to make difficult points clear; but they are out of place where scientific accuracy is required. Always use them with care; avoid trite and hackneyed metaphors, whose edge has been dulled and whose point has been blunted by constant use—they are the most dangerous. The more familiar a metaphor, the more suspect it is, and the more likely you are to have forgotten that it is a metaphor. Are you conscious of the metaphor, when you talk of the *progress* of civilisation or the *progress* of mankind? If people were aware that the literal meaning of the word is *forward movement*, they would

not use it invariably in the sense of *improvement* or *betterment*. For a step forward is not necessarily a step in the *right* direction; a disease can progress—*i.e.*, it can become progressively *worse*; and the onward march of an army can lead it to disaster, not victory! A host of misconceptions arise from failure to realise the true implications of the word: *e.g.*, people have come to regard the new always as superior of the old; they imagine that life in the twentieth century *must* be better and healthier and happier than life in the Middle Ages, and that the latest is bound to be the best. There is no greater fallacy.

We shall have occasion later to note how difficult it is to separate our sense-impressions from the inferences and the emotions that accompany them. Our vocabulary is full of words that convey at the same time not only a sense-impression but also the inference made and the emotion felt by the person who experienced it. When we say, for example, that we have been listening to a *long-winded harangue*, we mean that we were restless or bored and that we did not like the speaker's subject or his manner of treating it. The same address might have been described by the speaker's admirers as a *stirring oration*; they were obviously as interested as we were bored, and for them the speech was all too short. Probably the cold fact was that Mr So-and-so *spoke for an hour!*

We do not, in fact, sufficiently distinguish in language between a clear expression and a cogent expression. As Burke says in his essay *On the Sublime and Beautiful*, the former appeals to the intellect, the latter to the passions; the one describes a thing as it is, the latter describes it as it is felt. Just as a moving tone of voice, an impassioned facial expression, or an agitated gesture affect us independently of the subject which excites them, so certain words and certain dispositions of words touch and move us more than those which express the subject-matter more clearly and distinctly. We yield to sympathy what we refuse to mere description. The truth is, all verbal description, however exact it may be, conveys a poor and insufficient idea of the thing described without those modes of speech that mark a strong and lively feeling in the speaker himself. Then as it were by an infection of the emotions, we catch the fire kindled in him.

Language would, of course, be poorer if it did not contain terms which carry with them emotional values, and which connote approval or disapproval, and words or combinations of words which, as it were, weave a magic spell about the reader with the rich associations latent in them. Such words are the very stuff of poetry and impassioned oratory. But where *facts* are in dispute, there is no room for them; they

cloud and confuse the issue, they effectually beg the question, they disclose prejudice on the part of those that use them, and they often help to confirm the prejudice of others.

Such words and phrases are the stock-in-trade of those keen controversialists —politicians, pamphleteers, leader-writers — who, knowing the weaknesses of human nature, confidently appeal to the heart rather than to the head, use flattery or abuse instead of argument, and sacrifice truth to picturesqueness.

Thus 'a far-sighted prophet' to his supporters is in the eyes of his opponents 'a crazy visionary'; a 'bold manoeuvre' becomes 'an impudent plot,' a new idea is derided as 'a new-fangled notion,' a 'delicate hint' is turned into 'a subtle insinuation,' an 'ingenious plan' into 'a hare-brained scheme.'

People betray their prejudices by the terms they use. Temperance advocates refer to the sale of alcoholic drinks as 'the liquor traffic.' Those who object to the manufacture and sale of war munitions speak of it as the 'arms traffic.' Those who have not become reconciled to the necessity of unemployment insurance will speak of 'lavishing the dole on idlers.' A newcomer whose arrival is resented becomes an 'upstart'; a sub-committee whose proposals are unpopular becomes a 'caucus.' The effect of the use of these derogatory terms, of course, is to beg the question on the point at issue. (See Chapter Nine, Section 3.) They do not mean that there is anything intrinsically bad in the objects to which they are applied, but merely disapproval on the part of the persons that use them.

In the appendix to Sir G. C. Lewis's *Use and Abuse of Political Terms*, a list is given of correlative terms of approval and disapproval used in political controversy. Here are some:

Approval	Disapproval
party	faction
movement	agitation
popular	agitator

leader	
apostle	demagogue
missionary	mob-orator
efficient organisation	wire-pulling
wide discretion	arbitrary power
esprit de corps	class interest
secular education	godless education

On the eve of the General Election of November 1935, in a topical article in *Punch*, election candidates were advised to remember the following useful phrases

Your Side	The Other Lot
comprehensive programme of reform	unscrupulous electioneering manifesto
trenchant criticism	vulgar campaign of personal abuse
shrewd thrust	unmannerly interruption

It was interesting to note in the newspaper reports and comments on the disturbances in Spain in 1936 the different terms used to describe them and the parties concerned.

As the struggle progressed, the efforts of the papers of the "Right" to discredit the lawfully constituted Spanish Government became more and more noticeable. In a letter to the *New Statesman* of August 8th, 1936, Mr Julian S. Huxley classified the terms used in one newspaper—not one of the popular or sensational kind—in its issues first

between July 20th and July 23rd, and second between July 27th and July 30th; and then compiled a table of analysis showing how the descriptive terminology changed, and changed in a way that set the constituted authority in a worse, and its opponents in a better, light. Mr Huxley's classification of terms was as follows:

THE CONSTITUTED AUTHORITY		
<u>Less Favourable</u>	Neutral	More Favourable
Left Republican Madrid Government Communist Proletarian Revolutionary Anti-Fascist	Government Spanish Government	Loyal Spanish

THEIR OPPONENTS		
<u>Less Favourable</u>	Neutral	<u>More Favourable</u>
Revolt Rebellion Mutiny Enemy Subversive	Rising Insurrection Revolution	Opposition "Rebel" Anti-Government Provisional Government Right Monarchist Fascist Militarist

His analysis is as follows:

Date	Government			Opponents		
	More Favourable	Neutral	Less Favourable	More Favourable	Neutral	Less Favourable
July						
20 th → 23 rd	23	25	8	0	40	85
27 th → 30 th	6	51	25	38	13	39

One might have disagreed with Mr Huxley's classification in some respects, but the general conclusion drawn was difficult to confute.

Powerful Influence

Question-begging phrases with an emotional appeal have been known to exercise a powerful influence on public opinion in times of excitement. Miss Rose Macaulay, in *Potterism*, mentions some of the cries used in advertisement and news propaganda during the first Great War to stimulate recruiting and to stiffen the national resistance in the struggle with Germany: *carrying on, doing one's bit, seeing it through, fighting to a finish, gallant volunteers, the indomitable Britisher, innocent women and children*. These cries were repeated a few years later in the 'campaign' against railway strikers. "An appeal to strikers, published in the advertisement columns of two papers at the expense of 'a few patriotic citizens,' said 'Don't bring further hardship and suffering upon the innocent women and children. . . .' In another column was the Union advertisement and that was worse. There was a picture of a railwayman looking like a consumptive in the last stages, and embracing one of his horrible children, while his more horrible wife and mother supported the feeble heads of others, and under it was written, 'Is this man an anarchist? He wants a wage to keep his family,' and it was awful to think that he and his family would perhaps get the wage and be kept after all. The question about whether he was an anarchist was obviously unanswerable without further data, as there was nothing in the picture to show his political convictions; they might, from anything that appeared, have been Liberal, Tory, Labour, Socialist, Anarchist, or Coalition-Unionist. And anyhow, supposing that he had been an anarchist, he would still, presumably, have wanted a wage to keep his family. Anarchists are people who disapprove of authority, not of wages. The member of the Union who composed that picture must have had a muddled mind."

The misuse of the word *Anarchist* here is typical of the way in which a term having a well-defined meaning in a technical or semi-technical sense is often bandied about in a vague, loose way as a term of abuse. *Anarchy*, as Miss Macaulay explains, means *absence of government*—an almost ideal state in which the members are so well able to discipline themselves that they need no outside authority to coerce them. An *Anarchist* is one who holds this idealistic conception of future human society. But because some people who professed themselves anarchists, or were described as such by their opponents, have resorted to violence and even to assassination in attempts to attain their ends, the term has been loosely applied to any who struggle against the established order. There is a strong prejudice, in fact, against most words with the suffix -ism or -ist. We do not hear quite as much of *anarchist* and *anarchism* as we used to at the end of the last century; *bolshevist* and *bolshevism* have taken their places. *Bolshevism*, properly speaking, describes the political system of the Union of Russian Soviets—probably, as Miss Macaulay says, "the severest, most rigorous, and authoritative form of governmental oppression under which man has yet lived"—but, if we judged by the way it is applied by those who disagree with it, or those who use it as a conveniently explosive term of disapproval, it appears to mean just the reverse, *i.e.*, violent rebellion against law, order and authority. In fact, it often appears to mean nothing more than a desire for better conditions or higher wages, with, possibly, a belief in the strike as a legitimate means of securing them. *Communist* and *fascist*, also, are too often used to-day merely as synonyms of the *extreme left* and *right* among political parties, and communists and fascists are therefore assumed to possess the disagreeable qualities of all *extremists*—*i.e.*, people who will stop at nothing to attain their ends. *Capitalist* is another much abused explosive term. Perhaps it is hopeless to expect it to be confined to its dictionary meaning, *i.e.*, a person who has invested such wealth as he has in some productive undertaking instead of keeping it loose and ready to spend. Nowadays, with or without the epithet *bloated*, it apparently means someone who has more money to spend than he ought to have, and who is usually unscrupulous into the bargain.

I remember well at the General Election of 1906 that one party described the enlistment of Chinese native labour in the Rand as "Chinese *Slavery*." A more blatant example of begging the question could not be imagined; yet many electors accepted the phrase as a final judgment on a matter of considerable dispute.

Slavery, besides appealing strongly to the emotions, was a gross overstatement. Exaggerated and intemperate language accounts for many misunderstandings and

misjudgments, not only because it may arouse our worst passions and prejudices, but also because we often discount it, as it were, in advance. It is the old story of the boy who cried "Wolf! " When emphatic language is justified, we may refuse to attach any importance to it. Why? Because all of us, high and low, habitually indulge in overstatement. Is it the craving for excitement that makes us do it—that craving which the popular Press appears eager to satisfy? Is it that we can obtain no 'kick' out of the bald, literal truth?

Hence, in our popular newspapers, any out-of-the-ordinary event is a *sensation*, every accident a *tragedy*, every law case a *drama*. The Editor of one such newspaper, in a style sheet, issued to his subordinates as a guide to the make-up of their headlines, counsels the FREE use of words like MYSTERY, SECRET, TRAGEDY, DRAMA, COMEDY, SCANDAL. (Note the emphasis laid on FREE.) The Leader of the Opposition will describe a government bill as "the most monstrous hash of crude and undigested proposals which he remembers in a long parliamentary experience." A member of parliament will describe a new Pensions Bill as "the most brutal insult ever flung in the face of the poor." And in our own informal, everyday language extravagance is the rule rather than the exception: "awfully good," "terrifically handsome," "frightfully nice".

You may say, and I agree, that hyperbole is a recognised figure of speech; that no one takes these estimates seriously; that it is all a form or a flourish or part of an amusing game. But it is a dangerous game. When we are accustomed to use the epithet *appalling* for a thing mildly unpleasant, is it surprising that when no other word can be found to describe conditions which really ought to make us *turn pale*—such as starvation, slums, or the "toll of the road"—we find it difficult to bring home to ourselves or to others the true state of affairs?

And if, as you might say, it is a game in which both sides have to make due allowances, and 'knock off so much per cent,' isn't it like keeping one's watch always going fast? Isn't it easy to forget just how much allowance to make?

In any case, few people would deny that nowadays anything stated with complete calmness and fastidious precision . . . had almost the effect of satiric epigram." Absolutely literal statement is regarded as irony. Miss Rose Macaulay in an amusing essay tells the experiences of a candidate who spoke the truth to an audience of electors. The audience thought he was uproariously funny; the chairman angrily pulled

him down and hinted that he was drunk!

Is it an anti-climax to suggest that we might have more respect for the English language? This may be regarded as the cry of a pedant in the wilderness. It may be too late to regain the true senses of *famous*, *momentous*, *stupendous*, *colossal*; it may be too late to regain for *tragedy* the meaning of a "conflict of wills on the highest plane of human endeavour," or for *crusade* the meaning of "a movement inspired by high religious or ethical faith," but I cannot end this chapter without a plea for their recovery, and a general protest against the putting of noble words to ignoble uses.

Questions

About '[Thought And Language](#)'

1. Distinguish between the popular and the strictly technical uses of the following terms: metal, acid, work, energy, force.

2. Identify the use of *law* in

the law of contract

martial law

the laws of cricket

the law of gravity

Gresham's law

the law of self-preservation

the law of averages

the law of supply and demand

Grimm's law

the laws of nature

the laws of harmony

the laws of tragedy

3. Distinguish carefully between
common law and statute law
justice and equity
neutrality and impartiality

a delegate and a representative
talent and genius
law and morality
reason and intuition
a politician and a statesman
intrinsic and sentimental value
a qualifying and a competitive examination
direct and circumstantial evidence

4. In the extract from the Hon. Harold Nicolson's [broadcast talk](#) he refers to the *liberal tradition*. What does *liberal* mean here and in the following:

a liberal education,
a liberal donation,
the liberal arts,
a liberal interpretation?

5. What general, and what special, peculiar characteristics would you assign to the following:

dictionary, encyclopaedia, glossary, vocabulary, index, concordance?

6. What is common to the meanings of the following, and how would you distinguish them?

- (a) extravagant, liberal, lavish, prodigal, improvident
- (b) exceptional, eccentric, outlandish, abnormal
- (c) refugee, outcast, exile, fugitive
- (d) comrade, collaborator, accomplice, confederate
- (e) banish, outlaw, ostracise, evict, deport, excommunicate
- (f) originate, found, discover, invent
- (g) astute, cunning, crafty, subtle, shrewd
- (h) indifferent, nonchalant, phlegmatic, insensible
- (i) impersonate, mimic, imitate, caricature, parody
- (j) clever, precocious, ingenious, versatile
- (k) reparation, retaliation, repayment, requital, revenge
- (l) orthodox, customary, conventional
- (m) taciturn, reticent, laconic
- (n) revoke, recant, abjure, renounce

(o) obedient, obsequious, servile, submissive, obliging

7. "There is something unreal about this contrast drawn between industries under state control and those run by private enterprise. Have privately-run industries the monopoly of enterprise? Wasn't General Alexander a civil servant? Was he lacking in enterprise?"

Criticise this argument.

8. Illustrate the possible ambiguity of:
society, industry, character, brains, nerve.

9. Estimate the adequacy of the following definitions:

- (a) Life is the sum total of vital functions.
- (b) Liberty is the residue of human activity not forbidden by law or convention.
- (c) Sociology is the systematised study of human relations in organised groups.
- (d) Network is a reticulated fabric, decussated at regular intervals with interstices at the intersections. ([Johnson's](#) Dictionary)
- (e) An instinct is an inherited tendency.
- (f) Instinct is the concatenation of precise doings dependent upon the activation of hereditarily pre-established neuromuscular linkages. ([Johnson's](#) Dictionary)
- (g) Wit is intellectual legerdemain.
- (h) Humour is thinking in jest and feeling in earnest.
- (1) Oats is a grain which in England is generally given to horses, but in Scotland supports the people.
- (j) A snob is a social prig, and a prig is an intellectual snob.
- (k) An ambassador is a man sent to lie abroad for his country.

10. It has been asserted that "planning means scientific government." What possible meanings could *scientific* bear here?

11. The following passage is an extract from a letter written to a London newspaper in June 1943:

"At a time when the press, the wireless and the films have been welded into a vast Government propaganda machine, when the slick young men formerly so earnest in advising us to 'eat more bananas ' have been retained to filter the turbid stream of Whitehall truth until it becomes palatable for mass consumption, when every twopenny-ha'penny town ball has become a

temple of bureaucracy whose priests occasionally vary the monotony of their whole-time job of plastering the public with forms and generally impeding business by an excursion into some childish 'campaign,' with all its attendant mumbo-jumbo beloved of Pooh-Bahs throughout the ages—at such a time it is perhaps too much to hope that even a small percentage of adults should shut their ears to the babel of the planners and calmly THINK. It is certain, however, that if British common sense does not destroy the planners, the planners will destroy us.

I write as one of the many millions (normally inarticulate but not such fools as their betters are apt to assume) who are more planned against than planning, ordinary self-respecting men and women who are not (and do not desire to be) subsidised, who have no assured 'market' (home or foreign) for their product, who are not members of 'closed' professions or 'protected' industries, and whose simple economy is based on the old-fashioned notion that to live one must work.

Such people know (and do not resent it) that when through age or infirmity they are no longer able to do their jobs they will have to make way for those who can, and in saner times this urged them to make provision in the days of their vigour.

Inability to make this provision while being skinned alive by the planners leaves them with the bleak prospect—should they fall by the way—of being gathered up with whoops of joy by the planners who have destroyed them and incarcerated in a planned institution to speculate upon the glories of a planned funeral."

Separate the rhetorical chaff from this letter and express the grain or substance of it in straightforward, plain (*i.e.*, not coloured) language.

12. The following is part of a report of legal proceedings: (A passage from a book written by the witness is being read.)

"Who should descend upon the ancient peace of N— but X.Y.Z. That urban-minded and garrulous petrel . . . swooped upon N— to the aid of the local election candidate, who was pursuing a laborious and somewhat stilted way through the narrow seas of rural politics. He was dressed in a tight-fitting, hip-slinky overcoat of the sort that dance-band leaders wear, and addressed the crowd with an air of quite remarkable superiority. For the better part of an hour he sprayed us with an oleaginous stream of rhetorical oratory full of sly half-truths and old womanish digs at . . . the British Empire and the British idea of freedom with which he did not apparently agree. He is not an imposing figure. . . . He does not look as though he had ever shouldered a pack or done a day's manual labour."

COUNSEL: This was intended to be disparaging?

WITNESS: Not at all. It was purely descriptive.

Comment.

13. Illustrate at least ten different uses of the word *power*

14. Distinguish carefully between the popular and strictly legal uses of the following terms: libel, slander, scandal. (If necessary, consult Fowler's Dictionary of Modern English Usage.)

15. Using the following passage as illustration or model (a) write a short explanatory note on the Socratic method, and (b) construct a Socratic dialogue on *heroism*, and extract a clear and precise definition.

Socrates. Tell me, then; what is holiness, and what is unholy

EUTHYPHRON Well, then, I say that holiness means prosecuting the one who has committed murder or sacrilege, or any other such thing; and I say that unholiness means not prosecuting

Socrates. Try to give a more definite answer....What I asked you was, What is holiness? and you have not explained it to my satisfaction. You only tell me that what you are doing in prosecuting your father for murder, is a holy act.

EUTHYPHRON Well, that is true, Socrates.

Socrates. Very likely. But many other actions are holy, are they not, Euthyphron?

EUTHYPHRON Certainly.

Socrates. Remember, then, I did not ask you to tell me one or two of many holy actions that there are; I want to know what is that form of holiness which makes all holy actions holy. You say that there is one form which makes all holy actions holy, and one form which makes all unholy actions unholy. Do you not say so?

EUTHYPHRON I do.

Socrates. Well, then, explain to me what is this form, that I may know it, and to use as a standard whereby to judge your actions, and of other men, and be able to say that whatever action is holy, and whatever does not, is not holy.

EUTHYPHRON Well, then, what is pleasing to the gods is holy; and what is not pleasing to the gods is unholy.

Socrates. Beautiful, Euthyphron. Now you have given me the answer I wanted.

—PLATO, *Euthyphron* (trans. J. E. Taylor)

16. Give the *neutral* term, or term of *approval* corresponding to: in league with, antiquated system, meagre pittance, Hun mentality, servile minion, upstart, notorious, obsequious, clandestine, tirade, bloc, ganging up, rhodomontade, tortuous, caucus, accomplice, effusive, lucubrations, surreptitious, sentimental, satellite state, liquor traffic.

17. In what sense is *nature*, *natural*, or *unnatural* used in the following quotations:

(i) "The whole of nature . . . is a conjugation of the verb to eat, in the active and the passive."—(DEAN INGE.)

(ii) "One touch of nature makes the whole world kin." —(SHAKESPEARE, *Troilus and Cressida*, III, 111, 176.)

Distinguish between the sense intended by Shakespeare in the context, and the sense usually attributed to it when used as a stock phrase.

(iii) "Nature can do more than physicians."—(OLIVER CROMWELL.)

(iv) "Art and nature thus allied

Go to make a pretty bride."— (GILBERT, *Mikado*.)

(v) "Naturam expellas furca; tamen usque recurret."—(HORACE.)

(*i.e.*, pitch nature out with a fork, yet she will always return quickly.)

(vi) The man who betrays his country is an unnatural being.

(vii) "True wit is nature to advantage dress'd."—(POPE.)

(viii) "Yet do I fear thy nature

It is too full o' the milk of human kindness."—(SHAKESPEARE, *Macbeth*, I, v.)

(ix) "Nature and nature's laws lay hid in night:

God said, 'Let Newton be! ' and all was light."—(POPE.)

(x) "Nature might stand up

And say to all the world, 'This was a man.'"—(SHAKESPEARE, *Julius Caesar*, V, v.)

18. Criticise the arguments in:

(a) Religion is good for all:

hence Religion is a matter of national concern.

hence We ought to maintain a national church.

(b) A nation is ennobled by a love of art, music and drama.

hence The encouragement of art, music and drama is a matter of national interest.

hence National money ought to be expended on endowing picture galleries, opera houses and theatres.

(c) "Let us have free trade between buyer and seller, between employer and employed, and nature will do the rest."

(d) Man is naturally virtuous. If the restraint of our imperfect laws were removed, nature would prompt men to act rationally and to live at peace with one another. Therefore the more individual liberty allowed to man the better society will be.

(e) If true justice were the rule, we should all be much better off.

4. Prejudice

We think so, because other people *all* think so,
Or because—or because after all we *do* think so,
Or because we were told so, and think we *must* think so,
Or because we once thought so, or think we *still* think so,
Or because having thought so, we think we *will* think so.— (*Lines Dreamt* by Henry Sidgwick.)

THE scientific investigator is bent upon discovering nature's laws; his goal is the truth, and in his pursuit of it he is completely disinterested. Apart from the passion that stimulates him to find the truth and the eagerness with which he pursues his task, his personal feelings do not enter in. He does not allow his feelings to influence him in his judgments. He does not adopt or reject a particular view because it gives him pleasure or displeasure, because it saves or causes trouble, or because it flatters or wounds his pride or self-respect. He knows it is no use his being hurt, or annoyed, or resentful when he finds that an hypothesis, which he has carefully built up, will not square with some newly discovered facts. He knows it is no use his shutting his eyes to evidence that seems to conflict with his own views—he must examine it dispassionately on its merits; he knows that any attempt to overlook inconvenient or disagreeable facts will deceive only himself and no one else, and that it will only lead him away from his goal. He knows he has to face all the facts fearlessly and frankly, and to keep an open mind, if he wishes to find the truth, the whole truth, and nothing but the truth.

Indeed, the remarkable triumphs achieved in the sphere of pure science have been due to the unbiased, disinterested and unemotional way in which investigators have pursued their tasks. But outside this sphere, in our everyday life when determining our actions or opinions and condemning or defending our own or other's conduct, all of us are liable to

be led astray by our feelings. Even the scientific investigator, in his private unprofessional life, will often allow himself to be swayed by the very irrational impulses he has resolutely repressed in his study or laboratory.

It is to some of those feelings, which, whether we realise it or not, tend to influence our ways of looking at things, that I wish to draw your attention in this chapter on Prejudice.

For when we allow positive or negative weight to our personal feelings in forming judgments in matters where reason, and reason alone, can lead us to the truth, then we are *prejudiced*; *i.e.*, we have, in reality, prejudged the issue.

The feeling that exercises perhaps the most powerful influence upon our thinking is our love of ease and comfort and "a quiet life," and the consequent dislike of anything that threatens to disturb them. Hence the general prejudice against change or innovation.

We are creatures of habit. The oftener we act or think in a certain way, the more mechanical and the easier it becomes to go on acting and thinking in the same way, and the more difficult, and therefore the more distasteful, it becomes to deviate from our established routine.

Right from our earliest days our habits of thought and ways of looking at things are being moulded by circumstances almost beyond our control. In the family, the school, the district in which we live, the social class to which we belong, we are surrounded by customary modes of thought and behaviour, which we adopt as a rule without question; for most of us naturally dislike being thought different from those with whom we are in daily contact. And these close ties breed loyalties which we are naturally loath to disown. In later life, we are apt to think that the world in which we grew up was the best of all possible worlds, and to regard the customs and notions which helped to mould our own selves as the acme of wisdom and sound sense, never reached before or since.

We refer to our own times as a kind of golden age; we call them the *good old days* [Thus [begging the question](#)], compared with which the present is decadent and degenerate. Then at a later stage, fresh associations bring their influence to bear upon our views and outlook—the Church, the trade or profession, the clubs and societies to which we belong—all have their customs, conventions and fashions to which we conform almost as a matter of course; they bring fresh loyalties which may blind our reason and pervert our judgment. Loyalty to their country makes some people refuse to believe that their fellow countrymen can ever misbehave themselves in foreign

countries, that foreign justice can be anything but a farce, or that foreigners can be actuated by any feelings other than jealousy or suspicion. Some years ago a number of British engineers were arrested in Russia and accused of espionage and sabotage. The comments of several British newspapers were based upon the assumptions, first, that the charges were absurd, for no Briton could be guilty of espionage and no British engineer could be suspected of sabotage; second, that the accused could not expect a fair trial, for justice in a Russian court was, as every schoolboy knew, a mere travesty of justice, as we in Britain understood it. Imagine what an outcry there would have been if a Russian newspaper had commented in a similar way on the arrest and accusation of Russian engineers in Britain ! This chauvinist, " My-Country-Right-or-Wrong" attitude is just as indefensible as the attitude of the opposite minority who will believe good of every country but their own. Lastly, we are extremely susceptible to the current prejudices of our own age: an intelligent analysis of a popular newspaper will soon reveal them, for it appears to be the policy of newspaper proprietors and advertising agents to create, foster or pander to them, in the hope of increasing circulations or swelling sales.

Attempts to disturb these prejudices are bound to meet with strong resistance: so many of us dislike not only change, but also being forced to think at all. But it is only right to add that if the reformer and the innovator usually have to contend with this dead weight or inertia of prejudice against change, they are just as likely themselves to be prejudiced against existing notions, merely because they are old and well-established and generally accepted, and to be prejudiced in favour of new ideas, merely because they are new or happen to be *le dernier cri*. In fact, it is almost inevitable that every man should be blinded to some extent by one or the other of these prejudices. The important thing is that we should recognise the possibility, for then half the battle is won; to realise our limitations is half-way to overcoming them. And, while recognising the possibility of prejudice behind our own views, let us be chary of dismissing other people's views merely on the ground that *they* are prejudiced; there may well be rational grounds on which they may be accepted. When we ourselves feel perfectly convinced we are adopting a reasonable attitude and our efforts to reach agreement with those who differ from us are unavailing, it is tempting to attribute to prejudice their apparently unaccommodating attitude. In cases like this, the *real* source of disagreement may be found, as I have suggested before, in the tacit assumptions underlying both attitudes—our own and theirs; and it would be profitable to discover and examine these assumptions before giving up hope of reaching a mutually agreeable settlement.

The next feeling that we so often allow to interfere in our thinking is that of pride or *amour propre*. When we have once adopted an opinion, our pride makes us loath to admit that we are wrong. When objections are made to our views, we are more concerned with discovering how to combat them than how much truth or sound sense there may be in them; we are at pains rather to find fresh support for our own views, than to face frankly any new facts that appear to contradict them. We all know how easy it is to become annoyed at the suggestion that we have made a mistake; that our first feeling is that we would rather do anything than admit it, and our first thought is "How can I explain it away?" Especially is this the case when our authority as experts is doubted; we are up in arms at once, our *amour propre* is hurt, we become hot, and if we only knew it, we are already in a less favourable position to argue rationally.

