

private discipline; would you leave the young child to the mad career of his own passions and whimsies, and call this anarchy a respect for the child's nature? I answer, -- Respect the child, respect him to the end, but also respect yourself.... The two points in a boy's training are, to keep his nature and train off all but that; to keep his nature, but stop off his uproar, fooling, and horseplay; keep his nature and arm it with knowledge in the very direction in which it points." And as Emerson goes on to show this reverence for childhood and youth instead of opening up an easy and easy-going path to the instructors, "involves at once, immense claims on the time, the thought, on the life of the teacher. It requires time, use, insight, event, all the great lessons and assistances of God; and only to think of using it implies character and profoundness."

Summary. Power to grow depends upon need for others and plasticity. Both of these conditions are at their height in childhood and youth. Plasticity or the power to learn from experience means the formation of habits. Habits give control over the environment, power to utilize it for human purposes. Habits take the form both of habituation, or a general and persistent balance of organic activities with the surroundings, and of active capacities to readjust activity to meet new conditions. The former furnishes the background of growth; the latter constitute growing. Active habits involve thought, invention, and initiative in applying capacities to new aims. They are opposed to routine which marks an arrest of growth. Since growth is the characteristic of life, education is all one with growing; it has no end beyond itself. The criterion of the value of school education is the extent in which it creates a desire for continued growth and supplies means for making the desire effective in fact.

1. Intimations of its significance are found in a number of writers, but John Fiske, in his *Excursions of an Evolutionist*, is accredited with its first systematic exposition.

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2. This conception is, of course, a logical correlate of the conceptions of the external relation of stimulus and response, considered in the last chapter, and of the negative conceptions of immaturity and plasticity noted in this chapter.

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Chapter Five: Preparation, Unfolding, and Formal Discipline

1. **Education as Preparation.** We have laid it down that the educative process is a continuous process of growth, having as its aim at every stage an added capacity of growth. This conception contrasts sharply with other ideas which have influenced practice. By making the contrast explicit, the meaning of the conception will be brought more clearly to light. The first contrast is with the idea that education is a process of preparation or getting ready. What is to be prepared for is, of course, the responsibilities and privileges of adult life. Children are not regarded as social members in full and regular standing. They are looked upon as candidates; they are placed on the waiting list. The conception is only carried a little farther when the life of adults is considered as not having meaning on its own account, but as a preparatory probation for "another life." The idea is but another form of the notion of the negative and privative character of growth already criticized; hence we shall not repeat the criticisms, but pass on to the evil consequences which flow from putting education on this basis.

In the first place, it involves loss of impetus. Motive power is not utilized. Children proverbially live in the present; that is not only a fact not to be evaded, but it is an excellence. The future just as future lacks urgency and body. To get ready for something, one knows not what nor why, is to throw away the leverage that exists, and to seek for motive power in a vague chance. Under such circumstances, there is, in the second place, a premium put on shilly-shallying and procrastination. The future prepared for is a long way off; plenty of time will intervene before it becomes a present. Why be in a hurry about getting ready for it? The temptation to postpone is much increased because the present offers so many wonderful opportunities and proffers such invitations to adventure. Naturally attention and energy go to them; education accrues naturally as an outcome, but a lesser education than if the full stress of effort had been put upon making conditions as educative as possible. A third undesirable result is the substitution of a conventional average standard of expectation and requirement for a standard which concerns the specific powers of the individual under instruction. For a severe and definite judgment based upon the strong and weak points of the individual is substituted a vague and wavering opinion concerning what youth may be expected, upon the average, to become in some more or less remote future; say, at the end of the year, when promotions are to take place, or by the time they are ready to go to college or to enter upon what, in contrast with the probationary stage, is regarded as the serious business of life. It is impossible to overestimate the loss which results from the deflection of attention from the strategic point to a comparatively unproductive point. It fails most just where it thinks it is succeeding -- in getting a preparation for the future.

