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OUTLINES OF EDUCATIONAL DOCTRINE

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PREFACE

The reasons for translating and annotating Herbart's "Outlines" are, first, to present to the English-speaking public Herbart's latest, and also his most complete, work on education; and, second, to note to some extent at least the advances made in educational thought since Herbart laid down his pen.

Herbart's educational writings are distinguished by two marked characteristics: 1, their helpfulness in actual teaching; and 2, their systematic completeness. The thoughtful reader can see the bearing of each part upon all the others; the purposes of education are so completely correlated with the means, that, whether the topic under discussion be apperception or interest or methods of teaching or school government or moral training or the presentation of a particular study, the reader is never at a loss to see the relation of this part to the whole.

The eminent practicability of Herbart's thought depends upon his psychological point of view, which is always that of concrete experience. The moment one tries to apply rational psychology to actual teaching, one begins to rise into the clouds, to become vague or, at least, general. The reason for this is [vi] that rational psychology deals with unchangeable presuppositions of mind. We may conform our work to these standards, but we cannot modify them, any more than we can a law of nature. But when we have to deal with an apperceiving content, we feel at home, for over this we have some control. We can build up moral maxims, we can establish permanent interests, we can reveal the unfolding of whole developments of thought and effort, we can fix the time order of studies and parts of studies; in short, we can apply our pedagogical insight with some degree of success to actual school problems. Though empirical psychology has in the last fifty years had as rapid a development as any other department of science, it has never departed essentially from the direction fixed by Herbart. New methods have indeed been applied, but the leading motive has remained empirical; it has had small tendency to drift toward rational psychology. This fact makes Herbart's educational thought, so far as psychological bearing is concerned, seem as fresh and modern as when it was first recorded.

In one important respect, however, Herbart's system needs modernizing. It is in relating education to conditions of society as it now exists. German society has never been that of English-speaking countries; much less does German society of the early part of the nineteenth century correspond to Anglo-Saxon society at the beginning of the twentieth. Indeed, even had there been correspondence before, there [vii] would be divergence now. It is one of the main purposes of the annotation, therefore, to point out the social implications of various parts of the "Outlines."

The annotation has made no attempt to improve Herbart's prophetic vision concerning many important matters, or to elucidate self-evident propositions, or to supplement observations already complete, true, and apt.

Especial attention is called to the exactness and illuminating character of Herbart's diagnosis of mental weaknesses and disorders in children, together with his suggestions as to proper treatment. Students of child-study, moreover, will find in this work not only encouragement in their work, but also assistance in determining what is worth studying in the child. The reader is constantly reminded of the fact that, when written by a master, no book is newer than an old one.

Cornell University,
January, 1901.

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OUTLINES OF EDUCATIONAL DOCTRINE

INTRODUCTION

1. The plasticity, or educability, of the pupil is the fundamental postulate of pedagogics.

The concept plasticity, or capacity for being moulded, extends far beyond the confines of pedagogics. It takes in even the primary components of matter. It has been traced as far as the elementary substances entering into the chemical changes of organic bodies. Signs of plasticity of will are found in the souls of the higher animals. Only man, however, exhibits plasticity of will in the direction of moral conduct.

Had not the youthful mind the capacity to receive culture, education would be impossible. This educability of the young has rarely if ever been questioned in actual practice. Much philosophical strife, however, has raged about the various conceptions of WILL, and the consequent possibility of teaching virtue, or of training the moral character. The extremes have been *fatalism*, or the determination of conduct by means of forces lying entirely outside the power of the individual; and *absolute caprice of will*, or the determination of conduct entirely by the individual himself without [2] regard to outside influences. The doctrine of fatalism makes moral education mechanical; that of volitional caprice makes it futile. Educational theory must therefore assume a middle ground, in which the self-activity of the individual and the moulding influence of education are both recognized.

2. Pedagogics as a science is based on ethics and psychology. The former points out the goal of education; the latter the way, the means, and the obstacles.

This relationship involves the dependence of pedagogics on experience, inasmuch as ethics includes application to experience, while psychology has its starting-point, not in metaphysics alone, but in experience correctly interpreted by metaphysics. But an exclusively empirical knowledge of man will not suffice for pedagogics. It is the less adequate in any age the greater the instability of morals, customs, and opinions; for, as the new gains on the old, generalizations from former observations cease to hold true.

In order to accept the statement that ethics points out the goal of education, we must conceive of ethics in a broad way. At some periods in the history of the world, the development of purely individual, or subjective, character would have been thought a worthy and adequate conception of the final purpose of education. Other-worldliness was the ruling ideal. At present, however, we regard that man as most fit for the world to come who best performs all his functions in the world that now is. Ethics must therefore be conceived to embrace an estimation of the value of a man's conduct in every department of life. Not only must it estimate the worth of pious feeling, but it must [3] embrace a consideration of every action in its relation to the actor's social, economic, and political environment. A man having a praiseworthy character must be a good citizen of state, nation, and community; he must be public-spirited, law-abiding, given to honest dealing. Every child should be trained to be a useful member of civilization as it now exists. Piety alone is insufficient; it must be accompanied by honesty, industry, patriotism, public spirit. Non-social, or purely individualistic, conceptions of character as the goal of education must give way to those social ideals through which alone the highest welfare of both individual and community are to be conserved. Without such conceptions an industrial state, such as now exists, becomes a human jungle in which men enter upon a fiercer struggle than do the beasts of the real jungle. Social coöperation is essential when we wish to transform a struggle of mutual destruction into one of mutual helpfulness.

3. Philosophical systems, involving either fatalism or its opposite, pure caprice of will, are logically shut out from pedagogics, because the notion of plasticity, implying as it does a transition from the indeterminate to the determinate, cannot by such systems be brought in without inconsistency.

Common sense overcomes the logical difficulties of even the worst systems. Herbart's remark has, therefore, no practical significance. The philosophy of Spinoza might easily be described by an opponent as "fatalistic," since it leaves no room for special providences in the physical universe; yet Professor Paulsen, who holds substantially to Spinoza's view, is one of the most eminent promoters of [4] the theory of education in the university of Berlin. Herbart thought Kant's doctrine of transcendental will one of absolute volitional caprice, yet the followers of Kant have been among the most energetic promoters of mental and moral training. Herbart thinks he sees in this remark a chance to put his philosophical opponents out of court, to the benefit of his own system. If one philosopher develops a system of "fatalism" and another one of "absolute free will," the one may be charged with making

education impossible and the other with making it futile. In either case, since we know that education is neither impossible nor futile, the presumption is that both systems are defective. This paragraph and others like it are mere indirect methods of defending Herbart's system of philosophy: they have no real significance for the theory of education itself.

4. On the other hand, the assumption of unlimited plasticity is equally inadmissible; it is for psychology to guard against this error. The educability of the child is, to begin with, limited by his individuality. Then, too, the possibility of determining and moulding him at will through education is lessened by time and circumstances. Lastly, the established character of the adult develops by an inner process which in time passes beyond the reach of the educator.

5. Education seems thus to find a barrier, first, in the order of nature, and later in the pupil's own will. The difficulty is indeed a real one, if the limitations of education are overlooked: hence an apparent confirmation of fatalism as well as of the doctrine of absolute free will.

[5] Modern scientific evolutionary study of anthropology and history tends to confirm the hasty thinker in the idea that the circumstances of the environment completely determine the character and destiny of men, since their debt to the moulding influences of society and physical surroundings becomes more and more apparent; yet however powerful the environment may prove to be in fixing the direction of mental growth in the race, it cannot rightly be conceived as creating the growing forces. All the sunshine and warmth in the world will not cause a pebble to sprout; so no external influences whatever can develop mind where there is none to develop. The exigencies of Herbart's metaphysics drove him into a crusade against Kant's doctrine of innate freedom, or transcendental will; all the freedom that Herbart would admit was that psychological freedom which is acquired through instruction and training. The quarrel belongs to eighteenth-century metaphysics, not to modern psychology, nor to education; for however potentially free an infant may be, nobody thinks of making it responsible, except so far as growing experience gives it insight and volitional strength.

NOTE.—Many thinkers fluctuate constantly between these two erroneous extremes. When looking historically at mankind as a whole, they arrive at fatalism, as does Gumplowicz in his "Outlines of Sociology." Teacher and pupil alike seem to them to be in the current of a mighty stream, not swimming,—that is, self-active,—which would be the correct view, but carried along without wills of their own. They arrive, on the other hand, at the idea of a perfectly free will, when they contemplate the individual and see him resist external influences, the aims of the teacher very often included. Here they fail to comprehend the nature of will, and sacrifice the concept of natural law for that of will. Young teachers can hardly avoid sharing this uncertainty, favored as it is by the philosophies of the day; much [6] is gained, however, when they are able to observe fluctuations of their own views without falling into either extreme.

6. The power of education must be neither over- nor under-estimated. The educator should, indeed, try to see how much may be done; but he must always expect that the outcome will warn him to confine his attempts within reasonable bounds. In order not to neglect anything essential, he needs to keep in view the practical bearings of the whole theory of ideas; in order to understand and interpret correctly the data furnished by observation of the child, the teacher must make constant use of psychology.

7. In scientific study concepts are separated which in practice must always be kept united. The work of education is continuous. With an eye to every consideration at once, the educator must always endeavor to connect what is to come with what has gone before. Hence a mode of treatment which, following the several periods of school life, simply enumerates the things to be done in sequence, is inadequate in a work on pedagogics. In an appendix this method will serve to facilitate a bird's-eye view; the discussion of general principles, arranged according to fundamental ideas, must needs precede. But our very first task will necessarily consist in dealing, at least briefly, with the ethical and the psychological basis of pedagogics.

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PART I

THE DOUBLE BASIS OF PEDAGOGICS

CHAPTER I

The Ethical Basis

8. The term *virtue* expresses the whole purpose of education. Virtue is the idea of inner freedom which has developed into an abiding actuality in an individual. Whence, as inner freedom is a relation between insight and volition, a double task is at once set before the teacher. It becomes his business to make actual each of these factors separately, in order that later a permanent relationship may result.

Insight is conceived as the perception of what is right or wrong. This perception is founded on the spontaneous, or intuitive, feeling that arises in the mind when certain elementary will-relations are presented to the intelligence. The unperverted mind has a natural antipathy to strife, malevolence, injustice, selfishness; it has a corresponding approval of harmony, good-will, justice, benevolence. These feelings arise, naturally, only when the appropriate ideas are present. Insight, therefore, is a state of feeling or disposition arising from knowledge, or ideas.

When volition has come into permanent accord with educated insight, virtue has been attained. [8] Conscience approves every virtuous act; it disapproves every deviation from virtue. Inner freedom, therefore, is marked by approving conscience; lack of it, by accusing conscience. The development of virtuous character is not so easy, however, as might appear from these simple statements, for virtue has a shifting, not to say a developing character. Elementary as the fundamental ethical ideas may be when presented in the home or in the kindergarten, they are not elementary when met with in modern civilization. At times virtue has been of a military character, as in Sparta and Rome; at other times it has been ecclesiastical, as in the Middle Ages. At the present time, in addition to all that it has ever been from a purely Christian character, it is civil, social, industrial. Virtue in a modern city has a content quite different from that in a pioneer mining camp. Furthermore, virtue is uneven in its development. The race has, for instance, been trained long and hard to respect unprotected property, so that we may fairly say such respect has become instinctive; yet when unprotected property comes into new relations to the individual, as in the case of borrowed books, we may find only a rudimentary conscience. What scholar is not a sufferer from this form of unripe virtue?

9. But even here at the outset we need to bear in mind the identity of morality with the effort put forth to realize the permanent actuality of the harmony between insight and volition. To induce the pupil to make this effort is a difficult achievement; at all events, it becomes possible only when the twofold training mentioned above is well under way. It is easy enough, by a study of the example of others, to cultivate theoretical acumen; the moral application to the pupil himself, however, can be made, with [9] hope of success, only in so far as his inclinations and habits have taken a direction in keeping with his insight. If such is not the case, there is danger lest the pupil, after all, knowingly subordinate his correct theoretical judgment to mere prudence. It is thus that evil in the strict sense originates.

It is helpful to give the pupil abundant opportunity to pass judgment upon the moral quality of actions not his own. The best opportunities are at first the most impersonal ones, for where the child himself is immediately concerned, the quality of his judgment may be impaired by intense personal feelings, such as fear of blame or punishment. Literature furnishes the earliest and most copious examples; later, history may be helpful, though there is great danger of taking partial or mistaken views as to the moral quality of historical deeds. A selection of literature is an artistic whole. All the relations can be easily perceived, but any given historical event is likely to be a small section of a whole too vast for the youthful mind to comprehend. It is for this reason that caution is needed when passing judgment upon historical facts.

To encourage the child to pass judgment in these impersonal cases is to sharpen his natural perceptions of right and wrong, and to influence his disposition favorably. One who has been led to condemn cruelty to animals in this way is likely to be more thoughtful himself, and less disposed wantonly to inflict pain. But every resource of authority and persuasion, as well as appeal to sensibility and conscience, must be employed to make virtuous action habitual, and to prevent the generation of evil.

