

The Nature of Method

1. The Unity of Subject Matter and Method

The trinity of school topics is subject matter, methods, and administration or government. We have been concerned with the two former in recent chapters. It remains to disentangle them from the context in which they have been referred to, and discuss explicitly their nature. We shall begin with the topic of method, since that lies closest to the considerations of the last chapter. Before taking it up, it may be well, however, to call express attention to one implication of our theory; the connection of subject matter and method with each other. The idea that mind and the world of things and persons are two separate and independent realms - a theory which philosophically is known as dualism - carries with it the conclusion that method and subject matter of instruction are separate affairs. Subject matter then becomes a ready-made systematized classification of the facts and principles of the world of nature and man. Method then has for its province a consideration of the ways in which this antecedent subject matter may be best presented to and impressed upon the mind; or, a consideration of the ways in which the mind may be externally brought to bear upon the matter so as to facilitate its acquisition and possession. In theory, at least, one might deduce from a science of the mind as something existing by itself a complete theory of methods of learning, with no knowledge of the subjects to which the methods are to be applied. Since many who are actually most proficient in various branches of subject matter are wholly innocent of these methods, this

state of affairs gives opportunity for the retort that pedagogy, as an alleged science of methods of the mind in learning, is futile; - a mere screen for concealing the necessity a teacher is under of profound and accurate acquaintance with the subject in hand.

But since thinking is a directed movement of subject matter to a completing issue, and since mind is the deliberate and intentional phase of the process, the notion of any such split is radically false. The fact that the material of a science is organized is evidence that it has already been subjected to intelligence; it has been methodized, so to say. Zoology as a systematic branch of knowledge represents crude, scattered facts of our ordinary acquaintance with animals after they have been subjected to careful examination, to deliberate supplementation, and to arrangement to bring out connections which assist observation, memory, and further inquiry. Instead of furnishing a starting point for learning, they mark out a consummation. Method means that arrangement of subject matter which makes it most effective in use. Never is method something outside of the material.

How about method from the standpoint of an individual who is dealing with subject matter? Again, it is not something external. It is simply an effective treatment of material - efficiency meaning such treatment as utilizes the material (puts it to a purpose) with a minimum of waste of time and energy. We can distinguish a way of acting, and discuss it by itself; but the way exists only as way-of-dealing-with-material. Method is not antithetical to subject matter; it is the effective direction of subject matter to desired results. It is antithetical to random and ill-considered action, - ill-considered signifying ill-adapted.

The statement that method means directed movement of subject matter towards ends is formal. An illustration may give it content. Every artist must have a method, a technique, in doing his work. Piano playing is not hitting the keys at random. It is an orderly way of using them, and the order is not something which exists ready-made

in the musician's hands or brain prior to an activity dealing with the piano. Order is found in the disposition of acts which use the piano and the hands and brain so as to achieve the result intended. It is the action of the piano directed to accomplish the purpose of the piano as a musical instrument. It is the same with "pedagogical" method. The only difference is that the piano is a mechanism constructed in advance for a single end; while the material of study is capable of indefinite uses. But even in this regard the illustration may apply if we consider the infinite variety of kinds of music which a piano may produce, and the variations in technique required in the different musical results secured. Method in any case is but an effective way of employing some material for some end.

These considerations may be generalized by going back to the conception of experience. Experience as the perception of the connection between something tried and something undergone in consequence is a process. Apart from effort to control the course which the process takes, there is no distinction of subject matter and method. There is simply an activity which includes both what an individual does and what the environment does. A piano player who had perfect mastery of his instrument would have no occasion to distinguish between his contribution and that of the piano. In well-formed, smooth-running functions of any sort, - skating, conversing, hearing music, enjoying a landscape, - there is no consciousness of separation of the method of the person and of the subject matter. In whole-hearted play and work there is the same phenomenon.