Finally, the principle of preparation makes necessary recourse on a large scale to the use of adventitious motives of pleasure and pain. The future having no stimulating and directing power when severed from the possibilities of the present, something must be hitched on to it to make it work. Promises of reward and threats of pain are employed. Healthy work, done for present reasons and as a factor in living, is largely unconscious. The stimulus resides in the situation with which one is actually confronted. But when this situation is ignored, pupils have to be told that if they do not follow the prescribed course penalties will accrue; while if they do, they may expect, some time in the future, rewards for their present sacrifices. Everybody knows how largely systems of punishment have had to be resorted to by educational systems which neglect present possibilities in behalf of preparation for a future. Then, in disgust with the harshness and impotency of this method, the pendulum swings to the opposite extreme, and the dose of information required against some later day is sugar-coated, so that pupils may be fooled into taking something which they do not care for.

It is not of course a question whether education should prepare for the future. If education is growth, it must progressively realize present possibilities, and thus make individuals better fitted to cope with later requirements. Growing is not something which is completed in odd moments; it is a continuous leading into the future. If the environment, in school and out, supplies conditions which utilize adequately the present capacities of the immature, the future which grows out of the present is surely taken care of. The mistake is not in attaching importance to preparation for future need, but in making it the mainspring of present effort. Because the need of preparation for a continually developing life is great, it is imperative that every energy should be bent to making the

present experience as rich and significant as possible. Then as the present merges insensibly into the future, the future is taken care of.

2. Education as Unfolding. There is a conception of education which professes to be based upon the idea of development. But it takes back with one hand what it proffers with the other. Development is conceived not as continuous growing, but as the unfolding of latent powers toward a definite goal. The goal is conceived of as completion,-perfection. Life at any stage short of attainment of this goal is merely an unfolding toward it. Logically the doctrine is only a variant of the preparation theory. Practically the two differ in that the adherents of the latter make much of the practical and professional duties for which one is preparing, while the developmental doctrine speaks of the ideal and spiritual qualities of the principle which is unfolding.

The conception that growth and progress are just approximations to a final unchanging goal is the last infirmity of the mind in its transition from a static to a dynamic understanding of life. It simulates the style of the latter. It pays the tribute of speaking much of development, process, progress. But all of these operations are conceived to be merely transitional; they lack meaning on their own account. They possess significance only as movements toward something away from what is now going on. Since growth is just a movement toward a completed being, the final ideal is immobile. An abstract and indefinite future is in control with all which that connotes in depreciation of present power and opportunity.

Since the goal of perfection, the standard of development, is very far away, it is so beyond us that, strictly speaking, it is unattainable. Consequently, in order to be available for present guidance it must be translated into something which stands for it. Otherwise we should be compelled to regard any and every manifestation of the child as an unfolding from within, and hence sacred. Unless we set up some definite criterion representing the ideal end by which to judge whether a given attitude or act is approximating or moving away, our sole alternative is to withdraw all influences of the environment lest they interfere with proper development. Since that is not practicable, a working substitute is set up. Usually, of course, this is some idea which an adult would like to have a child acquire. Consequently, by "suggestive questioning" or some other pedagogical device, the teacher proceeds to "draw out" from the pupil what is desired. If what is desired is obtained, that is evidence that the child is unfolding properly. But as the pupil generally has no initiative of his own in this direction, the result is a random groping after what is wanted, and the formation of habits of dependence upon the cues furnished by others. Just because such methods simulate a true principle and claim to have its sanction they may do more harm than would outright "telling," where, at least, it remains with the child how much will stick.

Within the sphere of philosophic thought there have been two typical attempts to provide a working representative of the absolute goal. Both start from the conception of a whole - - an absolute -- which is "immanent" in human life. The perfect or complete ideal is not a mere ideal; it is operative here and now. But it is present only implicitly, "potentially," or in an enfolded condition. What is termed development is the gradual making explicit and outward of what is thus wrapped up. Froebel and Hegel, the authors of the two philosophic schemes referred to, have different ideas of the path by which the progressive

realization of manifestation of the complete principle is effected. According to Hegel, it is worked out through a series of historical institutions which embody the different factors in the Absolute. According to Froebel, the actuating force is the presentation of symbols, largely mathematical, corresponding to the essential traits of the Absolute. When these are presented to the child, the Whole, or perfection, sleeping within him, is awakened. A single example may indicate the method. Every one familiar with the kindergarten is acquainted with the circle in which the children gather. It is not enough that the circle is a convenient way of grouping the children. It must be used "because it is a symbol of the collective life of mankind in general."

