

## THE VOICE OF LIBERAL LEARNING

spond to the current aversion from seclusion, to the now common belief that there are other and better ways of becoming human than by learning to do so, and to the impulsive longing to be given a doctrine or to be socialized according to a formula rather than to be initiated into a conversation? Not, I think, by seeking excuses for what sometimes seem unavoidable surrenders, nor in any grand gesture of defiance, but in a quiet refusal to compromise which comes only in self-understanding. We must remember who we are: inhabitants of a place of liberal learning.

## LEARNING AND TEACHING

1965

Learning is the comprehensive engagement in which we come to know ourselves and the world around us. It is a paradoxical activity: it is doing and submitting at the same time. And its achievements range from merely being aware, to what may be called understanding and being able to explain.

In each of us, it begins at birth; it takes place not in some ideal abstract world, but in the local world we inhabit; for the individual it terminates only in death, for a civilization it ends in the collapse of the characteristic manner of life, and for the race it is, in principle, interminable.

The activity of learning may, however, be suspended from time to time while we enjoy what we have learned. The distinction between a driver and a learner-driver is not insignificant; a master-tailor making a suit of clothes is doing something other than learning to make a suit of clothes. But the suspension is, perhaps, never either decisive or complete: learning itself often entails practising what we have in some sense learned already, and there is probably a component of learning in every notable performance. Moreover, some activities, like intellectual enquiries, remain always activities of learning.

By learning I mean an activity possible only to an intelligence capable of choice and self-direction in relation to his own impulses and to the world around him. These, of course, are pre-eminently human characteristics, and, as I understand it, only human beings are capable of learning. A learner is not a passive recipient of

impressions, nor one whose accomplishments spring from mere reactions to circumstances, nor one who attempts nothing he does not know how to accomplish. He is a creature of wants rather than of needs, of recollection as well as memory; he wants to know what to think and what to believe and not merely what to do. Learning concerns conduct, not behaviour. In short, these analogies of clay and wax, of receptacles to be filled and empty rooms to be furnished, have nothing to do with learning and learners.

I do not mean that the attention of a learner is focused always upon understanding and being able to explain, or that nothing can be learned which is not understood; nor do I mean that human beings are uniquely predestined learners whatever their circumstances. I mean only that an activity which may include understanding and being able to explain within its range is different, not only at this point, but at all points in the scale of its achievements, from one to which this possibility is denied.

Teaching is a practical activity in which a 'learned' person (to use an archaism) 'learns' his pupils. No doubt one may properly be said to learn from books, from gazing at the sky or from listening to the waves (so long as one's disposition is that mixture of activity and submission we call curiosity), but to say that the book, the sky or the sea has taught us anything, or that we have taught ourselves, is to speak in the language of unfortunate metaphor. The counterpart of the teacher is not the learner in general, but the pupil. And I am concerned with the learner as pupil, one who learns from a teacher, one who learns by being taught. This does not mean that I subscribe to the prejudice that attributes all learning to teaching; it means only that I am concerned here with learning when it is the counterpart of teaching.

The activity of the teacher is, then, specified in the first place by the character of his partner. The ruler is partnered by the citizen, the physician by his patient, the master by his servant, the duenna by her charge, the commander by his subordinates, the lawyer by his client, the prophet by his disciple, the clown by his audience, the hypnotist by his subject, and both the tamer and trainer by creatures whose aptitudes are those of being tamed or trained. Each of these is engaged in a practical activity, but it is not teaching; each has a partner, but he is not a pupil. Teaching is not taming, ruling, restoring to health, conditioning, or commanding, because none of these activities is possible in relation to a pupil. Like the ruler, or the hypnotist, the teacher communicates something to his partner; his peculiarity is that what he communi-

cates is appropriate to a partner who is a pupil – it is something which may be received only by being learned. And there can, I think, be no doubt about what this is.

Every human being is born an heir to an inheritance to which he can succeed only in a process of learning. If this inheritance were an estate composed of woods and meadows, a villa in Venice, a portion of Pimlico and a chain of village stores, the heir would expect to succeed to it automatically, on the death of his father or on coming of age. It would be conveyed to him by lawyers, and the most that would be expected of him would be legal acknowledgement.

But the inheritance I speak of is not exactly like this; and, indeed, this is not exactly as I have made it out to be. What every man is born an heir to is an inheritance of human achievements; an inheritance of feelings, emotions, images, visions, thoughts, beliefs, ideas, understandings, intellectual and practical enterprises, languages, relationships, organizations, canons and maxims of conduct, procedures, rituals, skills, works of art, books, musical compositions, tools, artefacts and utensils – in short, what Dilthey called a *geistige Welt*.

The components of this world are not abstractions ('physical objects') but beliefs. It is a world of facts, not 'things'; of 'expressions' which have meanings and require to be understood because they are the 'expressions' of human minds. The landed estate itself belongs to this world; indeed, this is the only world known to human beings. The starry heavens above us and the moral law within are alike human achievements. And it is a world, not because it has itself any meaning (it has none), but because it is a whole of interlocking meanings which establish and interpret one another.