When we reflect upon an experience instead of just having it, we inevitably distinguish between our own attitude and the objects toward which we sustain the attitude. When a man is eating, he is eating food. He does not divide his act into eating and food. But if he makes a scientific investigation of the act, such a discrimination is the first thing he would effect. He would examine on the one hand the properties of the nutritive material, and on the other hand the acts of the organism in appropriating and digesting. Such reflection upon

experience gives rise to a distinction of what we experience (the experienced) and the experiencing - the how. When we give names to this distinction we have subject matter and method as our terms. There is the thing seen, heard, loved, hated, imagined, and there is the act of seeing, hearing, loving, hating, imagining, etc.

This distinction is so natural and so important for certain purposes, that we are only too apt to regard it as a separation in existence and not as a distinction in thought. Then we make a division between a self and the environment or world. This separation is the root of the dualism of method and subject matter. That is, we assume that knowing, feeling, willing, etc., are things which belong to the self or mind in its isolation, and which then may be brought to bear upon an independent subject matter. We assume that the things which belong in isolation to the self or mind have their own laws of operation irrespective of the modes of active energy of the object. These laws are supposed to furnish method. It would be no less absurd to suppose that men can eat without eating something, or that the structure and movements of the jaws, throat muscles, the digestive activities of stomach, etc., are not what they are because of the material with which their activity is engaged. Just as the organs of the organism are a continuous part of the very world in which food materials exist, so the capacities of seeing, hearing, loving, imagining are intrinsically connected with the subject matter of the world. They are more truly ways in which the environment enters into experience and functions there than they are independent acts brought to bear upon things. Experience, in short, is not a combination of mind and world, subject and object, method and subject matter, but is a single continuous interaction of a great diversity (literally countless in number) of energies.

For the purpose of controlling the course or direction which the moving unity of experience takes we draw a mental distinction between the how and the what. While there is no way of walking or of eating or of learning over and above the actual walking, eating, and

studying, there are certain elements in the act which give the key to its more effective control. Special attention to these elements makes them more obvious to perception (letting other factors recede for the time being from conspicuous recognition). Getting an idea of how the experience proceeds indicates to us what factors must be secured or modified in order that it may go on more successfully. This is only a somewhat elaborate way of saying that if a man watches carefully the growth of several plants, some of which do well and some of which amount to little or nothing, he may be able to detect the special conditions upon which the prosperous development of a plant depends. These conditions, stated in an orderly sequence, would constitute the method or way or manner of its growth. There is no difference between the growth of a plant and the prosperous development of an experience. It is not easy, in either case, to seize upon just the factors which make for its best movement. But study of cases of success and failure and minute and extensive comparison, helps to seize upon causes. When we have arranged these causes in order, we have a method of procedure or a technique.

A consideration of some evils in education that flow from the isolation of method from subject matter will make the point more definite.

(I) In the first place, there is the neglect (of which we have spoken) of concrete situations of experience. There can be no discovery of a method without cases to be studied. The method is derived from observation of what actually happens, with a view to seeing that it happen better next time. But in instruction and discipline, there is rarely sufficient opportunity for children and youth to have the direct normal experiences from which educators might derive an idea of method or order of best development. Experiences are had under conditions of such constraint that they throw little or no light upon the normal course of an experience to its fruition. "Methods" have then to be authoritatively recommended to teachers, instead of being an expression of their own intelligent observations. Under such circumstances, they have a mechanical uniformity, assumed to be

alike for all minds. Where flexible personal experiences are promoted by providing an environment which calls out directed occupations in work and play, the methods ascertained will vary with individuals - for it is certain that each individual has something characteristic in his way of going at things.