Let me quote here a passage from *The Mind in the Making* by J.H. Robinson (in *The Thinkers Library*, Watts & Co.):

"If we are told that we are wrong we resent the imputation and harden our hearts. We are incredibly heedless in the formation of our beliefs, but find ourselves filled with a passion for them when anyone proposes to rob us of their companionship. It is obviously not the ideas themselves that are dear to us, but our self-esteem which is threatened. Few of us take the pains to study the origin of our cherished convictions; indeed, we have a natural repugnance to so doing. We like to continue to believe what we have been accustomed to accept as true, and the resentment aroused when doubt is cast upon any of our assumptions leads us to seek every manner of excuse for clinging to them. *The result is that most of our so-called reasoning consists in finding arguments for going on believing as we already do.*"

This is the rationalising process to which I referred in [Chapter One](#).

Moreover, many who would strongly repudiate the imputation of prejudice and perhaps pride themselves on their open mind, unconsciously fortify their prejudices by listening only to those who share them, and by reading only what echoes their own sentiments. "He who reads History, not to learn what it has to teach but simply to find in it what he already believes will learn very little. He will find only what he wishes to find." And so if we were to trust the statements of all those who have read the history of the last few decades with this object in view, then we should experience some difficulty in, shall we say, tracing the causes of war; for, according to them, all wars are due to international financiers, Jews, armament firms, imperialism, oil trusts, Jesuits, democracy, dictators, communists, individualists, foreigners, the English, the Press, education, boosting the birth rate, Catholicism, Freemasons, lawyers or drink. Such people shrink from the

special effort required to take account of negative evidence; they are blinded by prejudice; they are obsessed by another "King Charles's head "; or, as the man-in-the-street would say, they have bees in their bonnets.

An apt illustration of the way in which prejudice may originate, and the way it subsequently affects thinking, is contained in the following story, which I am permitted to quote from [*The Proper Study of Mankind*](#), through the kindness of the author: "Tomkins is a schoolboy, a champion of the interests of that downtrodden class. He has strong views on the subject. Schoolboys, he says, are in danger of losing their rights. Their principal oppressors are prefects, who punish them too frequently and too severely. If the prefects were more persuasive and less coercive they might not find anything to punish at all; for their aggressive manner is itself the cause of most of the insolence to which they object. They make a god of petty little rules and regulations, most of which serve no real purpose; the school would, in fact, be better disciplined if it had no rules at all. And if prefects were abolished, friction in the school would be abolished too. It is generally the wrong sort of person—the prying, toadying sort—who gets elected as a prefect; and if by the headmaster's oversight a decent fellow becomes one, he is soon spoiled by the power he has to use; for in time the exercise of authority spoils everyone.

Tomkins makes great play with these and similar arguments. He sees himself as the champion of the underdog, as a kind of scholastic Hampden, in fact; and he derives considerable satisfaction from the picture. He thinks that these arguments have caused him to take up his present position. But that is precisely where he is wrong.

The trouble with Tomkins dated back some two years. What really happened to him was this. About that time he developed rather an awkward habit of lying in bed too long in the morning; this caused him frequently to be late for school; he was reported to the prefects of that time and punished. This was probably no more than he deserved; he was getting rather slack; but to admit that, even to himself, was more than Tomkins was prepared to do. So his mind set to work, quite unconsciously, to justify his position. What does three minutes more or less matter anyway? he asked himself. It is absurd of the prefects to make such a fuss about a trifle. But that is like prefects; fussy people, always trying to stop a fellow from enjoying himself. Are they themselves so much better than anyone else? And Tomkins soon invented all these reasons for disapproving of prefects which we have set out above.

Now some of the reasons so eloquently expounded by Tomkins are quite good reasons in themselves. Prefects have no monopoly of wisdom; some of them do undoubtedly deteriorate if allowed too much power; and others of them may have as muddled an idea of their duty as Tomkins has of his. But the point is that these reasons, whether right or wrong, do not, in fact, provide the real explanation of Tomkins's attitude to prefects. He does not dislike prefects because of these reasons. He has constructed these reasons because he dislikes prefects.

If Tomkins were fully aware of this then he would be simply a dishonest humbug, and there would be no more to be said about him than that. But it is exceedingly likely that by now he will have entirely forgotten what it was originally that caused him to take up his present position. He is by now firmly in the grip of a set of ideas which he calls his 'principles,' and he would be honestly indignant if anyone were to suggest that they were really his prejudices."

The third feeling is that most commonly associated with prejudice—self-interest. It is uncommonly difficult not to allow our love or desire for power or wealth or possessions or personal advancement to interfere with our judgment. This is especially the case where matters of public policy, involving the welfare of the whole community, are concerned. The natural interest, or instinct, we have for self-preservation extends also to the preservation of the power and privilege belonging to our own social class or professional status. The suggestion of any form of social reconstruction will naturally cause the average person to ask, "How is it going to affect me? What sort of position am I going to occupy in the new order of things?" One is reminded of the story of the two Yorkshiremen (?), one of whom is explaining to the other his idea of Communism. He says, "If tha has two houses, tha gives one to't folk that has none." His friend nods gravely. And if tha has two cows, tha gives one to thy neighbour that has none." Again his friend's assent is forthcoming. "And if tha has two pigs—" "Nay, lad," protested the other, "tha knows I have two pigs." In Disraeli's novel, *Sybil*, there is a baronet who thought that the future of the order of baronets was the most important political problem of the day. We should be hypocrites if we pretended that, on listening to the details of a new Budget, our first thoughts were not "How will the Chancellor's proposals affect my pocket? How far am I going to gain or lose by them?" We should be more, or less, than human if we did not feel a glow of satisfaction in the passing of some Act of Parliament which meant an increase of salary, or accelerated promotion, or added dignity to ourselves; and if we did not feel disappointed if it affected our careers or our pockets

adversely. As long as these feelings of satisfaction or disappointment go no further, there is no question of prejudice. But if we argued that the Act was a good one, *i.e.*, that it was beneficial to the country as a whole, inasmuch as we benefited by it, and that others, who were not benefited immediately, were not justified in condemning it on that ground, because it would *ultimately* be to their advantage, then we might rightly be suspected of being prejudiced.

The Law takes cognisance of human susceptibility to prejudice from self-interest. In the Middle Ages, the Law did not recognise a gift unless there was some consideration given in return. To-day a person who has any share or interest in any contract or employment with a borough council is disqualified from sitting as a councillor. At one time the holding of an office of profit under the Crown disqualified a man from sitting in the House of Commons; and to-day if a Member of Parliament wishes to resign his seat he applies for the "stewardship of the Chiltern Hundreds"—a curious survival of the old custom. Nowadays, too, if a Member of Parliament financially interested, say, in a shipbuilding firm were to vote on a motion affecting the award of a contract to that firm, he would be liable to heavy penalties. The existence of prejudice (for other reasons, of course) is also recognised by the medical profession who consider it undesirable that a doctor should attend his own family in cases other than minor ailments.

Self-interest prompted a man charged with breaking a shop-window to plead that he was a public benefactor because he had provided work for an unemployed glazier! His plea is similar to the remark ascribed to the sole survivor of an earthquake when surveying the ruins. " Well, it's good for trade; the damage will have to be repaired!".

Special Pleading

Prejudice in this form of 'Special Pleading ' is evident in the man who varies his attitude towards the Law according as it suits his interests or convenience. At one time he will, when pressing his legal rights to the most unfair extreme, justify his hard dealing by urging that he is not contravening the law and is merely insisting on what is lawfully due to him. At another time, the same man will show no scruple about breaking the law, protesting, perhaps, that "the Law is a hass," or that he is not morally bound by it when it conflicts with the Law of Nature; he will urge, for instance, that wild animals are the natural property of anyone who can seize them; or that "finding is keeping"; or that every man has a natural right to bring any goods he pleases into the country, and that though the law has limited this right and guarded the limitation by penalties, yet if he

chooses to risk the penalty, he is doing nothing morally wrong.

The instances cited serve to show how prejudice causes people to accumulate arguments in favour of anything in which their own interests are favourably affected, and to concentrate on the, objections to anything which they do not like; *i.e.*, prejudice tends to determine the scope and direction of people's inquiries, and the stage at which they arrive at a definite conclusion.

Thus prejudice interferes at two vital stages in the thinking process — at stage 2, when we choose and examine data, and at stage 4, when we are engaged in working out and comparing the consequences of suggestions in preparation for final judgment—and at both stages it puts, as it were, blinkers on our eyes, or makes us look at things through spectacles coloured with our feelings, our likes or dislikes, hopes or fears.

Hence it is not surprising that we often betray our prejudice by using coloured words and phrases with a question-begging effect. When we beg the question, it usually means we refuse to consider a point because we have already made up our minds on it and, while professing to examine the data, allow our conclusion to leak through.

In fact, if it were not for prejudice we should not make as many logical errors as we do, nor would those made by others pass unnoticed. Prejudice tempts us to use sophistical arguments and causes us to be deluded by them when others put them forward. Let me give you an example. During the late war, when a Town Planning bill was being discussed in the House of Commons, a speaker used the following argument:

"We (*i.e.*, the British people) are fighting against Hitler and Totalitarianism. Hitler is the arch-planner of history and totalitarian states are planned states. What are we fighting for, if not to avoid planning? How then can we consistently and without hypocrisy advocate an extension of planning in our own country?"

Now this is tantamount to saying: "All totalitarian states are planned states: therefore, all planned states are totalitarian." It is not difficult for us to see that this argument is unsound and that the conclusion is not warranted. But we are in a critical frame of mind and we are examining the argument coolly and dispassionately: the speaker, on the other hand, as is obvious from the rest of his speech, had an intense dislike of planning, and allowed his feelings to overcome his better judgment. He is to be blamed, not for

disliking planning—he has a perfect right to do so, and he may have excellent reasons for his dislike—but for allowing this dislike to influence his judgment on a matter of fact.

He was, we can only presume, so keen upon discrediting planning by making it indistinguishable from a totalitarian regime (his dislike of which he knew his audience shared) that he allowed himself to be indifferent to the soundness of the argument on which he based his conclusion. But if the subject under discussion had been one on which he did not feel very strongly one way or the other, he would probably have never made such an error himself, and he would have been quick to detect it if he had heard another speaker use it.

Hence it is a useful practice to test our own and other people's arguments on subjects on which we feel strongly by reducing them to their essentials, and then translating them into similar arguments on some subject which does not excite any particular feelings on our part. If the argument is unsound, then the fallacy will become obvious.

For example, if we substituted *Arabs* for totalitarian states and *Moslems* for planned states, the argument would have run: " All Arabs are Moslems: therefore all Moslems are Arabs "—and the absurdity would be evident at once.

This is one way in which we can make sure that prejudice is not leading us astray—to acquire the ability to reduce an argument to its bare elements and to cultivate the habit of translating it into analogous terms, or better still, into symbols—neither of which are likely to arouse feeling. " All T are P : therefore all P are T" is manifestly absurd and would not deceive anyone.

Prejudice often shows itself in the use of far-fetched arguments. People under its influence tend to lose their sense of proportion and probability, and to be ready to go to almost any length or any extreme in order to provide themselves with evidence to back up their beliefs or contentions. They will seize upon some striking coincidence or develop a fanciful analogy or make wild speculations, blithely unconscious of the fact that they are doing themselves or their cause no good and merely making them ridiculous. Similarly, they are particularly prone to be unfair to their opponents and to attribute to them statements far more sweeping than they have actually made. Examples of these and other unconscious or deliberate tricks to secure persuasion at any price will be found in [Chapter Nine](#).

Prejudice is often created and fortified by ignorance. It may originate in a judgment

made on isolated instances or on limited experience. National prejudices arise this way: it is natural to be suspicious and distrustful of foreigners whose institutions and ways of thought are not familiar to us, and these feelings of distrust and suspicion give rise to prejudices which are among the main causes of international misunderstanding. Therefore the more the nations of the world learn to know and understand one another the less part will be played by prejudice as a cause of international friction. But in general, although increased knowledge gives less excuse for prejudice, it is not necessarily a cure for it, and it does not follow that the more we know and the better we are educated the less prejudiced we shall be.

Prejudice springs from the unconscious and is the result of feeling, and try as we will we cannot keep emotion out of our thinking. We can take such precautions as I have suggested; but they are hardly adequate against ingrained and inveterate habits of thought. Here I can only suggest one or two prophylactics: a readiness to listen patiently and tolerantly to other people's opinions; a determination in dispute to get to the root of a question, to stick to the point, to try to look at facts squarely and dispassionately and to judge them on their merits; to keep calm and cool, and to avoid personalities and rancour. All these counsels are easy enough to give but not so easy to carry out. But it is worth while trying to follow them in the hope that the effort will grow into a habit; and when we want help we shall profit by consulting trustworthy authorities and those whose views are expressed moderately, rather than those who have an axe to grind and who use rhetorical exaggeration, stamping emphasis, catch-phrases, slogans, cheap quips and other devices that are only calculated to arouse feeling and irrational tendencies.

All these steps will naturally follow if we are keen enough on getting at the truth and on living useful and purposeful lives—in fact, if we cultivate a passion that will override and direct our other feelings, a passion not only for the truth but also for the achievement of a high aim and purpose. Herein lies the true solvent for prejudice.

Questions

About '[Prejudice](#)'

1. Look up St John, Chap. i, v. 46, and find an early example of prejudice.
2. Suggest some circumstances in which (a) a juryman might seek excuse from serving, (b) a J.P. might withdraw from the bench, (c) a M.P. or Borough Councillor might

abstain from voting, on the grounds that he might be prejudiced.

3 . Explain and give an example of 'Special Pleading. '

4. Explain the sayings:

"A man may be confuted and yet not convinced."
"He that complies against his will
Is of his own opinion still."(BUTLER, *Hudibras*.)

5. Explain the connection between prejudice and begging the question.

6. Describe any advertisements you have seen which appeal to the prejudices of any particular class of society.

7. What is the implied inference when schoolmasters are accused of prejudice in advocating the raising of the school-leaving age?

8. "What we call 'cherished principles ' in ourselves, others would call 'rooted prejudices.'"

Explain. At what point can a principle descend to be a prejudice?

9. At a Games Club meeting at a boys' school, a proposal was put forward to lay a number of lawn-tennis courts to enable boys who had no aptitude or taste for cricket to play tennis. The proposer had scarcely time to outline the proposal, when he was interrupted by Mr X, who, unable any longer to restrain his anger, exclaimed "What! cut up that beautiful field to give a lot of namby-pamby loafers a chance to pat a soft ball across a net!"

(a) Suggest some probable reasons (*not* excuses) for Mr X's outburst.

(b) If you had been the proposer, what would have been your reply?

5. Propaganda

IN the course of its [history](#), and more especially during the last fifty years, there has been a good deal of confused thinking about the word PROPAGANDA and what it stands for. If we are to dispel this confusion, we must try to remove the prejudice

surrounding the word. I propose therefore to try to look objectively at some of the manifestations of propaganda, and to draw up a neutral definition in terms of its purpose or function. Such a definition I suggest should be:

"Propaganda is a term applied to the matter disseminated, or the methods of dissemination used, by people whose deliberate aim is to persuade others to think or do something which they would not otherwise have done or thought."

Let us look at some of the implications of this definition. It should be noted first that propaganda is primarily concerned, not with the spreading of facts or information, but with persuasion. If facts are given, it is with the idea of inducing people to draw such conclusions from them as will make them act in the way the propagandist wants them to act. There are indeed few resources of the propagandist that could not be paralleled by those of the persuasive orator or platform-speaker. It may be taken for granted that neither orator nor propagandist, private or public, will ever attempt to present the pros and cons of any controversial question with judicial impartiality. At the best, we can scarcely expect propagandists to be much more than '[special pleaders](#)', selecting and presenting facts in such a way as to put their point of view in a favourable light. No serious harm can come from this as long as the way is left open for people to exercise their rational judgment, *i.e.* as long as criticism is not silenced and there are facilities for the other side to be heard—when the rational approach would be to weigh and consider the rival claims, and to refuse to be 'bounced' one way or the other.

At the same time, we may concede that there may be occasions, during periods of national emergency, when it may be in the general interest for the government of the day to induce people to act *before* they think, and when there is no time to explain the rational basis for such action. Even the most fervent believers in 'government by discussion' would admit that, when immediate action is imperative, methods other than rational persuasion, but preferably falling short of physical compulsion, are permissible—and this is an end that propaganda can be made to serve. But though they might reluctantly approve of the use of such propaganda as a temporary expedient, they would emphatically repudiate it as a permanent instrument of policy, for it would be far too dangerous a tool in the hands of the unscrupulous.

Propaganda does tend to trade upon the intellectual inertia which besets so many people, and to secure its ends by appealing to their emotions. There is nothing inherently wrong or reprehensible in appealing to people's emotions. Few would object

to the stimulation of feelings of kindness and tolerance; and to bring about the removal of some abuse or injustice, the rousing of indignation and compassion may be necessary. But appeals to people's baser feelings, such as fear, greed or selfish pride, which bring their brutish instincts into play, are another matter; these and attempts to play on *any* feelings in such a way as to make rational thinking impossible—*i.e.* to induce the sort of mob hysteria which makes people incapable of seeing reason—would find few defenders on moral grounds. Nevertheless it does appear that the propagandist acts on the assumption that the non-rational appeal has greater chances of success than inviting people to make rational judgments. Not that he may not *pretend* to invite people to exercise their reasoning powers: this is one of the weapons in the armoury of advertisers, and the propagandist makes use of this and of other devices familiar in advertising technique. Indeed, perhaps the close association in the public mind between the propagandist and the advertiser may account for some of the distrust with which propaganda is often viewed. As no one suspected advertisers of altruistic motives, people began to wonder whether the motives of propagandists were not similarly tainted. The early years of the twentieth century saw a tremendous development in advertising technique, more especially in America; and in the competitive scramble for business and in the struggle to break down sales-resistance, advertisers were tempted to use devices which took full advantage of human susceptibility to suggestion and to irrational and instinctive reactions to certain stimuli. They realised that in the majority of their fellow-men civilisation was only superficial and that they had only to be scratched to reveal the superstitious savage hiding beneath the thin veneer. Schools of advertising sprang up, and their pupils studied the workings of the human mind—that crude jumble of prejudices and instinctive and habitual responses, in which reason plays a minor part—with the object of exploiting its vulnerability. It was a pity, but perhaps inevitable, that propaganda for objects not inspired by self-interest or cupidity, in order to commend itself to people used to having their ears and eyes assaulted by advertising devices, should have taken its cue from some of these devices. And it was little wonder that when similar devices were used both by propagandists and advertisers, people failed to distinguish between their motives.

Most propaganda could be classed as 'spoon-feeding', but there is no particular point in decrying it on that account. One could hardly expect propaganda, if it is to be effective, to be pitched much above the average level of intelligence of the people whose behaviour it is designed to influence. Hence one must not be surprised to find a close resemblance between the methods of propaganda and those used in the early stages

of the training of children. Teachers and parents often have to inculcate good habits in children by inducing them to act before they are able to reason; and in making intellectual fare suitable to tender digestions, they have to select and to simplify facts in much the same way as the propagandist. But in a society organised so as to give the citizen the fullest opportunity to develop his individuality, there should be this radical difference between the propagandist and the educator: whereas the propagandist attempts to influence thought and behaviour so that the people influenced act and think without searching for the reasons why they do so, the educator should attempt to influence thought and behaviour in such a way that the people influenced will be stimulated to seek to understand why they think and act as they do. Whereas the propagandist hopes to keep people at the spoon-fed stage, the educator should prepare them for emerging from it to a stage when they have the courage and initiative to think for themselves.

It must be confessed that in this country education has not only failed to bring the great mass of the people nearer to this stage of comparative maturity, but has also contributed in a great degree to make them more susceptible to the influences of propaganda. As I said in Chapter One, our mental progress has not kept pace without material progress; and for this failure our educational system must bear a good part of the blame. True, it has had to contend with the deep-seated prejudice in these islands against schooling in general and more especially against the idea of continuing that painful process—painful in both its obsolete and its current senses—beyond the early years of adolescence. Now its task is even more formidable, for it has to contend with unfavourable conditions largely the consequences of its former neglect.

It is an ironical fact that scientific and technical advances of the last fifty years have not only put within the reach of almost everybody the cheap newspaper, the radio and the cinema, but also helped to create the conditions most favourable for the passive reception of propaganda through these mediums, and indeed to increase the public appetite for it. Mechanisation in workshops, factories and offices has made the daily task of wage-earners shorter no doubt, but more repetitive and monotonous. It has given them more leisure, but at the same time deprived them of the interest and joy the old-time craftsman used to extract from creative and inventive effort. A few indeed do turn in their spare time to some manual or mental *activity* as a natural outlet for the creative instinct. But the vast majority are too tired or too lazy at the end of their working day to make the effort, and are content to let themselves be *passively* entertained at the

expense of no more exertion than that necessary to turn on a knob, or to skim the pages of a thriller, or to walk to the nearest picture-house. The machine has banished colour, adventure and emotion from their daily work, turning it into a dull routine; and they satisfy their natural longings for these experiences by entering vicariously into the colourful, adventurous and emotional lives of fictitious characters glamorously or sensationally recorded in cheap print or in Hollywood studios. Many of them who are compelled to use tram, bus or train to take them to and from their daily work fill in the idle minutes of travel at the beginning and the end of each working day by reading the headlines and snippets of news in their morning or evening newspapers.

It is not surprising that such people soon make all this passive entertainment and substitute-living into a regular daily routine, and so unconsciously drug or (lope themselves into a condition in which they are unable to think for themselves on any subject outside their own immediate and restricted orbit. Such thinking demands effort—effort they are reluctant to make when the propagandist is ready and anxious to do it for them, using the same media to which they look for ways of filling in time, at moments when they are particularly receptive.

Propaganda, in fact, has its best chances of success when those to whom it is addressed are in a passively receptive and uncritical mood, or when their will or power to resist is weak. If the propagandist has reason to suspect that these conditions are not present, he may try to create them artificially, and so predispose his hearers to listen. Here again he has profited by the example of the persuasive orator. It is a well-known device for a speaker, before introducing a subject that he fears will be unpalatable to his audience, to put them in a good humour first by telling them something he knows they will like (*i.e.* by administering some 'jam') and thus to predispose them to swallow, with less resistance, the 'pill' or the 'powder' that follows. This technique will be familiar to those who have listened to commercially-sponsored radio programmes from the Continent, in which recommendations of some commercial product are sandwiched between turns by well-known variety artists or popular dance-bands.

But similar conditions of receptivity may also be brought about by methods comparable to those of the hypnotist when he sends his patients to sleep and makes them amenable to the belief or impulse he is about to insinuate. This process of insinuating a belief or impulse into a hypnotic patient is technically termed *suggestion*. and when the patient is ready to receive suggestion he is said to be *suggestible*.

The state of suggestibility is not as remote from ordinary waking life as might be thought. In his efforts to obtain from those he is trying to influence a quicker response than would be possible by a rational approach through facts and closely-reasoned argument, the propagandist tends, consciously or unconsciously, to take advantage of human proneness to it. For in certain circumstances we are all apt to reveal involuntarily something of that blind, unquestioning obedience to suggestion which the hypnotist induces in his patient.

There are indeed three ways in which people are apt to derive their opinions from non-rational sources: they tend to think what they wish to think; they allow their feelings to interfere with their interpretation of facts; and they tend to believe what they are told by way of suggestion. The propagandist is usually ready to exploit all three of these tendencies. I have already referred to the first two: let us look for a moment at the third.

The circumstances in which people are most readily suggestible are:

- (1) when they are told something by someone to whom they ascribe prestige;
- (2) when they are told something in a confident and assured tone and in an authoritative manner;
- (3) when a statement is repeated again and again;

and the more ignorant they are about something, the more suggestible they are likely to be in any one of these circumstances.

For evidence of the number of people who are susceptible to the claims of real or assumed prestige, we have only to look at the many advertisements which presumably tempt people to buy toilet preparations mainly on the strength of the prestige attaching to stage and cinema artists or athletic aces whose incomparable complexions and coiffures splash the pages of [picture papers](#).

The source of a statement or opinion is without doubt an important clue to its truth or tenability. But it is irrational to accept the statement or adopt the opinion solely because it is derived from a source to which we pay unquestioning deference.

Those arch-propagandists Hitler and Mussolini worked up sufficient prestige about themselves to make their followers accept them as the sole and infallible source of truth

and authority. People may pour scorn and ridicule on the idea of basing prestige upon such false and hollow pretensions; but how many of the same people still believe implicitly in the truth of anything they see in print, especially newspaper print? And if there are fewer of these than there used to be, how many of them are content to quote as sufficient authority for a statement or opinion something they heard on the wireless? The prestige of the newspaper may be on the wane, but that of the radio waxes strong.

The Press and the Radio are two of the most powerful instruments of propaganda. I shall have more to say about the Press of this country; but a word here about British Broadcasting would not be out of place. The B.B.C., although ultimately subject to parliamentary control, is a quasi-independent, public service monopoly. It has built up a world-wide reputation for presenting news 'accurately, fairly, soberly and impersonally'.

It is also tacitly committed to the task of trying to raise the standard of knowledge, judgment, and taste in the general public. For these reasons, *everything* broadcast has come to acquire for most people an amplified significance and a high measure of prestige; the mere fact of broadcasting an opinion enhances the authority and weight it may already possess; and when an opinion with little or no authority behind it is broadcast, it thereby acquires some. For the B.B.C. also aims at mirroring the life of the day and at 'presenting the people to the people', and thus, while its choice of material is not wholly indiscriminate, the material it presents is bound to vary greatly in quality, and the greater part of the listening public can hardly be expected to exercise reasoned discrimination between the good and the indifferent. The result is that the importance of the indifferent is apt to be magnified out of all proportion. The very fact of being chosen to broadcast endows a person with prestige; and because in sound broadcasting the speaker cannot be seen and is represented solely by a voice over the air, he enjoys a semi-anonymity which itself confers a mysteriously authoritative quality on anything he happens to say. It is ironical that the well-intentioned efforts of the B.B.C. to be impartial should ultimately have the possible effect of 'making the worse appear the better reason'; but when suggestibility to prestige is at work in the minds of listeners, this effect is not unlikely.

An authoritative manner on the part of a speaker will often confer, temporarily, sufficient prestige to induce in many people a readiness to accept what he says as true or credible, without questioning whether he is in fact entitled by his credentials to speak with authority on the topic in hand or the question at issue. If he is so qualified, then they may reasonably give him a respectful and attentive hearing. But without satisfying

themselves on this point, they betray their suggestibility if they allow his confident and assured tone by itself to bewitch them into believing him. Furthermore, even if his credentials will bear close investigation, it is *what he says*, not *how he says it*, that is important, and his hearers ought still to reserve judgment on his utterances until they have examined them on their merits.

When Lewis Carroll, in *The Hunting of the Snark*, put into the mouth of the Bellman the remark: "What I say three times is true", he was drawing attention to the common human failing which makes people believe in the truth of a statement provided it is repeated often enough; and the more confidently and dogmatically the statement is made, the more credibility it seems to acquire. Constant reiteration is a familiar advertising device which propagandists freely borrow. They are also fond of coining catch-phrases and slogans to serve as rallying cries for their supporters. These may have their legitimate uses in arousing interest and stimulating enthusiasm. But when constantly repeated, they may have a hypnotic effect: they tend to provoke strong emotional reactions in both supporters and opponents, and may induce conditions in which the voice of reason has little chance of being heard or heeded. They are dangerous too when repeated mechanically and parrot-wise as substitutes for argument, and encourage mental laziness by suggesting over-simplified solutions for complex problems.

From what has been said about the nature and working of propaganda, it should be clear first that, whether we like it or not, propaganda is exerting a powerful influence on the moulding of contemporary life. We cannot get away from it in one form or another; and it is in times like the present, when conditions are unstable and changing, that propagandists find most scope and encouragement.