Froebel's recognition of the significance of the native capacities of children, his loving attention to them, and his influence in inducing others to study them, represent perhaps the most effective single force in modern educational theory in effecting widespread acknowledgment of the idea of growth. But his formulation of the notion of development and his organization of devices for promoting it were badly hampered by the fact that he conceived development to be the unfolding of a ready-made latent principle. He failed to see that growing is growth, developing is development, and consequently placed the emphasis upon the completed product. Thus he set up a goal which meant the arrest of growth, and a criterion which is not applicable to immediate guidance of powers, save through translation into abstract and symbolic formulae.

A remote goal of complete unfoldedness is, in technical philosophic language, transcendental. That is, it is something apart from direct experience and perception. So far as experience is concerned, it is empty; it represents a vague sentimental aspiration rather than anything which can be intelligently grasped and stated. This vagueness must be compensated for by some a priori formula. Froebel made the connection between the concrete facts of experience and the transcendental ideal of development by regarding the former as symbols of the latter. To regard known things as symbols, according to some arbitrary a priori formula -- and every a priori conception must be arbitrary -- is an invitation to romantic fancy to seize upon any analogies which appeal to it and treat them as laws. After the scheme of symbolism has been settled upon, some definite technique must be invented by which the inner meaning of the sensible symbols used may be brought home to children. Adults being the formulators of the symbolism are naturally the authors and controllers of the technique. The result was that Froebel's love of abstract symbolism often got the better of his sympathetic insight; and there was substituted for development as arbitrary and externally imposed a scheme of dictation as the history of instruction has ever seen.

With Hegel the necessity of finding some working concrete counterpart of the inaccessible Absolute took an institutional, rather than symbolic, form. His philosophy, like Froebel's, marks in one direction an indispensable contribution to a valid conception of the process of life. The weaknesses of an abstract individualistic philosophy were evident to him; he saw the impossibility of making a clean sweep of historical institutions, of treating them as despotisms begot in artifice and nurtured in fraud. In his philosophy of history and society culminated the efforts of a whole series of German writers -- Lessing, Herder, Kant, Schiller, Goethe -- to appreciate the nurturing influence of the great collective institutional products of humanity. For those who learned the

lesson of this movement, it was henceforth impossible to conceive of institutions or of culture as artificial. It destroyed completely -- in idea, not in fact -- the psychology that regarded "mind" as a ready-made possession of a naked individual by showing the significance of "objective mind" -- language, government, art, religion -- in the formation of individual minds. But since Hegel was haunted by the conception of an absolute goal, he was obliged to arrange institutions as they concretely exist, on a stepladder of ascending approximations. Each in its time and place is absolutely necessary, because a stage in the self-realizing process of the absolute mind. Taken as such a step or stage, its existence is proof of its complete rationality, for it is an integral element in the total, which is Reason. Against institutions as they are, individuals have no spiritual rights; personal development, and nurture, consist in obedient assimilation of the spirit of existing institutions. Conformity, not transformation, is the essence of education. Institutions change as history shows; but their change, the rise and fall of states, is the work of the "world-spirit." Individuals, save the great "heroes" who are the chosen organs of the world-spirit, have no share or lot in it. In the later nineteenth century, this type of idealism was amalgamated with the doctrine of biological evolution. "Evolution" was a force working itself out to its own end. As against it, or as compared with it, the conscious ideas and preference of individuals are impotent. Or, rather, they are but the means by which it works itself out. Social progress is an "organic growth," not an experimental selection. Reason is all powerful, but only Absolute Reason has any power.

The recognition (or rediscovery, for the idea was familiar to the Greeks) that great historic institutions are active factors in the intellectual nurture of mind was a great contribution to educational philosophy. It indicated a genuine advance beyond Rousseau, who had marred his assertion that education must be a natural development and not something forced or grafted upon individuals from without, by the notion that social conditions are not natural. But in its notion of a complete and all-inclusive end of development, the Hegelian theory swallowed up concrete individualities, though magnifying The Individual in the abstract. Some of Hegel's followers sought to reconcile the claims of the Whole and of individuality by the conception of society as an organic whole, or organism. That social organization is presupposed in the adequate exercise of individual capacity is not to be doubted. But the social organism, interpreted after the relation of the organs of the body to each other and to the whole body, means that each individual has a certain limited place and function, requiring to be supplemented by the place and functions of the other organs. As one portion of the bodily tissue is differentiated so that it can be the hand and the hand only, another, the eye, and so on, all taken together making the organism, so one individual is supposed to be differentiated for the exercise of the mechanical operations of society, another for those of a statesman, another for those of a scholar, and so on. The notion of "organism" is thus used to give a philosophic sanction to class distinctions in social organization -- a notion which in its educational application again means external dictation instead of growth.