This world can be entered, possessed and enjoyed only in a process of learning. A 'picture' may be purchased, but one cannot purchase an understanding of it. And I have called this world our common inheritance because to enter it is the only way of becoming a human being, and to inhabit it is to be a human being. It is into this *geistige Welt* that the child, even in its earliest adventures in awareness, initiates itself, and to initiate his pupils into it is the business of the teacher. Not only may it be entered only by learning, but there is nothing else for a pupil to learn. If, from one point of view, the analogies of wax and clay are inappropriate to learning, from another point of view the analogies of sagacious apes and accomplished horses are no less inappropriate. These admirable

creatures have no such inheritance; they may only be trained to react to a stimulus and to perform tricks.<sup>1</sup>

There is an ancient oriental image of human life which recognizes this account of our circumstances. In it the child is understood to owe its physical life to its father, a debt to be acknowledged with appropriate respect. But initiation into the *geistige Welt* of human achievement is owed to the Sage, the teacher; and this debt is to be acknowledged with the profoundest reverence – for to whom can a man be more deeply indebted than to the one to whom he owes, not his mere existence, but his participation in human life? It is the Sage, the teacher, who is the agent of civilization. And, as Dr. Johnson said, not to name the school and the masters of illustrious men is a kind of historical fraud.

## 2

Most of what I have to say about learning and teaching relates to the character of what is taught and learned, and to the bearing of this upon the activities concerned; but there are two general considerations, one about the teacher and the other about the pupil, which I must notice first.

It is difficult to think of any circumstances where learning may be said to be impossible. Of course, in some conditions it will take place more rapidly and more successfully than in others; but, in principle, it does not depend upon any specifiable degree of attention, and it is not uncommon to find oneself to have learned without knowing how or when it happened. Thus, the random utterances of anyone, however foolish or ignorant, may serve to enlighten a learner, who receives from them as much or as little as he happens to be ready to receive, and receives often what the speaker did not himself know or did not know he was conveying.

But such casual utterances are not teaching; and he who scatters them is not, properly speaking, a teacher. Teaching is the deliberate and intentional initiation of a pupil into the world of human achievement, or into some part of it. The teacher is one whose

<sup>1</sup> The horses I refer to are, of course, those of Elberfeld. But it is, perhaps, worth recalling that the ancient Athenians delighted in the horse above all other animals because they recognized in it an affinity to man, and an animal uniquely capable of education. The horse had no *genetische* inheritance of its own, but (while other animals might be set to work) the horse was capable of sharing an inheritance imparted to it by man. And, in partnership with a rider (so Xenophon observed), it could acquire talents, accomplishments and even a grace of movement unknown to it in its 'natural' condition.

utterances (or silences) are designed to promote this initiation in respect of a pupil – that is, in respect of a learner whom he recognizes to be ready to receive what he has resolved to communicate. In short, a pupil is a learner known to a teacher, and teaching, properly speaking, is impossible in his absence.

This, of course, does not mean that 'readiness to receive' is an easily discernible condition, or that it should be identified as the condition in which reception will come most easily. Jean Paul Richter's maxim, that in teaching a two-year-old one should speak to him as if he were six, may be a profound observation. Nor does it mean that the relationship of teacher and pupil is emancipated from the latitudes and imprecisions common to all human relationships. Indeed, it is probably more subject to these imprecisions than any other relationship. What it means is that a teacher is one who studies his pupil, that the initiation *he* undertakes is one which has a deliberate order and arrangement, and that, as well as knowing what he designs to transmit, he has considered the manner of transmission. I once knew a wise man who, wishing to learn the art of the farrier, looked, not only for a man practised in the art, but for one accustomed to teaching, and he was gratified when he found a farrier who was also a teacher of boxing.

With regard to the pupil, there is a famous dilemma which has haunted reflection on education for long enough. Is learning to be understood as acquiring knowledge, or is it to be regarded as the development of the personality of the learner? Is teaching concerned with initiating a pupil into an inheritance of human achievement, or is it enabling the pupil to make the most or the best of himself? Like many such cruxes, this one points to what I believe to be a genuine discrepancy, but misinterprets it.

To escape from it we may recognize learning, not merely as the acquisition of knowledge, but also as the extension of the ability to learn, as the education and not merely the furnishing of a mind, as an inheritance coming to be possessed in such a manner that it loses its second-hand or antique character; and we may recognize teaching, not as passing on something to be received, nor as merely planting a seed, but as setting on foot the cultivation of a mind so that what is planted may grow. But the escape from the dilemma this affords us is imperfect; and, in any case, it is not an escape but a resolution we should be seeking.