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10. Of the remaining practical or ethical concepts, the idea of perfection points to health of body and mind; it implies a high regard for both, and their systematic cultivation.

Perfection here means *completeness of efficiency*, rather than acquisition of holiness. An efficient will is strong, vigorous, decided; it is self-consistent in the pursuit of leading purposes, not vacillating or incoherent. Still, the idea of moral perfection is not a remote one, for, in order to be thoroughly efficient, a will must be in substantial accord with the ethical order of a rational society. All its deviations from established law and custom will be for their improvement, not for the destruction of what is good in them.

11. The idea of good-will counsels the educator to ward off temptation to ill-will as long as such temptation might prove dangerous. It is essential, on the other hand, to imbue the pupil with a feeling of respect for good-will.

Good-will is one of the three concrete virtues lying at the basis of social order. It is both *passive*, as in *laissez faire* attitudes of mind, and *active* as in thoroughgoing civic, business, and social coöperation. School training must seek to impress the mind with respect for the active rather than the passive type of good-will. So, too, must it ward off the dangers both of passive and active ill-will, as manifested, in covetousness, malice, malevolence, envy, treachery, stinginess, cruelty, hard-heartedness. How these ends may be attained, will be considered later.

12. The idea of justice demands that the pupil abstain from contention. It demands, furthermore, [11] reflection on strife, so that respect for justice may strike deep root.

No idea appeals more strongly to the unperverted youthful mind than that of justice or fair play; even the gentlest natures become indignant at manifestations of injustice. The basis of the idea is, in the thought of our author, our natural displeasure in contention over that which, in the nature of the case, only one person can have. Primarily, it concerns property rights, but secondarily it may extend to other relations in which two or more wills are at issue. Justice in the acquisition, possession, and disposition of wealth is the theme of the greater part of every judicial system. The idea of justice is the second of the three concrete moral virtues necessary for civilized society.

13. The idea of equity is especially involved in cases where the pupil has merited punishment as requital for the intentional infliction of pain. Here the degree of punishment must be carefully ascertained and acknowledged as just.

NOTE.—This kind of punishment should not be confounded with educative punishment—so called, *i.e.*, punishment through natural consequences.

The third concrete moral idea is that of *equity*, or *requital*. It arises when existing will-relations are altered either for good or bad. The natural demand is that the requital shall be adequate to the deed. Lack of requital for good deeds we call ingratitude, one of the most hateful of human failings. In savagery and barbarism private vengeance is the normal method of requiting injuries. Remnants of this system still exist in the duel, and in the fierce vendettas of some sparsely settled regions. [12] Civilization demands that requital for evil deeds shall be remanded to the executors of established law. Only in this way is society saved from destructive broils. In this respect, as in so many others, the school is the miniature of the institutional world. The teacher is, to a considerable extent, lawgiver, judge, and executive. Not a small part of his moral influence upon his pupils depends upon the justice of his requitals for violated law. Good-will, justice or rights, and requital are the three fundamental concrete moral ideas upon which sound character, both individual and national, is based. The remaining two are that of inner freedom and that of efficiency. Though formal in character, *i.e.*, devoid of positive content, they are equally important with the more concrete conceptions.

14. Where a number of pupils are assembled there arises, naturally, on a small scale, a system of laws and rewards. This system, and the demands which in the world at large spring from the same ideas, must be brought into accord.

The school is a miniature world, to be regulated by the same system of moral ideas as that which obtains in society. Compare 182, 310.

15. The concept of an administrative system has great significance for pedagogics, since every pupil, whatever his rank or social status, must be trained for coöperation in the social whole to fit him for usefulness. This requirement may assume very many different forms.

16. Of the system of civilization only the aspect of general culture, not that of special training, must be [13] emphasized at this point.

NOTE.—The principles of practical philosophy which have just been briefly indicated are at the same time the starting-points of ethical insight for the pupils. If the resolve to direct the will accordingly be added, and if the pupil obeys this resolve, such obedience constitutes morality. Quite distinct from this is the obedience yielded, be the

motive fear or affection, to the person of the teacher, so long as that higher obedience is not securely established.

17. For the business of education, the idea of perfection, while it does not rise into excessive prominence, stands out above all others on account of its uninterrupted application. The teacher discovers in the as yet undeveloped human being a force which requires his incessant attention to intensify, to direct, and to concentrate.

NOTE.—The maxim *perfice te* is neither so universal as Wolff asserted, as though it were the sole fundamental principle of ethics, nor so objectionable as Kant represents it to be. Perfection, quantitatively regarded (*Vollkommenheit*—the state of having *come* to *fulness*), is the first urgent task wherever man shows himself lower, smaller, weaker, more narrowly limited, than he might be. Growth, in every sense of the word, is the natural destiny of the child, and the primary condition of whatever else of worth may be expected of him in later life. The principle *perfice te* was deprived of its true meaning by the attempt to define by it the whole of virtue—a blunder, since no single practical idea ever exhausts the contents of that term. Quite different is the import of the next remark, which applies solely to the practice of pedagogy.

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18. The constant presence of the idea of perfection easily introduces a false feature into moral education in the strict sense. The pupil may get an erroneous impression as to the relative importance of the lessons, practice, and performance demanded of him, and so be betrayed into the belief that he is essentially perfect when these demands are satisfied.

19. For this reason alone, if others were wanting, it is necessary to combine moral education proper, which in everyday life lays stress continually on correct self-determination, with religious training. The notion that something really worthy has been achieved needs to be tempered by humility. Conversely, religious education has need of the moral also to forestall cant and hypocrisy, which are only too apt to appear where morality has not already secured a firm foothold through earnest self-questioning and self-criticism with a view to improvement. Finally, inasmuch as moral training must be put off until after insight and right habits have been acquired, religious education, too, should not be begun too early; nor should it be needlessly delayed.

It is well known what obstacles confront the American teacher who desires to give a religious basis to moral character. For a full discussion of the subject viewed from numerous standpoints, the reader is referred to “Principles of Religious Education,” Longmans, Green & Co., New York, 1900. This book is a series of lectures by prominent school men and others.

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CHAPTER II

The Psychological Basis

20. It is an error, indeed, to look upon the human soul as an aggregate of all sorts of faculties; but this error only becomes worse when, as is usually done, the statement is added that faculties are after all at bottom one and the same active principle. The traditional terms should rather be employed to distinguish mental phenomena that present themselves to experience as successively predominant. In this way we get the leading features of soul-life, which reminds us sufficiently of psychology for our immediate purpose.

21. The stage of predominant sense-activity is followed by that of memory in the sense of exact reproduction of series of percepts previously formed. Traces of higher activities are as yet absent. The only thing to be noted is that the series, unless rendered long by frequent repetition, are generally short; necessarily so, since while forming they are exposed to continual disturbances caused by great sensitiveness to new impressions.

22. Even very young children betray at play and in speech that form of self-activity ascribed to [16] imagination.

The most insignificant toys, provided they are movable, occasion changes and combinations of percepts, attended even with strong emotion, that astonish the mature observer, and perhaps excite anxiety lest some of these motley fancies should become fixed ideas. No evil after effects are to be feared, however, so long as the emotional excitement does not threaten health, and passes over quickly. A strong play impulse is, on the contrary, a promising sign, especially when it manifests itself energetically, though late, in weak children.

23. Soon there follows a time when the observation of external objects prompts the child to ask innumerable questions. Here that activity which is called power of judgment begins to stir in conjunction with reasoning. The child now strives to subsume what is new under conceptions already in his mind, and to affix their symbols, the familiar words. He is still far, withal, from being able to follow an abstract train of thought, to employ periodic sentences, and to conduct himself rationally throughout. The slightest occasions will prove him a child still.

24. In the meantime, the child manifests, besides the physical feelings of pleasure and pain, affection for one person and aversion to another; furthermore, a seemingly strong will, together with a violent [17] spirit of contradiction, unless this is suppressed in time.

25. On the other hand, the ethical judgment as a rule shows itself at first very seldom and transiently —a foreshadowing of the difficulty of securing for it later, in spite of obstinacy and selfishness, the function of control, on which control depend both morality and the higher sense of art.

26. The boy asks fewer questions, but tries all the more to handle and shape things. He is gaining knowledge by himself and acquiring dexterity. Gradually his respect for his elders increases; he fears their censure and stands in awe of their superiority. At the same time he attaches himself more closely to other boys of the same age. From now on it becomes more difficult to observe him. The teacher who has no previous knowledge of boys who have reached this age, may long deceive himself in regard to them and will seldom obtain complete frankness.

This reserve is indicative of more or less self-determination, which is commonly attributed to pure reason.

27. The names for the mental faculties acquire renewed importance with the beginning of systematic instruction. Their import, however, shows a marked difference. Now memory is relied on for the acquisition, without additions or omissions, of prescribed series, the order being fixed or not, as the case may be; usually there is a slight connection with older ideas. Imagination is called for to lay hold of the [18] objects of distant lands and ages. The understanding is expected to derive general notions from a limited number of particulars, to name and to connect them. The development of the ethical judgment teachers rarely wait for; obedience to commands is demanded. Obedience of this kind depends chiefly on the ease with which antecedent ideas are revived and connected in response to, but not beyond, a given stimulus. In extreme cases the fear of punishment effectively takes the place of all other motives. But often not even the usual memory-work can be successfully exacted through fear, much less obedience without oversight.

28. Many pupils reveal a curious contrast. In their own sphere they display a good memory, a lively imagination, keen understanding; by the teacher they are credited with little of all these. They rule perhaps over their playmates because of their superior intelligence, or possess at least the respect of the latter, while in their classes they show only incapacity. Such experiences suggest the difficulty of making instruction take proper hold of the inner growth of the pupil. It is evident, at the same time, that what is customarily ascribed to the action of the various mental faculties takes place in certain groups of ideas.

29. The grown man has one group of ideas for his church, another for his work at home, a third for [19]

society, and so on. These groups, though partially interacting and mutually determinant, are far from being connected at every point. This is true as early as boyhood. The boy has one set of ideas for his school, another for the family circle, still another for the playground, etc. This fact explains better than intentional reserve the observation that a boy is one being at home or at school and quite another among strangers.

30. Each body of ideas is made up of complications of ideas, which, if the union is perfect, come and go in consciousness as undivided wholes, and of series, together with their interlacings, whose members unfold successively, one by one, provided they are not checked. The closer the union of parts within these complications and series, the more absolute the laws according to which ideas act in consciousness, the stronger is the resistance against everything opposing their movement; hence the difficulty of acting upon them through instruction. They admit, however, of additions and recombinations, and so may in the course of time undergo essential changes; up to a certain point they even change of themselves if repeatedly called into consciousness by dissimilar occasions, *e.g.*, by the frequent delivery of the same lecture before different audiences.

The general notions of things are complexes or complications of their attributes. Other examples of [20]
complexes important to instruction are furnished by logical concepts and words. But since words of several languages may be perfectly complicated or bound together with the same concept, without being just as intimately connected with one another, it should be noted that when the object or concept comes up at different times, it will be joined now with this and next with another language. Yet the repeated perception of the object is not quite the same perception as before, although earlier ideas mostly coalesce so fully with later homogeneous ideas that the difference makes itself felt but little.

31. The inner structure of groups of ideas becomes discernible in a measure when thoughts are bodied forth in speech. Its most general aspect is disclosed in the construction of a period. Conjunctions particularly are important in that they, without denoting a content of their own, serve as hints to the listener. They point out to him the connection, the antitheses, the positiveness, or the uncertainty of the speaker's utterances; for the meanings of conjunctions can be traced back to the series-form, to negation and certitude. It should be noted that want and refusal are related to negation; expectation, together with hope and fear, to uncertainty, so that the consideration of thought masses must also include emotional states. Children possess the structure of thought just as they experience the emotional states, long before they know how to embody the same in words with the help of conjunctions. Certain [21]
conjunctions, such as, to be sure, although, on the contrary, either—or, neither—nor, etc., are not adopted by children until late.

32. Of equal importance with the inner organization of the pupil's ideas are, for the teacher, the degree of ease or difficulty with which a given mass of ideas is called into consciousness, and its relatively long or brief persistence in consciousness. Here we are face to face with the conditions of efficient instruction and training. The most necessary statements relative to this subject will be made under the head of interest and character-building.

33. The capacity for education, therefore, is determined not by the relationship in which various originally distinct mental faculties stand to one another, but by the relations of ideas already acquired to one another, and to the physical organism. Every pupil must be studied with reference to both.

> NOTE.—In the minds of those whose early training has been in the hands of several persons, whose early life has, perhaps, even been spent in different households or has been tossed about by changes of fortune, there are usually formed thought masses that are heterogeneous and poorly correlated. Nor is it easy to win the single-hearted devotion of such boys. They cherish secret wishes, they feel contrasts, the nature of which it is difficult to get at, and soon strike out in directions which education can frequently not encourage. Far more susceptible of educative influences are pupils that have been, for a long time, under the guidance of only one person,—of the mother especially,—who has had their full confidence. It now remains to base their further training on what already exists [22]
> and to refrain from demanding sudden leaps.