(ii) In the second place, the notion of methods isolated from subject matter is responsible for the false conceptions of discipline and interest already noted. When the effective way of managing material is treated as something ready-made apart from material, there are just three possible ways in which to establish a relationship lacking by assumption. One is to utilize excitement, shock of pleasure, tickling the palate. Another is to make the consequences of not attending painful; we may use the menace of harm to motivate concern with the alien subject matter. Or a direct appeal may be made to the person to put forth effort without any reason. We may rely upon immediate strain of "will." In practice, however, the latter method is effectual only when instigated by fear of unpleasant results. (iii) In the third place, the act of learning is made a direct and conscious end in itself. Under normal conditions, learning is a product and reward of occupation with subject matter. Children do not set out, consciously, to learn walking or talking. One sets out to give his impulses for communication and for fuller intercourse with others a show. He learns in consequence of his direct activities. The better methods of teaching a child, say, to read, follow the same road. They do not fix his attention upon the fact that he has to learn something and so make his attitude self-conscious and constrained. They engage his activities, and in the process of engagement he learns: the same is true of the more successful methods in dealing with number or whatever. But when the subject matter is not used in carrying forward impulses and habits to significant results, it is just something to be learned. The pupil's attitude to it is just that of having to learn it. Conditions more unfavorable to an alert and concentrated response would be hard to devise. Frontal attacks are even more wasteful in learning than in war. This does not mean, however, that students are to be seduced

unaware into preoccupation with lessons. It means that they shall be occupied with them for real reasons or ends, and not just as something to be learned. This is accomplished whenever the pupil perceives the place occupied by the subject matter in the fulfilling of some experience.

(iv) In the fourth place, under the influence of the conception of the separation of mind and material, method tends to be reduced to a cut and dried routine, to following mechanically prescribed steps. No one can tell in how many schoolrooms children reciting in arithmetic or grammar are compelled to go through, under the alleged sanction of method, certain preordained verbal formulae. Instead of being encouraged to attack their topics directly, experimenting with methods that seem promising and learning to discriminate by the consequences that accrue, it is assumed that there is one fixed method to be followed. It is also naively assumed that if the pupils make their statements and explanations in a certain form of "analysis," their mental habits will in time conform. Nothing has brought pedagogical theory into greater disrepute than the belief that it is identified with handing out to teachers recipes and models to be followed in teaching. Flexibility and initiative in dealing with problems are characteristic of any conception to which method is a way of managing material to develop a conclusion. Mechanical rigid woodenness is an inevitable corollary of any theory which separates mind from activity motivated by a purpose.

2. Method as General and as Individual

In brief, the method of teaching is the method of an art, of action intelligently directed by ends. But the practice of a fine art is far from being a matter of extemporized inspirations. Study of the operations and results of those in the past who have greatly succeeded is essential. There is always a tradition, or schools of art, definite enough to impress beginners, and often to take them captive.

Methods of artists in every branch depend upon thorough acquaintance with materials and tools; the painter must know canvas, pigments, brushes, and the technique of manipulation of all his appliances. Attainment of this knowledge requires persistent and concentrated attention to objective materials. The artist studies the progress of his own attempts to see what succeeds and what fails. The assumption that there are no alternatives between following ready-made rules and trusting to native gifts, the inspiration of the moment and undirected "hard work," is contradicted by the procedures of every art.

Such matters as knowledge of the past, of current technique, of materials, of the ways in which one's own best results are assured, supply the material for what may be called general method. There exists a cumulative body of fairly stable methods for reaching results, a body authorized by past experience and by intellectual analysis, which an individual ignores at his peril. As was pointed out in the discussion of habit-forming (ante, p. 49), there is always a danger that these methods will become mechanized and rigid, mastering an agent instead of being powers at command for his own ends. But it is also true that the innovator who achieves anything enduring, whose work is more than a passing sensation, utilizes classic methods more than may appear to himself or to his critics. He devotes them to new uses, and in so far transforms them.

Education also has its general methods. And if the application of this remark is more obvious in the case of the teacher than of the pupil, it is equally real in the case of the latter. Part of his learning, a very important part, consists in becoming master of the methods which the experience of others has shown to be more efficient in like cases of getting knowledge. ¹ These general methods are in no way opposed to individual initiative and originality - to personal ways of doing things. On the contrary they are reinforcements of them. For there is radical difference between even the most general method and a prescribed rule. The latter is a direct guide to action; the former operates

indirectly through the enlightenment it supplies as to ends and means. It operates, that is to say, through intelligence, and not through conformity to orders externally imposed. Ability to use even in a masterly way an established technique gives no warranty of artistic work, for the latter also depends upon an animating idea.