Secondly, it should be clear that if all the instruments of propaganda in this country were allowed to fall exclusively into the hands of the government of the day, or of one political party, or of an irresponsible minority, it would be the first step towards a totalitarian tyranny and would lead to the gradual extinction of our traditional freedoms. As long as these freedoms are preserved, and until we return to more settled times, we must expect the propaganda 'war' to go on; and we must continue, if we wish to retain our self-respect as individual, thinking beings, with minds and souls of our own, to pick our way through the welter of conflicting opinions as best we can according to our lights, to guard against our susceptibility to suggestion and other natural weaknesses and

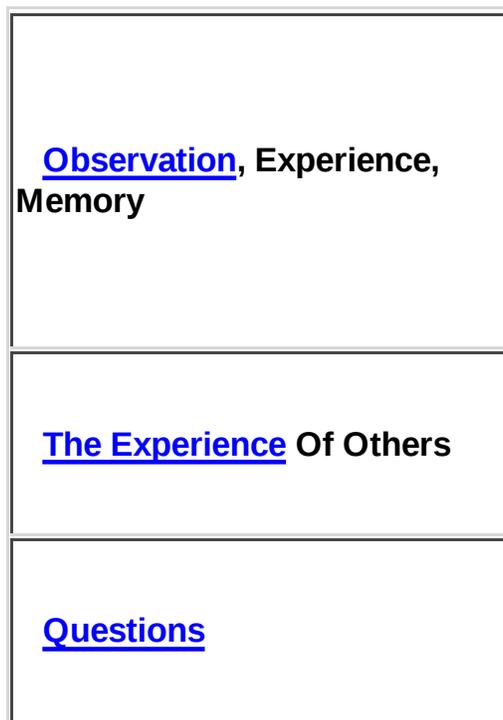
failings, and to make decisions boldly and as rationally as possible. By doing so, we deliberately choose the more difficult path: it would be easier, but supine, to be complacently acquiescent and let things run their course; it would be easier, but futile and cowardly, to withdraw from the conflict altogether and take up a position of detachment; and it would be easier, but evasive and timid, merely to be suspicious and vaguely apprehensive about the way things are going, and to shirk the responsibility of making decisions.

A parliamentary democratic government like our own cannot work properly unless the channels of communication for news and ideas are comparatively free and unrestricted. If electors are to take an active and intelligent interest in politics, they must have access to the material and relevant information on which to base their opinions and form their judgments; and they must have opportunities to express and to examine divergent views. Freedom of expression, freedom of discussion, freedom to criticise, and knowledge of the facts are essential if electors are to take their proper part in forming collective decisions on matters of public policy.

The organs of communication in Great Britain still enjoy comparative degrees of freedom: they are all—Press, Radio and Cinema—free from extreme forms of state control or censorship. The censoring of films is done by the British Board of Film Censors—a body controlled by the film industry itself, although a Local Authority may ban the public showing of a film in its own area. Broadcasting in this country is not free in the sense that it is in the U.S.A., *i.e.* left to private enterprise under licence from the government; nor is it merely a state mouthpiece, as it is in totalitarian countries. The charter under which the B.B.C. acts is a typically British example of compromise: it is a monopoly, but a public service monopoly it is ultimately responsible to a minister of state, who is in turn responsible to parliament, but it is administered by an independent board of governors, which has very wide powers of discretion. In practice, it is, in its presentation of news and opinion, as nearly impartial as it is humanly possible to be in this imperfect world; and if there are any unfortunate repercussions from its general policy, it is, as I have pointed out, the fallibility of listeners themselves that is perhaps mainly responsible. The Press is restrained by the laws of blasphemy, libel and sedition; but there is no official censorship and the government has no monopoly of news. The newspapers are privately owned; but modern economic conditions have resulted in concentrating most of the popular Press in the control of one or other of the great newspaper combines. There are dangers inherent in concentrating the Press in the

hands of an irresponsible few; but it is as easy to exaggerate these dangers, as it is to exaggerate the power exerted by the Press in shaping public opinion; and the corrective remedies are in the hands of the intelligent and careful reader. (A short article on ['Reading the Newspaper'](#) is at the end of this book.)

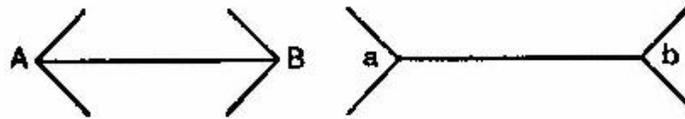
6. Thinking Material



6-1. Observation, Experience, Memory Propaganda

NATURALLY, in forming judgments, we depend first of all upon our *observation*, or more strictly speaking, upon the perceptions of our senses — hearing, touch, smell, taste, as well as sight; the accumulation and repetition of these sense perceptions and of our interpretation of them becomes what we may call *experience*; and the power that stores them up in our mind we term *memory*.

The old adage says "Seeing is Believing," but it is a notorious fact that our eyes can easily lead us astray. The reader is probably familiar with the optical illusion illustrated below:



AB and ab are identical in length, and yet AB *looks* shorter than ab. Again, if you plunge your right hand into a bowl of hot water and your left into a bowl of cold water, and then both into a bowl of tepid water, the right hand will feel cold and the left will feel hot.

How often, too, is it found that reliable eyewitnesses may give substantially different accounts of the same simple occurrence! Why is this?

It is possible to *see* things, without *noticing* or *being aware* of them. The eye registers an impression of everything that comes within the range of its view; but our awareness depends upon a number of circumstances; our attention may be weak, or intermittent, or distracted; we may be preoccupied; we may be in poor bodily health. Again, the direction of our attention is naturally determined by our interests at the time or by our point of view. We may see things, even notice them, and then dismiss them as being of no consequence or significance. "There are none so blind as those that won't see" — this old proverb tells us that we can even shut our eyes and refuse to see what runs counter to our desires.

Indispensable parts of a successful conjurer's stock-in-trade are the superfluous gestures and interminable patter which he hopes will distract the attention of his audience from the significant movements necessary to perform his tricks.

Professor Dover Wilson in one of his latest contributions to Shakespearean research — *What Happens in Hamlet* — suggests a very ingenious solution to a problem in that puzzling play which up to now has received no adequate explanation. How is it that Claudius remains unmoved while witnessing the dumb-show which clearly epitomises the play to follow, and yet is not strong enough to sit through the play itself? The answer, says Professor Wilson, is simple enough — *Claudius never saw the dumbshow*, for his attention had been distracted.

Mr G. K. Chesterton in *The Invisible Man*, one of his "Father Brown" stories, gives a good illustration of the common failure on the part of observers to see anything they are not

expecting to see. A manservant, a commissioner, a policeman and a street vendor are persuaded to watch the entrance to a block of flats and to notice whether any man, woman or child went in. When their reports are collected, they all swear with varying degrees of emphasis that *nobody* had entered or left. But, as Father Brown points out later, " when those four quite honest men said that no man had gone into the Mansions, they did not really mean that *no man* had gone into them. They meant no man whom they could suspect. A man did go into the house, and did come out of it, but they never *noticed* him." It was the postman!

The danger to which many of us are too often prone is that of interpreting what we see in the light of preconceived opinion. A shop assistant giving evidence regarding a hold-up asserted that her assailant threatened her with a revolver. It turned out to be a tobacco-pipe! About the time when there was a great revival in England of interest in the rearing of pedigree cattle, Maria Edgeworth wrote a book entitled *Irish Bulls*. It found a ready sale amongst farmers!

I was present some years ago at a lecture by a professor of psychology. He began by talking to us about Napoleon's campaigns and referred to the battles of Marengo, Hohenlinden, Austerlitz, Jena, etc. Suddenly, without warning, he produced and showed for a second a piece of white cardboard with a word on it printed in large capitals. He asked us to write down the word we had seen. The majority of us wrote BATTLE. As a matter of fact the word was BOTTLE! Authors frequently find difficulty in detecting printers' errors in the proofs of their own writings. Familiarity with the words they have originally written makes them read rapidly and carelessly; they see perhaps one or two letters in a word, or one or two words in a sentence correctly printed, but the rest of the word or sentence escapes their eye and is taken for granted. Errors they miss in this way are more easily detected by proof-readers who approach the text without any previous knowledge of its contents.

Another source of deception is the habit we have of confusing details of what we have seen with the inferences made from them. As soon as the mind receives sense impressions it proceeds to interpret them in the light of experience; the interpretation or inference follows so quickly that in actual practice it is bound up so closely with the sense impression that it is difficult to separate the two. A very great part of our so-called facts of observation consists of partial sense impressions completed by rapid interpretations or inferences supplied from imagination, memory, or previous

experience. We hear droning noises of various degrees of intensity and we say "bumble-bee," or "hornet," or "aeroplane" without troubling to look in order to discover whether our inference is correct or not. The stage and, to a much larger degree, the 'movies' and 'talkies' rely upon our ability thus to reconstruct the whole from the part.

The more ignorant and uneducated a person is, "the more difficult it is for him to discriminate between his inferences and the perceptions on which they were grounded. Many a marvellous tale, many a scandalous anecdote owes its origin to this incapacity. The narrator relates, not what he saw or heard, but the impressions which he derived from what he saw or heard, and of which perhaps the greater part consisted of inference, though the whole is related not as inference, but as matter of fact." The person who says, "I see there's someone ill at Number So-and-so," when the sole evidence is a doctor's car standing outside, sees no such thing: what he really sees is an appearance equally reconcilable with the inference he made and with other totally different inferences.

One of the most celebrated examples of a universal error produced by mistaking an inference for the direct evidence of the senses was the resistance made, on the ground of common sense, to the Copernican system. People protested that Copernicus's theory contravened the common-sense conclusion, *i.e.*, the conclusion derived from visual observation, that the earth was stationary and that the sun and stars moved round it. They 'saw' the sun rise and set and the stars revolve in circles round the pole. But we now know that they saw no such thing; what they did see was a number of natural phenomena which could be equally well explained by a totally different theory.

Again, when the sense impression has been received and interpreted, the mental process is still incomplete; it is nearly always accompanied by some emotional reaction, *i.e.*, our feelings — pleasure, disgust, shame, etc. — are stirred at the same time. These too often affect our inferences and distort our interpretation of what we have seen. For example, in witnessing a street accident in which a pedestrian and a motor car are involved, our observation and our inferences may be affected by pity for the victim, or by sympathy with the driver of the car.

The influence of emotion upon our inferences often takes the form of "making the wish father to the thought" *i.e.*, we imagine that we have seen evidences of what we wished to see. This probably accounts for the 'evidences' supporting the stories of that fabulous

Russian army which the majority of the British people believed had landed in Scotland in the August of and had been transported by rail to a southern port and thence conveyed by ship to France. In those anxious and gloomy early days of the first Great War, people were ready to believe any heartening report, and those 'eyewitnesses' who were addressed by strange-looking soldiers (*i.e.*, 'Cossacks ') in a barbaric tongue from railway-carriage windows or who saw foreign (*i.e.*, 'Russian') coins taken from station-platform automatic machines were too excited to draw rational inferences from what they did actually see or hear. If, indeed, they were not romancing altogether. Similar emotional excitement on the part of those who accepted these 'evidences' as based on fact was responsible for making them form mistaken estimates of what was probable or even possible in the circumstances. ([Compare later.](#))

Such are the main sources of error in observation; and it should be remembered that everything said about seeing applies equally to bearing and all the other senses.

Lastly, memory — the power that enables us to store up experience — is not always a safe guide. Most people tend to remember incidents attended with feelings of pleasure and warmth, and to repress the memory of those unpleasant incidents which sends a shiver down the spine. Distance often lends enchantment to the view. The passage of time frequently casts a halo about past events. Memory has a habit of exaggerating or minimising pleasant or unpleasant sensations. Memory, too, may play strange pranks.

Charles Lamb once quoted a passage he "remembered" from Dante, and Hazlitt, wishing to quote it also, asked Lamb for the exact reference. Lamb couldn't find it and said he must have written it himself! A friend of mine was once discussing the Irish Question with an old woman. She said that the Bible was on her side and quoted: "'The land belongeth to the tenant and not to the landlord,' saith the Lord." In this way faulty or fictitious memory can create 'authority.' That brilliant essay on the nature of memory — *1066 and All That* — contains many relevant examples of the unsatisfactory way in which the mind often works. "Sir Walter Raleigh was executed for being left over from the last reign" is a good specimen of the type of impossible half-belief which lingers at the back of the mind after imperfect digestion of highly condensed historical text-books.

Again, the tendency is for us to remember only those facts or instances which bear out a belief we already possess; we shrink from the special effort required to take account of negative evidence. How easy, for example, it was to forget some of the circumstances connected with British colonial expansion, when we held up our hands in

pious horror at Italy's treatment of Abyssinia! Superstitious people will be ready to quote examples of fatalities occurring, say, after thirteen have sat down to table; they have forgotten, or have not troubled to remark, how often similar fatalities have followed the sitting down of twelve or fourteen; or the cases where thirteen have sat down to table and no fatality at all has ensued.

This disposition to neglect negative evidence is one of the forms that the working of prejudice may take, and was noted in Chapter Four. In Bacon's *Novum Organum* there is a passage on the subject which I have taken the liberty of paraphrasing and modernising thus:

When any belief is popularly held, perhaps because it brings comfort or pleasure to its holders, every fresh circumstance is made to support and confirm it; and, although many strong evidences may seem to contradict it, people either shut their eyes to them or depreciate them or get rid of them in some other way, rather than sacrifice their cherished conviction. A man was once shown in a temple the votive tablets hung on the walls by people who had escaped the perils of shipwreck and was asked whether he was not then convinced that his scepticism regarding the power of the gods was ill-founded.

His answer – and a very good one, too – was:

"But where are the portraits of those who perished in spite of their vows?"

All superstitions are much the same – astrology, dreams, omens and the like – in which the deluded observers note and remember the prophecies which are fulfilled but neglect or forget those which come to nothing, even though the latter may be much more common. Apart from the fact that people, especially ignorant people, do not relish having their cherished convictions upset, they are peculiarly prone to the error of paying more attention and giving greater weight to affirmatives than to negatives; whereas in trying to establish the truth of any proposition, they should give far more consideration to those instances that appear to point to the [contrary](#)

If at the time of observation, or a short time subsequently, we are unable to distinguish what we have seen from the inferences made or the emotions aroused, how much more difficult it will be after some considerable interval has elapsed, during which perhaps we have lived through the experience again in our imagination, and made further inferences with further emotional reactions! Unless we have taken care to make a careful record of our observations when they were still fresh, our memory may, quite unconsciously, distort or elaborate them. A witness's testimony in the law-courts is often a jumble of facts, assumptions and feelings, and a cross-examining counsel is usually not slow to take advantage of his inability to keep them separate, and thus to discredit

him as a witness.

In general, the tendency is for people to see what they want to see and to remember what they want to remember. Prejudice thus plays a large part in determining people's power of recall, and the scope and direction of their observation.

6-2. The Experience Of Others

If we had to rely only on our own observation, experience and memory, we should never get very far in advancing our knowledge; we rely, too, upon the experience of others—parents, teachers, and those who have recorded their experience in books for our benefit. In our early years we adopt without question judgments ready made for us by our elders. The proverbs and proverbial sayings which we have heard quoted and applied so often what are many of them but judgments neatly or arrestingly expressed in picturesque language?

But civilisation and the growth of knowledge are only possible if these popular judgments are continually being tested and confirmed, modified or rejected in the light of experience. If we refused to modify them to suit new conditions or to tally with new evidence, or if we discarded or rejected them out of hand without due reason, we should be equally mistaken. But we are more likely to adhere to them too long after they have outworn their usefulness; students of Economic and Political History know that the theories of Mercantilism, *Laissez-faire* and Splendid Isolation, took, like Charles II, an unconscionable time in dying. Nowadays, when conditions—political, economic and social, national and international—change so quickly, it is more necessary than ever to take stock of our cherished convictions, and to remember that "a truth remains true as long as it is the best to be had; it becomes false as soon as it can be bettered."

At this point it is convenient to deal with the charge of *inconsistency* which is frequently brought, quite justifiably, against those who change their opinions, and to attempt to give a satisfactory definition of the term; and I cannot do better than give an abstract of Archbishop Whately's remarks on this topic. "Strictly speaking," he says, "inconsistency (such at least as a wise and good man is exempt from) is the maintaining *at the same time* two contradictory propositions; whether expressed in language, or implied in sentiments or conduct. As, *e.g.*, if the same person censures and abhors oppression, yet practises it towards others; or if he prescribes two medicines which neutralise each

other's effects, etc.

"But a man is often censured as inconsistent if he *changes* his plans or his opinions on any point. And certainly if he does this often, and lightly, that is good ground for withholding confidence from him. But it would be more precise to characterise him as fickle and unsteady, than as inconsistent; because this use of the term tends to confound one fault with another; viz., with holding two incompatible opinions *at once*.

"But, moreover, a man is often charged with inconsistency for approving some parts of a book, system, character, etc., and disapproving others; for being now an advocate for peace, and now, for war; in short, for accommodating his judgment or his conduct to the circumstances before him, as the mariner sets his sails to the wind. In this case there is not even any change of mind implied; yet for this a man is often taxed with inconsistency; though in many instances there would even be an inconsistency in the opposite procedure; e.g., in *not* shifting the sails when the wind changes.

"In the other case, indeed—when a man does change his mind—he implies some error, either first or last. But some errors every man is liable to, who is not infallible. He therefore who prides himself on his consistency, on the ground of resolving never to change his plans or opinions, does virtually (unless he means to proclaim himself either too dull to detect his mistakes, or too obstinate to own them) lay claim to infallibility. And if at the same time he ridicules (as is often done) the absurdity of a claim to infallibility, he is guilty of a gross inconsistency in the proper and primary sense of the word.

"But it is much easier to boast of consistency than to preserve it. For as, in the dark, adverse troops may take post near each other, without mutual recognition, and consequently without contest, but as soon as daylight comes, the weaker give place to the stronger; so, in a misty and darkened mind, the most incompatible opinions may exist together, without any perception of their discrepancy; till the understanding becomes sufficiently enlightened to enable the man to reject the less reasonable opinions, and retain the opposites.

"It may be added, that it is a very fair ground for disparaging anyone's judgment, if he maintains any doctrine or system, *avowedly* for the sake of consistency. That must always be a bad reason. If the system, etc., is *right*, you should pursue it *because* it is right, and not because you have pursued it hitherto; if it is wrong, your having once committed a fault is a poor reason to give for persisting in it."

On some controversial topics it is impossible in the nature of things for us to depend upon first-hand evidence for new facts. We must depend upon what we read in books or newspapers; we must put ourselves in the hands of the experts. Where the experts disagree, we can examine and weigh their evidence in much the same way as a judge

sums up in a court of law. But we must be careful, in estimating the value of the evidence, to remember that

(1) time alone does not constitute experience;

(2) the experience of the practical man is not necessarily superior to that of the theorist. The practical man often "cannot see the wood for the trees," and the theorist (*i.e.*, the looker-on) often "sees more of the game";

(3) that experience, skill or success in one department of knowledge does not necessarily warrant a person's speaking with authority on another. (This is an example of false analogy: see Chapter Seven, [section 3](#).)

(4) repetition and reiteration, however persistent, do not create authority.

As regards (2) and (3), often the most efficient and successful worker in a limited sphere in any business, industry or profession, is the very last person to speak with authority on the business as a whole. Again, a successful business man, merely because he is a successful business man, is not thereby qualified to express authoritative views on wider questions of economics, much less politics.

No Government could fail to benefit from the inclusion among its members of men who have made their mark in business or commerce. Men with practical experience are needed to help in solving pressing economic problems; and some Government departments, such as the Post Office, are best run on business lines and with the aid of the latest business methods. Successful business men are likely to prove enterprising administrators; they have had experience in checking waste and extravagance, in managing their subordinates adroitly, and generally in running their departments with the maximum of efficiency and the minimum of friction. Such qualities are valuable enough, but they are not all that are required in a statesman. Success in the limited sphere of industry or commerce, or in the still more restricted sphere of a single business, no matter how wide its ramifications, may handicap rather than assist a man in managing the affairs of his country. In fact, his previous experience may effectually prevent his taking a wide view, embracing his countrymen's interests as a whole. A man of culture and wide sympathies, with an alert and vigorous mind, with no first-hand experience of an office or a factory, will often be more capable of conceiving broad policies, coordinating diverse or reconciling clashing interests, than one who has spent a lifetime immersed in the details of business management.

Civil servants, policemen and schoolmasters have on more than one occasion protested against the practice of filling some of the more responsible posts in government departments, the police force and the teaching profession with recruits from outside their regular ranks. One can readily understand and even sympathise with the disappointment of those whose hopes of promotion have thus been dashed; but each case has to be judged on its merits, and no one could seriously contend that success in a subordinate position is the sole or even a sure criterion of fitness for the position of a principal.

Transfer Of Ability

The problem of the transference of training in education raises similar questions. For many years Latin was regarded as an essential subject in the grammar school curriculum mainly in the belief that it was a valuable mental gymnastic, inculcating habits of accurate and exact thought and expression that were transferred inevitably to other subjects and reacted favourably on all forms of mental activity. This belief has lately been shown to be largely a myth. (Compare Chapter Seven.)

There is a tendency, too, to allow scientists to tell us what we ought to think about subjects in which they have no special competence, and as for the popular newspapers and magazines, they try to persuade us that any person 'in the news' has opinions worth our consideration on almost any question outside his legitimate province. We might be inclined to listen to Miss X., the champion lawn-tennis player, on the subject of the backhand stroke at that game, but not to give equal weight to her ideas, say, on the rearing of children; or to Sir X.Y.Z., the record-breaking motorist, on internal-combustion engines, but not on [International Co-operation](#).

The power of the Press to influence our judgments in its presentation of facts about current affairs is so important as to deserve fuller treatment in a separate chapter. It is sufficient here to point out the folly and danger of swallowing *indiscriminately* whatever we see in print, whether in books or newspapers. It is impossible in the limited compass of this book to deal adequately with the canons of historical evidence, *i.e.*, to examine the methods by which historians estimate the value and importance of documentary evidence in arriving at the truth. But it might be profitable here to give examples how mistakes can be made. A writer recently wrote an article on the Russian Revolution. He had consulted two authorities which had adopted different chronological systems—one the Western, the other the Russian Calendar. The result is that many events in his

narrative are described twice and as having happened at different times. Again, an American writer failed to distinguish between two great English thinkers, J. S. and J. B. S. Haldane, father and son. He was at great pains to try to reconcile apparent inconsistencies in the views of a single, composite Haldane!

I have already pointed out how mistakes may arise from faulty or fictitious quotations. As we have seen from the example quoted [above](#), not only can "the devil cite Scripture to his purpose," but he can also invent it when it suits him!

A warning, too, is necessary against accepting generalisations, however neatly or attractively put, as substitutes for facts. In our judgments on history, for example, we should beware of contenting ourselves with dismissing Richard III as "a bad king," or Cromwell as "a tyrant," or Gladstone as "a humbug," and of assuming that such question-begging verdicts are efficient substitutes for facts or arguments. Many of the historical text-books used in schools, which are necessarily highly condensed and simplified to suit the youthful understanding, are full of such generalisations; and when they are imperfectly understood or only half digested by the immature intelligence, the net result is the kind of history presented to us so brilliantly by the authors of *1066 and All That*

Again, beware of accepting at their face value statements beginning "Everybody says . . ." or "Everyone knows . . ." These statements may be commonly made, or may be the expressions of common opinion, but they are not necessarily true or common sense. Similarly, because you see a statement repeated a number of times, do not assume that it must be true; and because a statement or opinion has remained unquestioned or unchallenged for some time, do not assume that it has acquired some magic potency that makes it unquestionable and beyond challenge.

Many errors in all departments of knowledge tend to become perpetuated by being repeated slavishly or uncritically by successive writers. A statement of opinion by one writer may be re-stated as a fact by another, who may in turn be quoted as an authority by yet another; and this process may continue indefinitely, unless it occurs to someone to question the facts on which the original writer based his opinion or to challenge the interpretation he placed upon those facts. Imagine the confusion that might arise in the future if the mistakes referred to in a previous paragraph were repeated by successive writers over a number of years!

Dr R. H. Whitehouse, the author of recent standard works on Zoology, lately showed me a diagram, incorrect in a very important particular, which had been drawn some sixty years ago and had been copied or reprinted many times since in different text-books without any attempt at correction.

A natural aversion to thinking, and the temptation to take the line of least resistance, makes people prone to accept without question the opinions and judgments made for them by the leaders and headlines of the popular Press, the slogans of advertisers, and the catch-phrases of politicians. The prominence given to them makes it difficult to avoid them. Not only are we so naturally susceptible to the influence of constant iteration that we tend to imbibe them unconsciously, but also it needs constant effort to resist the methods of modern publicity. The merchants of that article know our weakness and trade upon it.

6-3. Questions On *The Experience Of Others*

1. Give, from your own experience, one or two examples of the fallibility of the senses.
2. Give examples from your own reading or experience of errors caused by (a) interpreting a perception in the light of preconceived opinion; and (b) confusing a sense impression with the inference made from it.
3. Give some examples of 'making the wish father to the thought.'
4. Give some examples of superstitions still widely believed in. Suggest some reasons why they survive.
5. Illustrate the influence of Prejudice on (a) observation, and (b) memory.
6. Explain and illustrate the tendency of the human mind to neglect negative evidence.
7. Is a 'good' memory a blessing or a curse?
8. What criteria would you use in judging a person's authority to give expert testimony?

9. "A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines." (Emerson.)

Explain and comment.

10. Write short explanatory notes on (a) the Mercantile theory (b) Laissez-faire, (c) Splendid isolation, and explain briefly the conditions which made each unworkable.

11. At the time of the loss of the American Colonies, commonly accepted ideas were (i) that trade with colonies must be governed by the Navigation Acts in order to secure profits for the mother country.

(ii) that colonies were like fruits which clung to a tree until they were ripe, and then dropped off.

Show how these ideas were subsequently discounted.

12. "Distance lends enchantment to the view." Explain this saying and illustrate its application.

13. What is to be said for and against the British practice of appointing ' amateurs' as heads of state departments?

14. On more than one occasion policemen and schoolmasters have protested against the practice of filling the more responsible posts in the police force and the teaching profession with recruits from outside their regular ranks. What is to be said for and against their protests?

15. "Enjoy your schooldays while you can; you will never have such happy days again; my schooldays were the happiest in my life." This is the sort of thing old gentlemen who give prizes away on Speech Days say (or used to say) to their young audiences. If you were given the opportunity to reply, what would you say?

16. Find examples from current newspapers and advertisements of the use of testimony by people in the public eye on subjects on which they can claim no expert knowledge.

17. Give some examples of historical dicta which have been exploded and yet still

widely persist.

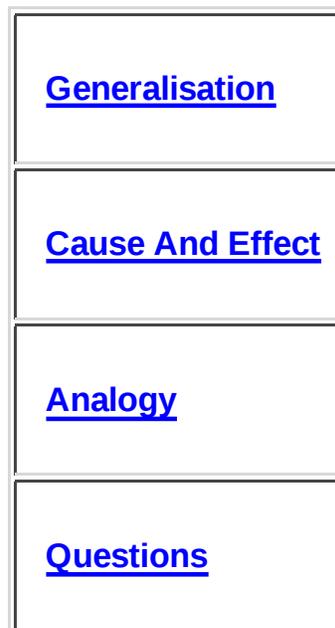
18. Illustrate the dangers of 'over-simplification.'

19. "It has never been denied. Therefore it must be". Explain the fallacy in this argument.

20. Why is it not an easy matter to tell just what we saw and heard at a particular time?

7. Induction

WE no sooner perceive things by the senses than we begin, consciously or unconsciously, to arrange and classify them in various categories according to the properties they appear to possess, to note causal relations, and to trace similarities between them. These three processes, with which we shall deal separately under the headings of Generalisation, Cause and Effect, and Analogy, are called *Inductive Processes*. Induction implies the collecting and arrangement of data and the formulation of generalisations, laws or rules to cover a number of data and possibly to account for them.



7.1. Generalisation

Generalisation means, as its derivation implies, putting things into their *genera* or classes. Right from a very early age our observation and inquiries lead us to form generalisations which guide our judgments and determine our actions. For example, a child may soon learn that *Matches are dangerous playthings*, or that *People who frown are angry*, or that *Dogs are faithful animals*, or that *Jays like peas*, or that *Policemen wear uniform*. Each new experience, each freshly acquired piece of knowledge helps him to form new generalisations, or to strengthen or modify his old ones. It will easily be seen that without this power of generalisation, human knowledge would have never advanced, and civilisation would have been impossible. Most generalisations, at any rate in matters concerning the conduct of human affairs (*i.e.*, as opposed to such subjects as mathematics or physics), are necessarily imperfect, because it is almost impossible to obtain sufficient data from which a universal rule can be extracted. The value of a generalisation depends on:

- (1) the *relative* number of the *unobserved* instances;
- (2) whether the instances observed form a fair and sufficient sample, and whether no exceptions are discoverable;
- (3) the degree of probability of the existence of such a general rule or law.

To apply these tests to our own conclusions, we shall have to ask ourselves:

- (1) Have our investigations covered a wide enough field?
- (2) Are the conditions we have observed typical of general conditions or are they special conditions prevailing only in the sphere of our investigations?
- (3) Is our conclusion one that could reasonably be supposed to exist?