34. Now, in order to gain an adequate knowledge of each pupil's capacity for education, observation is necessary—observation both of his thought masses and of his physical nature. The study of the latter includes that of temperament, especially with reference to emotional susceptibility. With some, fear is the first natural impulse, with others, anger; some laugh and cry easily, others do not. In some cases a very slight stimulus suffices to excite the vascular system. We need to note furthermore:—

(1) The games of pupils. Do they in a thoroughly childlike manner still play with any object that comes to hand? Do they intentionally change their games to suit a varying preference? Can distinct objects of persistent desire be discovered?

(2) Their mental capacity and processes as shown in their studies. Is the pupil able to grasp long or only short series? Does he make many or few slips in the recitation? Do his lessons find a spontaneous echo in his play?

(3) Their depth and consistency. Are their utterances superficial, or do they come from the depths of the soul? A comparative study of words and actions will gradually answer this question.

Such observations will take account also of the rhythm of the pupil's mental life as well as of the

character of his store of thoughts. The insight thus obtained determines the matter and method of instruction. [23]

The reader will not fail to notice that much of modern child study is anticipated in the foregoing paragraphs. Further important contributions to the same subject are made in paragraphs 294–329.

35. Instruction in the sense of mere information-giving contains no guarantee whatever that it will materially counteract faults and influence existing groups of ideas that are independent of the imparted information. But it is these ideas that education must reach; for the kind and extent of assistance that instruction may render to conduct depend upon the hold it has upon them.

Facts, at least, must serve as material for methodical treatment, otherwise they do not enlarge even the scope of mental activity. They rise in value when they become instinct with life and acquire mobility so as to enrich the imagination. But their ethical effect always remains questionable so long as they do not help to correct or modify the ethical judgment, or desire and action, or both.

This point calls for a few additional distinctions. Generally speaking, rudeness decreases in proportion to the expansion of the mental horizon by instruction. The mere diffusion of desires over the enlarged thought area causes them to lose something of their one-sided energy. Moreover, if instruction presents ethical subjects of some kind in a comprehensible way, the pupil's disposition undergoes a refining process so that it at least approximates a correct estimate of the will, that is, the creation of ethical ideas. [24]

Such favorable results are, however, apt to be outweighed by the harm done when mere knowledge becomes the chief aim of ambition.

36. In order that instruction may act on the pupil's ideas and disposition, every avenue of approach should be thrown open. The mere fact that we can never know with certainty, beforehand, what will influence the pupil most, warns us against one-sidedness of instruction.

Ideas spring from two main sources,—experience and social intercourse. Knowledge of nature—incomplete and crude—is derived from the former; the later furnishes the sentiments entertained toward our fellow-men, which, far from being praiseworthy, are on the contrary often very reprehensible. To improve these is the more urgent task; but neither ought we to neglect the knowledge of nature. If we do, we may expect error, fantastical notions, and eccentricities of every description.

37. Hence, we have two main branches of instruction,—the historical and the scientific. The former embraces not only history proper, but language study as well; the latter includes, besides natural science, mathematics.

"Historical" must be interpreted to include all human sciences, such as history, literature, languages, æsthetics, and political, economic, and social science. "Scientific" may include applied as well as pure science, and then we add all forms of industrial training to the curriculum. Other divisions of the subject-matter of instruction are often helpful. Thus one may speak of the human sciences, the natural sciences, and the economic sciences. The economic sciences include those activities where man and nature interact. Dr. Wm. T. Harris speaks of five coördinate groups of subjects, corresponding to what he calls the "five windows of the soul." [25]

38. Other reasons aside, the need alone of counteracting selfishness renders it necessary for every school that undertakes the education of the whole man to place human conditions and relations in the foreground of instruction. This humanistic aim should underlie the studies of the historical subjects, and only with reference to this aim may they be allowed to preponderate.

An interesting attempt to realize the aim here demanded is found in Professor John Dewey's "School and Society,"[1] which is in effect a description of what he is working out in his practice or experimental school in connection with his department in the University of Chicago.

"If the aim of historical instruction is to enable the child to appreciate the values of social life, to see in imagination the forces which favor and let men's effective coöperations with one another, to understand the sorts of character that help on and that hold back, the essential thing in its presentation is to make it moving, dynamic. History must be presented not as an accumulation of results or effects, a mere statement of what has happened, but as a forceful, acting thing. The motives, that is, the motors, must stand out. To study history is not to amass information, but to use information in constructing a vivid picture of how and why men did thus and so: achieved their successes and came to their failures."[2] [26]

NOTE.—This view does not shut out the other held in regard to Gymnasia, namely, that their business is to preserve and perpetuate a knowledge of classical antiquity; the latter aim must be made congruent with the former.

[1] Dewey, "The School and Society," University of Chicago Press, 1899.

[2] Dewey, "The Aim of History in Elementary Education," Elementary School Record, No. 8, University of Chicago Press, 1900.

39. Mathematical studies, from elementary arithmetic to higher mathematics, are to be linked to the pupil's knowledge of nature, and so to his experience, in order to gain admission into his sphere of thought. Instruction in mathematics, however thorough, fails pedagogically when the ideas generated form an isolated group. They are usually soon forgotten, or, if retained, contribute but little toward personal worth.

It may be added that the leading practical motive in the teaching of arithmetic has been economic, the cost of things forming the chief reliance for problems. Only those parts of nature study that involve important quantitative relations are fitted for correlation with mathematics. Biology, for instance, which is *qualitative*, since it deals with life, is a poor support for mathematics; but physics is a good one.

40. In general, it will always remain a matter of uncertainty whether and how instruction will be received and mentally elaborated. To diminish this uncertainty, if for no other reasons, there is need of [27] constant endeavor to put the pupil in a frame of mind suitable for instruction. This task falls within the province of training.

41. But even apart from reference to instruction, training must seek to ward off violent desires and to prevent the injurious outbursts of emotion. We may grant that after the days of school life are over, individual traits will always break forth again in this respect; but experiences, too, follow, and in connection with these the after-effect of education comes to light in proportion as education has been more or less successful. It shows itself in the nature and the amount of self-knowledge through which the adult strives to restrain his native faults. Seeming exceptions are in most cases accounted for by impressions produced in very early youth and long concealed.

As soon as a person attains freedom of action, he usually endeavors to achieve the life which in his earlier years seemed most desirable. Hence training and instruction have each to be directed against the springing up of illusive longings and toward a true picture of the blessings and burdens of various social classes and professions.

What modifications of individuality training may accomplish, is brought about less by restrictions, which cannot be permanent, than by inducing an early development of the higher impulses whereby they [28] attain predominance.

42. The larger portion of the restrictions necessary during the period of education falls under another head, that of government. The question of completeness of education aside, children no less than adults need to experience the constraint imposed on every one by human society: they, too, must be kept within bounds. This function the state delegates to the family, to guardians, and to the schools. Now the purpose of government refers to present order; that of training to the future character of the adult. The underlying points of view are accordingly so different that a distinction must necessarily be made in a system of pedagogics between training and government.

43. In matters of government, too, much depends on how keenly its disciplinary measures are felt. Only good training can insure the right kind of sensibility. A gentle rebuke may prove more effective than blows. The first thing to do, of course, when unruly children create disorder, is to govern, to restore order; but government and training should, if possible, go together. The distinction between these two concepts serves to aid the reflection of the teacher, who ought to know what he is about, rather than to suggest a perceptible separation in practice.

44. In the following pages, general pedagogics, which is followed necessarily by observations of a [29] more special nature, will be discussed under the three main heads,—government, instruction, training. What needs to be said concerning government as the primary condition of education will be disposed of first. Next comes the theory of instruction and didactics. The last place is reserved for training; for an enduring effect could not be expected from it, if it were severed from instruction. For this reason the teacher must always keep the latter in view when he fixes his attention on methods of training, which in actual practice always work hand in hand with instruction. The other customary form of treatment, that according to age, while not adapted to the exposition of principles, finds its proper place in the chapter leading over to the discussion of special topics.

[30]

PART II

OUTLINES OF GENERAL PEDAGOGICS

SECTION I

GOVERNMENT OF CHILDREN

CHAPTER I

Theoretical Aspects

45. We assume at the outset the existence of all the care and nurture requisite for physical growth and well-being; a bringing up that shall be as free from pampering as from dangerous hardening. There must be no actual want to lead a child astray, nor undue indulgence to create unnecessary demands. How much hardening it is safe to risk will depend in each case on the child's constitution.

46. The foundation of government consists in keeping children employed. No account is taken as yet of the prospective gain to mental culture; the time is to be fully occupied, at all events, even if the immediate purpose be merely the avoidance of disorder. This purpose, however, involves the requirement of ample provision, according to the ages of pupils, for the need of physical activity, that the [31] cause of natural restlessness may be removed. This need is more urgent with some than with others; there are children that seem ungovernable because compelled to sit still.

47. Other things being equal, self-chosen occupations deserve the preference; but it rarely happens that children know how to keep themselves busy sufficiently and continuously. Specific tasks, not to be abandoned until completed, assure order much better than random playing, which is apt to end in ennui. It is desirable that adults possessing the requisite patience assist children, if not always, at least frequently, in their games; that they explain pictures, tell stories, have them retold, etc. With advancing maturity, a steadily increasing proportion of the occupations assumes the character of instruction or of exercises growing out of it; this work should be properly balanced by recreations.

48. Next in order comes supervision, and with it numerous commands and prohibitions. Under this head several things must be considered.

In the first place this: Whether under certain circumstances one might withdraw a command or permit what has once been forbidden. It is ill-advised to give an order more sweeping than the execution is meant to be; and it weakens government to yield to the entreaties, the tears, or, worse still, the impetuous insistence of children.

Also this question: Whether it is possible to make sure of obedience. Where children are not kept busy [32] and are left without oversight, the issue becomes doubtful.

The difficulty grows at a rapid rate with an increase in numbers. This is true especially of larger educational institutions, but, on account of the coming and going of pupils, applies in a measure also to common day schools.

49. The usual solution is greater strictness of supervision. But this involves the risk of utter failure to receive voluntary obedience, and of inciting a match game in shrewdness.

As to voluntary obedience, much depends on the ratio of restraint to the freedom that still remains. Ordinarily, youth submits readily enough to many restrictions, provided such restrictions bear upon specific fixed points, and leave elbow room for independent action.

In the work of supervision the teacher will find it hard to rely on himself entirely, particularly if he has charge of classes only at stated times. Others must assist him; he himself will have to resort occasionally to surprises. Supervision is always an evil when coupled with unnecessary distrust. It is essential, therefore, to make those who do not merit distrust understand that the measures adopted are not directed against them.

[33]

CHAPTER II

Practical Aspects

50. Since supervision is not to be vigorous to the point of ever felt pressure, child government, to be effective, requires both gentle and severe measures. In general, this effectiveness results from the natural superiority of the adult, a fact of which teachers sometimes need to be reminded. Whatever the plan of supervision, there must be coupled with it an adequate mode of disciplinary procedure. A record should be kept in schools, not for the law-abiding pupils, but for those guilty of repeated acts of disobedience. These remarks do not thus far include any reference to marks and records pertaining to education proper; they are confined to what is popularly, but loosely, called discipline, that is, the training of pupils to conform to the system of order that obtains in the school.

Home training seldom requires such bookkeeping; but even here it may at times be useful. Of course, the individual child knows in any case that some one is keeping an eye on his actions, but the fact becomes more deeply impressed upon his memory if the reproofs incurred by him are recorded.

51. It would be in vain to attempt to banish entirely the corporal punishments usually administered [34] after fruitless reprimands; but use should be made of them so sparingly that they be feared rather than actually inflicted.

Recollection of the rod does not hurt a boy. Nor is there any harm in his present conviction that a flogging is henceforth as much beyond the range of possibility as his meriting such treatment. But it would, no doubt, be injurious to actually violate his self-respect by a blow, however little he might mind the physical pain. And pernicious in the highest degree, although, nevertheless, not quite obsolete yet, is the practice of continuing to beat children already hardened to blows. Brutish insensibility is the consequence, and the hope is almost vain that even a long period of now unavoidable indulgence will restore a normal state of feeling.

There is less objection to making use, for a few hours, of hunger as a corrective. Here only an act of deprivation takes place, not one involving a direct insult.

Curtailment of freedom is the most commonly employed form of punishment; justly so, provided it be properly adjusted to the offence. Moreover, it admits of the most varied gradations from standing in a corner to confinement in a dark room, perhaps even with hands tied together behind the back. Only, for [35] several serious reasons, this punishment must not be of long duration. A whole hour is more than enough unless there is careful supervision. Besides, the place must be chosen judiciously.

> Solitary confinement, especially in a dark room, is seldom if ever resorted to in American public schools. For remarks upon the social basis of modern school punishments, see 55.