What, I think, we must understand is that there is no discrepancy between a pupil succeeding to his inheritance of human achievement and his making the most of himself. 'Self-realization' for human beings is not, of course, the realization of an exactly pre-

determined end which requires only circumstances favourable to this end in order that it should be achieved; but nor is this self an infinite, unknown potentiality which an inheritance of human achievement is as likely to thwart as to promote. Selves are not rational abstractions, they are historic personalities, they are among the components of this world of human achievements; and there is no other way for a human being to make the most of himself than by learning to recognize himself in the mirror of this inheritance.

A discrepancy, however, remains; but it is a discrepancy, not between the self and its world, but between learning and teaching. It is a divergence of points of view. For the pupil, to learn is not to endeavour to make the most of himself, it is to acquire knowledge, to distinguish between truth and error, to understand and become possessor of what he was born heir to. But to the teacher things must appear differently. Obliquely and upon a consequence he is an agent of civilization. But his direct relationship is with his pupil. His engagement is, specifically, to get his pupil to make the most of himself by teaching him to recognize himself in the mirror of the human achievements which compose his inheritance. This is the somewhat complicated manner in which he performs his work of initiation, and this is what distinguishes him from others who hand on the fruits of civilization; namely, that he has a pupil.

Now, to make a 'civilization' available to a pupil is not to put him in touch with the dead, nor is it to rehearse before him the social history of mankind. Death belongs to nature, not *Geist*; and it is only in nature that generation involves a process of recapitulating all earlier forms of life. To initiate a pupil into the world of human achievement is to make available to him much that does not lie upon the surface of his present world. An inheritance will contain much that may not be in current use, much that has come to be neglected and even something that for the time being is forgotten. And to know only the dominant is to become acquainted with only an attenuated version of this inheritance. To see oneself reflected in the mirror of the present modish world is to see a sadly distorted image of a human being; for there is nothing to encourage us to believe that what has captured current fancy is the most valuable part of our inheritance, or that the better survives more readily than the worse. And nothing survives in this world which is not cared for by human beings. The business of the teacher (indeed, this may be said to be his peculiar quality as an agent of civilization) is to release his pupils from servitude to the current dominant feelings, emotions, images, ideas, beliefs and even skills.

not by inventing alternatives to them which seem to him more desirable, but by making available to him something which approximates more closely to the whole of his inheritance.

But this inheritance is an historic achievement; it is 'positive', not 'necessary'; it is contingent upon circumstances; it is miscellaneous and incoherent; it is what human beings have achieved, not by the impulsion of a final cause, but by exploiting the opportunities of fortune and by means of their own efforts. It comprises the standards of conduct to which from time to time they have given their preferences, the pro and con feelings to which they have given their approval and disapproval, the intellectual enterprises they have happened upon and pursued, the duties they have imposed upon themselves, the activities they have delighted in, the hopes they have entertained and the disappointments they have suffered. The notions of 'finished' and 'unfinished' are equally inapplicable to it. It does not deliver to us a clear and unambiguous message; it often speaks in riddles; it offers us advice and suggestion, recommendations, aids to reflection, rather than directives. It has been put together not by designers but by men who knew only dimly what they did. It has no meaning as a whole; it cannot be learned or taught in principle, only in detail.

A teacher, then, engaged in initiating his pupils into so contingent an inheritance, might be excused for thinking that he needed some assurance of its worth. For, like many of us, he may be expected to have a superstitious prejudice against the human race and to be satisfied only when he can feel himself anchored to something for which human beings are not responsible. But he must be urged to have the courage of his circumstances. This man-made inheritance contains everything to which value may be attributed; it is the ground and context of every judgement of better and worse. If there were a mirror of perfection which he could hold up to his pupils, he might be expected to prefer it to this home-made article. But there is no such mirror. He may be excused if he finds the present dominant image of civilized life too disagreeable to impart with any enthusiasm to his pupils. But if he has no confidence in any of the standards of worth written into this inheritance of human achievement, he had better not be a teacher; he would have nothing to teach.

But teachers are modest people, and we are likely to disclaim so large an engagement as initiating our pupils into the civilized inheritance of mankind. We do not pretend to hand on anything but scraps of that inheritance; and it does not escape us that the civilization we are directly concerned with is not alone in the world



and that this is a further limitation of our activities. And all this constitutes a renewed recognition of the contingency of what we have to teach. But the important point here is that whether we are concerned with a relatively simple or (like ours) an exceedingly complex civilization, whether we are concerned with a small or a large part of it, and whether we are concerned with practical skills, with moral conduct or with large intellectual enterprises (like philosophy or science), teaching and learning always relate to an historic inheritance of human achievement and that what is to be handed on and learned, known and understood, are thoughts and various 'expressions' of thoughts.

## 3

From one important point of view, all we can be said to know constitutes a manifold of different 'abilities', different amounts of knowledge being represented in different degrees of ability, and every complex ability being a manifold of simpler abilities.

When an ability is recognized as an ability to do or to make something, and it is recognized to be significantly composed of physical movements, we usually call it a skill. Playing billiards and ploughing a field are skills; each may be enjoyed in different degrees and each may be seen to be a manifold of simpler skills. Thus the ability to plough entails the ability to manage the horse as well as the plough; and the ability to manage the horse entails the ability to manage the leads and the ability to make the appropriate noises.