If knowledge of methods used by others does not directly tell us what to do, or furnish ready-made models, how does it operate? What is meant by calling a method intellectual? Take the case of a physician. No mode of behavior more imperiously demands knowledge of established modes of diagnosis and treatment than does his. But after all, cases are like, not identical. To be used intelligently, existing practices, however authorized they may be, have to be adapted to the exigencies of particular cases. Accordingly, recognized procedures indicate to the physician what inquiries to set on foot for himself, what measures to try. They are standpoints from which to carry on investigations; they economize a survey of the features of the particular case by suggesting the things to be especially looked into. The physician's own personal attitudes, his own ways (individual methods) of dealing with the situation in which he is concerned, are not subordinated to the general principles of procedure, but are facilitated and directed by the latter. The instance may serve to point out the value to the teacher of a knowledge of the psychological methods and the empirical devices found useful in the past. When they get in the way of his own common sense, when they come between him and the situation in which he has to act, they are worse than useless. But if he has acquired them as intellectual aids in sizing up the needs, resources, and difficulties of the unique experiences in which he engages, they are of constructive value. In the last resort, just because everything depends upon his own methods of response, much depends upon how far he can utilize, in making his own response, the knowledge which has accrued in the experience of others. As already intimated, every word of this account is directly applicable also to the method of the pupil, the way of learning. To suppose that students, whether in the primary school or in the

university, can be supplied with models of method to be followed in acquiring and expounding a subject is to fall into a self-deception that has lamentable consequences. (See ante, p. 169.) One must make his own reaction in any case. Indications of the standardized or general methods used in like cases by others - particularly by those who are already experts - are of worth or of harm according as they make his personal reaction more intelligent or as they induce a person to dispense with exercise of his own judgment. If what was said earlier (See p. 159) about originality of thought seemed overstrained, demanding more of education than the capacities of average human nature permit, the difficulty is that we lie under the incubus of a superstition. We have set up the notion of mind at large, of intellectual method that is the same for all. Then we regard individuals as differing in the quantity of mind with which they are charged. Ordinary persons are then expected to be ordinary. Only the exceptional are allowed to have originality. The measure of difference between the average student and the genius is a measure of the absence of originality in the former. But this notion of mind in general is a fiction. How one person's abilities compare in quantity with those of another is none of the teacher's business. It is irrelevant to his work. What is required is that every individual shall have opportunities to employ his own powers in activities that have meaning. Mind, individual method, originality (these are convertible terms) signify the quality of purposive or directed action. If we act upon this conviction, we shall secure more originality even by the conventional standard than now develops. Imposing an alleged uniform general method upon everybody breeds mediocrity in all but the very exceptional. And measuring originality by deviation from the mass breeds eccentricity in them. Thus we stifle the distinctive quality of the many, and save in rare instances (like, say, that of Darwin) infect the rare geniuses with an unwholesome quality.

3. The Traits of Individual Method

The most general features of the method of knowing have been given in our chapter on thinking. They are the features of the reflective situation: Problem, collection and analysis of data, projection and elaboration of suggestions or ideas, experimental application and testing; the resulting conclusion or judgment. The specific elements of an individual's method or way of attack upon a problem are found ultimately in his native tendencies and his acquired habits and interests. The method of one will vary from that of another (and properly vary) as his original instinctive capacities vary, as his past experiences and his preferences vary. Those who have already studied these matters are in possession of information which will help teachers in understanding the responses different pupils make, and help them in guiding these responses to greater efficiency. Child-study, psychology, and a knowledge of social environment supplement the personal acquaintance gained by the teacher. But methods remain the personal concern, approach, and attack of an individual, and no catalogue can ever exhaust their diversity of form and tint.

Some attitudes may be named, however,-which are central in effective intellectual ways of dealing with subject matter. Among the most important are directness, open-mindedness, single-mindedness (or whole-heartedness), and responsibility.