One of the most prevalent sources of error in argument is the rash generalisation. It takes one of the following forms:

- (1) Generalisation from single or isolated instances.
- (2) Generalisation from selected instances.
- (3) Generalisation arising from ignorance or prejudice.

These forms roughly correspond to the conditions and tests enumerated above, and they can be detected easily enough by applying those tests.

The absurdity of forming generalisations from single or isolated instances is patent enough; but how often are people—in most respects ordinary, sensible people—guilty of it! An Englishman's casual visit to the Palais des Papes at Avignon, during which he is pushed and jostled in a crowd of French sightseers, causes him to dismiss *all* our neighbours across the Channel as rude and inconsiderate folk. And how often do we hear such statements as: "Doctors are all alike. They really don't know any more than you or I do. This is the third case of faulty diagnosis I have heard of in the last month! "

Or, "Another policeman convicted of burglary! There you are—it proves what I said—the whole police force is hopelessly corrupt." Or again, we often hear of a self-made successful business man protesting against the raising of the school-leaving age and saying, "I left school at thirteen, and look at me! " A deputation of parents living in a rapidly growing suburban district, whose children had to attend a school over a mile away from their homes, waited upon the local education committee to request that suitable transport should be provided to convey their children to and from school. The chairman remarked: "Why, when I was a boy, I had to walk five miles to school every day! It never did me any harm. Look at me, still hale and hearty at eighty! " The obvious retort to the last two generalisations from single instances is the same as that of the sceptic quoted by [Bacon](#), viz., "Yes, but where are the others?"

Members of Parliament frequently base their pronouncements on data collected from a limited field, *i.e.*, from the conditions prevailing in their own constituencies only.

In judging some historical personage people often make the mistake of selecting a *single* passage from a *single* writer as summing up his whole character. The possible injustice of this is apparent enough even if the writer is unprejudiced; but if he happens to be prejudiced, it is even more unjust.

Vendors of panaceas and quack remedies seek to prove their efficacy by reference to the number of so-called cures they have effected; but they forbear to mention, or do not care to find out, in how many cases fatal results ensued, or no results at all.

I have already referred in the previous [chapter](#) to the human tendency to accept insufficient data as the proof of a belief, when that belief brings pleasure or comfort with

it. The people who credulously accepted the story of the Russian troops on such slender testimony failed also to calculate the probability of such an occurrence or even the mechanical possibility of transporting such a vast number of men by rail across England in such a short space of time.

In politics one party frequently judges the other party by their most illogical and extreme members. Moreover, one isolated statement by one member of a party is often quoted as representing the views of the party as a whole. Mr J. R. MacDonald complained of this habit in the introduction of his little book on the Socialist Movement. He said,

"To-day the opponents of Socialism try to make Socialism itself responsible for every extravagance, every private opinion, every enthusiasm of every one of its advocates.

The logic is this: Mr Smith writes that the family is only a passing form of organisation; Mr Smith is a Socialist; therefore all Socialists think that the family is only a passing form of organisation. This method of controversy may offer for itself a shamefaced justification when it is resorted to for the purpose of a raging and tearing political fight in which the aim of the rivals is not to arrive at truth but to catch votes, but it cannot be defended on any other or higher ground."

A particularly delusive method of proof by selected instances is illustrated by the "Peace Ballot" conducted in 1936 by a popular newspaper. When the result was announced, the percentages of votes cast for and against were given, but the total number of votes cast was withheld. The use and interpretation of figures and statistics will be treated more fully later in this chapter.

An old Sussex labourer I knew was convinced that "a wet Monday meant a wet week." The inherent improbability of such a generalisation did not strike him; and I doubt if statistics ranging over a long period and proving the contrary would have altered his conviction.

A weakness for exaggeration, a dislike for half-measures, and a desire to be thought thoroughgoing and downright lead us to make universal generalisations when a little thought would make us more chary and less sweeping in our judgments. In normal times the man who counsels caution and moderation tends to be unpopular—he is called weak and shilly-shallying and is told he does not know his own mind. In times of crisis, stress or emotional excitement his voice has even less chance of being heard. It is in times like these that sweeping generalisations about people arouse the worst

barbaric passions. "*A bas les aristocrates!*"—with this cry French nobles, without discrimination, were hurried away in tumbrils to the guillotine.

When such sweeping statements are made about peoples as a whole, they are often dangerous and misleading. The Englishman, we are told, is phlegmatic, the Scotsman dour, the Welshman excitable, the Frenchman logical, the German ruthless, and so on.

There may be some justification for these popular estimates, but it is dangerous to assume that *all* Englishmen are phlegmatic and *all* Frenchmen logical; and it is perhaps still more dangerous to take it for granted that in a particular set of circumstances an Englishman, or even most Englishmen, *will* betray no emotion, and that a Frenchman or the majority of Frenchmen *will* be guided by logical principles. Professor George

Trevelyan points out that a similar assumption accounted for the British attitude to the Germans in the Franco-Prussian War of 1870. He says that when the war began it was not Germany we feared. The idea of the dreamy German being a danger to Europe was new and strange. Only a few years before, their soldiers had been drawn by our comic artists as funny little men strutting about under the weight of enormous helmets. In

1870, however, these little men had shot up into genial giants with bushy beards, singing Luther's hymns round Christmas trees in the trenches before Paris. We were too ignorant of Germany to regard her as a serious rival. This also shows how ill judged it is to form our opinions of nations from the way they are caricatured in cartoons or on the stage.

Very often the weaker our generalisations are, the more vehemently we propound them. The degree of their weakness may perhaps be measured by the degree of obstinacy and dogmatic confidence with which we utter them. Assertiveness is frequently mistaken for strength of knowledge or the voice of authority; on the other hand, modesty and tolerance are attributed to weakness or ignorance.

The fact that we frequently make these generalisations and suppress such words as *all* or *every*, does not make them less universal in their application; it merely helps to deceive ourselves or our opponents in the course of an argument. Since, as I have said, most generalisations about human beings, their affairs and relationships, are necessarily imperfect, and may even be misleading or untrue, we should be chary of saying, or implying, *all* when we mean *some*, and of saying *are* when we mean *tend to be*, unless, of course, we can prove our statements by reference to indisputable figures.

The Generalisation, as I have remarked before in , "*The Writer's Craft*", Lesson XXXIII, is a good servant, but a bad master. We must not allow our desire for order and simplicity to tempt us to impose them where they do not exist. We must not attempt to *force* facts to square with a theory: we must modify the theory to make it account for *all* the available relevant facts.

When we are challenged to produce evidence for our general statements, the weakness of our case is often patent, and it is often seen to depend upon selected instances. Incidentally, it is as well to remember that selected instances can no more disprove a statement than prove it; and to remember that the common retort, when instances are quoted against our contention that "the exception proves the rule," is bad logic and a misleading translation of the Latin tag *Exceptio probat regulam*, which merely means that the rule covers all cases not specifically excepted.

Suppose **A.** in support of his statement that "All State or Municipal enterprises are extravagant, wasteful and inefficient as compared with private enterprises " refers to (1) muddles made during the war, when the State assumed control of all "key" industries, (2) a case where the attempt on the part of a certain Municipality to build houses by employing direct labour proved more expensive than entrusting the job to private contractors, (3) the inability of the Belgian State Railways to pay their way without subsidies, (4) the multitude of private, but successful, enterprises such as Ford's motors, the Imperial Chemical Industry, or Unilever. **B.** retorts : "What about the Post Office? " and, "Look at the number of big private concerns that have smashed recently; could the Hatry, Kreuger and Stavisky scandals have happened under State management?" **A.** continues: "Ah, those are the exceptions that prove the rule..."

How much further are they towards settling the question? A.'s contention may be right, but the instances he cites do not prove it; nor do B.'s instances to the contrary disprove it, much less prove it because they *are* exceptions. The argument, as conducted by A. and B., leads nowhere. Is it then impossible to come to a conclusion regarding the respective merits of State and Private Enterprise? By no means; given full statistics compiled by trained investigators, we should be able to formulate some generalisation that covers all the available data; but it will *not* be the sweeping generalisation that A. made at the outset of his argument and that was shown to be incapable of proof.

There is a popular belief that a boy's academical career is no index to his career in after

life. This belief finds expression in a number of ways; *e.g.*, " You never hear of the brilliant boy after he has left school "—" I never passed an examination in my life, and look at me! " says a successful business man—" It is the dunce at school who makes his mark in after life; Mr W— C— never rose above the Third Form at H—" and so on. Suppose we desire to try to find out how much truth there is in this belief, how shall we set about it? There are certain preliminary assumptions we must make: (1) we must decide what standard of achievement, (a) at school, (b) in after life, we are going to adopt as a basis for calculation; (2) we must fix the ages at which it is possible to say that a boy and a man ought to have reached those standards of achievement, if they are to reach them at all—shall we say, for the purpose of this argument, 17 and 55? (3) we must decide from how many and what kinds of schools we are going to obtain the data that we want; (4) we must agree to accept the data when we receive them from the headmasters, who will, of course, have been fully instructed how to compile them. We are now in a position to proceed. We write to the head-masters of, say, forty schools and ask them to obtain from their records particulars of the school and after careers of 25 boys chosen at random from the 16+ to 17+ age group of the pupils in the year 1897. On the receipt of these particulars we shall have the information we want concerning 1000 boys, and we proceed to classify them as follows:

A.	"Brilliant " at school " successful afterwards	50
B.	" Brilliant " at school " unsuccessful" afterwards	150
C.	"Undistinguished" at school: "successful" afterwards	100
D.	"Undistinguished" at school: "unsuccessful " afterwards	700

(These figures are, of course, purely imaginary.)

What can we conclude from these figures Certainly not that "All dunces at school are successful in after life " nor that "No boy with a brilliant record at school makes his mark in after life." But we can, firstly, say that the chances of a brilliant boy's ultimate success are 1 in 4; whereas the chances of success of his undistinguished schoolfellow are 1 in 8; and therefore that the brilliant boy's chance of success is twice as great as his undistinguished schoolfellow's. The point worth emphasising is that on the above figures it is as useless for anyone to try to prove any *universal* generalisation about either brilliant boys or dunces by merely citing all the instances in his favour, as it is useless for

his opponent to prove the contrary by citing all the instances that point the other way.

It is on figures such as these that calculations of probability are based. People who hope to acquire riches by gambling would perhaps be less willing to risk their money if they were able to calculate their chances to some degree of accuracy. Many alleged contests of skill in popular newspapers are really forms of gambling under a very thin disguise—especially crosswords and picture-guessing competitions, in which, shall we say, 86 per cent of the clues or titles are so easy that no one could possibly make a mistake, while the odd 14 per cent admit of two, three or four alternative answers.

Suppose there were one hundred of these pictures to guess, and of them seven admitted of two possible solutions, five of three and two of four. If the intending competitor realised that the mathematical chance of gaining first prize by guessing all the pictures "correctly" was approximately one in half a million, would he be so willing to risk his entrance fee? And perhaps he would lose any illusions he may have had regarding the generosity or disinterestedness of the proprietors of popular newspapers.

Figures, or statistics, as they are called, are of great help in enabling us to obtain a clear and comprehensive grasp of facts; by means of them we are able to sum up the results of our observations in a convenient and intelligible form. They enable us to calculate averages and ratios and proportions; to make comparisons; to detect correspondences and variations between different sets of happenings. But in interpreting statistics, *i.e.*, in drawing conclusions from them, we must take care (1) that we understand on what assumptions they are made or on what principles they are based; (2) to see that *all* the *relevant* figures are taken into consideration; (3) not to assume that there is a *causal* connection between different sets of figures without further experiment or investigation.

The successful candidates of two schools at a School Certificate Examination are as follows:

School	Certificates	Matriculation Exemptions
Chart	54	30
Charvel	27	15

Only the most foolish and ignorant observer would draw from these figures the conclusion that the results of Chart are twice as good as those of Charvel. Before we can make an adequate comparison we want to know (1) the number of pupils in each school, the age range and the number of pupils at each point in the age range; (2) the numbers of unsuccessful candidates; (3) the average age of the candidates; (4) the numbers of honours and/or distinctions gained; (5) the number of candidates taking the examination for the second time, and so on.

It is noted that at a certain "soccer" school the weather on successive Saturday afternoons, when 1st XI matches were played, began by being good, but became progressively worse, until on the last Saturday the match was played in a torrent of rain and a howling gale and on very heavy ground. The results were as follows

1	Won	5-0
2	Drawn	2-2
3	Lost	3-5
4	Lost	0-10

It is obvious that we cannot draw from this information alone the conclusion that the weather was responsible for the falling off of the performance of the team in the last two matches. We shall want to know about changes in the constitution of the team, casualties, the relative strength and weight of their opponents, and maybe other material factors, before we can say that there is even a *prima facie* case for our contention. But we are now trespassing on the ground to be covered in the next section dealing with cause and effect: you will be told there what tests to apply before you begin to trace causal relations between things.

The quotations of figures and statistics by opposite sides in a dispute often has inconclusive results and leaves the real issue untouched. For example, early in 1938 the Government was blamed for a rise in the cost of living. Their opponents pointed out that since 1933 the cost of living rose 11 per cent and wages only 9 per cent. The Government's case was that between 1929 and 1933 the cost of living fell 14 per cent and wages fell only 5 per cent, and that on balance therefore the workers of 1938 were 4 per cent better off than in 1929. But both the complaint and the justification were really futile and superficial over-simplifications of a complex question. The official cost of living

figures were based on arbitrarily chosen items, and the rate of wages alone is not the only index to the standard of living among the workers: it takes no account of such things as social services, holidays with pay, and publicly provided amenities. In fact, the expression 'standard of living' is itself deceptive: there is a standard of *satisfaction*, but it would be beyond human ingenuity to express this statistically.

7-2. Cause And Effect

After observing, sorting and classifying, noting common properties and formulating general rules or tendencies, the next natural step in the advancement of knowledge is trying to account for things. When we have discovered that things generally happen in a certain way, we very naturally want to know why. Experience tells us that every event has a cause, and will be followed by an effect; natural curiosity impels us to try to trace effects to causes; natural desire to plan our future—to avoid failures and to repeat successes— impels us to try to forecast the effect of causes.

Because an effect is the consequent of a cause, and a cause the antecedent to an effect, we are apt to assume that two events or conditions, one of which precedes or follows the other in point of time, are causally connected. This is an error to which ignorant and superstitious people are especially prone. A man walks under a ladder and soon afterwards is run over and killed; superstitious people will tell you he was killed *because* he walked under the ladder. The temptation to fall into this error is especially strong when one or other or both of the occurrences are more than ordinarily striking; or when there is apparently a constant recurrence of similar happenings in conjunction. Then even the sceptic may begin to think that " the long arm of coincidence " has been stretched too far and he may be tempted to suspect that "there may be something in it after all."

And so there may be; but we are not justified in asserting that there is, until further trial has been made. We must first ask ourselves, " Does the so-called cause *adequately* explain the effect? Are there any other forces that may have interfered? " We cannot point to one definite cause until all other adequate causes have been eliminated. The imposition of tariffs in this country was followed by the fall of prices to an almost unprecedented low level. We cannot conclude that the imposition of tariffs caused prices to fall, until we have found out whether other factors were at work. It might be advisable, too, to find out whether the same result was evident in other countries when

tariffs had been in existence for some time, and to inquire whether there was a general fall in *world* prices at the same time.

A habit, similar to that described in the previous chapter as rash generalisation, tempts us, in our efforts to simplify things, to attribute an event to a single cause, when a multitude of different causes may have combined to bring it about. When we know how various and involved our own motives may be in taking any particular line of action, we ought not to be too ready to attribute, say, the war of 1914-18 *solely* to the desire of Germany for aggrandisement. Incidentally, we ought to beware of explaining the behaviour of our fellow-creatures by imputing motives—good or bad— as the springs of their action.

Again, in searching for causes we should be careful not to confuse the cause with the occasion. The murder of the Austrian Archduke at Sarajevo was the occasion, not the cause, of the outbreak of war in 1914. The responsibility for an explosion lies with those who laid the charge and the train, not alone with the man who applied the match.

Another common error is to assume that two conditions, found side by side or in conjunction, are causally related. Because we often find poverty and drunkenness in the same home we must not assume that one is the cause or effect of the other; they may both be the effects of another cause, *e.g.* , bad housing conditions.

And, by the way, so-called "coincidences will nearly always be found to depend upon carefully selected instances. As for " Chance," Aristotle invented it " to cover up the astonishing fact that there were certain phenomena for which he found himself wholly unable to account!"

7-3. Analogy

The use of comparison in making language clearer, more vigorous or more picturesque, is familiar to us through figures of speech—particularly simile, metaphor, personification and parable, in all of which comparison is either expressed or implied.

In Exposition, comparison helps to make explanations more intelligible, more emphatic or more attractive. When your subject-matter is unfamiliar to your audience, when you

are dealing with something outside their experience, or with abstractions, then comparison will be found a great aid to elucidation. For example, if you were explaining the National Budget to a juvenile audience, you would help to make your explanation clearer if you compared the calculations of the Chancellor of the Exchequer to those of a prudent housekeeper who estimates the amount of money coming into the house, and allows so much for rent, food, fuel, light and so forth. That homely illustration might be extended—you might call the Chancellor the Nation's Housekeeper.

One of the commonest comparisons made is that of a collection of people—a nation, a church, a school, a profession—with a living organism. St Paul thus compares the Christian Church, in the Twelfth Chapter of his Epistle to the Romans: "For as we have many members (*i.e.*, limbs, organs, etc.) in one body, and all members have not the same office (*i.e.*, duty), so we, being many, are one body in Christ, and every one members one of another." At school we are taught the value of a *corporate* life. We speak of London as the *heart* of the British Empire. We speak of parks as the *lungs* of a city. Again, we compare our Empire to a family; Britain is the *mother-country*, the Dominions are her *sons*, the Colonies her *daughters*, and so on.

So far, so good. But there is a temptation not to let the matter rest here, but to carry the comparison further; to base arguments or to draw conclusions from the resemblances noted; to infer that because two things are parallel in one respect, they must also exhibit similarities in other respects. This is termed Argument by Analogy.

Now, Analogy may or may not be a safe guide. In English Grammar its use as a clue to the formation or pronunciation or inflexion of words is limited. Reliance upon analogy leads the puzzled foreigner astray; he fancies that because the plural of mouse is mice, the plural of house must be hice; he imagines that dough, rough, through, thorough, slough are pronounced alike as to the final —ough. On the other hand, in a logically constructed language like Spanish, analogy will rarely lead the student wrong.

Englishmen, at the time of the revolt of the American Colonies, complained of the *unfilial* attitude of Britain's sons across the Atlantic; *i.e.*, they argued that Britain's *parental* authority entailed filial obedience on the part of her dependencies. On the other hand, the fact that the time comes in a family when a son arrives at years of discretion, when he can be trusted to fend for himself and to assume his own responsibilities, has been urged as a reason for granting colonies complete independence when they have shown

themselves capable of self-government. But neither argument can be conclusive in itself, for it is based on resemblance only, and not on fact.

The danger of pressing a comparison too far—of carrying it, as we say, to its logical conclusion—is pretty obvious. We could be drawn into the most ridiculous and fantastic judgments; *e.g.*, if we pressed the comparison between a nation and an organism too far, we should be drawn into discovering activities in a nation parallel, say, to the digestive or respiratory systems of an organism. We need hardly be warned against such wild and extravagant flights of fancy.

But it is very easy to pass from the simple illustration referred to earlier in this section, picturing the Chancellor of the Exchequer as the Nation's Housekeeper, to an argument of this kind: The prudent housekeeper naturally wants to lay out the limited amount of money at her disposal to the best advantage; she purchases the provisions and goods she wants where she can get them cheapest; she wants the best value for her money; *therefore* it is to the advantage of the nation's "housekeeping" to buy goods in the cheapest market, and to allow free and unrestricted imports into the country.

The conclusion reached may be sound enough, but it is not proved by the illustration. The danger lies in the plausibility of the argument, which may easily deceive people ignorant of the complicated machinery of international trade and of the intricate considerations which go to determine national policy.

A common form of false analogy is to argue that ability in one sphere must mean ability in another. So-and-so, a lawyer, is a very clever man; therefore he will make a good Foreign Secretary. He may indeed prove so; but it will be in virtue of his diplomatic, not his legal ability. The transference of ability from one subject to another has already been referred to (see [Chapter Six](#)). The retention of certain subjects in the educational curriculum is often supported by recourse to an analogy like the following:

"In order to become fit, an athlete puts himself through a severe training, takes strenuous exercise and submits to strict discipline in the matter of diet, eating only the plainest fare. So, too, the plainest intellectual fare is best for the growing mind, and such subjects as Latin (or Mathematics, or Grammar, or Gerund-grinding, or what not) which provide a fine mental discipline, are clearly the best for improving the child's brain and making it equal to the hard tasks of thinking that it will have to face."

False analogy is at the root of many specious *a fortiori* arguments, like the following example taken from an advertisement for — Powders. A letter from Mrs Blank is first quoted, alleging that the powders had cured her of Malaria. The advertisement continues: " If — Powders can conquer such a terrible complaint as Malaria, everybody will at once appreciate that they can make child's play of such troubles as Colds, Chills, 'Flu, Headaches, Neuralgia and Rheumatism." A similar kind of proportional false analogy is exemplified in the following arguments: "Trade improved when sixpence was taken off the income-tax. Therefore if another sixpence is taken off, trade will improve to the same extent." And again, "Periods of monetary inflation are periods of active trade, little unemployment, rising wages and high profits. Why not increase the note issue and so produce this desirable state of affairs? " These arguments might be continued to their logical conclusion to prove that, if income tax were abolished altogether, or if the country were flooded with paper-money, unemployment would cease and the millennium of prosperity dawn at last! But, as I have hinted already, few analogies will bear being carried "to a logical conclusion "; they are more likely to end in a *reductio ad absurdum*.

One method or argument by analogy is especially delusive. You have, we will say, a difficult problem to solve; then the recipe is as follows: compare it with a much simpler problem, resembling your problem in some respects, to which there can be only one indisputable answer. Then, while your readers or hearers are wondering why they had not seen the resemblance before, take another simpler problem and apply it likewise; and then they wonder why they have been so stupid as not to have guessed the solution before. An example from Macaulay, who uses [this device](#) frequently, will make the method clear. In his essay on " Gladstone on Church and State," he is discussing whether the State should assume responsibility for the spiritual as well as the temporal interests of its members. These illustrations follow:

"It is of very much more importance that men should have food than that they should have pianofortes. Yet it by no means follows that every pianoforte maker ought to add the business of baker to his own, for, if he did so, we should have both much worse music and much worse bread. It is of much more importance that the knowledge of religious truth should be wisely diffused than that the art of sculpture should flourish among us. Yet it by no means follows that the Royal Academy ought to unite with its present functions those of the Society for Promoting Christian Knowledge."

The eager and uncritical readers at once says: "How absurd! Of course the State has no business to interfere in religious matters! " But, in reality, the cases Macaulay quotes

are not parallels at all, and they prove nothing.

This method of delusive analogy is one of the most effective weapons in the armoury of the controversialist. At election times the platform speaker addressing meetings crowded with his own supporters uses it to score easy and immediate triumphs.

Archbishop Whately in his *Rhetoric* has a passage which aptly describes it. He says,

" When the occasion or object in question is not such as calls for, or as is likely to excite in those particular readers or hearers, the emotions required, it is a common rhetorical artifice to turn their attention to some object which *will* call forth these feelings; and when they are too much excited to be capable of judging calmly, it will not be difficult to turn their passions, once roused, in the direction required, and to make them view the case before them in a very different light. When the metal is heated, it may easily be moulded into the desired form. Thus, vehement indignation against some crime may be directed against a person who has not been proved guilty of it; and vague declamations against corruption, oppression, etc., or against the mischiefs of anarchy; with high-flown panegyrics on liberty, rights of man, etc., or on social order, justice, the constitution, law, religion, etc., will gradually lead the hearers to take for granted, without proof, that the measure proposed will lead to these evils or these advantages; and it will in consequence become the object of groundless abhorrence or admiration. For the very utterance of such words as have a multitude of what may be called *stimulating* ideas associated with them, will operate like a charm on the minds, especially of the ignorant and unthinking, and raise such a tumult of feeling as will effectually blind their judgment; so that a string of vague abuse or panegyric will often have the effect of a train of sound argument."

Here is an example of this use of delusive analogy from the speech of a candidate at the General Election of November 1935. "If you were steaming across the Atlantic into fine weather in the *Queen Mary* under a first-class captain and crew, with a storm behind you, you would not be ready to change into a rather unseaworthy old tramp ship commanded by an inexperienced captain who announced his intention of steering straight back into the storm area." Who would? For the same reason," the speaker went on, " you should support my party and reject the other."

The "Ship of State " is a favourite image of the politician (7) and the use of it frequently shows him "at sea." Unless he is a nautical expert, he soon finds himself in difficulties; but even the merest novice in nautical matters can see the absurdity of the following passage in a recent speech:

"Yet despite the manifold difficulties which press upon us both at home and abroad, anchored to such a firm and unyielding rock as this, I both hope and

believe that our common ship could be steered as it were mentally by the hand of its competent guides so as to turn the corner, and slowly but surely win through to the goal which we have always kept with such steadiness in sight."

My local representative in Parliament said in his Election address that his party had made the United Nations the *sheet-anchor* of their foreign policy. A sheet-anchor is a spare heavy anchor used only in emergency when a ship is moored, and rarely carried by merchant ships. Did he really mean that his party regarded the United Nations as a resort only to be made use of when we are in difficulties, or when every other resort has failed? (See also the section on " Metaphors " in [Chapter Three](#).)

But the flower of my collection of nautical analogies is surely the following:

"A little over a year ago the ship of State was heading for the rocks. The skipper had to change his course suddenly, and many of his officers and most of his crew deserted. It was a case of all hands to the pumps, and I signed on with my friends, not for six months or a year; I signed on for the duration, be the weather fair or foul, and I am going to stick to the ship, whether it goes to the bottom or gets into port...."

The author of this remarkable passage would be flattered by the comments passed upon it by a number of schoolboys who were asked for their criticisms on it; and I cannot resist quoting a few of them here. "This series of episodes is surely unparalleled in the whole history of the Mercantile Marine." " If the ship had not struck the rocks, why was it necessary to man the pumps? " " Are seamen usually engaged in the middle of a voyage on the high seas? " "When they sign on, don't they sign on for the voyage, and not for any specified term? " " I have never heard of any 'fair-weather clause ' in a seaman's contract." "The man who sticks to the ship when it goes to the bottom must have lost his senses." These were some of the kindest observations passed upon it.

The schoolboys were not old enough to remember the recruiting posters during the first Great War with their appeal to men to enlist "for three years or the duration "; they therefore did not notice the emotional significance of the phrase "for the duration" (see [Influence](#) Chapter Three). But they were not slow to point out that the author intended to appeal to passion and prejudice rather than reason, and that, even if the details of the illustration he had used had been circumstantial and consistent, it was no substitute for argument.

And this was part of a speech broadcast by Mr Baldwin in October 1932 shortly after the

resignation of certain Cabinet Ministers from the National Government.

A mistaken application of analogy led to the present form of the Constitution of the U.S.A.. Those responsible for framing it set out to imitate certain characteristics of the English Constitution. But in their estimate of it they overrated the influence of the Crown in the person of George III—an influence due to transitory causes only—and they paid more attention to the *theory* of the Constitution, as explained by the lawyer Blackstone, than to its working in practice. Hence they created a strong executive (representing the Crown in England) and carefully separated the three departments of government—the executive, the legislative and the judicature; but they neglected the fact that in actual practice in England those holding the highest executive posts sit in Parliament and are responsible to it for the conduct of their official duties.

The fact that during the nineteenth century England became the most prosperous country in the world and that Parliamentary institutions were more highly developed in England than in any other civilised country caused other countries to attempt to model their government on hers, with not altogether happy results.

History is a happy hunting-ground for those who seek parallels in the past as arguments to support their policies for the future. Human nature, they tell us, changes slowly, if at all. Similar sequences of events can be observed again and again. A famous archaeologist shows us that world civilisation has not been a steadily continuous development in a straight line, but a series of cycles, or "revolutions," passing, in the sphere of Art, through three stages between rise and fall—rugged strength, graceful beauty, and excessive ornamental elaboration. In Architecture, for example, a parallel can be drawn between the successive classical styles, Doric, Ionic and Corinthian, and the Norman, Early English and Decorated styles in England. Again, in the broad outlines of the Revolutionary movements in France in 1789 and lately in Russia there is apparently a close parallel; each movement began with a bourgeois or middle-class revolt, developed into a "reign of terror" and ended in a military dictatorship. Again, the sequence—war, boom, depression—evident in the first half of the nineteenth century, appeared to be repeated in the years 1914-1934.