Further, we are apt to extend this notion of skill to abilities not so significantly composed of physical movements. A navigator, a chairman or a painter may be said to be 'skilful'. But when we say this we usually mean that the abilities concerned in these activities are large and complex and that in this case they are enjoyed only to a limited extent: we mean that his ability runs to a *merely* skilful performance. And this draws attention to abilities which we do not normally call skills.

These are usually more complicated, less obviously concerned with doing and making and more obviously concerned with the performance of mental operations – like speaking, diagnosing, understanding, describing, explaining, etc. The complex 'abilities' denoted in the expressions engineer, Latin scholar, explorer, actor, surgeon, lawyer, army commander, physicist, teacher, painter, farmer and so forth are each manifolds in which simpler abilities are grouped and given a specific focus.

This conjunction, in a concept of 'abilities', of what we know and the use we make of it, is not designed to prove anything, but merely to indicate the way in which we carry about with us what we may be said to know. What we are aware of is not a number of items of knowledge available for use, but having powers of specific kinds – the power of being able to solve a legal problem, or to understand a Latin inscription or to perform a surgical operation. What we know constitutes an equipment which we possess in terms of what it enables us to do or to understand. The 'pragmatism' which this way of thinking might seem to commit us to may be avoided if it is recognized that abilities are of different kinds and cannot be assimilated to one another – that, for example, the ability to understand and to explain cannot be assimilated to the ability to do or to make.

Now, these abilities of various kinds and dimensions which constitute what we may be said to know will be found to be conjunctions of what is called 'information' and what I shall call 'judgement'.

The component of 'information' is easily recognized. It is the explicit ingredient of knowledge, where what we know may be itemized. Information consists of facts, specific intellectual artefacts (often arranged in sets or bunches). It is impersonal (not a matter of opinion). Most of it is accepted on authority, and it is to be found in dictionaries, manuals, textbooks and encyclopaedias. It is the appropriate answer to questions which ask: who? what? where? which? how long? how much? etc. Typical pieces of information are: the date of Shakespeare's death or St. Paul's conversion; the average annual rainfall in Bourne-mouth; the ingredients of Welsh rabbit; the specific gravity of alcohol; the age of consent; the atomic structure of nitrogen; the reasons given by Milton for favouring polygamy; the seating capacity of the Albert Hall.

Except in quizzes, where it is notoriously inert, information is a component of knowledge, and (unlike knowledge itself) it may be useful or useless. Useful information is composed of facts related to a particular skill or ability. There is no inherently useless information; there are only facts irrelevant to the matter in hand.

Some facts seem to convey detached pieces of information – 'Mummy, Mrs. Smith wears a wig', 'we cook on gas', 'that is a bicycle', 'this is a bassoon' – and they lose their inertness merely by reason of their place in a conversation. But the importance of information lies in its provision of rules or rule-like propositions relating to abilities. Every ability has its rules, and they are contained in that component of knowledge we call information. This is

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clearly the case with mathematical or chemical formulae, or with information like 'glass is brittle' or 'hemlock is poisonous'; but it is also the case with other items of information. A recipe tells me what ingredients I should use in making a dish, and one of the uses of knowing the seating capacity of the Albert Hall is that it tells me how many tickets I may sell.

But rules or rule-like propositions such as are supplied in pieces of information may be related to knowledge (that is, to a specific ability or skill) in either of two different ways. They may be items of information which must be known as a condition of being able to perform; or they may constitute the criterion by means of which a performance may be known to be incorrect, though here they are never the only means by which mistakes may be detected.

First, nobody could read or receive a message in Morse unless he were correctly informed about the Morse Code equivalents of the letters of the alphabet. This is information in the exact sense. It is a set of facts (specific intellectual artefacts), not opinions; it is stated in propositions; it is received on authority; it is capable of being forgotten and it needs to be recollected; and it appears in rules to be followed — rules which must be known and recollected as a condition of being able to perform.

Secondly, the grammar of a language may be said to constitute the criterion by which a performance may be known to be incorrect. It consists of facts, stated in propositions, and it appears as rules. But, while this information may obliquely promote a laudable performance, it is not necessary to it. A laudable performance is possible to somebody who never possessed this information, or to somebody who once had it but has now forgotten it. There are a number of things directly related to a performance which a person ignorant of these facts could not do; but among them is neither the ability to speak intelligently and to understand what is said in the language, nor the ability to detect mistakes. The rules, here, are observed in the performance and they are capable of being known. They are the criteria for determining an incorrect performance, but a knowledge of them is not a condition of a laudable performance.

There is, indeed, a third sort of rule-like proposition which, in order to distinguish it from other sorts, is often called a 'principle'. These are propositions which are advanced in order to explain what is going on in any performance; they supply what may be called its 'underlying rationale'. And, consequently, as I understand them, they are never components of the knowledge which constitutes the performance. They belong to a separate performance of their own — the performance of explaining a performance. Let me offer two examples of what I mean.