3. Education as Training of Faculties. A theory which has had great vogue and which came into existence before the notion of growth had much influence is known as the theory of "formal discipline." It has in view a correct ideal; one outcome of education should be the creation of specific powers of accomplishment. A trained person is one who can do the chief things which it is important for him to do better than he could

without training: "better" signifying greater ease, efficiency, economy, promptness, etc. That this is an outcome of education was indicated in what was said about habits as the product of educative development. But the theory in question takes, as it were, a short cut; it regards some powers (to be presently named) as the direct and conscious aims of instruction, and not simply as the results of growth. There is a definite number of powers to be trained, as one might enumerate the kinds of strokes which a golfer has to master. Consequently education should get directly at the business of training them. But this implies that they are already there in some untrained form; otherwise their creation would have to be an indirect product of other activities and agencies. Being there already in some crude form, all that remains is to exercise them in constant and graded repetitions, and they will inevitably be refined and perfected. In the phrase "formal discipline" as applied to this conception, "discipline" refers both to the outcome of trained power and to the method of training through repeated exercise.

The forms of powers in question are such things as the faculties of perceiving, retaining, recalling, associating, attending, willing, feeling, imagining, thinking, etc., which are then shaped by exercise upon material presented. In its classic form, this theory was expressed by Locke. On the one hand, the outer world presents the material or content of knowledge through passively received sensations. On the other hand, the mind has certain ready powers, attention, observation, retention, comparison, abstraction, compounding, etc. Knowledge results if the mind discriminates and combines things as they are united and divided in nature itself. But the important thing for education is the exercise or practice of the faculties of the mind till they become thoroughly established habitudes. The analogy constantly employed is that of a billiard player or gymnast, who by repeated use of certain muscles in a uniform way at last secures automatic skill. Even the faculty of thinking was to be formed into a trained habit by repeated exercises in making and combining simple distinctions, for which, Locke thought, mathematics affords unrivaled opportunity.

Locke's statements fitted well into the dualism of his day. It seemed to do justice to both mind and matter, the individual and the world. One of the two supplied the matter of knowledge and the object upon which mind should work. The other supplied definite mental powers, which were few in number and which might be trained by specific exercises. The scheme appeared to give due weight to the subject matter of knowledge, and yet it insisted that the end of education is not the bare reception and storage of information, but the formation of personal powers of attention, memory, observation, abstraction, and generalization. It was realistic in its emphatic assertion that all material whatever is received from without; it was idealistic in that final stress fell upon the formation of intellectual powers. It was objective and impersonal in its assertion that the individual cannot possess or generate any true ideas on his own account; it was individualistic in placing the end of education in the perfecting of certain faculties possessed at the outset by the individual. This kind of distribution of values expressed with nicety the state of opinion in the generations following upon Locke. It became, without explicit reference to Locke, a common-place of educational theory and of psychology. Practically, it seemed to provide the educator with definite, instead of vague, tasks. It made the elaboration of a technique of instruction relatively easy. All that was necessary was to provide for sufficient practice of each of the powers. This practice

consists in repeated acts of attending, observing, memorizing, etc. By grading the difficulty of the acts, making each set of repetitions somewhat more difficult than the set which preceded it, a complete scheme of instruction is evolved.