In other words, "*history repeats itself*". So it does, but with a difference. We must be wary of making assumptions based upon an over-simplification of historical developments. Conditions are rarely precisely similar; there is usually a "snag" somewhere, some

circumstance which does not fit in, which may render the whole argument useless. For example, during the fiscal controversies in the early part of this century we often found in arguments supporting Free Trade comparisons made with the nineteenth century; but the fact that certain conditions existent in the nineteenth century favourable to Free Trade were absent in the twentieth century was neglected; for in the nineteenth century we had an expanding market for our goods, whereas in the early twentieth century the market was stationary or contracting. By judiciously selecting convenient facts and neglecting or failing to see inconvenient ones, we can make "history " provide specious and plausible support for any theory we may wish to advance. Beware of the man who begins "History teaches us . . ."; he may be like the man who prefaces a lie with "As a matter of fact . . ."

An example of the ingenious, or perhaps I should say ingenuous, way in which "history" may be made to serve as an " awful warning" to those whose views differ from one's own was recently provided by a leading article in a popular " Isolationist " newspaper apropos of the tercentenary of George Herbert. The gist of it was as follows:

"There was once a poet called George Herbert. He wanted King James to make an alliance with Spain; but the King did not take his advice. Now no one has heard of him (!), and no one will ever hear again of the people who want us to be involved in foreign entanglements to-day (!!)."

The exclamation marks are mine.

Comparison should never be used as the *sole* support of a theory or judgment. It can be used by way of illustration and explanation, to elucidate or to verify a fact already established. It also has another very valuable use; it can often start a train of thought or suggest a working hypothesis. The resemblance noted by Newton between the fall of an apple from a tree and the movement of the celestial bodies through space suggested to him the theory of gravitation. Darwin's theory of evolution originated in the discovery "that selection was the keystone of man's success in making useful races of plants and animals," and in wondering whether anything similar had taken place on a very much larger scale in Nature. But resemblance was only the starting point in both these theories; before they were substantiated the whole processes of induction and experimental verification had to be gone through.

Questions On *Induction*

1. Construct an inductive argument to prove that some article of food, or some habit, is beneficial or injurious to you.
2. You read somewhere that illegible handwriting is no criterion of greatness. You say to yourself: "Well, it may not be a criterion of greatness, but at any rate most great men seem to write illegibly." How would you proceed to test the truth of your view?
3. You discover that more crimes were committed in 1934 in the U.S.A. than in the United Kingdom. What other figures or information will you require before you can estimate the comparative prevalence of crime in the two countries?
4. A lecturer, addressing a large meeting of children, said: "The average number of children in a family is 8. This can be verified at any large representative gathering." He then issued slips of paper on which the children wrote down the total number of children (including themselves) in their own family. The average was 3.4. How do you explain the result?
5. What truth is there in the statement that statistics can be made to prove anything?
6. Mention some uses to which (a) the results of the Census and (b) the Registrar-General's returns can be put?
7. "Many people make figures bear the interpretation they want to put on them, and will choose the cause or effect they want and eliminate the others." Comment on this, and illustrate your answer by referring to different interpretations put on General Election or By-Election results.
8. An airman attributed the successful completion of a hazardous flight to the mascot he was carrying. What information must the rational person be supplied with before he can abandon his opinion that the connection between the mascot and success is only accidental?
9. Give some examples of people's credulity in attributing causes and suggesting remedies.

10. "Some people see in every incident a manifestation of their own pet theory." Explain and illustrate.

11. "Every age sees history through its own glasses."— "Once you begin to generalise about history, your prejudices must make themselves evident."

How far do you agree with these dicta?

12. Criticise the following arguments:

- (a) Our Common Law and our Jury System cannot be due to Protestantism because they began to develop long before England became Protestant. Therefore they must be due to Roman Catholicism.
- (b) "There, what did I say? Imprisonment never deters people from crime. More than half the prisoners at the recent assizes were old lags. Once a criminal, always a criminal."
- (c) Mr Bernard Shaw writes such good plays because he is a vegetarian.
- (d) It will be a hard winter, because holly-berries are abundant.
- (e) During the last war there was a marked reduction in the amount of crime in the U.K. This goes to prove that war is a great moral tonic.
- (f) A. "Negroes are incapable of intellectual development."
B. "But what about Booker Washington and Paul Robeson?"
C. "Yes, but they are the exceptions that prove the rule."
- (g) Britain's national debt has grown as her prosperity increased. It looks therefore as if it pays you to live beyond your income.
- (h) The lunatic asylums contain many highly educated people. Education therefore is one of the causes of mental abnormality.
- (i) Ministers in parliament are justified in withholding information on the same principle on which doctors refuse to divulge information about their patients which they have gained in the course of professional attendance.
- (j) The British Empire is rapidly breaking up. Everything that grows must also decay. The British, like all the empires of antiquity, must fall a victim to the laws of time.
- (j) Carlyle supports his objection to the parliamentary system of government by representation on the ground that a ship could never be taken round Cape Horn if the crew were consulted every time the captain proposed to alter the course.
- (l) These ruthless amputations of coal and transport are not going to improve the national circulation.

- (m) If you are going to suppress high speed on the road on the ground that it is dangerous, you might as well also suppress religion, science, gas-cookers, circular saws, alcohol, and cup-ties.
- (n) If we can spend 15 million pounds a day during the war surely to goodness we can spend a few hundred thousand on endowing a National Theatre.
- (o) There's some hope for the Ministry of Labour now we've got an ex-trade-union official at the head of it.

13. A self-made successful business man, protesting against the raising of the school-leaving age, says: "I left school at thirteen, and look at me." Construct a suitable reply.

14. Look back at [Chapter Two](#). What methods were used by the medical officer in (a) discovering and (b) verifying the *cause* of the scarlet-fever epidemic?

15. An analyst is entrusted with the task of finding out whether arsenic is present in a substance submitted to him. The reagents generally used are zinc and sulphuric acid, both of which substances are liable to contain traces of arsenic. What precautions therefore must he take?

8. Deduction

DEDUCTION means using a general rule by applying it to particular cases. It is thus the reverse process to Induction; Induction moves from a number of particulars to a generalisation, Deduction from the generalisation to the particulars. Although for the purposes of convenience we treat each separately, they are really *complementary*; deduction is impossible without previous induction, and induction is of no particular value unless it is followed by deduction. In fact, we can only arrive at the meaning of a general statement by applying it to particular cases, and we can never be sure what a general statement implies until we have seen what conclusions it is possible to draw from it.

[General Statements](#) And Their Immediate Implications

[Drawing](#) The Line

<u>Syllogistic</u> Reasoning	<u>Dilemmas</u>
<u>Some Arguments</u> Analysed	<u>Questions</u>

8-1. General Statements And Their Immediate Implications

First let us examine some general statements and find out what their immediate implications are, *i.e.*, find out to what other statements we are committed when we make them. We have learnt, shall we say, that a considerable knowledge of mathematics is a primary requisite for an actuary: then we may conclude, with some certainty, that:

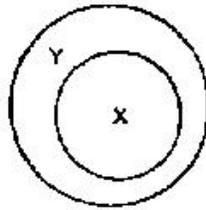
(1) All actuaries are mathematicians

This means that all those people classified as actuaries, *i.e.*, all the members of the actuary class, are also members of the mathematician class, or, if you like, that the whole of the actuary class is included in the mathematician class. This is called a *universal affirmative generalisation*.

In order that we may apply the results of our investigations to classes of people or things other than actuaries and mathematicians, let us use symbols instead of names, and put this kind of generalisation or proposition, as the logicians call it, thus:

(1) All X's are Y's

—it being understood that X stands for any class of persons or things that is wholly included in another class represented by Y. We shall also find it convenient to illustrate this proposition diagrammatically thus:



the larger circle representing Y and the smaller X.

Diagram 1

Every generalisation, indeed every fact, can be expressed either in an affirmative or in a negative way. The form it takes will depend largely on the circumstances in which it is used, or the particular purpose it is intended to serve. Hence on one occasion we might say:

All men are mortal

and on another:

No man is immortal

but *the meaning remains the same.*

Hence when we assert that all actuaries are mathematicians, we are also committed to the assertion that:

(2) No actuaries are non-mathematicians

or symbolically:

(2) No X's are non-Y's

This form of the original proposition (1) is called the *obverse*, and the process of change is called *obversion*: in 2 we are, as it were, looking at 1 from a different point of view.

But in changing from the affirmative to the negative form of a proposition, or vice versa, it is very easy to fall into the error or fallacy known as *illicit obversion* and to draw unwarrantable conclusions. A careless and superficial thinker might easily be tempted to suppose that:

All citizens are qualified to vote

is equivalent to:

All aliens (*i.e.*, non-citizens) are disqualified to vote.

But careful reflection for a moment will show that no such inference is possible. A glance at [diagram 1](#) will prove that it does not follow that people excluded from the X class are also necessarily excluded from the Y class. The negative equivalent of *all citizens are qualified to vote is no citizen is disqualified to vote.*

Now let us examine a *universal negative generalisation* like:

3. No Quakers are militarists, or

3. No X's are Y's

i.e., a Statement that all members of the X class are wholly excluded from the Y class—
diagrammatically

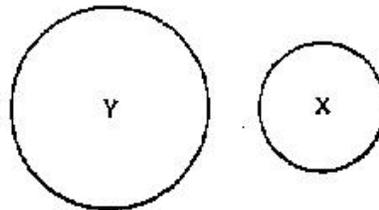


Diagram 2

We can see first of all that the affirmative equivalent of this is:

4. All X's are non-Y's

but *not*

No non-X's are non-Y's

which would be a case of illicit obversion.

There is another process called *conversion*, by which the subject and the complement of certain propositions may be interchanged: *e.g.*, it follows from (look at [diagram 2](#)) that:

5. No Y's are X's.

In other words total exclusion is a reversible relation—in excluding X from Y, we are also excluding Y from X.

But inclusion is not reversible: hence it follows that:

1. All X's are Y's.

cannot be converted to:

All Y's are X's.

If we did so we should fall into the error of *illicit conversion*. With [diagram 1](#) in front of us, it is easy enough to see the fallacy; but illicit conversion is a commoner source of confusion than you would think. In the heat of debate it is easy enough to assume that a proposition which makes a universal statement about the subject also makes a universal statement about the complement, whereas, as diagram 1 should make clear, it is the word *some* which is understood before the complement. The proverb *All that glitters is not gold* is a warning against this fallacy: people fancy that because all gold glitters all that glitters is gold.

We have already had one example of this fallacy in [Chapter Four](#), where a speaker is quoted as arguing that because all totalitarian states were planned states, advocacy of an extension of planning in this country was the equivalent to advocacy of totalitarianism. Let me give two other illustrations. The fact that the Nazis might have discovered that all the traitors they caught were Jews was no justification for concluding that all Jews were traitors—a conclusion they appeared to reach by some such reasoning process. Again, let us suppose that all the pacifists we have come across are also socialists, and that we have been rash enough to make the generalisation that all pacifists are socialists. It is not difficult to see that we may also be illogical enough to conclude from this that all socialists are pacifists.

On the other hand, proposition 1 is *negatively* convertible to:

6. No non-Y's are X's.

i.e., if all actuaries are mathematicians, it follows that no one who is not a mathematician can be an actuary.

In the section on generalisation in [Chapter Seven](#) I have already urged the necessity of being chary of saying or implying *all* when we mean *some*, and of saying *are* when we mean *may be* or *tend to be*. Let us therefore examine the more cautious *partial generalisations*.

7. Some pacifists are socialists,

or

7. Some X's are Y's

i.e., a statement that class X is partially included in class Y. Illustrated diagrammatically:

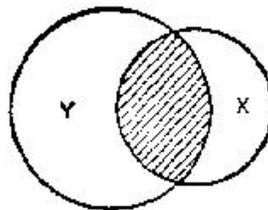


Diagram 3

Here the left-hand circle represents class Y, and the right-hand circle class X: the shaded portion representing the portion common to both.

It can be seen at once from this diagram that proposition 7 is simply convertible to:

8. Some Y's are X's.

But sometimes classes nearly coincide, and the portions of each outside the other are

comparatively small, e.g.:

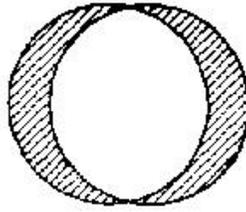


Diagram 4

Let us suppose that in our experience the bulk of socialist opinion is also pacifist, and the bulk of pacifist opinion is also socialist. In the diagram above if the right-hand circle represents socialists and the left-hand pacifists, then the shaded portions represent (r) those socialists who are not pacifists, and (l) those pacifists who are not socialists. The diagram thus illustrates the propositions:

9. Some X's are not Y's,

and

10. Some Y's are not X's..

These are examples of *partial negative generalisations*.

It should be observed that although the same diagram may illustrate both, 10 is not *equivalent* to 9. 9 is *consistent with*, i.e., it does not exclude the possibility, that, *some Y's are not X's*; but it is also consistent with *some Y's are X's*. On the other hand 9 is negatively convertible to:

11. Some non-Y's are X's

Let me make this clearer by another example. Starting from the proposition *some teachers are not graduates*, we can infer that *some non-graduates are teachers*. But we cannot infer therefrom that *some graduates are not teachers* or that *some graduates are teachers*, though we do not exclude the possibility of either.

All the propositions treated so far have been assertions referring directly to persons or

things, their qualities and their relations, and representing our judgments about them.

That is one aspect of thinking. But there is another aspect—already referred to in Chapter Seven, [section 2](#)—in which we pass from the noting of the qualities and characteristics of things to the discovery of connections between them—a step towards explaining things, towards the formulation of theories and laws. For example, in Chapter Four, we had occasion to note that people actuated by prejudices are liable to make logical errors. We then suspected that the presence of prejudice had some connection with the liability to make logical errors. In other words, we pass from the categorical assertion that *(all) people actuated by prejudice are liable to make logical errors* to:

If a person is actuated by prejudice, he is liable to make logical errors.

And in doing so, we state that liability to make logical errors is a *consequence* of being actuated by prejudice, and that being actuated by prejudice is one *antecedent* condition of the liability to logical error. This is called a *hypothetical proposition*, and it has two parts: the *if* clause is known as the *antecedent* and the main clause as the *consequent*.

Symbolically expressed, it will run:

If X, then Y.

Universal generalisations can usually be put in this way: *e.g.*, [\(1\)](#) above would take the form:

If a person is an actuary, he is a mathematician.

It will be observed that this is *not* equivalent to saying:

If a person is a mathematician, he is an actuary,

or

If Y, then X: (the hypothetical form of illicit *conversion*)

nor is it equivalent to saying:

If a person is not an actuary, he is not a mathematician,

or

If not X, then not Y: (the hypothetical form of illicit *obversion*)

All we can say is:

If a person is not a mathematician, he is not an actuary,

or

If not Y, then not X .

8-2. Syllogistic Reasoning

So far we have been concerned with immediate inference only, and this is not strictly speaking deduction. Deduction involves applying the information contained in a proposition to a particular circumstance or set of circumstances, and drawing a conclusion different from the original proposition: that is, in the course of a deductive argument we move from one position to another in stages, and it is now our business to find out the forms these stages must take in order to make the conclusions arrived at valid, *i.e.*, to make them reliable guides for action or further thought.

Let us therefore apply the statement (1) *all actuaries are mathematicians* to a particular person, Benjamin Smith. It tells you that if B.S. is on the actuarial staff of the Lifebuoy Assurance Co., you might safely infer that he would be able to help you to solve a mathematical problem. It also tells you that, if you know that if B.S. is not a mathematician, though he may be employed by the Lifebuoy Assurance Co., it will not be as an actuary. Let us represent Mr Smith by the symbol S: then symbolically these arguments run as follows:

- (A) 1. All X's are Y's:
 2. S is X:
 3. therefore S is Y.

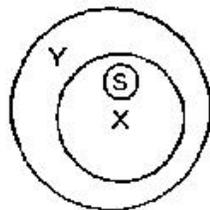
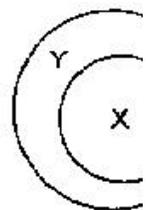


Diagram 5

- and (B) 1. All X's are Y's:
 2. S is not Y:
 3. therefore S is not X.



Diagram

Thus two items of information are put together—the first, the major premiss, in the form of a general statement, and the second, the *minor premiss*, in the form of a particular statement, and a third, called the *conclusion*, is deduced from them in the form of a particular statement. It will also be noticed that there are three terms (there cannot be more than three, see below), Y the *major term*, S the *minor term*, and X the *middle term*, and that the two premisses contain one common term (in the default of a common term no conclusion can be drawn).

It is also possible for both the major and the minor premisses to be general statements: in this case the conclusion will also be a general statement. Thus:

All non-utility garments are expensive:
all fur coats are non-utility garments:
Therefore all fur coats are expensive.

or

- (C)
1. All B are C:
 2. All A are B:
 3. therefore all A are C.

All these examples (A, B, and C) are valid deductive arguments in the form known as a *syllogism*. When I say that the reasoning is valid, I mean that the conclusion inevitably follows from the premisses, or, if you like, that the conclusion is *entailed* by the premisses. It does not necessarily follow that the conclusion is *true*: only when both premisses are true, is the conclusion also true. Whatever is entailed by true premisses is true—'entailed' implying that the reasoning takes a valid *form*.

The form therefore of an argument or piece of reasoning is vitally important. But, you might say:

"Why all this fuss about forms? No one but a fool could fail to see that the reasoning in A, B, and C above is sound. It's as plain as a pikestaff."

Yes, perhaps too much fuss has been made in the past about the principles of deductive reasoning. The medieval school-men thought that deduction was the chief

means of acquiring knowledge. We now realise that deduction can never teach us anything new: it can only tell us what is entailed by what we already know or assume.

But do not on that account underestimate the importance of form. When an argument is put in the form of a syllogism, or in another recognised structure, it is easy enough to tell whether it is sound or not. But unfortunately, we seldom put our arguments in a syllogistic form or in such a way that their essential structure is apparent. Very often, especially in a lengthy argument, we reason elliptically—hurrying on from one point to another, omitting a step here and there, and not stopping to make all the stages definite and explicit. We want to press on to our conclusion without wearying ourselves and making our hearers impatient by emphasising what we think ought to be obvious. In our hurry and impatience we thus tend to fall into confusion and error unwittingly; the sophist, on the other hand, deliberately glazes over or omits what is *not* obvious, and hopes to cover up his tracks by means of all the tricks of his trade. "Sophistry," says Archbishop Whately, "like poison, is at once detected when presented to us in a concentrated form; but a fallacy which, when stated barely in a few sentences, would not deceive a child, may deceive half the world, if diluted in a quarto volume." Even in a single piece of reasoning, we may omit a premiss (more often the major premiss), and sometimes the conclusion is left unstated and is left to the imagination. Again, before we get to the core of an argument, it is often necessary to strip it of irrelevancies, red-herrings, and rhetorical trimmings. In fact, it is pathetically easy to be misled unless we are able to distinguish and separate the *form* of an argument from its *content*. Hence we need to learn a little about practical logical technique to be able to reduce an argument to its essential structure and so find out whether it is *valid* or *invalid*. Having done this we can then turn to the content and consider whether the premisses and conclusion are *true*.

It cannot be sufficiently emphasised that not only may a perfectly logical argument be based on false premisses, but also true conclusions may be drawn as a result of unsound arguments. It is equally important that we should be able to detect both: the first, because otherwise we should be at the mercy of sophists or unscrupulous propagandists, who habitually argue logically from false premisses; and the second, because otherwise we might be tempted to condemn a conclusion as false on the ground that it was arrived at by bad logic.

Let us examine a few examples:

(a) All fungi are edible:
this is a fungus:
therefore this is edible.

Here the reasoning is sound. But the conclusion, if acted upon, might have serious consequences for you, for the major premiss is not true. But if the argument ran thus:

Some fungi are edible:
this is a fungus:
therefore this *may* be edible.

the reasoning is correct and the conclusion (for what it is worth) is true. It will at any rate induce caution, and perhaps lead to further investigation into the qualities of different kinds of fungi.

The major premiss in *(a)* is none other than a rash generalisation, arising from ignorance or limited experience. Enough has been said about this in [Chapter Seven](#). All that I wish to emphasise here is that in putting forward arguments of this kind, we often omit the *all* in the major premiss, and yet proceed as if it were understood.

(b) All poisons are harmful:
alcohol is a poison:
therefore alcohol is harmful.

Again the reasoning is correct. But is the minor premiss true, stated thus in a categorical and wholesale manner? Does it not need modification in some such way as this? Alcohol, taken in immoderate quantities and in certain conditions, is a poison. The conclusion therefore, as it stands, is not in accordance with fact.

(c) Augustus was a Roman emperor:
Julius Caesar was a Roman general:
therefore Julius Caesar was the uncle of Augustus.

Here both premisses are true, and Julius Caesar was in fact the uncle of Augustus, but it does not follow from the premisses: see the conditions mentioned below *(d)*.

- (d)** Loss of liberty makes men slaves:
I am denied the liberty of buying a glass of beer outside licensing hours
therefore I am a slave.

Here the reasoning is invalid, because in a syllogism among the necessary conditions of validity are:

- (1)** that there should be no more than three terms,
(2) that there should be one term common to both premisses, and
(3) that the terms should not change their meaning or application during the course of the argument

—it is understood that the symbols used have the same referents throughout the argument. Now liberty in the major premiss means all liberty; but the liberty in the minor premiss refers to a single liberty: so there are in fact not three, but four terms, and there is no common term.

This is an example of the *fallacy of equivocation*— easy enough to detect when a simple instance like this is analysed and explained. But equivocal arguments are by no means uncommon: sometimes equivocation is committed involuntarily and may be due to haziness and to the neglect, through haste or impatience, of the precaution to define carefully the vital terms in an argument or discussion; but at other times it is committed deliberately with the intention to deceive, and is part of the stock-in-trade of the unscrupulous propagandist or the platform speaker or heckler who is more anxious to score a cheap debating point than to elucidate the truth. Sophistry of this kind often gains credence in readers or hearers who are blinded by prejudice or whose power of rational thought is neutralised by passion or strong feeling, or who are still superstitiously susceptible to the magic spell of words. But all these matters have been fully dealt with in Chapters [Three](#) and [Four](#), and the reader is referred to these chapters again.

- (e)** All successful diplomats are noted for their tact:
Lord S. is noted for his tact:
therefore Lord S. is a successful diplomat.

i.e.

All X's are Y:
S is Y:
therefore S is X.

Here the conclusion *may* be true but it does not follow from the premisses—the reasoning is unsound. Reference to the diagram below will make this clear.

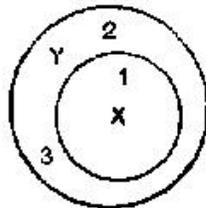


Diagram 7

Thus S may be at any of the points numbered 1, 2, and 3—not necessarily at 1, or at any other point *within* the circle X.

This type of fallacious argument may originate in a mistaken notion as to the immediate implications of the major premiss: the perpetrator of it may be first guilty of *illicit conversion* (q.v.), *i.e.*, he may imagine that *all X's are Y's* is equivalent to *all Y's are X's*. Or it may originate in a confusion between *all (and only)* and *all (but not only)*. Or it may be due to his forgetting that Y's stand for *some*, not all, Y's.

But whatever the origin, it is a very common error. So also for similar reasons is the following:

(f) All Council houses are let at uneconomic rents:
These houses are not Council houses:
therefore these houses are not let at uneconomic rents.

or

All X's are Y's:
S's are not X's:

therefore S's are not Y's.

Again, reference to [diagram 7](#) will make the error clear. By the minor premiss, S is excluded from circle X, but not necessarily also from circle Y. This error corresponds closely to *illicit obversion* (q.v.). Using the material of the example there quoted, the argument would run

All citizens are qualified to vote:
S is an alien (*i.e.*, not a citizen):
therefore S is disqualified to vote.

Similar errors to (e) and (f) are possible in the *hypothetical* syllogistic forms. Before reading what follows, refer again to what has been said about [hypothetical propositions](#).

The hypothetical form of [\(A\)](#) is:

(D) If a person is an actuary, he is a mathematician:
S is an actuary: (*i.e.*, the antecedent is affirmed)
therefore S is a mathematician.

or

If X, then Y:
S is X: (refer to [diagram 5](#))
therefore S is Y.

and of (B):

(E) If a person is an actuary, he is a mathematician:
S is not a mathematician: (*i.e.*, the consequent is denied)
therefore S is not an actuary.

or

If X, then Y:

S is not Y: (refer to [diagram 6](#))
therefore S is not X.

Valid conclusions are arrived at in (D) and (E) when the antecedent is affirmed or when the consequent is denied, and these conclusions will be true only if the premisses are true.

Let us look at some further examples.

If a competitor cheats, he is disqualified:
the competitor S has cheated:
therefore he is disqualified.

Here the argument is sound—the antecedent is affirmed. But an incorrect and possibly untrue deduction would be made if, instead of affirming the antecedent, you affirmed the consequent, and argued:

If a competitor cheats, he is disqualified:
the competitor S is disqualified:
therefore the competitor S has cheated

because cheating, the condition here mentioned for disqualification, is not necessarily the *sole* condition: the competitor may have broken some other rule.

Affirming the consequent is a very common source of fallacious reasoning and underlies the *post hoc ergo propter hoc* fallacy: it assumes that a consequence has only one condition or cause to account for it.

Nevertheless, the *cumulative* use of such reasoning is often the only resource in solving a mystery when direct evidence—testimonial evidence—is lacking, and in testing a hypothesis to find out whether it accounts for all the relevant data. Hence it is extensively used in detection and in building up what is called circumstantial evidence. Look back to Chapter Two where [stage 4](#) of the thinking process is elaborated. The detective there is confronted with a number of data—all suspected effects or consequences of some cause or condition he is trying to discover. A cause or condition to account for them is suggested to him. He then argues after this fashion:

If X, then Y1, Y2, Y3. Y4, . . . and so on
But Y1, Y2, Y3, etc. (*i.e.*, affirming the
consequent)
therefore X:

X being the suggested cause or condition and Y1....etc., being the probable results of X.
If all these results are confirmed by observation, and if there are no other relevant data
discoverable that point to a different cause, then X is probably true.

But X will remain at best probable in default of actual proof by way of experiment. For
example, the Medical Officer mentioned in Chapter Two argued thus:

If the epidemic was caused by contamination of milk, then the incidence of the epidemic will
correspond to the usual round of some milk retailer:the houses affected *are* all served by the
same milk retailer: (*i.e.*, affirming the consequent.) therefore the epidemic was probably caused
by milk contamination.

But he could not be sure until he had subsequently taken steps to stop the supply of
milk from that source and had found that the removal of the suspected cause was
followed by the discontinuance of the effect.

As you no doubt have already gathered, if my explanation has been sufficiently clear,
this process of reasoning is not deductive, but inductive. The principles of valid
deduction tell us that what is *entailed* by true premisses *must* be true. But Y1, Y2, Y3, are
not entailed by X, in the sense in which this word has been used, *i.e.*, they are not solely
and inevitably caused by X: they only *indicate* or *point to* X. Circumstantial evidence, as
you know, may be delusive: subsequent investigation and discovery may result in
unearthing a fact that entirely upsets a theory, however elaborately built up in its
absence. That classic of detective fiction, Mr E. C. Bentley's *Trent's Last Case*, provides a
very good example.

After this digression, let us turn to the second hypothetical syllogism (E). A correct
conclusion is arrived at if the consequent is denied. This form of argument is also very
commonly used in scientific investigation into causes: if the expected effect does not
occur, then the suggested cause can be ruled out. This is how the Medical Officer
tested and rejected his first hypothesis he argued thus:

If the epidemic was caused by simple infection from patient to patient, then the outbreak would be gradual and spread from family to family: (If X, then Y.)
but the outbreak was sudden and whole families were affected simultaneously : (Not Y.)
therefore the epidemic was not caused by simple infection from patient to patient. (therefore not X.)