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First, riding a bicycle is a skill which consists wholly of making the appropriate physical movements. In order to enjoy this skill certain information must have been acquired, and there may also be what could be called the 'grammar' of the skill. But beyond all this, the skill may be said to be an exemplification of certain principles of mechanics. But these principles are utterly unknown to even the most successful cyclist, and being able to recite them would not help him to be more proficient. They do not constitute a criterion. Their sole value is the contribution they may make to our understanding of what is going on. In short, they are unrelated either to learning or to practising the skill. They belong to a separate performance, the performance of explaining.

Secondly, moral conduct may be said to be the ability to behave well. Here, again, certain information must be known; and there may also be what could be called the 'grammar' of moral conduct — the rules and rule-like propositions which constitute the criteria by means of which a performance may be known to be 'incorrect'. But, again, beyond all this there are, or may be, 'principles' in terms of which what is going on in moral conduct may be understood and explained. Aristotle, for example, in the 'principle of the Mean', formulated what he believed to be the 'underlying rationale' of all good conduct. But a knowledge of this, or of any other such 'principle', is not a condition of being able to behave well, nor does this principle constitute a criterion by means of which a performance may be known to be 'incorrect'. It is unrelated either to learning good conduct or to a good performance.

There is, then, as I understand it, a sort of information which is designed to explain a performance (and also to explain the rules of a performance), but which is never a component of the knowledge which constitutes the performance. This, of course, is so even when the performance is itself a performance of understanding and explanation, as, for example, in history or in science.

But, to return from this not unnecessary digression, there is in all knowledge an ingredient of information. It consists of facts which may range from the recognitions and identifications in which knowledge of any sort emerges from indeterminate awareness, to rules or rule-like propositions which inform the skills and abilities in which we carry about what we may be said to know, and which are sometimes, but not always, expressly known and followed. This ingredient of information, however, never constitutes the whole of what we know. Before any concrete skill or ability can appear, information must be partnered by judgement, 'knowing *how*' must be added to the 'knowing *what*' of information.

By 'judgement' I mean the tacit or implicit component of know-

edge, the ingredient which is not merely unspecified in propositions but is unspecifiable in propositions. It is the component of knowledge which does not appear in the form of rules and which, therefore, cannot be resolved into information or itemized in the manner characteristic of information.

That we enjoy such knowledge has seemed to some writers undeniable. They direct our attention, in the first place, to skills—that is, to abilities which are significantly composed of physical movements. We may know how to do something without being able to state explicitly the manner of acting involved. This, for example, appears to be the case in swimming, riding a horse, playing a fish, using a chisel and in turning a bowl on a potter's wheel. These writers point out, further, that we may recognize an action as being of a known kind without being able to specify how we recognized it; that we are able to discover similarities in things without being able to say what they consist of, or patterns without being aware of the elements they are composed of or the rules they exemplify; and that we may speak a language without knowing the rules we are following and even without those rules ever having been formulated.

All this, I think, is true. But what it suggests to me is that there are skills and abilities where what is known may lack certain sorts of informatory content (particularly the sort of information we call 'the rules'), rather than that there is a 'knowing *how*' which can be divorced from any 'knowing *what*'. Thus I have used 'judgement' to distinguish 'knowing *how*' from information because I think 'knowing *how*' is an ingredient of all genuine knowledge, and not a separate kind of knowing specified by an ignorance of rules.

Facts, rules, all that may come to us as information, itemized and explicit, never themselves endow us with an ability to do, or to make, or to understand and explain anything. Information has to be used, and it does not itself indicate how, on any occasion, it should be used. What is required in addition to information is knowledge which enables us to interpret it, to decide upon its relevance, to recognize what rule to apply and to discover what action permitted by the rule should, in the circumstances, be performed; knowledge (in short) capable of carrying us across those wide open spaces, to be found in every ability, where no rule runs. For rules are always disjunctive. They specify only an act or a conclusion of a certain general kind and they never relieve us of the necessity of choice. They never yield more than partial explanations: to understand anything as an example of the operation of a rule is to understand it very imperfectly.

'Judgement', then, is not to be recognized as merely information of another sort; its deliverances cannot be itemized, remembered or forgotten. It is, for example, all that is contained in what has been called 'the unspecifiable art of scientific enquiry' without which 'the articulate contents of scientific knowledge' remains unintelligible.

And if we are obliged to retreat a little from the notion of an entirely independent 'knowing *how*' (because every ability has an ingredient of fact, recognized as fact and specifiable in propositions), I do not think we can avoid recognizing what I have called 'judgement' as a partner, not only in those abilities we call skills, but in all abilities whatever, and, more particularly, in those abilities which are almost exclusively concerned with mental operations.