52. Corrections of such severity, as removal from home or expulsion from an institution, are to be administered only in extreme cases; for what is to become of the expelled pupil? A burden to another school? And in case the transfer implies the same freedom, the old disorderly conduct will usually be resumed. Such pupils must, therefore, be placed under very strict supervision and given new occupations. We must trust to the new environment to obliterate gradually the old vitiated circle of thought.

53. It is a well-known fact that authority and love are surer means of securing order than harsh measures are. But authority cannot be created by every one at will. It implies obvious superiority in mind, in knowledge, in physique, in external circumstances. Love can, indeed, be gained in the course of time by a complaisant manner—the love of well-disposed pupils; but just where government becomes most necessary, complaisance has to cease. Love must not be purchased at the expense of weak indulgence; it is of value only when united with the necessary severity.

54. In early childhood and with healthy children, government is, on the whole, easy. It continues to be [36] easy after they have once formed habits of obedience. But it should not be interrupted. Even if children have been left to themselves or in charge of strangers only a few days, the change is noticeable. It requires an effort to tighten the reins again—something not to be done too suddenly.

Where boys have been allowed to run wild, the attempt to bring them back to orderly conduct reveals the differences of individuality. Some are easily made to return to appropriate work by kindness combined with a moderate measure of forbearance, others have sense enough to fear threats and to avoid penalties; but we may unfortunately also expect to find a few whose sole thought is to escape from supervision, however unpleasant for them the consequences may be.

Where home ties are wanting, this spirit may develop even during boyhood with ominous rapidity; during adolescence the difficulty of checking it may grow to be insuperable.

55. As a rule, it is reasonable to assume that youth will try to break through restraints as soon as these are felt. A sufficient amount of satisfying activity, together with uniform firmness of the lines of restraint, will, indeed, soon put an end to persistent attempts of this kind; yet they will be repeated from

time to time. As boys grow older there is a change of pursuits; now the restraining boundaries must [37]
gradually be enlarged. The question now is whether education has progressed sufficiently far to make government less indispensable. Moreover, the choice of work comes to be determined by the prospects opening before the young man, according to his rank and means, together with his native capabilities and acquired knowledge. To encourage such pursuits as being appropriate for him, and, on the other hand, to reduce mere hobbies and diversions to harmless proportions, still remains the function of government. In any case government should not be wholly surrendered too early, least of all when the environment is such as to justify apprehension of temptation.

Though American teachers are perhaps not accustomed to emphasize the distinction between government for order and training for character, the difference, nevertheless, exists, often in an exaggerated form. Just as fever is looked upon as the measure of functional disturbance in the body, so disorder in the schoolroom is looked upon as the measure of the teacher's failure. As fever is the universal symptom of disease, so disorder is the index of failure. The diagnosis may err in either case as to what the seat of the difficulty really is, but that something is wrong is plain to all. The fact that the public usually gauge a teacher's efficiency by the order he keeps has led in the past to an exaggerated emphasis upon school discipline. The means for securing good order have greatly changed since Herbart's time. A growing sense of social solidarity in the community, together with the all but universal employment of women as teachers in the elementary grades, has transferred the [38]
basis of discipline from the teacher to the community. It is social pressure in and out of the school that is the main reliance for regularity, punctuality, and order. Herbart wonders what will become of the bad boy if he is expelled. The modern answer is, he will be sent to the reform school or to the truant school. The teacher still stands as of old at the point of contact between the institution and the individual; nor can he entirely escape the heat generated at times by such contact, but, after all, it is society that now supplies the pressure formerly exerted by will and birch. The teacher is now more of a mediator between the pupil and the organized community, than an avenger of broken law.

SECTION II

INSTRUCTION

CHAPTER I

The Relation of Instruction to Government and Training

56. Instruction furnishes a part of those occupations which lie at the basis of government; how large a part depends on circumstances.

Children must be kept employed at all events, because idleness leads to misbehavior and lawlessness. Now if the employment consists of useful labor, say in the workshop or on the farm, so much the better. Better still, if the work teaches the child something that will contribute to his further education. But not all employment is instruction; and in cases where the mere government of children is a difficult matter, lessons are not always the most adequate employment. Many a growing boy will be taught orderly conduct much sooner when placed with a mechanic or merchant or farmer than in school. The scope of government is wider than that of instruction.

[40]

> Teachers of manual training everywhere testify to the quieting effect of directed physical labor upon stormy spirits. Even a truant school or a school for incorrigibles becomes an attractive place to the inmates when adequate provision is made for the exercise of the motor powers. Most children can be controlled through mental occupation, but there are some to whom motor activity is indispensable. That a judicious apportionment of sensory and motor activity would favorably affect the development of all children is not to be questioned.

57. Instruction and training have this in common, that each makes for education and hence for the future, while government provides for the present. A distinction should, however, be made here. Instruction is far from being always educative or pedagogical. Where acquisition of wealth and external success or strong personal preference supply the motives for study, no heed is paid to the question: What will be the gain or loss to character? One actuated by such motives sets out, such as he is, to learn one thing or another, no matter whether for good or bad or for indifferent ends; to him the best teacher is he who imparts *tuto, cito, jucunde*, the proficiency desired. Instruction of this kind is excluded from our discussion; we are concerned here only with instruction that educates in the moral sense of the term.

58. Man's worth does not, it is true, lie in his knowing, but in his willing. But there is no such thing as an independent faculty of will. Volition has its roots in thought; not, indeed, in the details one knows, but [41] certainly in the combinations and total effect of the acquired ideas. The same reason, therefore, which in psychology accounts for considering the formation of ideas first, and then desire and volition, necessitates a corresponding order in pedagogics: first the theory of instruction, then that of training.

> Note.—Formerly, strange to say, no distinction was made between government and training, although it is obvious that the immediate present demands attention more urgently than does the future. Still less was instruction given its true place. The greater or smaller amount of knowledge, regarded as a matter of secondary importance in comparison with personal culture, was taken up last. The treatment of education as the development of character preceded that of instruction, just as though the former could be realized without the latter. During the last decades, however, a demand has arisen for greater activity on the part of schools, primarily the higher schools. Humanistic studies are to bestow humanity, or culture. It has come to be understood that the human being is more easily approached from the side of knowledge than from the side of moral sentiments and disposition. Furthermore, examinations might be set on the former, but not on the latter. Now the time for instruction was found to be too limited—a want that the old Latin schools had felt but little. This led to discussions as to the relative amount due each branch of study. We shall treat chiefly of the correlation of studies, for whatever remains isolated is of little significance.

59. In educative teaching, the mental activity incited by it is all important. This activity instruction is to increase, not to lessen; to ennoble, not to debase.

> Note.—A diminution of mental activity ensues, when, because of much study and of sitting—especially at all sorts of written work, often useless—physical growth is interfered with in a way sooner or later to the injury of health. [42] Hence the encouragement given in recent years to gymnastic exercises, which may, however, become too violent. Deterioration sets in when knowledge is made subservient to ostentation and external advantages—the objectionable feature of many public examinations. Schools ought not to be called upon to display all they accomplish. By such methods instruction not only works against its own true end, but also conflicts with training, whose aim for the whole future of the pupil is—*mens sana in corpore sano*.

60. If all mental activity were of only one kind, the subject-matter of instruction would be of no consequence. But we need not go beyond experience to see that the opposite is true, that there is a great diversity of intellectual endowment. Yet while instruction must thus be differentiated, it should not be

made so special as to cultivate only the more prominent gifts; otherwise the pupil's less vigorous mental functions would be wholly neglected and perhaps suppressed. Instruction must rather be manifold, and its manifoldness being the same for many pupils in so far as it may help to correct inequalities in mental tendencies.

Not only is subject-matter to be varied on account of mental diversity, but also for social reasons as well. For an enlargement of this theme, see the annotation to paragraph 65.

61. What is to be taught and learned is, accordingly, not left for caprice and conventionality to decide. In this respect instruction differs in a striking manner from government, for which, if only idleness is prevented, it hardly matters what work children are given to do. [43]

NOTE.—Children are sent to school from many homes simply because they are in the way and their parents do not wish them to be idle. The school is regarded as an institution whose chief function is to govern, but which incidentally also imparts useful knowledge. Here there is a lack of insight into the nature of true mental culture; teachers, on the contrary, sometimes forget that they are giving pupils work, and that work should not exceed reasonable limits.

[44]

CHAPTER II

The Aim of Instruction

62. The ultimate purpose of instruction is contained in the notion, virtue. But in order to realize the final aim, another and nearer one must be set up. We may term it, *many-sidedness of interest*. The word *interest* stands in general for that kind of mental activity which it is the business of instruction to incite. Mere information does not suffice; for this we think of as a supply or store of facts, which a person might possess or lack, and still remain the same being. But he who lays hold of his information and reaches out for more, takes an interest in it. Since, however, this mental activity, is varied (60), we need to add the further determination supplied by the term *many-sidedness*.

It has been pointed out[3] what the content of the word *virtue* must be, if this word is to be an adequate expression for the ultimate purpose of instruction. Virtue must embrace not only what is purely individual, or subjective, such as piety and humaneness of disposition, but it must likewise include what is objective, or social, in conduct. This fact lends a new significance to the doctrine of interest, for though a normal child is not naturally interested in introspective analysis of his feelings, [45] he is spontaneously interested in what is objective and within the range of his experience. The enterprises of his mates, the regulations of his school or home, the erection of houses, the introduction of new machinery, the social doings of the neighborhood, the havoc created by the elements, the prominent features of the changing year—all these claim his closest attention. The common school studies deal with these very things. Literature (reading) and history reveal to him the conduct of men; the one considering it ideally, the other historically. Mathematics teaches the mastery of material when considered quantitatively, whether in trade or manufacture or construction. Nature studies bring the child into intimate touch with the significant in his natural environment. Geography shows him the most obvious features of the industrial activity about him. It shows him the chief conditions of production in crops and manufactures; it also gives him hints of the great business of commerce. In all these studies, the natural inclinations of the mind are directly appealed to. Not a little of the importance of the doctrine of interest in instruction depends upon these facts; for both the insight and the disposition that instruction is capable of imparting to the pupil relates specifically to the objective side of his character, the one most in need of development and most susceptible of it.

[3] Paragraphs 8–15.

63. We may speak also of indirect as distinguished from direct interest. But a predominance of indirect interest tends to one-sidedness, if not to selfishness. The interest of the selfish man in anything extends only so far as he can see advantages or disadvantages to himself. In this respect the one-sided man approximates the selfish man, although the fact may escape his own observation; since he relates [46] everything to the narrow sphere for which he lives and thinks. Here lies his intellectual power, and whatever does not interest him as means to his limited ends, becomes an impediment.

It is important for the teacher to see the full scope of the doctrine of interest in its relation to effort. In Herbart's psychology it assumes a most important place, since the primacy of mental life is, in this system, ascribed to *ideas*. In other systems, notably those of Kant, Schopenhauer, Von Hartmann, Paulsen, primacy is ascribed to the will, first in unconscious or subconscious striving, later in conscious volition. This fundamental difference in standpoint will account for the emphasis laid now upon *interest*, now upon *effort*. Herbart conceives that conscious feelings, desires, motives, and the like have their source in ideas, and that volition in turn arises from the various emotional states aroused by the ideas. Interest with him thus becomes a permanent or ever renewed, ever changing, ever growing desire for the accomplishment of certain ends. It is, consequently, a direct, necessary stimulus to the will. Systems, however, that regard the will as the primary factor in mental life, conceiving of ideas only as a means for revealing more clearly the ends of volition, together with the best methods of reaching them, are naturally prone to place the emphasis upon *effort*, leaving to interest but a secondary or quite incidental function. Dr. John Dewey has attempted to reconcile these two views.[4] Interest and effort are complementary, not opposing ideas. To emphasize one at the expense of the other, is to assume that the ends for which we act lie quite outside of our [47] personality, so that these ends would, on the one hand, have to be *made* interesting, or, on the other, struggled for without regard to interest. This assumption is an error. The ends for which we strive must be conceived as internal, our efforts being regarded as attempts at self-realization in definite directions. The purpose of our action is therefore an end desired. In this we have an interest surely. As an educational doctrine, however, interest concerns chiefly the means of reaching these ends. If interest in the means is wanting, the child works with a *divided attention*. He gives only so much to the means as he must; the remainder is devoted to his own affairs,—the past or coming ball-game, the picnic, the walk in the woods, the private enterprises of home or school. But if a lively interest is

felt in the means to the end, then the whole self is actively employed for the time being in the accomplishment of the purpose of the hour. The attention is no longer divided, it is concentrated upon the matter in hand. This in the school is *work*. When the attention is divided we have drudgery. This signifies that the interest felt in the end, say a dollar, is not felt in the means of attaining it, say a day's labor. However inevitable drudgery may be in life, it should have no place in the schoolroom. The teacher must so present the studies that the pupil can perceive at least a fraction of their bearing upon life. This awakens an interest in them as ends. He must, then, by conformity to the psychological order of learning, by enthusiasm and ingenuity, so teach the subjects that the natural interest in the end will be constantly enhanced through a lively interest in the daily lesson as the means of reaching it. The result is unified attention, zeal in the pursuit of knowledge, hospitality for ethical ideals.