But if the antecedent is denied, nothing conclusive follows: the effect is similar to that in (f) and in illicit obversion: *e.g.*

If a person is actuated by prejudice, he is liable to make logical errors
But S is not actuated by prejudice:
therefore S is not liable to make logical errors.

As you can see, liability to make logical errors may be due to sources other than prejudice : it may be due to ignorance, or excessive zeal, or carelessness. Reference to [diagram 7](#) will prove that exclusion from the X circle does not necessarily involve exclusion from the Y circle.

8-3. Some Arguments Analysed

Reference has already been made to the fact that many arguments are not put in syllogistic form, or are elliptic and omit a stage, or are otherwise so stated that their essential structure is obscured. The first step to be taken towards finding out whether such arguments are valid or not is to restate them in such a way as to make their essential structure clear; and this may involve supplying stages which are missing and altering the wording (but not of course the *meaning*) of the argument to make it fit the structure of a symbolic scheme. The use of symbolic schemes is an important safeguard against the prejudice that may arise in cases where the argument concerns some subject in which we are closely interested. Illustration by diagram- where this is possible and appropriate-can be used as a further check.

The following examples are intended to show how these restating and checking processes can be carried out. Some of them involve reference to symbolic schemes which have not previously been referred to; but they can be followed and understood without difficulty. In each case the original argument is first stated; then follows the restatement; then the symbolic scheme; and lastly the evaluation-valid or invalid. It is to be noted that only the validity, *not* the truth, of the conclusion is in question.

- (i) 1. People are flocking to see the new film at the Pantheon because it has a strong romantic flavour and a happy ending.
2. [All films having a strong romantic flavour and a happy ending are popular:]
the new film at the Pantheon has a strong romantic flavour and a happy ending: therefore the new film at the Pantheon is popular.
3. All X's are Y:
S is X:
therefore S is Y.
4. **Valid.** (N.B.—Major premiss omitted.)
- (ii) 1. If all people thought rationally, there would be no books on logic and kindred subjects.
2. If all . . . rationally, there would be no...subjects:
[but there *are* books . . . subjects: (denying the consequent)
therefore not all people think rationally.]
3. If X, then Y:
not Y:
therefore not X.
4. **Valid.** (N.B.—Minor premiss and conclusion omitted.)
- (iii) 1. The U.S.A. no doubt contains elements of many different races, but it must be counted among the Anglo-Saxon nations, all of whom are characterised by a strong individualism and a love of freedom. In no other country will you find more devotion to freedom and more opposition to socialism than in the U.S.A.
2. All Anglo-Saxon nations are individualistic and freedom-loving:
The U.S.A. is individualistic and freedom-loving:
therefore the U.S.A. is an Anglo-Saxon nation. .
3. All X's are Y:
S is Y:
therefore S is X.
4. **Invalid.**
- (iv) 1. No one would deny that the Athenians of the fifth century B.C. were highly civilised: their achievements in art, architecture, literature and philosophy have never been surpassed. Such achievements would have been impossible without leisure, and in Athens slave labour made leisure

possible. It looks therefore as if civilisation were impossible without some form of slavery.

2. All civilised states are leisured states:
all slave states are leisured states:
therefore all civilised states are slave states.

3. All A's are B's
All C's are B's
therefore all A's are C's.

4. **Invalid:** A and C are both within the B circle, but they need not coincide. In addition, of course, the argument is based on a generalisation derived from a single instance: therefore any valid deduction made would not be reliable.

- (v) 1. When we are interested in a subject, we are always on the *qui vive* for matter pertaining to it and so find it more easily than those who are indifferent.
2. If we are on the *qui vive* for matter pertaining to a subject, we find it with comparative ease:
if we are interested in a subject, we are on the *qui vive* for matter pertaining to it:
therefore if we are interested in a subject, we shall find matter pertaining to it with comparative ease.
3. If B, then C:
If A, then B:
therefore if A, then C.

4. **Valid.**

(vi) 1. The prosperity of a highly industrialised nation like Great Britain depends upon the maintenance of the importation of raw materials. These raw materials must be paid for by the exportation of manufactured goods. If therefore Great Britain fails to maintain a steady flow of such exports, she will cease to be prosperous.

2 & 3. If industries are to be kept going, if B
raw materials must be imported: then C
If Great Britain is to prosper, if A
her industries must be kept going: then B
therefore if Great Britain is to prosper (therefore) if A
raw materials must be imported. then C
If raw materials are to be imported, if C
manufactured goods must be exported: then D

therefore if Great Britain is to prosper,	therefore if A
manufactured goods must be exported.	then D
therefore if manufactured goods are not	therefore if not
exported,	D,
Great Britain will not prosper.	then not A.

4. **Valid.** (the consequent is denied)

8-4. Drawing The Line

I conclude this chapter with a reference to two examples of what may be termed *false logic*, *i.e.*, attempts to use obvious and self-evident logical rules or formulae to arrive at unwarrantable or inconclusive conclusions.

The first concerns the application of two fundamental logical laws—the Law of Contradiction and the Law of the Excluded Middle. The former states that A is not not-A, *i.e.*, that the same person or thing cannot be in the same sense A and not-A. The second that a person or thing is either A or not-A, *i.e.*, that there is no middle ground between them. (Observe in passing that either . . . or is here strictly *disjunctive* in meaning, *i.e.*, equivalent to not *both* . . . *and*; the alternatives they introduce are mutually exclusive.)

Now in these rules and formulae A and not-A are clearly *contradictories-terms* or notions that are absolute, and between which a hard and fast line can be drawn. *Mortal* and *immortal* are such terms; a man cannot be both mortal and immortal; he must be one or the other; there is no middle, undetermined, "no man's land" between the two.

But, unfortunately, we often confuse with contradictories and with each other two additional classes of terms or notions: (a) those that in some particular respect or other are merely *different*, and (b) those that are *opposite* or contrary, representing two opposite extremes of a continuous series of variations. Under different I would place such notions as *knave* and *fool*, *man* and *woman*. No hard and fast line can be drawn between knave and fool; the qualities of a knave and a fool may exist side by side in varying proportions in the same person. Men and women may from some points of view be contrasted or even placed at opposite poles; in some churches, for example, men sit on one side of the nave and women on the other; but from other points of view they are not opposites, far less contradictories. We must always know what other facts are

involved before we can determine whether such notions are really incompatible.

Under *opposites* or *contraries* we may class such relative terms as *young* and *old*, *sweet* and *sour*, *sane* and *insane*, *civilised* and *uncivilised*; between them there is a real difference, which can be more or less accurately measured in some quantitative way; but we cannot draw a hard-and-fast line of distinction between them, *i.e.*, if we do employ some quantitative means of measurement, we cannot say precisely at what point a person or thing ceases to be one and becomes the other. In fact they shade off by almost imperceptible degrees into each other. Hence the delimitation or *definition* of such terms, in the strict sense, is bound to be difficult, [if not impossible](#); and any attempt at precise definition might be used by an unscrupulous or captious opponent to force you to admit opinions which you do not hold. Socrates employed these tactics with devastating effect upon the Sophists.

People who make a great pretence of being logical, on whose lips "logical" and "logically" constantly recur, are often the first to apply the Law of Contradiction and the Law of the Excluded Middle in cases where opposite and not contradictory terms are in question, either to their own confusion or to the confusion of others. The following simple dialogue may help to make this clear.

X.: "I shouldn't call Senor Fulano old; he is only 55.

Y.: "When then exactly would you say that a man becomes old? 56, 57, 58, 59 ."

X.: "I can't exactly say. It all depends... "

Y.: "Come! Come! No hedging! You must draw the line somewhere. Be *logical*."

[Y. is wrong: logic cannot help; logic cannot provide a rule that can be applied in every case.]

X.: "But so much depends on the man himself. After all a man may be quite grey and yet possess all the vitality of youth."

Y.: "Well, then, give me your definition of old."

[Y. is here attempting to pin X. down to a definition, which he may subsequently use to X.'s discomfiture; but X. is not to be drawn.]

X.: "You are asking me to do the same thing as when you asked me where I would draw the line. I tell you it can't be done. Between the two extremes there are almost any number of stages at which it is impossible to say whether any particular man has ceased to be young and has become old."

Y.: "In other words, *logically*, according to you, there is really no difference between young and old."

[Y.'s third mistake; note how X. deals with him.]

X.: "Not at all. Just because it is impossible to say, to a year, where youth ends and old age begins, it does not follow that there is no difference between a baby in a cradle and a man of 90 in a bath-chair."

Classification into categories is, as we saw at the beginning of [Chapter Seven](#), a necessary preliminary to exact thinking, and when such categories are clearly defined or delimited, then the laws of formal logic will tell us whether an argument based on them is valid or not. But there are facts which cannot, owing to their own nature, be fitted into clear-cut categories, and any attempt to do so is likely to lead to error. It is just as foolish, however, to use this as an excuse for vacillation or indecision in a specific case where opposite or contrary notions are involved. Zealous partisans would have us believe that all that their party stands for is good and all that the other party stands for is bad. We may doubt this, especially when we have seen the claims of the other side. But that is no valid excuse for shrugging one's shoulders and saying that the policies of both parties are equally good or equally bad, and that therefore there is no point in choosing one or other. We are not thereby absolved from the duty of weighing and considering the rival policies, of estimating to the best of our ability *how much* good and *how much* bad is likely to accrue from each, and of coming to decision after setting one against the other.

One more illustration before we pass on. To state categorically that the Middle Ages ended and Modern Times began in 1453 would reveal a very imperfect interpretation of the movements and tendencies in European History; it is no doubt a convenient date to remember, but the statement is an oversimplified summary of a complicated variety of changes spread over a long period of time. But that is no reason why we should not continue to distinguish between those two successive periods and to label them "Middle Ages" and "Modern Times"; nor why we should not continue to make generalisations about the contrasting characteristics of each.

8-5. Dilemmas

My second example of false logic concerns the use of the dilemma in argument.

In popular speech, a dilemma is a situation in which there are only two possible courses of action either of which leads to unpleasant consequences. In Logic the term is applied to a form of argument intended to force an opponent to choose one of two alternatives,

both unfavourable to him. The medieval schoolmen called it *argumentum cornutum*—a horned argument—from a fanciful resemblance to the horns of a bull which will toss you whichever horn you lay hold of. Hence the expression "*on the horns of a dilemma*," and the epithet "gored" for the unfortunate victims.

In Logic the dilemma may take various forms. Let me give a symbolical representation of one or two, and then translate them into concrete terms.

(a) If A, then B; and if C, then B.
But either A or C

(i.e., affirming the antecedents).

Therefore B.

This may be put concretely thus:

If the train is late (A) (I might catch it, but), I shall miss my appointment (B); and if the train is punctual (C), (I shall not be able to catch it and) I shall miss my appointment (B).
But either the train is late (A) or it is punctual (C).
Therefore in either case I shall miss my appointment. The natural corollary is—It's no good my hurrying to catch the train; I may as well finish my breakfast and catch a later one.

(b) If A, then B; and if C, then D.
But either A or C

(i.e., affirming the antecedents).

Therefore either B or D.

Or, in concrete terms,

If you advise a friend what he means to do (A), your advice is superfluous (B); and if you advise him what he does not mean to do (C), your advice is ineffectual (D).
But you must either advise a friend what he means to do (A), or advise him what he does not mean to do (C).
Therefore your advice is either superfluous (B) or ineffectual (D).
And, of course, it follows—Don't offer advice to friends; better save your pains.

You will note that the major premiss takes a *hypothetical* form, and the minor a *disjunctive* form. Therefore in using the dilemma, we are liable to make the errors incidental to the use of both these forms of propositions. That is (i) we must not deny the antecedent, or

affirm the consequent; and (ii) we must be careful to see that the alternatives are either contradictories or mutually exclusive. They must cover all the possibilities, no cases must be overlooked and no circumstances left out of account. On the assumption that the conditions of (i) are strictly observed, the dilemma can never be more than a *formal* argument (like those based on the Law of Contradiction and the Law of the Excluded Middle above); and, if the result is inconclusive, as it frequently is, the fault lies in the terms used, or in the omission of one or more relevant circumstances.

In the first example quoted, the conclusion drawn is invalid because I have neglected one possibility at any rate, namely, that the train may not be very late and may easily make up time before reaching its destination, so that I may be able to keep my appointment after all. In the second example, one possible alternative is omitted, namely, that the friend may not mean to take any particular action until you have advised him; the alternatives, too, are not mutually exclusive.

Let us consider other examples, and note in passing that in actual argument the form of the dilemma as stated above is not always strictly adhered to—the minor premiss and/or the conclusion being frequently omitted.

Someone arguing in support of tariffs might say:

"Tariffs will either reduce imports or they will not; if they do (A), they will provide more work for home manufacturers (B); if they don't (not-A), they will increase the revenue from customs (C)."

[i.e., If A, then B; and if not-A, then C.
But either A or not-A.
Therefore either B or C.]

His opponent might object thus:

"Tariffs will either reduce imports or they will not; if they do (A), they will not increase the revenue from customs (not C); if they don't (not-A), they will not provide more work for home manufacturers (not B)."

[i.e., If A, then not C; and if not-A, then not B.
But either A or not-A.
Therefore either not C or not B.]

First of all, let us observe that this attempt at rebutting the argument is worthless, for its conclusion is not opposed to that of the original dilemma which demanded *either B or C*, not *both B and C*. But, unfortunately, outside logic, *either . . . or* is often used as equivalent to *alike . . . and* or *both . . . and* (compare [1](#) in the next chapter); and it is perhaps not surprising that *either not C or not B* is often mistaken for *neither C nor B*, which is not the same thing.

The more important point, however, is that both dilemmas are inconclusive; for what is still needed is a concrete estimate of *how much* gain and *how much* loss can reasonably be looked for, how general prosperity and international good feeling will be affected, and a host of other considerations.

The device used by Bishop Morton in the reign of Henry VII to extract "benevolences" from unwilling contributors was a practical application of the dilemma in this case familiarly known as "Morton's fork." According to Bacon, Morton instructed his officers that "if they met with any that were sparing, they must tell them that they must needs have because they laid up; and if they were spenders, they needs must have, because it was seen in their manner of living."

8. Questions On Deduction

1. On the assumption that a man must be over 21 years of age to qualify for a vote, does it necessarily follow that:

- (i) If Smith has a vote, he is over 21.
- (ii) Every man who is over 21 has a vote.
- (iii) A man who is under 21 has no vote.
- (iv) If a man has no vote, he is under 21.
- (v) Either Smith has a vote, or he is under 21.
- (vi) Either a man has no vote, or he is over 21.

2. During war time the Government put many restrictions on individual liberty and you tolerated them willingly. Are you entitled to infer from this fact that you are justified in being loth to tolerate restrictions in peace time? Give a reason for your answer.

3. What conclusion can be validly drawn from the following pairs of statements? Where no conclusion can be validly drawn, state the reason.

- (i) All actuaries are mathematicians:— All statisticians are mathematicians.
- (ii) Some criminals are deserters:— Smith is a deserter..
- (iii) No professionals are allowed to compete:— Smith is an amateur..
- (iv) No professionals are allowed to compete — Smith is not allowed to compete.
- (v) No professionals are allowed to compete:— Smith is allowed to compete.
- vi) In all bureaucracies corruption is rife— Corruption is rife in Ruritania.

4. On what generalisations are the following opinions based?

- (i) The customer cannot expect much consideration from a monopoly like the London Passenger Transport Board.
- (ii) Doctrinaire? Why, of course : he comes from the X— School of Economics.
- (iii) You need have no hesitation about buying this house. The drains are in perfect order.
- (iv) Why do you blush? You have nothing to be ashamed of.
- (v) You say the novel you refer to is all about Wessex? Ten to one it was written by Thomas Hardy.

The following arguments are set for analysis and criticism on the lines of the examples in the text of this chapter

- 5. Look at all those people walking! They must have missed the bus.
- 6. Nations with large armies carry great weight in international affairs. If therefore a nation wishes to be influential, it must maintain a large army.
- 7. Si vis pacem, para bellum. Ruritania is preparing for war, therefore she wishes for peace.
- 8. Luck too often favours the undeserving examination candidate. If luck could be eliminated from examinations, the deserving candidate would have a better chance of success.
- 9. All the best poets are word-artists. If therefore you cultivate artistry in the use of words, you will write good poetry.
- 10. Youth is not the period for contented acquiescence. Only those who have forgone their ambitions are contented; and no young person lacks ambition.
- 11. It is pretty obvious this burglary is the work of a real professional: no amateur would have been half so clever.

12. All the unruly elements in the school come from the X district—what else could you expect?

13. Mother (to son) : You'd better ask your form-master.

Father: Every human being is liable to error and schoolmasters are no exception; so your form-master is not infallible.

14. A.: There's been a great increase in crime lately, especially in burglary. I expect it's due to all these deserters from the army who are afraid to disclose their identity and therefore can only earn a livelihood by dishonest means.

B.: No doubt desertion may lead to crime. But to attribute all the increase in crime to deserters is to stigmatise unduly a great many men who, however mistaken they may be in not facing the consequences of desertion, have not stooped so low as to break the criminal law.

15. Irishman (looking at the result of the draw of a sweep) : What a hit of luck!

B. : Why, have you drawn a horse?

I. : No.

B.: Then why are you lucky?

I.: Because I didn't buy a ticket.

16. The Prime Minister's broadcast the other night on the fuel crisis was a ' flop '—he was so cold and matter of fact. People won't rise to the occasion in a crisis unless their feelings are roused and their imagination stirred.

17. You can't make a man moral by Act of Parliament, so the new Betting Bill is doomed to failure at the outset.

18. Workers will not give of their best unless they are contented. There is widespread discontent among the industrial workers in the X district caused by the lack of suitable housing accommodation, and so the output per man-hour in the X factories is low compared with that in the neighbouring town of Y where the housing problem is less acute.

19. He must be a sailor. Look at his rolling gait.

20. If a boy cheats in an examination, he deserves to fail. But Smith did not cheat, therefore he did not deserve to fail.

21. I always keep strictly to the law. But I have looked carefully and cannot find any regulation that forbids me to do this, therefore I am justified in doing it.

22. No Church of England clergyman is allowed to sit in the House of Commons. It follows that all M.P.s are laymen.

23. He is the finest character I know. I do not believe he has a single vice.

24. If anyone wishes to get on in politics these days, he must either be uncommonly clever or possess unlimited means. Smith has plenty of money and brains and so is sure to succeed.

25. Genius is akin to madness. As Smith is no genius, he is never likely to lose his reason.

26. Whatever is rare and desired is dear. Cheap diamonds are rare and desired : therefore cheap diamonds are dear.

27. At the election one ought to vote for clever candidates, but so many candidates are stupid

that it is better not to vote at all.

28. No law-abiding man steals. I don't steal : therefore I am a law-abiding man.

29. Appearances are deceitful. Smith looks honest, and so the odds are he's a scoundrel.

30. Killing a man is murder, so capital punishment is murder, for it involves killing a man.

31. Counsel For The Prosecution: My learned friend has made an irrelevant observation. Other distinguished lawyers have done the same, so he is in good company.

Counsel For The Defence: I hasten to assure my learned friend that the observation I made was very far from being irrelevant, as I hope to show later.

Judge: It follows therefore that you cannot be a distinguished lawyer. (Laughter in Court.)

32. Colonies are indispensable if we are to be prosperous. For if we had no colonies, from where could we be sure of obtaining the raw materials for the industries on which we depend for our prosperity?

33. No child can really learn unless his curiosity has been awakened and unless the interest aroused by this curiosity is strong enough to induce him to satisfy it. No teacher can expect to awaken curiosity or stimulate interest in a child unless his methods are such as to induce a state of willing receptivity which can only exist in a happy and contented mind. Harsh methods and Spartan discipline may succeed in driving knowledge into unwilling heads but the knowledge thus acquired is seldom of any lasting advantage and if it is retained at all, the interest behind its retention is the result of fear, not of willing co-operation. Hence it is the prime business of every teacher to make his pupils happy and contented : they will thus regard learning as a form of self-amusement; and indeed the only effective way to learn is by amusing oneself.

34. Russian propaganda is very busy at the moment telling the world that Great Britain should reduce her military forces drastically and withdraw her armies from Greece, the Middle East and other quarters, as well as from the occupied zone of Germany. Many Labour back-benchers, as well as the Communist Party, are urging the same. The Russian influence, thus obvious in and out of the House of Commons, is a very disturbing feature in contemporary politics.

35. A general ought to be the servant of his own government, and of no other. It follows that whatever rewards he receives for his services ought to be given either by his own government, or with the full knowledge and approbation of his own government. This rule ought to be strictly maintained even with respect to the merest bauble, with respect to a cross, a medal, or a yard of coloured riband. But how can any government be well served, if those who command its forces are at liberty, without its permission, without its privity, to accept princely fortunes from its allies?

It is idle to say that there was then no Act of Parliament prohibiting the practice of taking presents from Asiatic sovereigns. It is not on the Act which was passed at a later period for the purpose of preventing any such taking of presents, but on grounds which were valid before that Act was passed, on grounds of common law and common sense, that we arraign the conduct of Clive. There is no act that we know of, prohibiting the Secretary of State for Foreign Affairs from being in the pay of continental powers. But it is not the less true that a Secretary who should receive a secret pension from France would grossly violate his duty, and would deserve severe punishment.(— MACAULAY, Clive.)

36. An Incident At The Mad Hatter's Tea-Party

"I believe I can guess that," Alice added aloud.

"Do you mean that you think you can find out the answer to it? " said the March Hare.

" Exactly so," said Alice.

"Then you should say what you mean," the March Hare went on.

"I do," Alice hastily replied; "at least—at least I mean what I say—that's the same thing, you know."

"Not the same thing a bit! " said the Hatter. "You might just as well say that ' I see what I eat ' is the same thing as 'I eat what I see!'"

You might just as well say," added the March Hare, "that ' I like what I get' is the same thing as ' I get what I like '

37. Alice In Wonderland Again

Alice, in one of her very tall moments, finds herself looking down into a nest of pigeon's eggs in the topmost branches of a tree. "Serpent! " screamed the Pigeon.

"You're a serpent; and there's no use denying it. I suppose you'll be telling me that you've never tasted an egg!

"Little girls eat eggs quite as much as serpents do, you know."

"I don't believe it," said the Pigeon; "but if they do, why, then, they're a kind of serpent, that's all I can say.

38. The second Caliph, Omar, after his capture of Alexandria in 642, justified the burning of the famous library there by saying that its destruction would be no loss, for if the volumes contained the same doctrines as the Koran, they were unnecessary, and if they contained doctrines at variance with those of the Koran, they were pernicious.

39. It is useless forcing the employers to raise the wages of their employees : for either they will close their works and thus throw the employees out of work; or they will pass on the increased cost to the consumer, the consumer will then buy fewer manufactured products, and the employees who remain at work will be put on short time and will earn no more and perhaps less than they did before.

40. It is no good compelling undergraduates to attend their College Chapel. If they care about it, they will attend in any case; if they do not, then it cannot do them any kind of good.

41. No conscientious barrister would defend an accused person. For an accused person is either innocent or guilty. If he is innocent the fact must be evident to the judge. If he is guilty, then he ought not to be defended.

42. A young man aspiring to be a barrister promised to pay his tutor for his lessons as soon as he had won a case. A brief did not come his way until he was sued by his tutor for payment. He then argued that if he won his case, according to the judge's decision, he would not have to pay; and that if he lost, the terms of his agreement would not have been fulfilled, and he would still not have to pay. "Not at all," replied his tutor, "if you win, you must pay according to the terms of our agreement; and if you lose, the judge will condemn you to pay."

9. Common Fallacies

THE last chapter dealt mainly with deductive *forms*, and in the course of it we had occasion to note several formal fallacies, *i.e.*, arguments which were inconclusive or invalid because of some error in their structure. In this chapter we turn our attention to a number of common *material* fallacies, *i.e.*, those concerned with the matter rather than with the form of arguments.

<u>1.</u>	The Fallacies Of Composition And Division	<u>5.</u>	Circular Arguments
<u>2.</u>	The Fallacies Of Accident	<u>6.</u>	The Vicious Circle
<u>3.</u>	Begging The Question	<u>7.</u>	Ignoring The Point
<u>4.</u>	Complex Questions	<u>8.</u>	Extension And Diversion

1. The Fallacies Of Composition And Division

These names are given to errors caused by offending against the following rules:

- (a) What is true of one or more parts of a whole, taken separately or distributively, is not necessarily true of the whole; and conversely,
- (b) What is true of the whole is not necessarily true of the parts taken separately.

For example:

- (a) It is often argued that, because a particular measure benefits one section of the community, it is bound to benefit the community as a whole. This is a plausible plea often put forward by particular business, trade or professional interests, when they are trying to persuade the Government to afford them special privileges.
- (b) Vice versa, a Governmental measure that benefits the community as a whole is not bound to benefit every section of the community, at any rate not to an equal extent; in fact, if we believed the complaints of certain sections, when some such measure is put into operation, we should conclude that it was definitely to their disadvantage.

Ignorance of these two rules leads to curious cases of self-deception. A person might argue, quite legitimately, that a certain proposal, if carried into effect, would result in this *or* that *or* the other advantage. Often before the end of the argument he will have persuaded himself that it would result in this *and* that *and* the other advantage. It is a common occurrence to find a person thinking that, if the chances of one event are, say, 6 in 10, and those of another event 7 in 10, the chances of *both* events coming off are about the same; whereas the mathematical chances of the double event are only 42 in 100, *i.e.*, a little over 4 in 10.

"I can't go to Church *every* Sunday," is often put forward as an excuse for not going at all! "It is quite impossible for me to respond to *all* the charitable appeals that are made to me" is a convenient excuse for not responding to *any*.

I found the following extract in the 1935 Election Address of a Labour candidate:

"Modern technique is able to create continually greater wealth with the employment of fewer persons and, so far as the majority of them are concerned, less skilled persons. This means that a smaller proportion of the total wealth is distributed in wages and salaries, and that, as the bulk of our population maintains itself out of wage and salary earnings, the majority of the people receive a proportionately smaller share of the total social product."

This well illustrates the fallacy arising from neglect of the rules we have just been discussing. The first sentence applies to certain *particular* industries, and not to industry as a whole, in which the aggregate of employment tends to increase. The second sentence applies to "total wealth" the argument which has been made good only for particular industries, and it ignores (a) the vast increase in the total wealth of the country, (b) the increasing number of new industries. Did the writer really seriously contend that the share of the wage-earner, including State services (education, insurance, public health services, pensions, etc.), was less in 1935 than, say, in 1825?

2. The Fallacies Of Accident

This is the name given to fallacies arising from neglect of the following rules:

- (a) What is true of a thing generally is not necessarily true of it in some accidental or peculiar circumstance; and conversely,
- (b) What is true of a thing in some accidental or peculiar circumstance is not necessarily one of its general or essential properties or characteristics.

In other words, people often forget that *circumstances alter cases*. For example, (a) Because the laws of England do not generally interfere with the right of citizens to engage actively in politics, it does not thereby follow that civil servants and police are at liberty to do so, for they are in a peculiar position as employees of the state or of local authorities. (b) It would be unjustifiable to defend lying and deceitful propaganda generally, on the ground that it is considered expedient in war-time to issue false information in order to deceive the enemy. Lying undermines the mutual confidence necessary for human intercourse, but the saving of life may outweigh that consideration.

3. Begging The Question

To beg the question is to assume the point in dispute, *i.e.*, to smuggle into the premisses the conclusion about to be deduced. Begging the question may take a number of forms, which the following illustrations may help to make clear:

- (a) One of the commonest tricks of the Question-beggar is to begin his argument with "It is only too clear that . . .," or "It is beyond dispute that . . .," "All thinking men are agreed that . . ."—on the lines of Macaulay's *Every Schoolboy Knows*. In any case, common notions are not necessarily common sense (see Chapter Six, [section 2](#)).
- (b) A discussion is proceeding on the merits of Means Tests. One of the disputants says : "Means Tests are bad: all these prying inquisitions into a citizen's private affairs are bad." This is begging the question by assuming, or stating without proof, a general rule which covers the particular point at issue.
- (c) Again if you were to argue that state subsidies were bad because they offend

against sound economic principles, you would beg the question. The reason you give for your opinion is already contained in the opinion itself; for what does *bad* mean in this context but *inconsistent with sound economic principles*?

(d) Another method of begging the question is to give, as a proof of a fact, the same fact or its virtual equivalent in a different set of words. Here is a magnificent example quoted by Whately:

"To allow every man an unbounded freedom of speech must always be, on the whole, advantageous to the State; for it is highly conducive to the interests of the community that each individual should enjoy a liberty, perfectly unlimited, of expressing his sentiments."