The connoisseurship we recognize to belong to the knowledge entailed in riding a horse, for example, or in transmitting or receiving a message in the Morse Code, has its counterpart elsewhere. Indeed, the further we go from manual and sensual skills the larger becomes the place occupied by this component of knowledge. Whatever its place in tea-tasting and in the diagnosis of disease, its place in art and literature, in historical, philosophical or scientific understanding is almost immeasurably greater.

It is represented, for example, in the so-called *divinatio* of the textual critic in which a corrupt reading is detected and an emendation suggested. It is what comes into play where the information to be got from the collation of manuscripts and recension stops. It is all that goes beyond the point where critical rules and methods leave off, and all that is required to drag appropriate precepts from these rules. It is what escapes even the most meticulous list of the qualities required for practising the craft of the textual critic.

A similar ingredient appears in the practical relationships of human beings. The moral and legal rules which set out in positional form the recognized rights and duties, and the prudential maxims which give some flexibility to those rules, constitute only a small part of the knowledge comprised in the ability to live a civilized life. The precepts themselves require interpretation in respect of persons and circumstances; where there is a conflict between precepts, it cannot be resolved by the application of other rules. 'Casuistry', as it has been said, 'is the grave of moral judgement'.

In short, in every 'ability' there is an ingredient of knowledge which cannot be resolved into information, and in some skills this may be the greater part of the knowledge required for their prac-



tics. Moreover, 'abilities' do not exist in the abstract but in individual examples: the norms by which they are recognized are afterthoughts, not categorical imperatives. And each individual example has what may be called a style or idiom of its own which cannot be specified in propositions. Not to detect a man's style is to have missed three-quarters of the meaning of his actions and utterances; and not to have acquired a style is to have shut oneself off from the ability to convey any but the crudest meanings.

What, then, is significant is not the observation that one may know how to speak a language without knowing the rules one is following, but the observation that until one can speak the language in a manner not expressly provided for in the rules, one can make no significant utterance in it. And, of course, by a 'language' I do not mean merely Latin and Spanish, I mean also the languages of history, philosophy, science and practical life. The rules of art are there, but they do not determine the practice of the art; the rules of understanding are there, but they do not themselves endow us with understanding. They set limits – often telling us only what *not* to do if we wish to speak any of the languages of our civilization; but they provide no prescription for all that must go on in the interval between these limits.

## 4

The inheritance of human achievements into which the teacher is to initiate his pupil is knowledge; and (on this reading of it) knowledge is to be recognized as manifold of abilities, in each of which there is a synthesis of 'information' and 'judgement'. What bearing has this view of things upon the activities of learning and teaching – learning which is succeeding to the inheritance, and teaching which is deliberately initiating a pupil into it? I doubt very much whether there are any practical conclusions to be drawn from it for either learners or teachers; but I think it may have some virtue as part of an attempt to understand what is going on in learning and teaching.

It suggests, first, that what I have called the two components of knowledge ('information' and 'judgement') can both be communicated and acquired, but cannot be communicated or acquired separately – at least, not on separate occasions or in separate 'lessons'. This, I think, is certainly true in respect of all the more important abilities and passages in the inheritance, and it is not seriously qualified by the observations that it is possible to com-

municate and acquire inert information, and that there are some skills in which the component of information is minimal.

But, secondly, it suggests that these two components of knowledge cannot be communicated in the same manner. Indeed, as I understand it, the distinction between 'information' and 'judgement' is a distinction between different manners of communication rather than a dichotomy in what is known; and for me it springs from reflecting upon teaching and learning rather than from reflecting upon the nature of knowledge. Thus teaching may be said to be a twofold activity of communicating 'information' (which I shall call 'instructing') and communicating 'judgement' (which I shall call 'impairing'); and learning may be said to be a twofold activity of acquiring 'information' and coming to possess 'judgement'.

The rest of what I have to say concerns this distinction and the understanding it may give of what is going on in learning and teaching.

All teaching has a component of instruction, because all knowledge has a component of information. The teacher as instructor is the deliberate conveyor of information to his pupil.

The facts which compose information are specific, impersonal and mostly to be taken on trust; they are also apt to be hard, isolated, arbitrary and inert. They may be stored in encyclopaedias and dictionaries. Their immediate appeal is not to the pupil's desire to understand, but to his curiosity, his desire not to be ignorant – that is, perhaps, to his vanity. This desire not to be ignorant is, for the most part, satisfied by knowing things in terms of their names and by knowing the signification of words and expressions. From his earliest years the pupil has been used to making such discoveries for himself; he has become accustomed to distinguishing in an elementary way between fact and not-fact – without, of course, knowing the rules he is observing in doing so. For the most part he is used to doing all this as part of the process of coming to be at home in the world he inhabits. Thus, when he falls into the hands of an instructor, he is already familiar with the activity of acquiring information, particularly information for immediate use.