1. It is easier to indicate what is meant by directness through negative terms than in positive ones

Self-consciousness, embarrassment, and constraint are its menacing foes. They indicate that a person is not immediately concerned with subject matter. Something has come between which deflects concern to side issues. A self-conscious person is partly thinking about his problem and partly about what others think of his performances. Diverted energy means loss of power and confusion of ideas. Taking

an attitude is by no means identical with being conscious of one's attitude. The former is spontaneous, naive, and simple. It is a sign of whole-souled relationship between a person and what he is dealing with. The latter is not of necessity abnormal. It is sometimes the easiest way of correcting a false method of approach, and of improving the effectiveness of the means one is employing, - as golf players, piano players, public speakers, etc., have occasionally to give especial attention to their position and movements. But this need is occasional and temporary. When it is effectual a person thinks of himself in terms of what is to be done, as one means among others of the realization of an end - as in the case of a tennis player practicing to get the "feel" of a stroke. In abnormal cases, one thinks of himself not as part of the agencies of execution, but as a separate object - as when the player strikes an attitude thinking of the impression it will make upon spectators, or is worried because of the impression he fears his movements give rise to.

Confidence is a good name for what is intended by the term directness. It should not be confused, however, with self-confidence which may be a form of self-consciousness - or of "cheek." Confidence is not a name for what one thinks or feels about his attitude it is not reflex. It denotes the straightforwardness with which one goes at what he has to do. It denotes not conscious trust in the efficacy of one's powers but unconscious faith in the possibilities of the situation. It signifies rising to the needs of the situation. We have already pointed out (See p. 169) the objections to making students emphatically aware of the fact that they are studying or learning. Just in the degree in which they are induced by the conditions to be so aware, they are not studying and learning. They are in a divided and complicated attitude. Whatever methods of a teacher call a pupil's attention off from what he has to do and transfer it to his own attitude towards what he is doing impair directness of concern and action. Persisted in, the pupil acquires a permanent tendency to fumble, to gaze about aimlessly, to look for some clew of action beside that which the subject matter supplies. Dependence upon extraneous

suggestions and directions, a state of foggy confusion, take the place of that sureness with which children (and grown-up people who have not been sophisticated by "education") confront the situations of life.

2. Open-mindedness

Partiality is, as we have seen, an accompaniment of the existence of interest, since this means sharing, partaking, taking sides in some movement. All the more reason, therefore, for an attitude of mind which actively welcomes suggestions and relevant information from all sides. In the chapter on Aims it was shown that foreseen ends are factors in the development of a changing situation. They are the means by which the direction of action is controlled. They are subordinate to the situation, therefore, not the situation to them. They are not ends in the sense of finalities to which everything must be bent and sacrificed. They are, as foreseen, means of guiding the development of a situation. A target is not the future goal of shooting; it is the centering factor in a present shooting. Openness of mind means accessibility of mind to any and every consideration that will throw light upon the situation that needs to be cleared up, and that will help determine the consequences of acting this way or that. Efficiency in accomplishing ends which have been settled upon as unalterable can coexist with a narrowly opened mind. But intellectual growth means constant expansion of horizons and consequent formation of new purposes and new responses. These are impossible without an active disposition to welcome points of view hitherto alien; an active desire to entertain considerations which modify existing purposes. Retention of capacity to grow is the reward of such intellectual hospitality. The worst thing about stubbornness of mind, about prejudices, is that they arrest development; they shut the mind off from new stimuli. Open-mindedness means retention of the childlike attitude; closed-mindedness means premature intellectual old age.

Exorbitant desire for uniformity of procedure and for prompt external

results are the chief foes which the open-minded attitude meets in school. The teacher who does not permit and encourage diversity of operation in dealing with questions is imposing intellectual blinders upon pupils - restricting their vision to the one path the teacher's mind happens to approve. Probably the chief cause of devotion to rigidity of method is, however, that it seems to promise speedy, accurately measurable, correct results. The zeal for "answers" is the explanation of much of the zeal for rigid and mechanical methods. Forcing and overpressure have the same origin, and the same result upon alert and varied intellectual interest.