This is very much like saying that no news is good news because the absence of information presupposes satisfactory developments!

Begging the question in this way is a common device of speakers when they wish to evade giving direct answers to awkward questions, and of Cabinet Ministers when they are faced with the task of explaining awkward facts. It was an attempt to use this device which drew the famous retort "The Right Honourable gentleman thinks he has accounted for a fact when he has covered it with a phrase."

(e) A., in the course of a discussion on modern music, makes the sweeping generalisation that all modern composers consider melody a sign of decadence. B. protests, and mentions D— and W—. A. says, "Ah, but I mean all composers with the *true* modern spirit." When B. presses him to be less vague, and more explicit, "What is a sign of this 'true modern spirit'?" A., now cornered, lamely says, "Absence of melody."

A. has begged the question; because, in the light of his subsequent interpretation, all that his original proposition meant was, "New-fashioned composers object to old-fashioned methods."

The remedy for this type of begging the question is *precise definition* of vital terms at the outset to a discussion. Obviously you cannot get very far if you really do not know exactly what the disputed point is.

(f) The question-begging use of the epithets *true* and *sound* has been pointed out in

examples (c) and (e). In any dispute involving the meaning or application of *moral* or *aesthetic* judgments, great care must be taken not to prejudge the issue by using loosely epithets like good, bad, true, sound, real, honest, proper, etc., *e.g.*, All *good* patriots are internationalists, or All people who *really* love their country support the United Nations.

Such propositions cannot be debated.

(g) When we allow our notions of right and wrong to be determined by our likes and dislikes, or by our individual preferences, we are guilty of begging the whole question of good and evil. This is perhaps the most mischievous form of the fallacy, and has been treated more fully in the chapter on [Prejudice](#).

(h) The question-begging effect of words with emotional values has already been discussed fully in [Chapter Three](#).

4. Complex (Leading) Questions

These are interrogative forms of question-begging. Perhaps the most familiar example is:

Have you ceased beating your wife?

The person asked this question cannot reply by a plain *Yes* or *No*, without also assenting to the assumption, contained in the question, that he had, at some time, been in the habit of beating his wife. The question, of course, can be answered by dealing with the assumption first, *i.e.*,

"I have never been in the habit of beating my wife, and therefore the question whether I have ceased to do so does not arise."

But it takes time and deliberation. A nervous witness during cross-examination could be made to make very damaging admissions by unscrupulous use of this type of question on the part of counsel.

Charles II once proposed to the Royal Society as a question,

"Why is it that a vessel of water receives no addition of weight from a live fish being put into it, though it does if the fish be dead? "

It was not surprising they were unable to give a satisfactory reply, because the fact assumed in the question was not a fact at all!

5. Circular Arguments

A *Circular Argument* is still another form of begging the question, although it is usually considered separately.

Arguing in a circle is first using a premiss to prove a conclusion, and then using the conclusion to prove the premiss; in other words, it is an attempt to prove two statements reciprocally from each other.

You quote, we will say, as evidence in support of some point you are making, certain statements which appear only in F 's Diary. Later on in the argument, when your opponent expresses his doubt as to the authenticity of F 's Diary or its trustworthiness as a source of evidence, you say, perhaps not in these words, that it must be reliable and authentic because it contains the information you have already quoted. Then you are arguing in a circle; your argument boils down to this:

These facts are true because they are in F 's Diary.
F 's Diary is true because it contains these facts.

The symbolic form of such an argument could be put thus:

If A, then B: if B, then C: if C, then A.

Let me draw on *Alice in Wonderland* for an amusing example of this fallacy.

In *that* direction," the Cat said, "lives a Hatter and in *that* direction lives a March Hare. . . . They're both mad."

"But I don't want to go among mad people," Alice remarked.

"Oh, you can't help that," said the Cat: "we're all mad here. I'm mad. You're mad."

"How do you know I'm mad?" said Alice.

"You must be," said the Cat, "or you wouldn't have come here."

Alice didn't think that proved it at all.

When the circular argument is expressed in simple and unmistakable language, with the intervening discussion omitted, it is easy enough to detect, and you might justly say that no one in his senses would ever be deceived. But when the two halves of the circle are widely separated, and the disputant uses his terms loosely and vaguely, then the argument has a plausibility about it that may deceive a hearer who is not alert.

6. The Vicious Circle

In Logic, *Circle* and *Vicious Circle* are the same thing.

Outside Logic, the term Vicious Circle may be properly applied to "the reaction between two evils that aggravate each other: the wrecked sailor's thirst makes him drink salt water; the salt increases his thirst." (Fowler, *Dictionary of Modern English Usage*.)

But the term is often improperly applied to a state of things when two conditions exist side by side, or follow each other, and are only *apparently* connected by a causal relation. (See under [Cause and Effect](#).) *Drunkenness—poverty, poverty—drunkenness* and *armaments—war, war—armaments* are often cited as vicious circles from which it is impossible to escape. The solution is—look *outside* the so-called circle for *another* condition, of which these two conditions are both effects: if that condition can be found and remedied, then both drunkenness and poverty, war and armaments will be obviated.

Another "vicious circle" is the gist of an argument often put forward as an excuse for inaction by those who are too comfortable to care about bettering others' social conditions. They say something like this:

"What's the use of all these schemes for slum clearance? You uproot these people from their drab and sordid houses in the slums, and plant them in a garden city. In a year or two you will find they have chopped up the banisters for firewood and are storing coals in the bath, and soon your vaunted model dwellings will be slums again."

Or this,

"I believe in improving the condition of the poor, but the trouble is that, if you make them better *off*, they only multiply faster, and thus keep themselves in their old condition of poverty."

7. Ignoring The Point

"Keep to the point" is excellent advice in any kind of speaking or writing; and nowhere is it more desirable than in argument. But many people find it desperately difficult, especially, as is only natural, when they are not clear in their mind as to what the exact point is.

Consider the course of the following discussion

A: No patriot would refuse to take up arms in defence of his country.

B: Oh, come! What about the Quakers? They are forbidden by their religion to fight.

A: Yes, but they performed useful services in the last war—they acted as stretcher-bearers and hospital orderlies. It all comes to the same thing, doesn't it?

"A" is shifting his ground or ignoring the point. As it turns out, his original proposition does not mean what it says; it means something else that was at the back of "A"'s mind; it means, in effect, "No patriot would refuse to do what I consider a patriot ought to do."

And that is not a very fruitful subject for discussion, is it?

"A"'s evasion of the point was no doubt unintentional and due more to haziness and carelessness than to deliberate intention to mislead. But it is a device commonly practised deliberately by those who have a weak case. If a barrister, acting for the prosecution in a criminal case, instead of proving that the accused had committed an atrocious fraud, concentrated his efforts on proving that the fraud of which he was accused was atrocious, he is deliberately throwing the jury "off the scent" by "dragging a red-herring across the trail."

Macaulay somewhere vehemently accuses the apologists of Charles I of blatantly ignoring the point: for, he says, when that ill-fated king's statesmanship is called in question, they harp on his piety, his faithfulness as a husband, his paternal solicitude for his children, etc. "Ample apologies indeed for fifteen years of persecution, tyranny and falsehood"—thus Macaulay clinches his argument.

Writers on logic have special names for the various kinds of ignoring the point. I will give you them because they are easy to understand and convenient to use for purposes of

classification. They are all opposed to *argumentum ad rem* (i.e., to the point).

- (a) *Argumentum ad hominem*, i.e., an argument directed towards an individual. I overheard the following remark in the train the other day: "You shouldn't have any use for these new tariffs, for your bread and butter depends on the import trade." The speaker is trying to dissuade his opponent from the view the latter had expressed, by suggesting that his own livelihood would be adversely affected if it was adopted. But the *argumentum ad hominem* may be legitimately applied to individual people when we are taxing them with inconsistency. If, for example, someone has repeatedly asserted that the State system of education is the best and that the State primary schools provide by far the most satisfactory and efficient form of elementary education, and that it is everyone's duty to support them, and sends his own children to private preparatory schools, we should be justified, in the absence of any special circumstances affecting the case, in retorting, "Why, then, don't you send your children to the State primary schools?" But this type of argument, even when properly applied, is addressed to the peculiar circumstances, character, avowed opinions or past conduct of the individual, and therefore has a reference to him only, and does not bear directly and absolutely on the real question, and is thus not an *argumentum ad rem*.
- (b) *Argumentum ad baculum* (baculus = the "big stick"). This, strictly speaking, is not argument at all, but an appeal to force.
- (c) *Argumentum ad populum* is an appeal to popular passion or prejudice. "It's not done among the best people." "It's not cricket." "It's not British." The use of words or phrases with an emotional appeal, calculated to arouse passion or prejudice in the minds of their hearers, is a common rhetorical device to cloud the issue or to divert attention from the real point.
- (d) *Argumentum ad ignorantiam* is attempting to prove an affirmative by showing that the negative has never been established. "Mermaids must exist, because no one has ever proved that they don't." "Nobody has a good word to say for him; therefore he must be a scoundrel."
- (e) *Argumentum ad verecundiam* is appealing to reverence for some respected authority, or some venerable institution, or some long-cherished tradition, or one's own qualifications to speak with the voice of authority. Watch the correspondence column in your newspaper for expressions like these: "Speaking as a schoolmaster of some 35 years' experience..." "Having spent the better part of a lifetime in the service of the British Raj in India. . . ." Observe also the attempts made to disguise an appeal *ad verecundiam* by the use of mock-modest introductory phrases; e.g., "I happen to be a licensed lay-reader. Naked appeals to authority usually arise from prejudice.
- (f) Perhaps the commonest form of *ignoratio elenchi* or ignoring the point is summed up in the legal tag, "No case: abuse plaintiff's attorney." This should explain itself.

These arguments are all irrelevant, but they are not dishonest, unless the man who uses them deliberately intends to deceive.

8. Extension And Diversion

I devote a separate section to these forms of ignoring the point because they are some of the commonest methods of misrepresentation used in unscrupulous propaganda and controversy.

Extension consists of attributing to an opponent a contention that he has not really made or interpreting that contention in terms unfair to him. It often takes the form of attacking a more extreme form of the proposition which an opponent is putting forward or defending. A., shall we say, makes a moderately worded Statement beginning *Some . . .* B. will be guilty of extension if he attacks A. as if he had said *All . . .* Jones defends the government's policy on Social Security. Smith retorts: "From the way you talk, this measure will abolish poverty, want and disease: in fact, it's going to bring about perfect bliss and contentment—the return of the Golden Age. Another Utopian dream." Robinson argues that all *war* is wrong. Tompkins, instead of attacking this contention, devotes himself to rebutting the more extreme contention that it is always wrong *to use force*, and this, of course, is a much easier thing to do—it gives him more chance to hold up Robinson's views to ridicule. And Tompkins, and people like him, often make a pretence of taking up their attitude on *logical* grounds: they will preface their extension device by saying, "logically speaking . . .," or "to be logically consistent . . .," or "if you carry Robinson's argument to its logical conclusion, it means . . ." *In other words* also is a common phrase used in extension to introduce a gross misinterpretation of an opponent's proposition. "You advocate the nationalisation of all Banks? In other words, you're a red-hot communist."

Diversion is also used with similar intentions. It is a common device of speakers and hecklers at political meetings for scoring cheap debating points or raising laughter, and so evading the point at issue. Here are two examples I heard recently:

- (i) A They manage these things better in the U.S.S.R.
B. Well, if you think so, you'd better go and settle there.
- (ii) A We've got a lot to learn from the U.S.S.R.
B. D'you mean to say we've got nothing to teach them?

(Readers will find plenty of examples of material fallacies among the miscellaneous questions at the end of this book.)

10. Epilogue

TRUTH is hard to come by. This much you must have gathered from the preceding chapters, if you have gathered nothing else. Language is an obstacle. It is not yet a perfect vehicle for our thoughts. It is difficult to make ourselves understood; it is no less difficult to understand others. Words tend to remain fixed; what they represent tends to change. The stream of information is often arrested or diverted or even polluted on its course. We allow ourselves to be flattered, cajoled, bullied, stampeded or drugged into ways of thought without much resistance. Our moral and intellectual make-up is a medley of vague aspirations, reason and prejudice. We would like to know, but we shrink from the effort; we would like to see, but prejudice blinds us. We are at the mercy of our feelings and we allow our primitive instincts to run away with us in moments of excitement. We are easily swayed by rhetoric and deceived by sophists who "make the worse appear the better reason.

Such are the dangers that beset the path to Truth. But if we know the dangers, we can, if we have the will, guard against them.

We cannot entirely overcome the difficulties inherent in language, because however much we strive to fix the meaning of words, they will always have different associations for different people; they will always arouse different emotions in different breasts. But we can and ought to make efforts to reach simplicity and accuracy and precision, and to avoid vagueness and verbosity; we can sharpen our definitions, make our distinctions more clearly cut, and refuse to allow a desire for elegance or picturesqueness to distort reality.

In forming our opinions we can fight against the temptation to take the line of least resistance. We can refuse to have our opinions cut to a standard pattern and manufactured for us like a reach-me-down suit of clothes. A knowledge of the ways of propaganda will at any rate put us on our guard against being imposed upon. A knowledge of the working of suggestion will make us less susceptible to its influence.

Similarly, the knowledge of our liability to prejudice will help us to neutralise its effect.

We can accustom ourselves, when faced with a particular problem, to a self-examination of this kind :

"How far are our views, or our conduct, actuated by self-interest; how far by a disinterested examination of available facts?"

A more valuable line of inquiry would be to ask ourselves what is the exact point at issue, to put the fundamental question in as simple and definite terms as possible, and to strip it of all other questions that are of secondary importance or merely confuse the issue. Again, we can acquire the habit of putting to ourselves "the other fellow's point of view" as forcibly as we can; we can ask ourselves what kind of a case we could put if we were in his position. Lastly, we can be less ready to impute prejudice to anyone who differs from us; we shall be more likely to come by the truth if we examine his arguments on their merits; for even if they are based upon prejudice, they may still be sounder than our own.

Again, if we know and can recognise the errors that are commonly made in reasoning, the source of each and the different forms each may take, we shall be less likely to deceive ourselves or to be deceived by others; we shall be on our guard against the plausible arguments or dishonest tricks of too ardent proselytisers or unscrupulous axe-grinders.

In fact, if we tackle our problems in an intelligent and reasoning way, we are more likely to reach a solution of them. But we must first wish to solve them; we must first refuse to acquiesce in things as they are and be inspired by the vision of things as they should be; we must be discontented with a divine discontent; we must be idealists. Clear thinking will not help us to form our ideals; it will help us to show how far they are feasible, how they can be attained, how far they are compatible with one another; it can inform our ideals, it may transform them, but it cannot create them.

11. Miscellaneous Questions

N.B.—Except where otherwise stated, arguments are quoted for analysis and criticism.

1. A burglar, after one of his housebreaking exploits, leaves behind a written message which contains glaring errors in grammar and spelling. What different inferences can be made?
2. How can X. be worse off now he is a partner? When he began as a traveller, he received a salary and 10 per cent commission; now he shares fifty-fifty with Y.
3. "I travelled up to town in the same carriage as Robinson the other day," said Brown.

"He was reading the *Daily Herald*. I always thought he was a staunch Conservative!

- (a) What is the implied inference? Is it justified or not? Give reasons.
(b) Substitute "hide-bound Tory" for "staunch Conservative." What difference is made?

4. "In going round the world westwards we keep gaining time and the whole trip would gain us a full day therefore, if we could make the whole journey in twenty-four hours, it would really take us no time at all." Point out the fallacy.

5. A man confesses to a crime. Is this sufficient to convict him? If not, why not?

6. A question in an Examination Paper admitted of two different answers. One candidate gave both answers fully and correctly, and also gained the maximum marks in the remainder of the paper. The examiner, anxious to give him full credit for his excellent performance, first awarded him 5 marks more than the maximum, which was 100 Then realising that it appeared absurd for one candidate to have more than the maximum marks, he reduced each candidate's marks by 5. Criticise the examiner's action.

7. What is to be said (a) for, (b) against, Promotion by Seniority?

8. A compositor drops the letters of the word "level" and replaces them at random. What is the probability that the word will be correctly printed? (Mathematical formulae not allowed. Explain in detail how you arrive at your solution.)

9. A deputation of parents in a rapidly growing suburban district, whose children have to attend a school over a mile away from their homes, waits upon the Local Education Committee.

LEADER OF THE
DEPUTATION:

"We refuse to allow our children to attend school until suitable transport is provided to convey them backwards and forwards."

CHAIRMAN OF THE
L.E.C. :

"Why! when I was a boy, I had to walk five miles to school every morning. It never did me any harm. Look at me, still hale and hearty at eighty."

If you were the leader of the deputation, how would you proceed with the argument?

10. **A.** "Why, won't these boys work?"
 B. "Because they are lazy."
 A. "But why are they lazy?"
 B. "Because they won't work."

11. Democracy is a bad form of government because the people are not the best judges of what is good for them.

12. "Well, it's good for trade," said a survivor of the earthquake, "the damage will have to be repaired."

13. "X. must be one of the eight best schoolboy shots in England because he was a member of the winning team in the Ashburton Shield Competition at Bisley this year."

14. When long-term British Government Stock paying 5 per cent stood at 99, Nbinga Nbonga 7 per cent Debentures were sold at 120. What would be their approximate value if British Government 3.5 per cent Stock rises to 115? State your argument in full.

15. **BANK
MANAGER**
 **(asked to
cash cheque
by a
stranger):**
 STRANGER: "But my friend here will vouch for my identity."
 B.M.: "But I don't know her either."
 STRANGER.: "That's easily rectified. Allow me to introduce you."

The Bank Manager is a patient and courteous man. How should he proceed to point out to the stranger (a lady) the fallacy in her argument?

16. "Free schooling, then free meals, now free boots and free milk—why! there will be free tickets for the cinema for the children before we know where we are.

17. The "Grid" system is going to save the country a lot of money because it is the most economical system that can be devised.

18. "You are hopelessly inconsistent. If you say there's no harm in a raffle at a Church Bazaar, what objection can you have to a Government lottery?"

19. Consider the point of view of the "next motorist" who comes before a magistrate who has just announced:

"I shall make an example of the next motorist who comes before me charged with speeding on the — by-pass."

20. **Cost Of Living Index Numbers**

Month and Year	Food Only	All Items—Food, Rent, Clothing, Fuel, Light, etc.
July 1914	100	100
December 1927	163	169
December 1932	125	143

Average Weekly Rates Of Wages In The Building Trades

Trade	July 1914 s. d.	December 1927 s. d.	December 1932 s. d.
Bricklayers	40 7	74 1	67 3
Masons	39 7	74 2	67 4
Joiners	39 11	73 11	67 2
Plumbers	39 8	74 0	67 3
Plasterers	40 0	75 8	67 10
Painters	36 3	73 4	67 0
Labourers	27 0	53 11	50 2

- (a) Explain carefully the significance of Cost of Living Index Numbers, giving a simple example.
- (b) Did the comparative wages of the different operatives in the Building Trade change between 1914 and 1932? If so, to what extent?
- (c) What changes do you note in the *real wages* (i.e., calculated in purchasing power) of any one of the classes of operatives mentioned?

21. To the Editor of the *Morning Argus*.

SIR,
I have no use at all for these newfangled notions in Education—free discipline, self-determination and so on. Look at the results. A lot of Bolsheviks, shiftless wasters, with no respect for authority or anything else for that matter. Give me the good old-fashioned discipline. If you spare the rod, you spoil the child. Besides, everyone knows that the average boy *likes* strict discipline: he respects those who wield it. He knows that it does him all the good in the world.
Yours, etc.,
LAUDATOR TEMPORIS ACTI.

Write a reply to this letter without being angry or sarcastic.

22.

- (a) The place of the woman is in the home. What interest has she in Politics?
(b) Woman has a genius for housekeeping, and therefore she should do well in Politics. For what is the Government of the State but housekeeping on a National scale?

Criticise both these points of view from the logical standpoint.

23. The Corporation of Brighton proposes to construct a motor-racing track on the Sussex Downs.

A Critic's Comment — How can the "beauty of the Downs" and the "harmony of the surroundings" be compatible with a fenced enclosure of 400 to 500 acres, a motor track 4½ miles long, a road of access from Devil's Dyke to the track, with broad subsidiary roads scarring the Downs, the camouflaged buildings, the half a million spectators, the appalling noise of the racing cars, the hundreds of motors, the litter and all the attendant abominations, spreading far beyond the actual area?

An Official Reply — What nonsense! The Corporation have no intention of allowing anything to interfere with the beauty of the Downs. We are all public-spirited and think that this scheme should go through. Most anxious thought has been given to the whole scheme. I am convinced that it would only retard the march of progress if the scheme were not sanctioned. The track will bring many visitors and much money to Brighton, but the Corporation have not allowed these considerations to outweigh others. The terms of the lease to the promoters of the track prohibit advertisement hoarding, and provide that any buildings erected shall be in keeping with the surrounding landscape. The Corporation are satisfied that nothing will be erected which will be an eyesore. There will be no racing on Sundays, so no objection can be taken from that point of view. The whole scheme has my personal approval. I am satisfied that nothing will be done which is detrimental to the beauty of the Downs. Your critic seems afraid that the noise of the cars will disturb the quiet of the Downs. I do not think it will. The R.A.C. restrictions regarding noise will be in force. They are strict. There should be no real cause for complaint. The

Corporation will watch the activities of the track. If anything is done which can be regarded as objectionable, prompt action will be taken.

- (a) Which side would you take in this controversy, and why?
(b) How far do you think the official reply meets the objections of the critic?

24. No successful business can be run nowadays without advertisement on a large scale. In fact, you have only to look at the hoardings and the front page of the *Daily Argus* to see the firms that make the profits. You don't suppose they could afford such publicity unless they were exceedingly prosperous.

25. **Protectionist:** And then you say that Protection raises prices. Why, ever since the introduction of tariffs after the financial crisis of 1931, prices have actually fallen, and many staple foods actually cost less to-day than they did in the palmy days before the Great War. That shows that tariffs have actually lowered prices.

What is the retort?

26. **A.** "They are a lot of hypocritical humbugs inspired by selfish greed."
B. "Come! Come! We may not agree with their opinions or their methods, but we have the purity of their motives or the sincerity of their convictions."
A. "I'm surprised at you—a man of your culture and upbringing—defending these bl

As B., what would you now say?

27. Pinkerton's paper, the *Daily Haste*, hated being pinned down to and quarrelled with about facts; facts didn't seem to the Pinkerton press things worth quarrelling over, like policy, principles or prejudices. The story goes that when anyone told him he was wrong about something, he would point to his vast circulation, using it as an argument that he couldn't be mistaken. If you still pressed and proved your point, he would again refer to his circulation, but using it this time as an indication how little it mattered whether his facts were right or wrong. Some one once said to him curiously, "Don't you care that you are misleading so many millions?" To which he replied, "I don't lead or mislead the millions. They lead me."

Ross MACAULAY: *Potterism*.—Comment.

28. The owner of a one-man business: "Why shouldn't I open and close my shop when I

please? If I choose to work sixteen hours a day, whom does it concern but me?"
What is the other side of the picture? Present it from the point of view of a shop assistant in a large store.

29. If you were on trial on a charge of burglary to which you pleaded not guilty, how would you answer the following question put to you by the counsel for the prosecution:

"Where did you conceal the swag?"

30. The holder of industrial shares must expect the value of his property to vary because of the fluctuations in the industrial markets.

31. The total wealth of a country has to be divided between workers and property owners. Obviously, what is taken from the one is given to the other.

32. An old man who has bathed in the Serpentine every morning for the last forty years says, "Look at me." I say to him, "Yes, but where are the others? " Why is my retort justified?

33. Why cannot you answer the following question by a plain Yes or No?

"Have you ceased bullying young Jenkins?"

34

(a) Why during the hearing of a certain case does a Judge forbid the Jury access to the outside world?

(b) At what point in a Criminal trial is evidence of a prisoner's previous criminal record permissible? And why?

35. The directors of a certain Meat Extract Company submitted to the shareholders particulars of offers made by two other companies, Bifco and Steeril, which wished to amalgamate with it. When the shareholders' replies were received, it was found that 85 per cent were against amalgamation with Bifco, and 55 per cent were against amalgamation with Steeril.

(a) Were there any against amalgamation with both Bifco and Steeril? If so, what percentage?

(b) Were there any who were not against amalgamation with either? If so, what percentage?

36. Some years ago a number of British engineers were arrested in Russia and accused of espionage and sabotage. The comments of several British newspapers were based upon the following assumptions:

- (i) The charges were absurd: no Briton could be guilty of espionage : no British engineer could be suspected of sabotage.
- (ii) The accused could not expect a fair trial. Justice in a Russian court was, as every schoolboy knew, a mere travesty of Justice, as we in Britain understood it.

Was this attitude justified? Give reasons.

N.B.—Never mind what happened after the arrest. Remember I am not suggesting it was wrong to sympathise with our fellow-countrymen. Try to put yourself in the place of a Russian reading these comments; or imagine that similar comments were made in a Russian newspaper on the arrest and accusation of Russian engineers in Britain.

37. What is meant by:
- (a) I never throw dust in a juryman's eyes
 - (b) drawing a red herring across the trail
 - (c) special pleading
 - (d) a leading question
 - (e) the laws of evidence

38. In a debate on "Capital Punishment" one speaker said: "The possibility of the death penalty does not deter the man with murderous intent, because only little more than 100 years ago sheep stealing was punished by hanging. and then crime was more prevalent than it is now.

How would you deal with this argument as a speaker on the other side?

39. What is meant by : prima facie evidence, a priori argument, sub judice, sub rosa, ex cathedra?

40. "I don't see any way out. You cannot be surprised if a man is driven by lack of home comforts to take refuge in a public house. And you cannot expect a woman to keep a respectable home when most of her husband's earnings go in drink."

Drab and sordid homes may encourage drunkenness, and drunkenness may lead to

drab and sordid conditions in the home, but is it true to say, "There is no way out"?

41. "The British Empire has been built up, brick by brick and stone by stone, cemented by the blood and sweat of successive generations of our countrymen. Remove one of these stones or bricks, and the whole edifice will collapse."

42. "Cupping" or blood-letting is a recognised method of curing some bodily ailments. War, too, acts in the same way. It is a blessing, not a curse. What country ever became great without blood-letting?

43. Comment on the logical validity of:

(a) X. was one of the best statesmen the country has ever had, for during his period of office we enjoyed a degree of prosperity unparalleled by anything either before or since.

(b) The cost of pig
Is something big
Because it's corn you'll understand
Is high priced too:
Because it grew
Upon the high priced farming land.
If you'd know why
Consider this: the price is big
Because it pays
Thereon to raise
The costly corn, the high priced pig.

(c) To grant a bounty on wheat production is clearly beneficial to wheat producers. To give bounties all round would therefore benefit all industries.

(d) It was a great Art for it was produced for a great State.

(e) Every variety which is selected into a species is favoured and preserved in consequence of being in some one or more respects better adapted to its surroundings than its rivals. In other words, every species which exists, exists in virtue of adaptation, and whatever accounts for that adaptation, accounts for the existence of the species.

(f) For forms of government let fools contest
Whate'er is best administered is best. —(London University Scholarship Exam.)

44. How would you answer the following question:

Would Association Football benefit if the pernicious influence of

professionalism were removed?

45. You know that Jones possessed a First Class Season Ticket on June 29th. Three days later you see him returning from the city by his usual train, but in a Third Class Carriage.

What possible conclusions may be drawn from this data alone?

12. Problem Corner

The five simple deductive problems that follow are added for those readers who like something in the way of a diversion from the more serious topics treated above. They are either taken from or founded upon the problems formerly set week by week by "Caliban" in the *New Statesman*.

1. Amy, Beryl, Cecily and Dorothy are married to Arthur, Basil, Cyril and David (not necessarily respectively), and each of the four husbands is brother to one of the ladies. Dorothy has no brothers. Amy's brother-in-law is married to Cecily. Beryl is married to Basil. Cecily's husband was at school with Arthur and David. Which of the ladies is Cyril's sister? (Give your argument in full.)