[4] "Interest as Related to the Will," second supplement to the Herbart Year Book, revised and reprinted, Chicago University Press, 1899.

64. As regards the bearings of interest on virtue, we need to remember that many-sidedness of [48] interest alone, even of direct interest such as instruction is to engender, is yet far from being identical with virtue itself; also that, conversely, the weaker the original mental activity, the less likelihood that virtue will be realized at all, not to speak of the variety of manifestation possible in action. Imbeciles cannot be virtuous. Virtue involves an awakening of mind.

The conception, that by awakening many-sided direct interest in the studies we can powerfully affect character, is perhaps peculiar to the thought of Herbart. Yet when we consider that the knowledge taught in the school goes to the root of every vital human relation, that, in other words, the studies may be made instruments for progressively revealing to the child his place and function in the world, it follows as a necessary consequence, that to interest the pupil thoroughly in these branches of learning, is to work at the foundation of his character, so far, at least, as insight into duty and disposition to do it are concerned. Even if interest in ethical things is not of itself virtue, it is an important means for securing virtue. This idea adds to the teacher's resources for the development of character. It also opens up to him a new realm for research. All literature, history, science, mathematics, geography, language, may be examined from this new standpoint, both with respect to selection and to methods of presentation. Select the portions that pertain intimately to life; teach them so that their important bearing upon it may be seen.

NOTE.—As has been stated already (17), the most immediate of the practical ideas demanding recognition from the teacher is the idea of perfection. Now, with reference to this idea, three factors are to be considered: the [49] intensity, the range, the unification of intellectual effort. Intensity is implied in the word *interest*; extension is connoted by many-sidedness; what is meant by unification will be briefly indicated in the next paragraph.

65. Scattering no less than one-sidedness forms an antithesis to many-sidedness. Many-sidedness is to be the basis of virtue; but the latter is an attribute of personality, hence it is evident that the unity of self-consciousness must not be impaired. The business of instruction is to form the person on many sides, and accordingly to avoid a distracting or dissipating effect. And instruction has successfully avoided this in the case of one who with ease surveys his well-arranged knowledge *in all of its unifying relations* and holds it together as *his very own*.

This section points to the correlation of studies, a subject to be considered hereafter in detail. It also throws light upon the modern system of elective courses or elective studies in secondary and higher education. The teachable subjects have now become so numerous that election is imperative unless what is to be taught is determined arbitrarily without regard to the needs or inclinations of students. Furthermore, election is made imperative by the fact that the higher education is now open to all minds of all social classes, and that differentiated industry calls for many kinds of education. But the need for mental symmetry, no less imperative now than in the past, is reinforced by the need for social symmetry. Education must put the student into sympathetic touch with the whole of life, not a mere segment of it. Since many-sidedness cannot be interpreted to mean knowledge of all [50] subjects, this being impossible, it must be interpreted to mean knowledge of all departments of learning. Election may be permitted to emphasize departments of study, but not to ignore them entirely. There are four or more languages worth teaching, many departments of history, numerous sciences, and various branches of mathematics, not to speak of the economic, political, and social sciences. Enough of each department being given to insure intelligent sympathy with the aspect of civilization it presents, the student may be allowed to place the emphasis upon such groups of studies as best conserve his tastes, his ability, and his destination in life.

[51]

CHAPTER III

The Conditions of Many-sidedness

66. It becomes obvious at once that a many-sided culture cannot be brought about quickly. The requisite store of ideas is acquired only by successive efforts; but unification, a view of the whole, and assimilation are to be attained besides (65), whence an alternation, in time, of absorption and reflection. The apprehension of the manifold is of necessity a gradual process, and the same is true of the unification of knowledge.

In *absorption* the mind surrenders itself to the acquisition or contemplation of facts. Thus a child will stand in open-eyed wonder at beholding a novel spectacle, the scientist becomes absorbed in watching the outcome of a new experiment, the philosopher loses consciousness to all about him in the unfolding of some new train of thought. Not only may absorption concern momentary experiences, but it may in a broad way be said to cover considerable periods of life, as, for instance, when a student becomes absorbed in the mastery of foreign languages having no immediate relation to his daily life. *Reflection* is the assimilation of the knowledge gained by absorption. The mind, recovering from its absorption in what is external, relates its new-found experience to the sum of its former experiences. New items of knowledge in this way find their appropriate places in the organic [52] structure of the mind. They are apperceived. The many-sided thus comes to unity.

Rosenkranz calls absorption and reflection, *self-estrangement* and its *removal*. "All culture," he says, "whatever may be its special purport, must pass through these two stages,—of estrangement, and its removal." Again, he says, "The mind is (1) immediate (or potential); but (2) it must estrange itself from itself, as it were, so that it may place itself over against itself as a special object of attention; (3) this estrangement is finally removed through a further acquaintance with the object ... it feels itself at home in that on which it looks, and returns again enriched to the form of immediateness (to unity with itself). That which at first appeared to be another than itself is now seen to be itself."[5] This is an abstract statement of the fact that (1) in learning the mind becomes absorbed for a time in external objects, ignoring temporarily their inner meaning and relation to self, and (2) this period of absorption is succeeded by one of reflection, in which the mind perceives the significance of what has been observed, noting the laws and principles underlying the phenomena and thus assimilating them to what it conceives to be rational.

Owing to the fact that absorption and reflection may refer to very short and also to comparatively long periods, they may be studied with respect to their bearing in conducting recitations, and to their importance in fixing courses of study. The former aspect of the two processes will in this connection chiefly occupy our attention.

[5] "Philosophy of Education," pp. 27, 28, New York, D. Appleton & Co.

67. Some teachers lay great stress on the explication, step by step, of the smaller and smallest components of the subject, and insist on a similar reproduction on the part of the pupils. Others prefer to [53] teach by conversation, and allow themselves and their pupils great freedom of expression. Others, again, call especially for the leading thoughts, but demand that these be given with accuracy and precision, and in the prescribed order. Others, finally, are not satisfied until their pupils are self-actively exercising their minds in systematic thinking.

Various methods of teaching may thus arise; it is not necessary, however, that one should be habitually employed to the exclusion of the rest. We may ask rather whether each does not contribute its share to a many-sided culture. In order that a multitude of facts may be apprehended, explications or analyses are needed to prevent confusion; but since a synthesis is equally essential, the latter process may be started by conversation, continued by lifting into prominence the cardinal thoughts, and completed by the methodical independent thinking of the pupil: *clearness*, *association*, *system*, *method*.

In teaching we need to have (1) *clearness* in the presentation of specific facts, or the elements of what is to be mastered; (2) *association* of these facts with one another, and with other related facts formerly acquired, in order that assimilation, or apperception, may be adequately complete; (3) when sufficient facts have been clearly presented and sufficiently assimilated, they must be *systematically* ordered, so that our knowledge will be more perfectly unified than it could be did we stop short of [54] thorough classification, as in the study of botany, or of the perception of rules and principles, as in mathematics and grammar; (4) finally the facts, rules, principles, and classifications thus far assumed must be secured for all time by their efficient *methodical* application in exercises that call forth the vigorous self-activity of the pupil. These four stages of teaching may be considered fundamental, though varying greatly according to the nature of the subject and the ability of the pupil. It is good exercise for a pupil to take long, rapid steps when able to do so; it is hopeless confusion to undertake them when they are too great or too rapid for his capacity. These four stages

in methods of teaching conceived to be essential, form the nucleus of an interesting development in the Herbartian school, under the title of "The Formal [*i.e.* Essential] Steps of Instruction." The leading ideas will be further described in a subsequent paragraph (70).

68. On closer inspection we find that instead of being mutually exclusive, these various modes of instruction are requisite, one by one, in the order given above, for every group, small or large, of subjects to be taught.

For, first, the beginner is able to advance but slowly. For him the shortest steps are the safest steps. He must stop at each point as long as is necessary to make him apprehend distinctly each individual fact. To this he must give his whole thought. During the initial stage, the teacher's art consists, therefore, preëminently in knowing how to resolve his subject into very small parts. In this way he will avoid taking [55] sudden leaps without being aware that he is doing so.

Secondly, association cannot be effected solely by a systematic mode of treatment, least of all at first. In the system each part has its own fixed place. At this place it is connected directly with the nearest other parts, but also separated from other more remote parts by a definite distance, and connected with these only by way of determinate intervening members, or links. Besides, the nature of this connection is not the same everywhere. Furthermore, a system is not to be learned merely. It is to be used, applied, and often needs to be supplemented by additions inserted in appropriate places. To be able to do this requires skill in diverting one's thoughts from any given starting-point to every other point, forward, backward, sideways. Hence two things are requisite; preparation for the system, and application of the system. Preparation is involved in association; exercise in systematic thinking must follow.

69. During the first stage, when the clear apprehension of the individual object or fact is the main thing, the shortest and most familiar words and sentences are the most appropriate. The teacher will often find it advisable also to have some, if not all, of the pupils repeat them accurately after him. As is well known, even speaking in concert has been tried in many schools not entirely without success, and for young beginners this method may indeed at times answer very well. [56]

For association, the best mode of procedure is informal conversation, because it gives the pupil an opportunity to test and to change the accidental union of his thoughts, to multiply the links of connection, and to assimilate, after his own fashion, what he has learned. It enables him, besides, to do at least a part of all this in any way that happens to be the easiest and most convenient. He will thus escape the inflexibility of thought that results from a purely systematic learning.

System, on the other hand, calls for a more connected discourse, and the period of presentation must be separated more sharply from the period of repetition. By exhibiting and emphasizing the leading principles, system impresses upon the minds of pupils the value of organized knowledge; through its greater completeness it enriches their store of information. But pupils are incapable of appreciating either advantage when the systematic presentation is introduced too early.

Skill in systematic thinking the pupil will obtain through the solution of assigned tasks, his own independent attempts, and their correction. For such work will show whether he has fully grasped the general principles, and whether he is able to recognize them in and apply them to particulars.

70. These remarks on the initial analysis and the subsequent gradual uniting of the matter taught, [57] hold true, in general and in detail, of the most diverse objects and branches of instruction. Much remains to be added, however, to define with precision the application of these principles to a given subject and to the age of the pupil. It will suffice, for the present, if we remind ourselves that instruction provides a portion of the occupations necessary to government (56). Now, instruction produces fatigue in proportion to its duration; more or less, of course, according to individual differences. But the more fatiguing it is, the less it accomplishes as employment. This fact alone shows clearly the necessity of intermissions and change of work. If the pupil has become actually tired, that is, has not lost merely inclination to work, this feeling must be allowed, as far as is practicable, to pass away, at any rate to diminish, before the same subject is resumed in a somewhat modified form. In order to have time enough for this, the systematic presentation must in many cases be postponed until long after the first lessons in the elements have begun, and conversely, the rudiments of a subject frequently have to be at least touched upon long before connected instruction can be thought of. Many a principle needs to be approached from a great distance.

Herbart found his basis for the four steps of method, viz. *clearness*, *association*, *system*, *method*, in the ideas of absorption and reflection, the alternate pulsation of consciousness in absorbing and [58] assimilating knowledge. Others, adopting this classification as essentially correct, have related these steps to customary psychological analysis. Thus Dörpfeld and Wiget point out that the mind goes through three well-marked processes when it performs the complete act of learning, namely, *perception* of new facts; *thought*, or the bringing of ideas into logical relations; and *application*, or the exercise of the motor activities of the mind in putting knowledge into use. Perception gives the *percept*, thought gives the *conception* (or rule, principle, generalization), and application gives *power*. In other words, the receptive and reflective capacities of the mind come to their full fruition

when they result in adequate motor activities. With respect to perception a good method will first *prepare* the mind for facts and will then *present* them so that they may be apperceived. The first two steps are therefore *preparation* and *presentation*. The first step, as Ziller pointed out, is essentially *analytic* in character, since it analyzes the present store of consciousness in order to bring facts to the front that are closely related to those of the present lesson; the second step, *i.e.*, presentation, is essentially *synthetic*, since its function is to add the matter of the new lesson to related knowledge already in possession. Both together constitute the initial stages of apperception.

Thought consists of two processes that may also be termed steps, and that are more or less observable in all good teaching; they are (1) the *association* of newly apperceived facts with one another and with older and more firmly established ideas in order that rational connection may be established in what one knows, and especially in order that what is general and essential in given facts may be grasped by the mind; and (2) the condensation of knowledge into a *system*, such for [59] instance as we see in the classifications of botany and zoölogy, or in the interdependence of principles as in arithmetic. Thought, in brief, involves the association of ideas and the derivation of generalizations such as are appropriate to the matter in hand and to the thought power of the pupils.

The third stage, that of *application*, is not subdivided. Most other followers of Herbart, both German and American, though varying in methods of approach, conform essentially to the results of this analysis, distinguishing *five* steps, as follows:—

1. Preparation—Analysis
2. Presentation—Synthesis

] Apperception of percepts.