Open-mindedness is not the same as empty-mindedness. To hang out a sign saying "Come right in; there is no one at home" is not the equivalent of hospitality. But there is a kind of passivity, willingness to let experiences accumulate and sink in and ripen, which is an essential of development. Results (external answers or solutions) may be hurried; processes may not be forced. They take their own time to mature. Were all instructors to realize that the quality of mental process, not the production of correct answers, is the measure of educative growth something hardly less than a revolution in teaching would be worked.

3. Single-mindedness

So far as the word is concerned, much that was said under the head of "directness" is applicable. But what the word is here intended to convey is completeness of interest, unity of purpose; the absence of suppressed but effectual ulterior aims for which the professed aim is but a mask. It is equivalent to mental integrity. Absorption, engrossment, full concern with subject matter for its own sake, nurture it. Divided interest and evasion destroy it.

Intellectual integrity, honesty, and sincerity are at bottom not matters of conscious purpose but of quality of active response. Their acquisition is fostered of course by conscious intent, but self-

deception is very easy. Desires are urgent. When the demands and wishes of others forbid their direct expression they are easily driven into subterranean and deep channels. Entire surrender, and wholehearted adoption of the course of action demanded by others are almost impossible. Deliberate revolt or deliberate attempts to deceive others may result. But the more frequent outcome is a confused and divided state of interest in which one is fooled as to one's own real intent. One tries to serve two masters at once. Social instincts, the strong desire to please others and get their approval, social training, the general sense of duty and of authority, apprehension of penalty, all lead to a half-hearted effort to conform, to "pay attention to the lesson," or whatever the requirement is. Amiable individuals want to do what they are expected to do. Consciously the pupil thinks he is doing this. But his own desires are not abolished. Only their evident exhibition is suppressed. Strain of attention to what is hostile to desire is irksome; in spite of one's conscious wish, the underlying desires determine the main course of thought, the deeper emotional responses. The mind wanders from the nominal subject and devotes itself to what is intrinsically more desirable. A systematized divided attention expressing the duplicity of the state of desire is the result. One has only to recall his own experiences in school or at the present time when outwardly employed in actions which do not engage one's desires and purposes, to realize how prevalent is this attitude of divided attention - double-mindedness. We are so used to it that we take it for granted that a considerable amount of it is necessary. It may be; if so, it is the more important to face its bad intellectual effects. Obvious is the loss of energy of thought immediately available when one is consciously trying (or trying to seem to try) to attend to one matter, while unconsciously one's imagination is spontaneously going out to more congenial affairs. More subtle and more permanently crippling to efficiency of intellectual activity is a fostering of habitual self-deception, with the confused sense of reality which accompanies it. A double standard of reality, one for our own private and more or less concealed interests, and another for public and acknowledged concerns, hampers, in most

of us, integrity and completeness of mental action. Equally serious is the fact that a split is set up between conscious thought and attention and impulsive blind affection and desire. Reflective dealings with the material of instruction is constrained and half-hearted; attention wanders. The topics to which it wanders are unavowed and hence intellectually illicit; transactions with them are furtive. The discipline that comes from regulating response by deliberate inquiry having a purpose fails; worse than that, the deepest concern and most congenial enterprises of the imagination (since they center about the things dearest to desire) are casual, concealed. They enter into action in ways which are unacknowledged. Not subject to rectification by consideration of consequences, they are demoralizing.