2. A train is controlled by an engine-driver, a fireman and a guard, whose names are Brown, Jones and Robinson, not necessarily respectively. On the train are three passengers: Mr Jones, Mr Robinson and Mr Brown. Mr Robinson lives at Leeds. The guard lives half-way between Leeds and London. Mr Jones's income is £400 2s. 1d. per annum. The guard earns in a year exactly one-third of the income of his nearest neighbour who is a passenger. The guard's namesake lives in London. Brown beat the fireman at billiards.

What is the name of the engine-driver? Give your argument in full.

3. To celebrate the sixth consecutive victory of the school in their annual rowing contest with Medford, the statue of Hercules which stood on the river bank in the public park was tarred and feathered. Suspicion pointed to one of the members of the school VIII. Whereupon Dr Evergreen called together the crew and the cox and asked each of them who was the culprit.

Adams: Jim Ebbels, Sir.

Belton: No, Sir, it was not Ebbels.

Chester: I did it, Sir.

Dodge: It was either Chester or Hammer, Sir.

Ebbels: Belton is not telling the truth, Sir.

Finch: It was Chester, Sir.

Graham: It was not Chester, Sir.

Hammer: It was neither Chester nor me, Sir.

Ison: Hammer is right, Sir; and it wasn't Ebbels either.

On the assumption that three, and three only, of these statements are true, who was the culprit?

4. CONFUSION AT THE RECTORY

"You know," I said to the Rector, "I find your sons very confusing. They are all at different colleges; they are all reading different subjects; each is keen on a different form of sport; and each contemplates a different vocation. It's hard to remember which to associate with what."

The Rector's eyes twinkled. "You should make it into a problem, Caliban."
"I would do," answered I, "if I had the data." Five days later I received the following post card

"Derek neither hunts nor shoots. The Selwyn man hates mathematics, the prospective barrister dislikes fishing. The hunting man has no interest in science. The Peterhouse man plays picquet with Bernard. The prospective clergyman is wishing he had read history. The climbing man detests languages, and the prospective barrister has no use for science. Derek is always poking fun at Peterhouse, the mathematician plays duets on the piano with Cohn. The languages man cannot ride, nor can the mathematician. Bernard is a year older than the Oriel man. Cohn is cleverer than the prospective journalist. The climbing man is younger than Derek. The prospective clergyman has never been to Cambridge. Neither of the Oxford men cares for climbing. Alaric keeps a dog at the Mitre. The fishing man buys his kit in Petty Cury. The prospective schoolmaster is the most popular of them all."

And the same afternoon I got the following telegram:

"Forgot to mention that the shooting man has no dog, and that one of the boys is at Christ Church."

Assign to each of the rector's sons his college, his subject of study, his favourite form of sport, and his intended career.

N.B.—Petty Cury is a street in Cambridge, not far from Selwyn and Peterhouse; the

Mitre is a well-known hotel in Oxford.

5. THE GREEK TRANSLATION

The afternoon before a scholarship examination one of the Sixth Form boys of Wigby School entered the Headmaster's study and made a rough translation of a Greek prose paper that was lying on the table. The translation was found in the study which is occupied by Arfback, Bowler and Cribb; and it may be taken as certain that the culprit is one of these three boys. Haled before the Headmaster, they made the following statements:

Arfback: "I never entered your room all day, Sir."

Cribb: "Well, it wasn't either Bowler or me."

Bowler: "I -was feeling very unwell, Sir."

Cribb: "I can't do translation from the Greek, Sir."

Bowler: "That's quite true, Sir; he can't."

Arfback: "It certainly was not Bowler, Sir."

Bowler: "And I can vouch for Arfback's statement that he never came near the place."

Cribb: "Well, I was in Arfback's company all afternoon."

Arfback: "And it's quite true, Sir, that Bowler was far from well."

The Headmaster asked a Mr Dubb to investigate. The latter, an impertinent young man who was under notice, sent in the following report:

"DEAR HEADMASTER,—Nine statements were made to you by three suspects. Of these nine statements, three, and three only—one statement by each suspect—are true. I need say no more.—A. DUBB."

On the assumption that Mr Dubb's report is accurate, who translated the paper?

13. Appendices

[The History Of Propaganda](#)

Reading The Newspapers

The Newspaper In School

The History Of Propaganda

DURING the last forty years '*Propaganda*' has suffered the fate that has overtaken many other words which began life with a more or less innocent connotation. It has acquired a derogatory sense; and though it is still used as a neutral term with an objective reference, it is common to find it used as a vague term of abuse.

The first time I remember its being used in a derogatory sense was in the early years of the present century in connexion with the unusual and often violent methods used by the militant suffragettes to advertise the cause of women's suffrage. Before that time, *propaganda* was rather a learned word and moved almost exclusively in literary circles. It had reputable and dignified associations. It referred to the spreading of information about some cause in order to enlist sympathy and support for it; and it had not quite lost its association with religious causes. At any rate, the causes and the methods used to propagate them were not generally discredited or such as to arouse widespread suspicion and doubt as to the disinterestedness of the motives actuating the promoters.

For the chief reason why *propaganda* came to be discredited we must look back to World War I, and to the measures taken then by the governments of the belligerent countries under the name of *propaganda* or 'public information'. (Perhaps their preference for the

latter term was an indication that even in those early days the word *propaganda* was suspect.) In all those countries the governments established a rigid censorship on news for home consumption.

Reports of reverses were suppressed or toned down. Victories were magnified. Everything was done, directly or indirectly, to keep people at home cheerful, confident, determined, industrious and united. Doubt and criticism, however justified, were discouraged or suppressed, and even in countries with a strong democratic tradition, the Press worked loyally with the government in galvanising the national effort, in glorifying the national cause, and in discrediting the aims and achievements of the enemy.

The Germans were the first to realise the importance of winning sympathy in neutral countries; and although they were at a disadvantage because the Allies had command of the sea and cable communications, they remedied it by setting up a powerful radio station, powerful enough to reach Mexico and South America. Over the air they radiated a service of news, in which German aims were presented in a favourable light and the aims of the Allies blackened and discredited. Their own gains and victories, and the Allies' losses and disasters were exaggerated. All was directed towards winning neutral sympathy or spreading discontent and revolt in the imperial or colonial possessions of the Allies.

But the Allies did not lag behind; and there was little to choose between the methods of either side. News was doctored, and rumours and 'atrocities' stories were spread abroad.

Towards the end of the struggle, they carried the *propaganda war* into the enemies' countries in all sorts of ingenious ways. Hitler went so far as to attribute the Allies' victory to the thoroughness of their propaganda and to the comparative feebleness of the German counter-efforts.

At the end of World War I, the general opinion in Britain on official propaganda was that it was one of those regrettable necessities (like the censorship and conscription) enforced by the extraordinary conditions prevailing during a period of national crisis and emergency. As far as propaganda for home consumption was concerned, most people deprecated the suppression or misrepresentation of the truth, and many felt resentment at some of the methods—variously characterised as bullying, doping, and jockeying—used to influence people's behaviour. About the use of propaganda as a

weapon of war, many British people salved their uneasy conscience by assuring themselves that, though the methods employed (like poison gas and 'reprisals') could not be morally defended, the necessity for counteracting the enemy's machinations and the consequent saving of their fellow-countrymen's lives was a sufficiently overriding consideration. But when the time came for some of the secrets of war propaganda to be revealed, no one felt particularly happy about the revelations; and it was forcibly brought home to everyone what a powerful instrument broadcasting could be made in the service of propaganda.

Between the two World Wars, western Europe watched with growing uneasiness the establishment of totalitarian regimes in Russia, Germany, and Italy, and the ruthless, thorough-going propaganda used by the dictators in fortifying them and making them immune from attack both from within and without. And in Russia, too, the Comintern was set up with the object of propagating communist doctrine throughout the world and of fomenting discontent among the workers in capitalist countries.

The use of propaganda by the dictators can best be studied in the case of Germany, for Hitler left details of his principles and methods in his book *Mein Kampf*. There he states that he learnt the secrets of successful propaganda from the British in World War I. How far this statement was itself an ingenious bit of propaganda I do not profess to know; but wherever he learnt his lesson, there is little doubt that he profited by it and proceeded to apply it with characteristic thoroughness to welding together the German people into a powerful instrument for war and aggrandisement. We are not concerned with those odious methods of physical compulsion which shocked the civilised world. Hitler was no fool: he knew that violence by itself would not achieve his object; and history had shown him that it was ineffective in the long run and that its effects often recoiled upon the heads of its perpetrators. He knew that success depended on securing domination over the minds, thoughts and feelings of the masses, and on conditioning them by the indoctrination of Nazi theories, hates and enthusiasms to be instruments of his will.

Such an ambitious, far-reaching aim could only be accomplished by seizing and monopolising all the means for the dissemination of propaganda—platform, hoarding, press, radio and cinema: and once in undisputed possession of all these, Hitler proceeded to turn on and keep running a steady and constant stream.

He tells us himself the ways in which he hoped to achieve his end, and they can be

briefly summarised thus:

- (1) driving home by endless repetition a few simple points, and using catchy slogans or war-cries;
- (2) playing on the herd instinct, and appealing always to groups or to the mass—never to individuals;
- (3) avoiding rational argument, and concentrating on securing instinctive reactions, especially to the primary feeling of fear.

There was nothing new in all this—little more than could have been gleaned from a Correspondence Course on the psychology of advertising. But when Nazi and Fascist propaganda had been at work for some time, new and, to many people, rather frightening features became clear. They were:

- (1) its thoroughness and ruthlessness: it was made to permeate every kind of informative, educational, cultural and recreational activity—even scientific laboratories and the courts of justice were not spared
- (2) the complete suppression of criticism, rivalry and competition; and the deliberate measures taken to prevent the free exchange of ideas and opinions with the outside world
- (3) the glorification—one might almost call it the deification—of the 'leader' as the sole and infallible source of authority and truth
- (4) the blatant acceptance of the Machiavellian principle that the end always justifies the means, and of its corollary that the only criterion by which propaganda can be judged is its results—it is 'good' when it succeeds, and 'bad' when it fails. On these grounds deliberate falsehoods were defended; the bigger the lie, it was said, the more credible it could be made. Hitler himself claimed that by skilful and sustained use of propaganda one can make people 'see heaven as hell, or a most wretched life as paradise'.

Propaganda conducted on such lines as these has been justly described as 'a debased system of persuasion which boasts neither impartiality nor accuracy, substitutes emotional catch-phrases for reasons, puts results before principles, and success before truth'. And its ultimate effect could well be to suppress individual thought and action, to standardise thought, behaviour and even taste at their lowest level, and to create a nation of robot citizens by mass-production methods.

Reports of this kind of propaganda at work in the totalitarian countries were received by British people in various ways. A few were frankly enthusiastic about its results; but the

attitude of the majority who thought about it at all varied from sheer incredulity and mild amusement to uneasiness and utter repugnance. It was often pointed out that the state of Germany after the war of 1914-1918—disunited, disillusioned and humiliated—made it ripe for that sort of propaganda; and that, in any case, the German people as a whole were pathetically sheep-like and easy to lead and to hoodwink.

Before long, Britain was involved in World War II, and once again the flood of propaganda was released, both for home and foreign consumption. For the most part, it was 'the mixture as before'. People at home had to be made aware of the critical situation of the country and of the supreme effort required from everyone if it was to survive; they had to be kept acquiescent, cheerful and tolerably contented in the face of controls, regimentation, privations, shortages and hardships; leakage of information to the enemy had to be stopped and fifth-columnists had to be circumvented; and the spirit of resistance had to be kept alive at home, and, abroad, the enemy's strength had to be undermined. The one outstanding feature was the unprecedented extent to which the radio was used.

But the end of the war did not bring an end to government propaganda: indeed the political and social repercussions of the war appear to have made propaganda an almost inescapable feature of our national life and international relations. In the international field, the way of life of the western democracies is being aggressively challenged. In the 'cold war' and in face of the 'iron curtain', the democracies are very much on the defensive; and, if they really believe in the superiority of their own way of life, they cannot be blamed if they use some of the resources of propaganda to advertise as widely as possible what that way of life stands for; or if they try to re-convert some of those countries where it has been discarded, and to break down the barrier these countries have erected to prevent 'contamination' from the western world. It is, for British people, an unaccustomed role to assume—the defence of their own institutions: for generations they had taken the superiority of these institutions for granted and there was no need to justify them in their own eyes or in anyone else's. Perhaps it is not a bad thing that this role has been thrust upon them by challenges from without that threaten their very survival.

In the meantime, at home, governmental planning, necessary during war to use the resources and man-power of the country to the best advantage, has been continued after the war, first to ease the transition from war-time to peace-time economy, and then

to lay the foundations for economic recovery and improvement of social conditions. Policies have been framed, programmes drawn up, 'targets' fixed—and if these policies are to be carried out, programmes fulfilled, and targets reached, the active support of all sections of the community must be enlisted. The vast administrative machine necessitated by such planning and reconstruction will work much more easily if the willing consent and co-operation of citizens can be obtained by persuasion, and if compulsion and repression can be avoided. And for this purpose the government makes use of all the instruments of propaganda—posters, press advertisements, films and radio. There are also other causes for which public support is enlisted by government-sponsored propaganda—causes generally accepted to be in the public interest, such as thrift (national savings), road safety, the treatment and prevention of epidemics, economy in the use of fuel, and so on.

Propaganda also plays a large part in the 'warfare' of political parties, ideologies, creeds, and schools of thought. It is used by all sorts of associations bent on influencing public opinion with the ultimate object of shaping national or international policy, and of tugging the heart-strings or unloosing the purse-strings of sympathisers. More recently, the propagandist ranks have been swelled by the accession of 'big' business and commerce, which, not content with advertising its own wares or services, now seeks to justify its existence, fearing perhaps that its very survival is threatened in the new order of things.

The foregoing account of the working of government propaganda, in Britain and elsewhere, during the last fifty years should enable us to understand some of the prevalent attitudes towards propaganda in general. It should explain how the word, which once stood for something respectable and comparatively innocuous, has acquired unpleasant associations. Many people regard it as only another name for lies, or dismiss it contemptuously as a 'stunt'. Some, although grudgingly admitting that it may sometimes be justified, find all propaganda, from whatever source it derives, equally distasteful and repulsive, because it implies stultifying the reasoning faculty.

Others effectually beg the question by drawing a line between 'good' and 'bad' propaganda: *i.e.* when its end is such as they approve and its methods not outrageously noxious to them, it is 'good' or at any rate admissible, and when the reverse, it is 'bad.' Others again advocate using the word *propaganda* solely for the dissemination of what is biased or untrue; and they recommend *publicity*, or some other word without bad associations, for the spreading of the truth. In fact, there is much confused thinking and

prejudice surrounding the word that needs to be dispelled before a more rational attitude is possible.

Reading The Newspaper

THE production and distribution of the modern popular newspaper, which reckons its readers by the million, entails a vast expenditure of money and an elaborate business organisation such as only highly capitalised firms can afford. The intense competition for the pennies of the vast reading public created by compulsory schooling and for the patronage of advertisers, quick to sense the possibilities in wide-spread publicity, caused those newspapers which possessed insufficient financial backing to be eliminated or absorbed by their stronger rivals. The result is that most of the popular Press both in London and the provinces is in the hands of one or other of the great newspaper combines.

In judging the value of the news provided and the opinions expressed in the average popular newspaper, these are the first facts to be taken into consideration: the running of a newspaper is a business in the hands of private enterprise; being a business it must be made to pay its way; and its policy must be to maintain and if possible to expand its circle of readers, for only in this way can it continue to attract advertisements, without the revenue from which wide distribution would not be possible at a cost that the humblest pocket could afford.

What we are immediately concerned with is how these economic and other circumstances that govern the publication of a newspaper with a wide appeal affect the methods of presenting news and comment, and how these methods can be used, deliberately or otherwise, to take advantage of the suggestibility and other irrational tendencies of the reader.

I have pointed out how people are naturally suggestible to constant reiteration of the same statement. The use of this device to advocate a particular policy in *one* daily newspaper may or may not be successful. But a reader may see the same statement repeated, not perhaps in so many words, in an evening paper also and in several provincial papers; and if he is not aware that all these papers may be controlled by the same syndicate, he may be tempted to conclude that he has seen separate and independent testimonies to the truth of the statement.

One common journalistic device in the popular Press is the short, pithy and arresting headline. This in itself may have a suggestive influence. The fact that it is printed in bold type gives an impression of weighty importance. The reader is meant to assume that it gives a reliable clue to the core of the news printed below it. The busy or lazy reader often gets no further, or carries away with him nothing more than this ready-made summary. Even the more careful reader is sometimes tempted to do little more than read the headlines, for frequently after he has read a couple of short paragraphs of the news text on page 1, he is told to turn over to half-way down a column on page 3, and perhaps before he gets there his attention is distracted to something else. The headline, the short paragraph and the splitting up of items on different pages all tend to discourage concentrated reading and sustained thought. The introduction of one emotionally coloured word into a headline may beg the whole question; and the reader may at once come away with a biased view of whatever is reported: he is presented, in fact, with a ready-made opinion which saves him the trouble of thinking for himself. The headline may be deliberately tendentious: it may effectually disguise comment as news; and it may have the same suggestive effect as the confident, dogmatic assertion. News and comment may also be subtly mingled by the insertion of paragraph headings in the news column, and in other ways, so that the uncritical reader may fail to distinguish between them.

The ostensible object of a newspaper is to provide its readers with news. Exactly what constitutes news is a matter for the determination of the editor, who, in making his decision, has to take into account the general policy of his paper approved by his employers. But he also has to study the tastes of its readers, who have come to expect not only news, but also light reading and entertainment, besides the inevitable advertisements. The result is that news of serious matters of political, economic and social importance at home and abroad—the facts on which the conscientious citizen has to form his judgments—is apt to be crowded out to make room for more frivolous and perhaps more sensational material. Even when newsprint was cheap and plentiful, the disproportionate amount of space devoted to serious news was most marked; and nowadays when newsprint is dear and scarce and strictly rationed, the enforced restriction on the publication of such news is almost equivalent to the imposition of an unofficial censorship.

The task therefore that faces an editorial staff of selecting and compressing items from the spate of information on these topics that is bound to pour in every day from every

quarter of the globe must be truly formidable; and to do it fairly, impartially, objectively and with a high sense of responsibility must be wellnigh impossible. Selection, as we have already seen, may result in 'special pleading'. The selection of one item in preference to another may give that item an altogether disproportionate emphasis and in the end result in giving a misleading or false impression. Suppression, the inevitable corollary of selection, may lead to serious distortion and misrepresentation. And in compression or 'boiling down' it is fatally easy, not only to over-simplify, and, by omitting the reservations to a carefully guarded statement, to turn it into a sweeping assertion, but also by wrenching words and phrases from their contexts, and by using words with an emotional content, to give to a summary a twist in some direction away from the objective truth.

In these last few paragraphs I have tried to draw attention to some of the ways in which careless and uncritical reading of a newspaper (or for that matter of any organ of publicity) may lead us astray. The credulous faith in the infallibility of the printed word may not be as common as it used to be: but the substitute for it is not a cynical scepticism that doubts the truth of everything publicised in print; and it has not been my object to foster such an attitude. It has rather been to try to open the reader's eyes to the difficulties of fair, accurate and objective reporting and to *his own* failings and deficiencies. If he learns to combat these, then—who knows—the popular Press may realise that it would be good policy to make a more determined effort not to run the risk of playing upon them.

The Newspaper In School

THE daily newspaper is an important factor in the life of a modern civilised community. As such, it cannot be excluded from the schools: teachers must acknowledge its existence, make use of the valuable material it contains, and show their pupils how to use it intelligently. Of late years, most schools have recognised in practical ways its value as a source of general and specialised information about the world of to-day and have used it to stimulate and maintain the child's interest in the ever-changing environment in which he will shortly have to shift for himself. The school library is not complete without at least one daily newspaper. Every class-room should have a board on which newspaper cuttings of general interest can be displayed; and teachers will encourage pupils to make cuttings themselves on specialised topics relevant to their lessons, and to paste them into their own note-books or journals, or to contribute them

to a common store from which at intervals a selection can be made and kept in files for permanent reference.

Such constructive uses of the informatory material that only a newspaper can provide can be made at all stages in the regular school curriculum. But in the later stages some opportunity should be found, possibly as part of a course in Citizenship or Current Affairs, to train children to look at the newspaper as a whole from a different angle, to read it with discernment and discrimination, and to adopt a detached and critical attitude in appraising it.

Pupils should begin by making themselves familiar with the usual contents and lay-out of some of the best known London and provincial journals; they should learn their way about them and when and where to look for regular or intermittent features. Their next step should be to analyse the contents and to classify them under headings. The class under the teacher's guidance can decide upon some standard system of classification for regular use. Each pupil can then be asked to measure by inches or columns the actual space devoted in one newspaper to each item in this classification and work out on a percentage basis the relative space occupied by each.

The information thus gained should be pooled and set down in parallel columns for comparison, together with other particulars such as price, circulation figures, weekday or Sunday publication, etc. A general class discussion may naturally follow on the proper function of a newspaper and the fare it ought to provide. Such a discussion will not get very far before it is realised that each newspaper is designedly catering for a different type of reader. Members of the class can be asked to account for their own individual preferences, and to ascertain the reasons for the family choice of daily or Sunday papers. Answers to such questions are often significant and sometimes startling. One boy once said to me: "We take the —: mother reads the women's page, the serial and the advertisements; father reads the sporting news and thoroughly enjoys fulminating against its politics."

Discussion is then likely to range on the general subject of 'reader-appeal,' and after drawing conclusions based on the comparative importance attached in different papers to different topics as measured in terms of space, the class can try to discover the principles underlying the selection of news-items, and to account for the relative prominence accorded to them.

The ingredients of that mysterious quality 'news-value' will need to be distinguished, and among them national, topical, and human interest will be accorded a prominent place.

But it will also be interesting to discover the comparative importance attached to the value of a piece of information itself and the authority from which it emanates or the celebrity of the persons concerned in it. It will be pointed out how when an insignificant fire breaks out at the flat of a film star it is news, but when the cottage of Tom Jones of Tonyandy is burnt out it is not news; how a constructive suggestion by a person of little note will be dwarfed or neglected to make way for a platitudinous utterance from the lips of a cabinet minister; and how news-value makes the opinion, say, of a racing motorist or a skating champion on Unemployment acquire an importance altogether disproportionate to its intrinsic value as a contribution to the solution of that problem.

Other factors in the selection of news-items and of matter for editorial comment will become apparent after an examination of a newspaper over an extended period—the general policy of the paper and its proprietors, its political colour, its championship of some particular cause. Opportunity should be taken here to stress the psychological effect on the reader of constant reiteration, and pupils should be told something of the human susceptibility to the influence of suggestion and of other secrets of successful propaganda. At this point also they should be given some verifiable facts about the ownership of newspapers, and they should know what different papers are controlled by the same owner or by the same trust or combine; so that they may not forget that if they see the same point given equal prominence in different newspapers, it does not necessarily mean that it is a significant coincidence or that it thereby acquires a multiplied importance.

The responsibility of the Press to the Public is an issue that is bound to crop up and it must be faced; and the pros and cons of private ownership and public control should be elicited from the class and carefully weighed by the teacher. The economics of newspaper production can also usefully be touched upon at this stage and attention drawn to the possible connection between advertising revenue and general policy.

The time is now ripe for a more detailed and critical examination and comparison of the methods used by different papers in presenting news of the same event. The selection of items for quotation in headlines or for display in bold type, the insertion of this, the omission of that detail should be noted and commented upon. Reports of speeches, or Parliamentary debates, or proceedings at public inquiries lend themselves easily to

critical consideration of this kind. It will be obvious that such speeches, etc., cannot be reported verbatim: they must be boiled down. The process of boiling down should be familiar to the class from their own study and practice of precis-writing; they should know that a good precis includes everything essential and nothing inessential, but they should also have realised that essential and inessential are relative terms, and facts cannot be so distinguished except by reference to some standard—a standard reached by an impartial and unprejudiced examination of the original as a whole. It should therefore not be difficult to show them how very often preconceived opinion, with or without deliberate intention to mislead can distort the true perspective of a speech by selecting this or that passage for emphasis or bold display and slurring over or omitting others.

Enthusiasts in the class—and they will not be lacking— should be taken to listen to an important debate in the House of Commons and should then compare the reports in different papers the next day. Or the school authorities might be persuaded to provide a few copies of the verbatim report of a sitting of a Royal Commission (to be obtained from H.M. Stationery Office); these can be compared with subsequent newspaper versions, or, better still, they can first be summarised as part of precis practice, and the summaries of the class compared with the newspaper versions. Occasionally extracts from a speech over the air by some prominent person may be given in the Press: these can be set by the side of the full transcript in *The Listener*, and the omissions noted and commented upon.

Headlines and placards can be given special attention. The class can be invited to read a full news report and to say whether the headlines and placards give a fair indication of its purport: if not, the moral can be drawn. The teacher can show by concrete examples how easy it is to turn a carefully guarded statement into a sweeping assertion by 'boiling down' and omitting all the ifs and ans; and how a reader can gain a wrong impression of a speech when he reads one sentence detached from its context to make a snappy headline and is too lazy to read the whole.

Pupils should also be warned to distinguish authenticated news from comment, to note the source of news, not to gloss over significant or question-begging introductory phrases such as "Everyone knows," "It is well known," "It is reported," etc., to be quick to detect the intermingling of news and comment, and to note how comment can be inserted in news in the form of paragraph headings. Leaders should be read with close

reference to the news on which they may be based. It is also a profitable exercise to compare the English style of leader-writers and news-reporters; to contrast the measured, dignified, and smooth periods of one with the crisp, snappy, staccato sentences of another: to note how the style of the one lends itself to closely reasoned argument, and that of the other to dogmatic assertion. Pupils can be asked- to consider the psychological effects on the reader of blocking out a news page into a large number of miscellaneous news items each headed by bold headlines, and perhaps continued elsewhere, of interrupting news with pictorial insets, and of otherwise disintegrating what should be a continuous and coherent account; and to inquire what purposes these devices are intended to serve.

There are numerous other ways in which a 'newspaper class' can be kept busy. The correspondence columns can be used for collecting and weighing arguments on some controversial topic, and they are often happy hunting grounds (especially during the 'silly season') for examples of prejudice and faulty reasoning. The advertisement pages too may be turned to constructive use: changes of fashion (other than those of millinery and women's clothes) can be noted; the secrets of their appeal can be probed; and pupils can be invited to express their opinions on the defensibility of different methods of approach to potential customers. And lastly, lessons in elementary Economics can be made more live and real by reference to the financial columns of the newspaper.

Generally speaking, the teacher's aims throughout a course of this kind should be to give his pupils guidance and practice in handling the large masses of material a newspaper contains; to get them to realise the immense power that the Press can wield and the vital necessity that such power should not rest unchallenged in irresponsible hands; to be aware of the methods that may be used to exploit his natural weaknesses and prejudices; and above all not to impair or sacrifice the democratic citizen's birthright of the active exercise of his mental faculties for a passive and slavish acceptance of ready-made opinion.

Notes

we

Note from [Chapter 1](#)

Throughout this book, by we I mean the reader and myself, as average literate human beings in general and Englishmen in particular.

Epidemic

Note from [Chapter 2](#)

Quoted from *How We Learn*, by W. H. S. Jones, by kind permission of the author.

Instinctive

Note from [Chapter 2](#)

Prompted by innate or inherited tendencies.

Less Favourable

Note from [Chapter 3](#)

Implying a faction or a party, not the sole constituted authority.

Less Favourable

Note from [Chapter 3](#)

Implying illegal rising against duly constituted authority.

More Favourable

Note from [Chapter 3](#)

Implying a legitimate party engaged in a straightforward struggle and not a rebel faction.

Example

Note from [Chapter 3](#)

Quoted from *The Writer's craft*, by R. W. Jepson (Dent).

The Proper Study of Mankind

Note from [Chapter 4](#)

By B. A. Howard, published by Ginn & Co.

International Co-operation

Note from [Chapter 6](#)

"The — will publish on Monday an *arresting* article by— the famous lawn-tennis player, on the issues raised at the Disarmament Conference.' [Italic is mine.—R. W.J.]

contrary

Note from [Chapter 6](#)

Darwin in his researches on his theory of Natural Selection took particular care to keep a record of all phenomena, noted by himself or by other observers, which did not appear to be explained by it.

Politician

Note from [Chapter 7](#)

See *What a Word!* by A. P. Herbert, pp. 181-187.

this device

Note from [Chapter 7](#)

This can be regarded as a form of "Ignoring the Point" (see [Chapter Nine](#)).