3. Association
4. Systemization

] Thought. The derivation and arrangement of rule, principle, or class.

5. Application. From knowing to doing: use of motor powers.

The reader is referred to the following-named works for extended discussion of this topic: McMurray, “General Method”; DeGarmo, “Essentials of Method”; Lange, “Apperception,” pp. 200–245; Rein (Van Liew’s translation), “Outlines of Pedagogy”; Herbart (Felkins’ translation), “Science of Education”; McMurray, C. A. & F. M., “The Method of the Recitation.” A comparative view of the treatment of the Steps of Instruction by various authors is found in Van Liew’s translation of Rein’s “Outlines of Pedagogy,” p. 145.

[60]

CHAPTER IV

The Conditions Determining Interest

71. Interest means self-activity. The demand for a many-sided interest is, therefore, a demand for many-sided self-activity. But not all self-activity, only the right degree of the right kind, is desirable; else lively children might very well be left to themselves. There would be no need of educating or even of governing them. It is the purpose of instruction to give the right *direction* to their thoughts and impulses, to incline these toward the morally good and true. Children are thus in a measure passive. But this passivity should by no means involve suppression of self-activity. It should, on the contrary, imply a stimulation of all that is best in the child.

At this point a psychological distinction becomes necessary, namely, that between designedly reproduced, or "given," and spontaneous representations. In recitations of what has been learned we have an example of the former; the latter appear in the games and fancies of children. A method of study that issues in mere reproduction leaves children largely in a passive state, for it crowds out for the time being the thoughts they would otherwise have had. In games, however, and in the free play of fancy, and [61] accordingly also in that kind of instruction which finds an echo here, free activity predominates.

This distinction is not intended to affirm the existence of two compartments in which the ideas, separated once for all, would, of necessity, have to remain. Ideas that must by effort be raised into consciousness because they do not rise spontaneously, may become spontaneous by gradual strengthening. But this development we cannot count on unless instruction, advancing step by step, bring it about.

> Interest must be conceived as self-propulsive activity toward an end. It is a part of the teacher's function to assist the pupil in making the appropriate ideas strong and spontaneous. Occasionally a mere suggestion will change the whole mental attitude toward an end and the means for reaching it. A student one day approached his instructor with this query: "How can I get through this study with the least expenditure of time and effort?" The desired answer was first given. The instructor then remarked that there was another way of viewing the matter, viz., that one might consider how to get the *most* rather than the *least* out of the study. He then briefly unfolded its nature and possibilities, whereupon the student became one of the most interested members of the class. He had come with only an indirect interest in the subject as an end; he regarded the study as a required task and the means of passing upon it as so much drudgery; but he so changed his attitude toward it, that the study became an end personally desired, and the daily effort a pleasurable exercise of his self-directed power of thought. The interest that the instructor had aroused in the end was transferred to [62] the means.

72. It is the teacher's business, while giving instruction, to observe whether the ideas of his pupils rise spontaneously or not. If they do, the pupils are said to be attentive; the lesson has won their interest. If not, attention is, indeed, not always wholly gone. It may, moreover, be enforced for a time before actual fatigue sets in. But doubt arises whether instruction can effect a future interest in the same subjects.

Attention is a factor of such importance to education as to call for a more detailed treatment.

73. Attention may be broadly defined as an attitude of mind in which there is readiness to form new ideas. Such readiness is either voluntary or involuntary. If voluntary, it depends on a resolution; the teacher frequently secures this through admonitions or threats. Far more desirable and fruitful is involuntary attention. It is this attention that the art of teaching must seek to induce. Herein lies the kind of interest to be sought by the teacher.

> *Forced* and *spontaneous* are more truly expressive terms than *voluntary* and *involuntary* in this connection. It is not meant that interested activity is *against* the will, or even indifferent to it. On the contrary, it is a form of activity that calls every resource of the mind into full play. The will is never so promptly active as when it is doing the things in which it is most interested; it is, however, a *spontaneous*, not a *forced* activity.
>
> There is, as Dr. John Dewey points out,[6] a contradiction between Herbart's Pedagogy and his [63] Psychology, as follows: the Pedagogy regards interest as the lever of education, the means for securing spontaneous activity of mind; the Psychology regards interest as a feeling arising from the relation of ideas. Ideas must therefore be *given*, in right relations, to arouse interest, while interest is in turn conceived as the means of arousing them. This is reasoning in a circle. The difficulty arises from asserting the primacy of ideas in mental life, and then speaking of *self-activity*, which presupposes the primacy of motor, or impulsive activities. The reader will avoid all contradictions in educational theory by accepting the modern view of the primacy, not of ideas, but of what may broadly be termed *will*. The latter view is in accord with biological and historical science. Ideas are a later production of mind; they serve to define more clearly the ends for which we work, at the same

time giving us insight into the best means of attaining them. For an interesting discussion of the primacy of the will, the reader is referred to Professor Paulsen's "Introduction to Philosophy," pp. 111–122.[7]

[6] "Interest as Related to Will," pp. 237–241, Second Supplement to First Herbart Year Book.
[7] Henry Holt & Co., New York, 1895.

74. Involuntary [spontaneous] attention is subdivided into primitive and apperceiving. The latter especially is of the greatest importance in teaching, but it rests on the former, the conditions of which must constantly be taken into account.

Apperception, or assimilation, takes place through the reproduction of previously acquired ideas and their union with the new element, the most energetic apperception, although not necessarily the best, being effected by the ideas rising spontaneously. This topic will be treated more fully below (77). Here it suffices to say that the apperceiving attention obviously presupposes the primitive attention; otherwise apperceiving ideas would never have been formed. [64]

The psychological and educational importance of the idea of apperception, or the assimilation of knowledge, has been much emphasized in recent years. For a psychological interpretation of the theory, the reader is referred to Wundt's "Human and Animal Psychology,"[8] pp. 235–251. The educational significance of the doctrine has been well brought out by Dr. Karl Lange, in his able monograph on "Apperception."[9] The subject has been more popularly treated in Dr. McMurray's "General Method,"[10] and in the writer's "Essentials of Method"[11]; also in a number of other works.

[8] New York, Macmillan & Co., 1894.
[9] Boston, D. C. Heath & Co., 1894.
[10] Bloomington, Ill., Public School Pub. Co., 1894.
[11] Boston, D. C. Heath & Co., 1893.

75. The primitive or original attention depends primarily on the strength of the sense-impression. Bright colors and loud speaking are more easily noticed than dark colors and low tones. It would be an error, however, to infer that the strongest sense-perceptions are at the same time the most adequate. These quickly blunt the receptivity, while weak sense-impressions may, in the course of time, engender ideation as energetic as that produced by originally obtrusive perceptions. For this reason, a middle course must be chosen from the first. For children, however, the direct sense-perception, even of a picture, if the object itself is not to be had, is altogether preferable to mere description. [65]

The presence in the minds of children of ideas—those supplied by instruction itself not excepted—contrary to the new representations to be mastered, acts as a hindrance or check. This very fact explains why clearness of apprehension is not gained where instruction piles up one thing upon another in too rapid succession. It is essential, therefore, in the case of beginners, so to single out each fact, to separate part from part, and to proceed step by step, that apprehension may be rendered easy for them.

A second hindrance to attention is of a more temporary character, but may nevertheless work much mischief. It makes a vast difference whether the ideas aroused are in a state of equilibrium or not. Long sentences in speech and in books are less easily apprehended than short ones. They excite a movement of many albeit connected thoughts, which do not at once subside into their proper places. Now, just as in reading and writing pauses must be observed, which is done more easily in short than in long sentences, instruction in general must have its chosen stopping-places and resting-points at which the child may tarry as long as may be necessary. Otherwise the accumulation of thoughts will become excessive, crowding in upon what follows, and this upon the next new element, until finally the pupils arrive at a state where they no longer hear anything. [66]

76. The four essentials then for primitive attention are: strength of sense-impression, economy of receptivity, avoidance of harmful antitheses to existing ideas, and delay until the aroused ideas have recovered their equilibrium. But in actual teaching it will be found difficult to do justice to all of these requirements simultaneously. Sameness of presentation should not be carried too far lest the child's receptivity be taxed too heavily. Monotony produces weariness. But a sudden change of subject frequently discloses the fact that the new is too remote from what has preceded, and that the old thoughts refuse to give way. If the change is delayed too long the lesson drags. Too little variety causes ennui. The pupils begin to think of something else, and with that their attention is gone completely.

The teacher should by all means study literary masterpieces for the purpose of learning from great authors how they escaped these difficulties. That he may strike the right chord in the earlier stages of instruction, he should turn particularly to simple popular writers, Homer, for example, whose story-telling is, on the other hand, too general and *naïve* for older pupils who have lost the power to put themselves back into a past period of culture. Yet it is safe to say in general, that classic writers seldom take sudden leaps and never stand still entirely. Their method of unfolding consists in a scarcely perceptible, at any rate an always easy, advance. They dwell, indeed, long on the same thought, but [67]

nevertheless achieve, little by little, most powerful contrasts. Poor writers, on the contrary, pile up the most glaring antitheses without other than the natural result—the antagonistic ideas expel each other and the mind is left empty. The same result threatens the teacher who aims at brilliancy of presentation.

77. The apperceiving, or assimilating, attention (74), though not the first in time, is yet observed very early. It shows itself when little children catch and repeat aloud single, familiar words of an otherwise unintelligible conversation between adults; when a little later they name, in their own way, the well-known objects that they come upon in their picture-books; when later still, while learning to read, they pick out from the book single names coinciding with their recollection; and so on in innumerable other instances. From within ideas are suddenly bursting forth to unite with whatever similar elements present themselves. Now this apperceiving activity must be exercised constantly in all instruction. For instruction is given in words only; the ideas constituting their meaning must be supplied by the hearer. But words are not meant to be understood merely; they are intended to elicit interest. And this requires [68] a higher grade and greater facility of apperception.

Universally popular poems do not produce their pleasing effect by teaching something new. They portray what is already known and utter what every one feels. Ideas already possessed are aroused, expanded, condensed, and consequently put in order and strengthened. On the other hand, when defects are apperceived, *e.g.*, misprints, grammatical blunders, faulty drawings, false notes, etc., the successive unfolding of the series of ideas is interrupted so that their interlacing cannot take place properly. Here we see how instruction must proceed and what it must avoid in order to secure interest.

NOTE.—The apperceiving attention is of so great importance in instruction that a word or two more will be in place. The highest stage of this kind of attention is indicated by the words—gaze, scrutinize, listen, handle. The idea of the examined object is already present in consciousness, as is likewise the idea of the class of sense-perceptions looked for. The psychic result turns on the ensuing sense-impressions, on their contrasts, combinations, and reproductions. These are able to induce the corresponding mental states unhindered, because disturbing foreign elements have already been removed and remain excluded. Passing from this highest grade to lower degrees of attention, we find that the idea of the object is not yet—at least not prominently—present, that this itself first needs to be reproduced and made more vivid. The question arises whether this can be accomplished directly or only indirectly. In the former case the idea must be in itself strong enough; in the second it must be sufficiently united with other ideas which it is possible to arouse directly. Moreover, the obstacles to reproduction must be such that [69] they can be overcome.

When the apperceiving attention is once under way, it should be utilized and not disturbed. The teaching must take the promised direction until it has satisfied expectation. The solutions must correspond clearly to the problems. Everything must be connected. The attention is disturbed by untimely pauses and the presence of extraneous matter. It is also disturbed by apperceptions that bring into light that which should remain in shadow. This is true of words and phrases too often repeated, of mannerisms of speech—of everything that gives prominence to the language at the expense of the subject-matter, even rhymes, verse-forms, and rhetorical adornment when used in the wrong place.

But that which is too simple must be avoided also. In this case the apperception is soon completed; it does not give enough to do. The fullest unit possible is to be sought.

A rule of vital importance is that, before setting his pupils at work, the teacher should take them into the field of ideas wherein their work is to be done. He can accomplish this at the beginning of a recitation hour by means of a brief outline view of the ground to be covered in the lesson or lecture.

78. Instruction is to supplement that which has been gained already by experience and by intercourse with others (36); these foundations must exist when instruction begins. If they are wanting, they must be firmly established first. Any deficiency here means a loss to instruction, because the pupils lack the thoughts which they need in order to interpret the words of the teacher.

In the same way, knowledge derived from earlier lessons must be extended and deepened by subsequent instruction. This presupposes such an organization of the whole work of instruction that that [70] which comes later shall always find present the earlier knowledge with which it is to be united.

79. Ordinarily, because their eyes are fixed solely on the facts to be learned, teachers concern themselves little with the ideas already possessed by the pupils. Consequently they make an effort in behalf of the necessary attention only when it is failing and progress is checked. Now they have recourse to voluntary attention (73), and to obtain this rely on inducements, or, more often, on reprimands and penalties. Indirect interest is thus substituted for direct interest, with the result that the resolution of the pupil to be attentive fails to effect energetic apprehension and realizes but little coherence. It wavers constantly, and often enough gives way to disgust.