There are various ways, equally conclusive, of criticizing this conception, in both its alleged foundations and in its educational application. (1) Perhaps the most direct mode of attack consists in pointing out that the supposed original faculties of observation, recollection, willing, thinking, etc., are purely mythological. There are no such ready-made powers waiting to be exercised and thereby trained. There are, indeed, a great number of original native tendencies, instinctive modes of action, based on the original connections of neurones in the central nervous system. There are impulsive tendencies of the eyes to follow and fixate light; of the neck muscles to turn toward light and sound; of the hands to reach and grasp; and turn and twist and thump; of the vocal apparatus to make sounds; of the mouth to spew out unpleasant substances; to gag and to curl the lip, and so on in almost indefinite number. But these tendencies (a) instead of being a small number sharply marked off from one another, are of an indefinite variety, interweaving with one another in all kinds of subtle ways. (b) Instead of being latent intellectual powers, requiring only exercise for their perfecting, they are tendencies to respond in certain ways to changes in the environment so as to bring about other changes.

Something in the throat makes one cough; the tendency is to eject the obnoxious particle and thus modify the subsequent stimulus. The hand touches a hot thing; it is impulsively, wholly unintellectually, snatched away. But the withdrawal alters the stimuli operating, and tends to make them more consonant with the needs of the organism. It is by such specific changes of organic activities in response to specific changes in the medium that that control of the environment of which we have spoken (see ante, p. 24) is effected. Now all of our first seeings and hearings and touchings and smellings and tastings are of this kind. In any legitimate sense of the words mental or intellectual or cognitive, they are lacking in these qualities, and no amount of repetitious exercise could bestow any intellectual properties of observation, judgment, or intentional action (volition) upon them.

(2) Consequently the training of our original impulsive activities is not a refinement and perfecting achieved by "exercise" as one might strengthen a muscle by practice. It consists rather (a) in selecting from the diffused responses which are evoked at a given time those which are especially adapted to the utilization of the stimulus. That is to say, among the reactions of the body in general 1 and the hand in particular which instinctively occur upon stimulation of the eye by light, all except those which are specifically adapted to reaching, grasping, and manipulating the object effectively are gradually eliminated -- or else no training occurs. As we have already noted, the primary reactions, with a very few exceptions are too diffused and general to be practically of much use in the case of the human infant. Hence the identity of training with selective response. (Compare p. 25.) (b) Equally important is the specific coordination of different factors of response which takes place. There is not merely a selection of the hand reactions which effect grasping, but of the particular visual stimuli which call out just these reactions and no others, and an establishment of connection between the two. But the coordinating does not stop here. Characteristic temperature reactions may take place when the object is grasped. These will also be brought in; later, the temperature reaction

may be connected directly with the optical stimulus, the hand reaction being suppressed - as a bright flame, independent of close contact, may steer one away. Or the child in handling the object pounds with it, or crumples it, and a sound issues. The ear response is then brought into the system of response. If a certain sound (the conventional name) is made by others and accompanies the activity, response of both ear and the vocal apparatus connected with auditory stimulation will also become an associated factor in the complex response. [2](#)

(3) The more specialized the adjustment of response and stimulus to each other (for, taking the sequence of activities into account, the stimuli are adapted to reactions as well as reactions to stimuli) the more rigid and the less generally available is the training secured. In equivalent language, less intellectual or educative quality attaches to the training. The usual way of stating this fact is that the more specialized the reaction, the less is the skill acquired in practicing and perfecting it transferable to other modes of behavior. According to the orthodox theory of formal discipline, a pupil in studying his spelling lesson acquires, besides ability to spell those particular words, an increase of power of observation, attention, and recollection which may be employed whenever these powers are needed. As matter of fact, the more he confines himself to noticing and fixating the forms of words, irrespective of connection with other things (such as the meaning of the words, the context in which they are habitually used, the derivation and classification of the verbal form, etc.) the less likely is he to acquire an ability which can be used for anything except the mere noting of verbal visual forms. He may not even be increasing his ability to make accurate distinctions among geometrical forms, to say nothing of ability to observe in general. He is merely selecting the stimuli supplied by the forms of the letters and the motor reactions of oral or written reproduction. The scope of coordination (to use our prior terminology) is extremely limited. The connections which are employed in other observations and recollections (or reproductions) are deliberately eliminated when the pupil is exercised merely upon forms of letters and words. Having been excluded, they cannot be restored when needed. The ability secured to observe and to recall verbal forms is not available for perceiving and recalling other things. In the ordinary phraseology, it is not transferable. But the wider the context -- that is to say, the more varied the stimuli and responses coordinated -- the more the ability acquired is available for the effective performance of other acts; not, strictly speaking, because there is any "transfer," but because the wide range of factors employed in the specific act is equivalent to a broad range of activity, to a flexible, instead of to a narrow and rigid, coordination.