The task of the teacher as instructor is to introduce the pupil to facts which have no immediate practical significance. (If there were no such facts, or if they composed an unimportant part of our inheritance, a teacher would be a luxury rather than a necessity.) And, therefore, his first business is to consider and decide what information to convey to his pupil. This may be decided by circumstances: the Sergeant-Instructor does not have to consider whether



or not he shall inform his class about the names and uses of the parts of the bren-gun. But, if it is not decided by such circumstances as these, it is something which falls to the teacher as instructor to consider. What part or parts of our inheritance of information shall be transmitted to his pupil?

His second task is to make the information he has to convey more readily learnable by giving it an organization in which the inertness of its component facts is modified.

The organization provided by an immediate application to the practical life of his pupil is spurious; much of the information he has to convey has no such application and would be corrupted by being turned in this direction. The organization provided by a dictionary or an encyclopaedia is not designed for learning but for the rapid discovery of items of information in response to a recognition of specific ignorance. And the organization of information in terms of the modes of thought, or languages, which are the greatest achievements of civilization, is much too sophisticated for the beginner. In these circumstances, what we have settled for, and what the instructor may be expected to settle for, is the organization of information in terms of the more or less arbitrarily distinguished 'subjects' of a school or university curriculum: geography, Latin, chemistry, arithmetic, 'current affairs' or whatnot. Each of these is an organization of information and not a mode of thought; but each permits facts to begin to reveal their rule-like character (that is, their character as tools to be used in doing, making or understanding) and thus to throw off some of their inertness. Moreover, there is, I think, some positive advantage in devising, for pedagogical purposes, special organizations of information which differ from the significant modes of thought of our civilization. For these modes of thought are not themselves organizations of information; and when one of them appears as a school 'subject' — as, for example, 'philosophy' in the curriculum of a *lycée* — its character is apt to be misrepresented. No great harm may be thought to come from representing 'geography' or even 'Latin' as information to be acquired, but there is something odd about 'philosophy' when it appears as the ability, for example, to remember and rehearse the second proof for the existence of God or what Descartes said about dreams.

There are, I think, two other tasks which obviously fall to the teacher as instructor. First, he has to consider the order in which the information contained in each of these somewhat arbitrary organizations of facts shall be transmitted to his pupil. It is this sort of consideration which goes into devising a syllabus, writing a

textbook, or composing the programme of an instructing machine. Second, he has to exercise his pupil in this information so that what has been acquired may be recognized in forms other than those in which it was first acquired, and may be recollected on all the occasions when it is relevant. That is, the instructor has not only to hear his pupils recite the Catechism, the Highway Code, the Capes and Bays, the eight-times multiplication table and the Kings of England, but he has also to see that they can answer questions in which this information is properly used. For the importance of information is the accuracy with which it is learned and the readiness with which it can be recollected and used.

Nevertheless, our inheritance of information is so great that, whatever devices the instructor may use to modify its inertness, much of it must be acquired with only the dimmest notion of how it might be used. No doubt it would be a good thing (as Liechtenberg said) if we could be educated in such a way that everything unclear to us was totally incomprehensible; but this is not possible. Learning begins not in ignorance, but in error. Besides, in acquiring information we may learn something else, other and more valuable than either the information itself or perceiving that it is something to be used. And to understand what this is we must turn from 'information' to 'judgement', from the activity of 'instructing' to the activity of 'imparting'.

Something of what I mean by 'judgement' has begun to appear whenever the pupil perceives that information must be used, and perceives the possibility of irrelevance. Something of this is imparted in the organization of information itself, although these organizations are apt to give a restrictive impression of relevance. It is clear that this is not itself information; it cannot be taught in the way in which information may be conveyed, and it cannot be learned, recollected or forgotten in the way in which information may be learned, recollected and forgotten. But it is clear, also, that this is only an intimation of 'judgement', for there is much more to be noticed which no mere organization of information can impart. To perceive that facts are rules or tools, to perceive that rules are always disjunctive and never categorical, is one thing; to have acquired the ability to use them is another.

'Judgement', then, is that which, when united with information, generates knowledge or 'ability' to do, to make, or to understand and explain. It is being able to think — not to think in no manner in particular, but to think with an appreciation of the considerations which belong to different modes of thought. This, of course, is something which must be *learned*; it does not belong to the pupil by

the light of nature, and it is as much a part of our civilized inheritance as the information which is its counterpart. But since learning to think is not acquiring additional information it cannot be pursued in the same way as we add to our stock of information.

Further, 'judgement' may be *taught*, and it belongs to the deliberate enterprise of the teacher to teach it. But, although a pupil cannot be explicitly instructed in how to think (there being, here, no rules), 'judgement' can be taught only in conjunction with the transmission of information. That is to say, it cannot be taught in a separate lesson which is not, for example, a geography, a Latin or an algebra lesson. Thus, from the pupil's point of view, the ability to think is something learned as a by-product of acquiring information; and, from the teacher's point of view, it is something which, if it is taught, must be imparted obliquely in the course of instruction. How this is done is to be understood from considering the character of what has to be imparted.