In the most favorable case, if instruction is thorough, *i.e.*, scientific, a foundation of elementary knowledge is gradually laid sufficiently solid for later years to build on; in other words, out of the elementary knowledge an apperceiving mass is created in the mind of the pupil which will aid him in his future studies. There may be several of such masses; but each constitutes by itself its own kind of one-sided learning, and it is after all doubtful whether even here direct interest is implied. For there is small hope that this interest will be aroused in the youth when the years of boyhood have been devoted merely [71] to the mastering of preliminary knowledge. The prospects of future station and calling are opening before him and the examinations are at hand.

80. The fact should not be overlooked, however, that even the best method cannot secure an adequate degree of apperceiving attention (75–78) from every pupil; recourse must accordingly be had to the voluntary attention, *i.e.*, the pupil's resolution. But for the necessary measures the teacher must depend, not merely on rewards and punishments, but chiefly on habit and custom. Instruction unites at this point with government and training. In all cases where the pupil begins his work not entirely without compulsion, it is particularly important that he should soon become aware of his own progress. The several steps must be distinctly and suitably pointed out to him; they must at the same time be easy of execution and succeed each other slowly. The instruction should be given with accuracy, even strictness, seriousness, and patience.

81. The voluntary attention is most frequently demanded for memorizing, for which, apart from all else, the presence of interest is not always a perfectly favorable condition. This is true even of spontaneous interest, for the ideas that rise spontaneously have a movement of their own, which by deviating from the given sequence may lead to surreptitious substitutions. Like observation, intentional [72] memorizing presupposes a certain amount of self-control. At this point a question arises as to the proper place of learning by heart.

Committing to memory is very necessary; use is made of it in every department of knowledge. But memorizing should never be the first thing except when it is done without effort. For if the memorizing of new matter, which the pupil cannot as yet have associated incorrectly, costs him an effort, it is plain that the single presentations encounter some opposition or other by which they are repelled too quickly for their mutual association to take place. The teacher must in this case talk the subject over first, set the pupil to work upon it, make him more familiar with it, and must sometimes even wait for a more opportune moment. Where clearness in single perceptions and their association (67 *et seq.*) are still deficient, these must be attended to first of all. After the ideas have been strengthened in this way, memorizing will be accomplished more easily.

The assigned series should not be too long. Three foreign words are often more than enough. Many pupils have to be shown how to memorize. Left to themselves they will begin over and over again, then halt, and try in vain to go on. A fundamental rule is that the starting-point be shifted. If, for example, the name Methuselah is to be learned, the teacher would, perhaps, say successively: lah,—selah,—thuselah, [73] —Methuselah.

Some have to be warned against trying to get through quickly. We have to do here with a physical mechanism which requires time and whose operation the pupil himself as little as the teacher should endeavor to over-accelerate. Slow at first, then faster.

It is not always advisable to put a stop to all bodily movements. Many memorize by way of speaking aloud, others through copying, some through drawing. Reciting in concert also may prove feasible at times.

Incorrect associations are very much to be feared; they are tenacious. A great deal, to be sure, may be accomplished through severity; but when interest in the subject-matter is wholly lacking, the pupil begins by memorizing incorrectly, then ceases to memorize at all, and simply wastes time.

The absolute failure of some pupils in memory work may perhaps be partly owing to unknown physical peculiarities. Very often, however, the cause of the evil lies in the state of false tension into which such pupils put themselves while attempting with reluctance what they regard as an almost impossible task. A teacher's injudicious attitude during the first period, his remarks, for instance, about learning by heart as a thing of toil and trouble, may lead to this state of mind, for which perhaps awkward first steps in learning to read have prepared the way. It is foolish to look for means of lightening still more the [74] exercises of children that retain and recite with facility; but, on the other hand, great caution is necessary because there are also others who may be rendered unfit for memorizing by the first attempt of the teacher to make them recite, or even only to repeat after him, a certain series of words. In attempting, by such early tests, to find out whether children retain and reproduce easily, it is essential that the teacher put them in good humor, that he select his matter with this end in view, and that he go on only so long as they feel they can do what is asked of them. The results of his observations must determine the further mode of procedure.

82. However carefully the process of memorizing may have been performed, the question remains: How long will the memorized matter be retained? On this point teachers deceive themselves time and again, in spite of universally common experiences.

Now, in the first place, not everything that is learned by heart needs to be retained. Many an exercise serves its purpose when it prepares the way for the next, and renders further development possible. In this way a short poem is sometimes learned as a temporary means for an exercise in declamation; or chapters from Latin authors are committed to memory in order to speed the writing and speaking of Latin. In many cases it is sufficient for later years if the pupil knows how to look for literary helps, and [75] how to make use of them.

But if, secondly, that which has been memorized is to remain impressed on the memory for a long time, forever if possible, it is only a questionable expedient to reassign the same thing as often as it is

forgotten. The feeling of weary disgust may more than offset the possible gain. There is only one efficient method—practice; practice consisting in the constant application of that which is to be retained to that which actually interests the pupils, in other words, that which continually engages the ideas rising spontaneously.

Here we find the principle that governs the choice of material for successful memorizing. And as to the amount—so much as is needed for the immediate future; for excessive quantity promotes an early forgetting. Besides, in instruction, as in experience, there is a great deal that may not be accurately remembered, but nevertheless renders abundant service by stimulating the mind and qualifying it for further work.

CHAPTER V

The Main Kinds of Interest

83. Instruction is to be linked to the knowledge that experience provides, and to the ethical sentiments that arise from social intercourse (36). Empirical interest relates directly to experience; sympathetic interest to human association. Discursive reflection on the objects of experience involves the development of speculative interest, reflection on the wider relations of society that of social interest. With these we group, on the one hand æsthetic, on the other religious interest, both of which have their origin not so much in discursive thought as in a non-progressing contemplation of things and of human destiny.

The classification of interests into two groups, namely, (*a*) those which arise from knowledge, and (*b*) those which arise from association with others, and the subdivision of each of these into three groups, making six in all, is one not of necessity, but of convenience. The knowledge interests are, (*a*) empirical, (*b*) speculative, (*c*) æsthetic; the interests arising from association are, (*a*) sympathetic, (*b*) social, (*c*) religious. This classification is adopted without criticism by most Herbartian writers. That the classification is made simply for convenience may be seen from such considerations as the following:—

1. Strictly speaking, *all* interests arise from *experience*, the social no less than the speculative; [77] hence experience is not a basis for classification at all.

2. Æsthetic interests, resting upon contemplation, need not be put into a group with those that rest upon the perception of cause and effect, or other relations perceived by discursive reflection.

3. The same is true for those empirical interests that are supposed to rest upon immediate sense apprehension, such as the interest in color, shape, sound, taste, odor.

4. If perception, reasoning, and sensibility are made bases for the classification of interests, why should not the active volitional powers of the mind become a basis likewise? Some claim that pleasure and pain rest primarily upon the *motor* side of our activity, rather than upon the sensory. Our interest in *doing* is antecedent to our interest in knowing or feeling. This fact is fully recognized by all Herbartians in the theory of methods, though it finds no recognition in their classification of interests.

It must be granted, however, that Herbart's classification is convenient, even if not especially scientific.

The empirical interest is the mental eagerness aroused by direct appeal to the senses, as by novel shapes, colors, sounds, odors, and the like. Its first stage is wonder, admiration, fear, awe. The child that drops his picture-book to chase a butterfly abandons one empirical interest for a stronger one. This form of interest is usually transient; unless it develops into a new kind of interest, it is soon abandoned for some other attraction. A primary teacher may catch but cannot hold the attention of a child by sensuous devices leading to nothing beyond themselves.

The speculative interest is more permanent than the empirical. It rests primarily on the perception [78] of the relations of cause and effect; it seeks to know the reasons of things. On this account it is a higher form of apperception, or mental assimilation. The most fundamental idea in the speculative interest is that of purpose. We want to know the *purpose of things*, the function they are to perform, the end they are expected to reach. Thus a child has a key to the understanding of even so complicated a machine as a self-binder, or a printing press, provided he sees clearly the purpose of each. Until this is perceived the facts are an unintelligible jumble of particulars. A crude form of the speculative interest is seen very early in the child, when he demands a reason for everything. It always remains the mainspring of intellectual life; when it ceases to be a motive power to thinking, thought is dead.

The æsthetic interest rests upon the enjoyment of contemplation, when an *ideal*, sometimes distinct, sometimes vague, can be perceived through a *sense medium*. In the Greek statue of *Apollo Belvidere*, a divinity is represented in marble. In the painting, *Breaking Home Ties*, the feelings of a lad and his mother upon parting are portrayed upon canvas. In music the ideal is usually vague, in poetry it is clear and distinct. The æsthetic value of the latter is enhanced by good oral recitation, both because appeal is made to an additional sense, and because the ears of men were attuned to beautiful poetry long before the eye learned to apprehend it.

All of these interests, the empirical, the speculative, and the æsthetic, may be classed as *individual*, since they rest upon purely subjective grounds. They might belong to any Robinson Crusoe who became isolated from his fellows. But the remaining groups, the sympathetic, the social, and the religious, rest upon the idea of intercourse with others. They are, therefore, of supreme importance for civilized life. Without the sympathetic coöperation of men civilization would become [79] impossible. Mephistopheles in "Faust" defines himself as "the Spirit that ever denies."[12]

Consequently any man who becomes so absorbed in his individual concerns as to deny all social duties and renounce all social benefits becomes thereby a kind of civic devil. The cynics of old repudiated all social obligations, thus making themselves bitter civic devils, while the Cyrenaics, choosing self-indulgence, but denying likewise social duties, transformed themselves into sensualistic civic devils.

It is an imperative duty of the teacher, therefore, to arouse the social and civic interests of the children, since upon these as active forces the welfare and possibly the stability of society rest.

The school is the place, the studies and daily intercourse the means, whereby this class of interests may be aroused. Pupils brought up in isolation by private tutors are likely to become non-social in their disposition. Idiosyncrasies are fostered, there being little or no development of ideals of social coöperation. The kindergarten, however, when rightly conducted, is nearly always able to foster the social instincts so powerfully that even the lack of later education is not able to obliterate them. When this training is reinforced by the well-governed school, a solid foundation for civic character is likely to be laid. The studies most important for the fostering of social and civic interests are literature, history, civil government, and geography, though others have a more or less intimate relation to them.

[12] "Ich bin der Geist der stets verneint."

84. We cannot expect to see all of these interests unfold equally in every individual; but among a number of pupils we may confidently look for them all. The demand for many-sidedness will accordingly [80] be satisfied the better, the nearer the single individual likewise approaches a state of mental culture in which all these kinds of interest are active with equal energy.

85. As has already been suggested (37), these six kinds of interest arise from two sources to which historical and nature studies respectively correspond. With this the facts observed in classical high schools (*Gymnasia*) coincide: pupils usually lean toward one side or the other. It would be a serious blunder, however, to affirm, on this account, an antithesis between the historical and the natural science interest; or, worse still, to speak of a philological and a mathematical interest instead—as is, indeed, not infrequently done. Such confusion in ideas should not continue; it would lead to utterly erroneous views of the whole management of instruction. The easiest means to counteract the evil is a consideration of the multitude of one-sided tendencies that occur even within the six kinds of interest; we shall be able, at all events, to bring out still more clearly the manifold phases of interest that must be taken into account. For the possible cases of one-sidedness are differentiated far more minutely than could be shown by the discrimination of only six kinds of interest.

"Is the ideal education classical or scientific?" This question, which is still debated, really means, shall we cultivate chiefly the *social* or the *knowledge* interests. The historical, or culture, studies [81] belong preëminently on the one side, the natural sciences most largely on the other. Herbert Spencer in 1860 made a special plea for science studies in his monograph, "Education," claiming that such studies are of chief worth both for knowledge and training. At that time classical, or culture, studies had possession of almost every institution for higher education, so that Spencer's special plea was justified. At present, however, science, which has developed its own methods of instruction, holds an equal place with social studies in the colleges and universities. When we are asked which half of human interests we will choose, the knowledge or the social, our reply can only be: We will abandon neither, but choose both. Both are essential to human happiness; both are necessary for social and material advance.

86. Empirical interest becomes one-sided in its way when it seizes upon one kind of objects of experience to the neglect of the rest. When, for instance, a person wants to be a botanist exclusively, a mineralogist, a zoölogist; or when he likes languages only, perhaps only the ancient or only the modern, or of all these only one; or when as a traveller he wishes to see, like many so-called tourists, only the countries that everybody talks about, in order to have seen them too; or when, as a collector of curiosities, he confines himself to one or the other fancy; or when, in the capacity of historian, he cares only about the information bearing on one country, or one period, etc.

Speculative interest becomes one-sided by confining itself to logic or to mathematics, mathematics [82] perhaps only as treated by the old geometricians; or to metaphysics restricted possibly to one system; or to physics narrowed down perhaps to one hypothesis; or to pragmatic history.