(4) Going to the root of the matter, the fundamental fallacy of the theory is its dualism; that is to say, its separation of activities and capacities from subject matter. There is no such thing as an ability to see or hear or remember in general; there is only the ability to see or hear or remember something. To talk about training a power, mental or physical, in general, apart from the subject matter involved in its exercise, is nonsense. Exercise may react upon circulation, breathing, and nutrition so as to develop vigor or strength, but this reservoir is available for specific ends only by use in connection with the material means which accomplish them. Vigor will enable a man to play tennis or golf or to sail a boat better than he would if he were weak. But only by employing ball and racket, ball and club, sail and tiller, in definite ways does he become expert in any one of them; and

expertness in one secures expertness in another only so far as it is either a sign of aptitude for fine muscular coordinations or as the same kind of coordination is involved in all of them. Moreover, the difference between the training of ability to spell which comes from taking visual forms in a narrow context and one which takes them in connection with the activities required to grasp meaning, such as context, affiliations of descent, etc., may be compared to the difference between exercises in the gymnasium with pulley weights to "develop" certain muscles, and a game or sport. The former is uniform and mechanical; it is rigidly specialized. The latter is varied from moment to moment; no two acts are quite alike; novel emergencies have to be met; the coordinations forming have to be kept flexible and elastic. Consequently, the training is much more "general"; that is to say, it covers a wider territory and includes more factors. Exactly the same thing holds of special and general education of the mind.

A monotonously uniform exercise may by practice give great skill in one special act; but the skill is limited to that act, be it bookkeeping or calculations in logarithms or experiments in hydrocarbons. One may be an authority in a particular field and yet of more than usually poor judgment in matters not closely allied, unless the training in the special field has been of a kind to ramify into the subject matter of the other fields.

(5) Consequently, such powers as observation, recollection, judgment, esthetic taste, represent organized results of the occupation of native active tendencies with certain subject matters. A man does not observe closely and fully by pressing a button for the observing faculty to get to work (in other words by "willing" to observe); but if he has something to do which can be accomplished successfully only through intensive and extensive use of eye and hand, he naturally observes. Observation is an outcome, a consequence, of the interaction of sense organ and subject matter. It will vary, accordingly, with the subject matter employed.

It is consequently futile to set up even the ulterior development of faculties of observation, memory, etc., unless we have first determined what sort of subject matter we wish the pupil to become expert in observing and recalling and for what purpose. And it is only repeating in another form what has already been said, to declare that the criterion here must be social. We want the person to note and recall and judge those things which make him an effective competent member of the group in which he is associated with others. Otherwise we might as well set the pupil to observing carefully cracks on the wall and set him to memorizing meaningless lists of words in an unknown tongue -- which is about what we do in fact when we give way to the doctrine of formal discipline. If the observing habits of a botanist or chemist or engineer are better habits than those which are thus formed, it is because they deal with subject matter which is more significant in life.

In concluding this portion of the discussion, we note that the distinction between special and general education has nothing to do with the transferability of function or power. In the literal sense, any transfer is miraculous and impossible. But some activities are broad; they involve a coordination of many factors. Their development demands continuous alternation and readjustment. As conditions change, certain factors are subordinated, and others which had been of minor importance come to the front. There is constant redistribution of the focus of the action, as is seen in the illustration of a game as over

against pulling a fixed weight by a series of uniform motions. Thus there is practice in prompt making of new combinations with the focus of activity shifted to meet change in subject matter. Wherever an activity is broad in scope (that is, involves the coordinating of a large variety of sub-activities), and is constantly and unexpectedly obliged to change direction in its progressive development, general education is bound to result. For this is what "general" means; broad and flexible. In practice, education meets these conditions, and hence is general, in the degree in which it takes account of social relationships. A person may become expert in technical philosophy, or philology, or mathematics or engineering or financiering, and be inept and ill-advised in his action and judgment outside of his specialty. If however his concern with these technical subject matters has been connected with human activities having social breadth, the range of active responses called into play and flexibly integrated is much wider. Isolation of subject matter from a social context is the chief obstruction in current practice to securing a general training of mind. Literature, art, religion, when thus dissociated, are just as narrowing as the technical things which the professional upholders of general education strenuously oppose.