School conditions favorable to this division of mind between avowed, public, and socially responsible undertakings, and private, ill-regulated, and suppressed indulgences of thought are not hard to find. What is sometimes called "stern discipline," i.e., external coercive pressure, has this tendency. Motivation through rewards extraneous to the thing to be done has a like effect. Everything that makes schooling merely preparatory (See ante, p. 55) works in this direction. Ends being beyond the pupil's present grasp, other agencies have to be found to procure immediate attention to assigned tasks. Some responses are secured, but desires and affections not enlisted must find other outlets. Not less serious is exaggerated emphasis upon drill exercises designed to produce skill in action, independent of any engagement of thought - exercises have no purpose but the production of automatic skill. Nature abhors a mental vacuum. What do teachers imagine is happening to thought and emotion when the latter get no outlet in the things of immediate activity? Were they merely kept in temporary abeyance, or even only calloused, it would not be a matter of so much moment. But they are not abolished; they are not suspended; they are not suppressed - save with reference to the task in question. They follow their own chaotic and undisciplined course. What is native, spontaneous, and vital in mental reaction goes unused and untested, and the habits formed are such that these

qualities become less and less available for public and avowed ends.

4. Responsibility

By responsibility as an element in intellectual attitude is meant the disposition to consider in advance the probable consequences of any projected step and deliberately to accept them: to accept them in the sense of taking them into account, acknowledging them in action, not yielding a mere verbal assent. Ideas, as we have seen, are intrinsically standpoints and methods for bringing about a solution of a perplexing situation; forecasts calculated to influence responses. It is only too easy to think that one accepts a statement or believes a suggested truth when one has not considered its implications; when one has made but a cursory and superficial survey of what further things one is committed to by acceptance. Observation and recognition, belief and assent, then become names for lazy acquiescence in what is externally presented.

It would be much better to have fewer facts and truths in instruction - that is, fewer things supposedly accepted, - if a smaller number of situations could be intellectually worked out to the point where conviction meant something real - some identification of the self with the type of conduct demanded by facts and foresight of results. The most permanent bad results of undue complication of school subjects and congestion of school studies and lessons are not the worry, nervous strain, and superficial acquaintance that follow (serious as these are), but the failure to make clear what is involved in really knowing and believing a thing. Intellectual responsibility means severe standards in this regard. These standards can be built up only through practice in following up and acting upon the meaning of what is acquired.

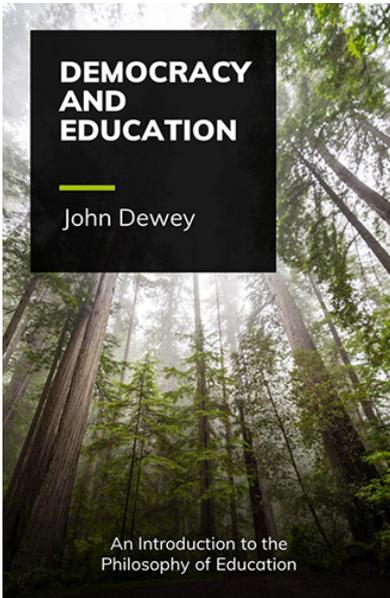
Intellectual thoroughness is thus another name for the attitude we are considering. There is a kind of thoroughness which is almost purely physical: the kind that signifies mechanical and exhausting drill upon

all the details of a subject. Intellectual thoroughness is seeing a thing through. It depends upon a unity of purpose to which details are subordinated, not upon presenting a multitude of disconnected details. It is manifested in the firmness with which the full meaning of the purpose is developed, not in attention, however "conscientious" it may be, to the steps of action externally imposed and directed.

Summary

Method is a statement of the way the subject matter of an experience develops most effectively and fruitfully. It is derived, accordingly, from observation of the course of experiences where there is no conscious distinction of personal attitude and manner from material dealt with. The assumption that method is something separate is connected with the notion of the isolation of mind and self from the world of things. It makes instruction and learning formal, mechanical, constrained. While methods are individualized, certain features of the normal course of an experience to its fruition may be discriminated, because of the fund of wisdom derived from prior experiences and because of general similarities in the materials dealt with from time to time. Expressed in terms of the attitude of the individual the traits of good method are straightforwardness, flexible intellectual interest or open-minded will to learn, integrity of purpose, and acceptance of responsibility for the consequences of one's activity including thought.

1 This point is developed below in a discussion of what are termed psychological and logical methods respectively. See p. 219.



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