'Judgement', the ability to think, appears first not in merely being aware that information is to be used, that it is a capital and not a stock, but in the ability to use it – the ability to invest it in answering questions. The rules may have been mastered, the maxims may be familiar, the facts may be available to recollection; but what do they look like in a concrete situation, and how may a concrete situation (an artefact or an understanding) be generated from this information? How does Latin grammar appear in a page from Cicero (whence, indeed, it was abstracted) and how can it be made to generate a page of genuine Latin prose? What do the copy-book maxims look like in moral conduct observed, and how can they be made to generate conduct? These are the facts, but what conclusions do they authorize or forbid? This is the literature – the articulate contents, for example, of current knowledge about magnetic effects – but how does a pupil learn to speak the language in which it is written down: the language of science? How does he acquire the connoisseurship which enables him to determine relevance, which allows him to distinguish between different sorts of questions and the different sorts of answers they call for, which emancipates him from crude absolutes and suffers him to give his assent or dissent in graduate terms?

But learning to think is not merely learning how to judge, to interpret and to use information, it is learning to recognize and enjoy the intellectual virtues. How does a pupil learn disinterested curiosity, patience, intellectual honesty, exactness, industry, concentration and doubt? How does he acquire a sensibility to small differences and the ability to recognize intellectual elegance? How

does he come to inherit the disposition to submit to refutation? How does he not merely learn the love of truth and justice, but learn it in such a way as to escape the reproach of fanaticism?

And beyond all this there is something more difficult to acquire, but more important than any of it; namely, the ability to detect the individual intelligence which is at work in every utterance, even in those which convey impersonal information. For every significant act or utterance has a style of its own, a personal idiom, an individual manner of thinking of which it is a reflection. This, what I have called style, is the choice made, not according to the rules, but within the area of freedom left by the negative operation of rules. We may listen to what a man has to say, but unless we overhear in it a mind at work and can detect the idiom of thought, we have understood nothing. Art and conduct, science, philosophy and history, these are not modes of thought *defined* by rules; they exist only in personal explorations of territories only the boundaries of which are subject to definition. To have command over the languages of our civilization is, not to know the rules of their grammar, but to have the opportunity of a syntax and a vocabulary, rich in fine distinctions, in which to think for oneself. Learning, then, is acquiring the ability to feel and to think, and the pupil will never acquire these abilities unless he has learned to listen for them and to recognize them in the conduct and utterances of others.

Besides information, then, this is what has to be learned: for this (and not the dead weight of its products) is the real substance of our inheritance – and nothing can be inherited without learning. This is what the teacher has to 'impart' to his pupil, together with whatever information he chooses to convey.

It cannot be *learned* separately; it is never explicitly learned and it is known only in practice; but it may be learned in everything that is learned, in the carpentry shop as well as in the Latin or chemistry lesson. If it is learned, it can never be forgotten, and it does not need to be recollected in order to be enjoyed. It is, indeed, often enough, the residue which remains when all else is forgotten; the shadow of lost knowledge.

It cannot be *taught* separately; it can have no place of its own in a timetable or a curriculum. It cannot be taught overtly, by precept, because it comprises what is required to animate precept, but it may be taught in everything that is taught. It is implanted unobtrusively in the manner in which information is conveyed, in a tone of voice, in the gesture which accompanies instruction, in asides and oblique utterances, and by example. For 'teaching by example', which is sometimes dismissed as an inferior sort of

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teaching, generating inflexible knowledge because the rules of what is known remain concealed, is emancipating the pupil from the half-utterances of rules by making him aware of a concrete situation. In imitating the example he acquires not merely a model for the particular occasion, but the disposition to recognize everything as an occasion. It is a habit of listening for an individual intelligence at work in every utterance that may be acquired by imitating a teacher who has this habit. And the intellectual virtues may be imparted only by a teacher who really cares about them for their own sake and never stoops to the priggishness of mentioning them. Not the cry, but the rising of the wild duck impels the flock to follow him in flight.

When I consider, as in private duty bound, how I first became dimly aware that there was something else in learning than the acquisition of information, that the way a man thought was more important than what he said, it was, I think, on the occasions when we had before us concrete situations. It was when we had, not an array of historical 'facts', but (for a moment) the facts suspended in an historian's argument. It was on those occasions when we were made to learn by heart, not the declension of *bonus* (which, of course, had to be learned), but a passage of literature, the reflection of a mind at work in a language. It was on those occasions when one was not being talked to but had the opportunity of overhearing an intelligent conversation.

And if you were to ask me the circumstances in which patience, accuracy, economy, elegance and style first dawned upon me, I would have to say that I did not come to recognize them in literature, in argument or in geometrical proof until I had first recognized them elsewhere; and that I owed this recognition to a Sergeant gymnastics instructor who lived long before the days of 'physical education' and for whom gymnastics was an intellectual art – and I owed it to him, not on account of anything he ever said, but because he was a man of patience, accuracy, economy, elegance and style.