Summary. The conception that the result of the educative process is capacity for further education stands in contrast with some other ideas which have profoundly influenced practice. The first contrasting conception considered is that of preparing or getting ready for some future duty or privilege. Specific evil effects were pointed out which result from the fact that this aim diverts attention of both teacher and taught from the only point to which it may be fruitfully directed -- namely, taking advantage of the needs and possibilities of the immediate present. Consequently it defeats its own professed purpose. The notion that education is an unfolding from within appears to have more likeness to the conception of growth which has been set forth. But as worked out in the theories of Froebel and Hegel, it involves ignoring the interaction of present organic tendencies with the present environment, just as much as the notion of preparation. Some implicit whole is regarded as given ready-made and the significance of growth is merely transitory; it is not an end in itself, but simply a means of making explicit what is already implicit. Since that which is not explicit cannot be made definite use of, something has to be found to represent it. According to Froebel, the mystic symbolic value of certain objects and acts (largely mathematical) stand for the Absolute Whole which is in process of unfolding. According to Hegel, existing institutions are its effective actual representatives. Emphasis upon symbols and institutions tends to divert perception from the direct growth of experience in richness of meaning. Another influential but defective theory is that which conceives that mind has, at birth, certain mental faculties or powers, such as perceiving, remembering, willing, judging, generalizing, attending, etc., and that education is the training of these faculties through repeated exercise. This theory treats subject matter as comparatively external and indifferent, its value residing simply in the fact that it may occasion exercise of the general powers. Criticism was directed upon this separation of the alleged powers from one another and from the material upon which they act. The outcome of the theory in practice was shown to be an undue emphasis upon the training of narrow specialized modes of skill at the expense of initiative, inventiveness, and readaptability -- qualities which depend upon the broad and consecutive interaction of specific activities with one another.

1. As matter of fact, the interconnection is so great, there are so many paths of construction, that every stimulus brings about some change in all of the organs of response. We are accustomed however to ignore most of these modifications of the total organic activity, concentrating upon that one which is most specifically adapted to the most urgent stimulus of the moment.

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2. This statement should be compared with what was said earlier about the sequential ordering of responses (p. 25). It is merely a more explicit statement of the way in which that consecutive arrangement occurs.

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Chapter Six: Education as Conservative and Progressive

1. Education as Formation. We now come to a type of theory which denies the existence of faculties and emphasizes the unique role of subject matter in the development of mental and moral disposition. according to it, education is neither a process of unfolding from within nor is it a training of faculties resident in mind itself. It is rather the formation of mind by setting up certain associations or connections of content by means of a subject matter presented from without. Education proceeds by instruction taken in a strictly literal sense, a building into the mind from without. That education is formative of mind is not questioned; it is the conception already propounded. But formation here has a technical meaning dependent upon the idea of something operating from without.

Herbart is the best historical representative of this type of theory. He denies absolutely the existence of innate faculties. The mind is simply endowed with the power of producing various qualities in reaction to the various realities which act upon it. These qualitatively different reactions are called presentations (Vorstellungen). Every presentation once called into being persists; it may be driven below the "threshold" of consciousness by new and stronger presentations, produced by the reaction of the soul to new material, but its activity continues by its own inherent momentum, below the surface of consciousness. What are termed faculties -- attention, memory, thinking, perception, even the sentiments, are arrangements, associations, and complications, formed by the interaction of these submerged presentations with one another and with new presentations. Perception, for example, is the complication of presentations which result from the rise of old presentations to greet and combine with new ones; memory is the evoking of an old presentation above the threshold of consciousness by getting entangled with another presentation, etc. Pleasure is the result of reinforcement among the independent activities of presentations; pain of their pulling different ways, etc.

The concrete character of mind consists, then, wholly of the various arrangements formed by the various presentations in their different qualities. The "furniture" of the mind *is* the mind. Mind is wholly a matter of "contents." The educational implications of this doctrine are threefold. (1) This or that kind of mind is formed by the use of objects which evoke this or that kind of reaction and which produce this or that arrangement