Æsthetic interest in one case is concentrated exclusively on painting and sculpture; in another on poetry, perhaps only on lyric or dramatic poetry; in still another on music, or perhaps only on a certain species of music, etc.

Sympathetic interest is one-sided when a man is willing to live only with his social peers, or only with fellow-countrymen, or only with members of his own family; while a fellow-feeling for all others is wanting.

Social interest grows one-sided if one gives himself up wholly to one political party, and measures weal or woe only by party success or failure.

Religious interest becomes one-sided according to differences of creed and sect, to one of which allegiance is given, while those who hold a different view are regarded as unworthy of esteem.

Much of this one-sidedness is brought about in later life by one's vocation. But a man's vocation must not isolate him. Yet this would happen if such narrowness should make headway in youth.

87. A still more detailed analysis of the varieties of one-sidedness would be possible; it is not needed, however, for ascertaining the position of the above-mentioned high school studies among the subjects of [83] instruction calculated to stimulate interest. Languages, to begin with, form a part of the curriculum; but why among so many languages is the preference given to Latin and Greek? Obviously because of the literature and history opened through them. Literature with its poets and orators falls under æsthetic interest; history awakens sympathy with distinguished men and the weal and woe of society, indirectly contributing in either case even to religious interest. No better focus for so many different stimuli can be found. Even speculative interest is not slighted if inquiries into the grammatical structure of these languages are added. Moreover, the study of history does not stop with the ancients; the knowledge of literature also is widened that the various interests may be developed still more completely. History, if taught pragmatically, assists speculative interest from another direction. In this respect, however, mathematics has precedence; only, in order to effect a sure entrance and abiding results, it must unite with the natural sciences, which appeal at once to the empirical and the speculative interest.

If now these studies coöperate properly, a great deal will be done, in conjunction with religious instruction, toward turning the youthful mind in the directions that answer to a many-sided interest. But if, on the contrary, the languages and mathematics were allowed to fall apart, if the connecting links were removed, and every pupil were permitted to choose one or the other branch of study, according to [84] his preferences, mere bald one-sidedness of the kind sufficiently characterized above would be the outcome.

88. It is admitted now that not only classical but also public high schools in general should provide for this same many-sided culture, that is, should take account of the same main classes of interests. The only difference lies in the fact that for the pupils of the classical high schools the practice of a vocation is not so near at hand; whereas, in the public high schools, there is a certain preponderance of modern literature and history, together with inability to equip completely with the helps to a manifold mental activity those who purpose to go on. Much the same is true of all the lower schools whose aim is to educate. It is different with trade schools and polytechnic institutes; in short, with those schools which presuppose a completed education—completed to the extent permitted by circumstances.

If, then, the programme of a public high school is of the right sort, it will show as well as the curriculum of a classical preparatory school does, that an attempt is being made to guard against such one-sidedness as would be the outcome if one of the six main classes of interest were slighted.

How one-sidedness under an elective system may be avoided is discussed in a previous section (65).

[85]

89. But no instruction is able to prevent the special varieties of one-sidedness that may develop within the limits of each main group. When observation, reflection, the sense of beauty, sympathy, public spirit, and religious aspiration have once been awakened, although perhaps only within a small range of objects, the farther extension over a greater number and variety of objects must be left largely to the individual and to opportunity. To pupils of talent, above all of genius, instruction may give the necessary outlook by enabling them to see what talent and genius achieve elsewhere; but their own distinguishing traits they must themselves answer for and retain.

Moreover, the above-mentioned forms of one-sidedness are not all equally detrimental, because they do not assert themselves with the same degree of exclusiveness. Each may, indeed, lead to self-conceit; but this tendency does not attach to all in the same measure.

Holding to the idea of many-sided interest, what justification is there for elective studies? To this, the reply must be made that in elementary and in a part of secondary education the principle of indiscriminate election must be rejected. The only rational election in secondary education, as already explained (65), is election among the various members of a group of similar studies. In this way the destination and ability of the pupil may be regarded, without sacrificing the needed many-sidedness. The case is different in higher education, however, for election and many-sidedness are here quite reconcilable. Higher education is the *comparative study* of a few branches. Thus, for [86] example, on the social side, the whole civilization of Greece is focussed now in her political history, now in her art, now in her language, now in her education, now in her philosophy. The student who studies any one of these subjects thoroughly gets a comparative view of the whole of Greek life. It is not necessary for him to study them all. The same is true of each important country or epoch. Every culture study is an eminence from which the whole is seen.

Likewise in science, to study a typical form of life exhaustively by the comparative method gives one an insight into all related life, as well as many glimpses into physical and chemical science. In a large sense, therefore, we study all nature, whether we elect biology, physics, or chemistry, provided we use the comparative method of higher education. In the college or university, therefore, a large amount of election is justifiable. That would be a one-sided course which neglected entirely all social or all science studies.

90. Under favorable circumstances of time and opportunity, such as obtain in classical and other high schools, effort, as we know, is not restricted to the initial stimulation. Hence the question arises: In what sequence shall the aroused interests be further developed? Of instruction-material there is no lack; we must select and arrange, guided in the main by what was said on the conditions of many-sidedness and of interest. Thus to recapitulate: there must be progress from the simple to the more complex, and solicitous endeavor to make spontaneous interest possible. But in applying these principles we must not [87] shut our eyes to the particular requirements and the difficulties in our way.

91. The empirical material of languages, history, geography, etc., calls for specific complications and series of ideas, together with the network of their interrelations. As to language, even words are complex wholes, made up of stems plus whatever elements enter into inflection and derivation, and further resolvable into single speech sounds. History has its time-series, geography its network of spatial relations. The psychological laws of reproduction determine the processes of memorizing and of retaining.

The mother-tongue serves as a medium through which foreign languages become intelligible, but at the same time offers resistance to the foreign sounds and constructions. Furthermore, it takes a young boy a long time to get familiar with the thought that far away in time and in space there have been and are human beings who spoke and speak languages other than his own, and about whom he need concern himself at all. Teachers, moreover, very commonly proceed on the fallacious and very mischievous assumption that, because their mode of expression is clear, it will, of course, be understood by the pupil. The resources of child-language increase but slowly. Such impediments as these must be removed. Geography extends the knowledge of spatial distances, but the inhabitant of a flat country lacks the sense-images of mountain ranges; one who grows up in a valley is without the sense-perception of a [88] plain; the majority of pupils lack the concrete idea of an ocean. That the earth is a sphere revolving about its own axis and about the sun, for a long time sounds to children more like a fairy-tale than like a statement of fact; and even educated young men sometimes hesitate to accept the theory of the planetary system because they are unable to comprehend how it is possible to know such things. Difficulties of this kind must be met and not massed together unnecessarily.—For history, old ruins might serve as starting-points if only the material they furnish do not prove altogether too scanty and is not too recent, when the object is to take pupils at an early age into the times and places of Jewish, Greek, and Roman antiquity. Here the only satisfactory helps are stories that excite a very lively interest; these establish points of support for the realization in thought of a time long vanished. There is still lacking, however, a correct estimate of chronological distances down to our own time. This is attained only very gradually through the insertion of intermediate data.

92. Material for the exercise of reflection, and so for the excitation of speculative interest, is supplied by whatever in nature, in human affairs, in the structure of languages, and in religion, permits us to discover, or even merely to surmise, a connection according to general laws. But everywhere—the most [89] common school studies, such as elementary arithmetic and grammar not excepted—the pupil encounters concepts, judgments, and inferences. But he clings to the particular, to the familiar, to the sensuous. The abstract is foreign to his mind; even the geometrical figures traced for the eye are to him particular things whose general significance he finds it hard to grasp. The general is to displace individual peculiarities in his thoughts; but in his habitual thought-series the well-known concrete crowds to the front. Of the general there remains in his mind almost nothing beyond the words used to designate it. Called upon to draw an inference, he loses one premise while pondering the next; the teacher is obliged to go back to the beginning again and again, to give examples, and from them lead up to generalizations; to separate and to connect concepts, and by degrees to bring the propositions closer to one another. When the middle terms and extremes have been successfully fused in the premises, they are still only loosely connected at first. The same propositions are repeatedly forgotten, and yet must not be reviewed too many times for fear of killing instead of quickening interest.

Since forgetting cannot be prevented, it is wise to abandon for a time a large portion of that into which pupils have gained an insight, but later on to go back to the essentials by other paths. The first preliminary exercises serve their purpose if the particulars are made to reveal the general before [90] generalizations become the material for technical propositions, and before propositions are combined into inference-series. The processes of association (69) must not be omitted between the first pointing out of common features and the systematic teaching of their rational connections.

93. Æsthetic contemplation may, indeed, receive its impulse from many interests other than the æsthetic, as also from aroused emotions. Art itself, however, is possible only in a state of mind

sufficiently tranquil to permit an accurate and coherent apprehension of the simultaneously beautiful, and to experience the mental activity corresponding to the successively beautiful. Æsthetic objects adapted to the pupil's power of appreciation must be provided; but the teacher should refrain from forcing contemplation. He may, of course, repress unseemly manifestations, above all the damaging of objects possessing æsthetic value and entitled to respectful treatment. Frequently imitative attempts—although very crude at first—in drawing, singing, reading aloud, and, at a later period, in translating, are indications of æsthetic attention. Such efforts may be encouraged, but should not be praised. The genuine warmth of emotion, which in æsthetic culture kindles of itself, is easily vitiated by intensifying artifices. Excess of quantity is injurious. Works of art appealing to a higher state of culture must not be [91] brought down to a lower plane. Art judgments and criticisms should not be obtruded.

94. The sympathetic interests depend still more on social intercourse and family life than the foregoing classes of interests do on experience in the world of sense. If the social environment changes frequently, children cannot become deeply attached anywhere. The mere change of teachers and of schools is fraught with harm. Pupils make comparisons in their own way; authority that is not permanent has little weight with them, whereas the impulse to throw off restraint gains in strength. Instruction is powerless to obviate such evils, especially since instruction itself must often change its form, thereby giving the impression of a real difference in teachers. This fact makes it all the more necessary that the instruction in history impart to pupils the glow of sympathy due to historical characters and events. For this reason—a reason of momentous significance to the whole process of education—history should not be made to present to pupils the appearance of a chronological skeleton. This rule should be observed with special care during the earlier lessons in history, since on these depends largely what sort of impression the whole subject will produce at a future time.

Of religious instruction, needless to say, we demand that it shall bring home to pupils the dependent condition of man, and we confidently expect that it will not leave their hearts cold. But historical [92] instruction must coöperate with religious instruction, otherwise the truths of religion stand isolated, and there is ground for fearing that they will fail to enter as potent factors into the teaching and learning of the remaining subjects.

[93]

CHAPTER VI

The Material of Instruction from Different Points of View

95. Differences in point of view give rise to conflicting opinions concerning not only the treatment, but also the choice of subject-matter for instruction. If, now, first one opinion then another wins predominance over the rest, the harmony of the purposes underlying both learning and teaching is wanting. Not only that, but the pupils suffer also directly through the lack of consistency where work is begun on one plan and continued on another.

96. The teacher in charge of a given branch of study only too often lays out his work without taking account of pedagogical considerations. His specialty, he thinks, suffices to suggest a plan; the successive steps in its organized content will, of course, be the proper sequence for instruction to follow. In teaching a language, he insists that pupils must master declensions and conjunctions in order that he may read an author with them later. He expects them to understand ordinary prose before he passes on to elucidate the finished style of a poet, etc. In mathematics, he demands that pupils bring to the subject [94] perfect facility in common arithmetic; at a more advanced stage they must be able to handle logarithms with ease before formulæ requiring their use are reached, etc. In history, the first thing for him to do is to erect a solid chronological framework to hold the historical facts to be inserted afterward. For ancient history, he presupposes a knowledge of ancient geography, etc. This same view which derives the principle determining the sequence of studies from the instruction-material itself, as though it had been unconditionally and finally settled that such and such things *must* be taught, asserts itself on a larger scale in requirements for admission to higher grades or schools. Children are to be able to read, write, and cipher well before being allowed to enter the grammar school; promotions to higher grades are to take place only when the goal set for the grade immediately preceding has been reached. The good pupil, accordingly, is one who fits into and willingly submits to these arrangements. The natural consequence of all this is, that little heed is paid to the condition of attention, namely, the gradual progress of interest.

97. But still another consequence ensues, occasioning a different point of view. Pupils are commiserated on the ground that they are overburdened. All sorts of doubts spring up as to the wisdom of teaching the branches causing the trouble. Their future utility is called in question. A host of instances [95] is adduced of adults neglecting and forgetting—forgetting without appreciable loss—that which it cost them so much toil to learn. Of course, examples showing the opposite to be true may also be cited, but that does not settle the question. It cannot be denied that there are many, even among the educated, who aspire to nothing higher than freedom from care by means of a lucrative calling, or a life of social enjoyment, and who, accordingly, estimate the value of their knowledge by this standard. Such a state of things is not mended by a kind of instruction that awakens little interest, and that in after years constitutes the dark side of reminiscences connected with early youth.

98. What is urged in reply is, generally speaking, true: youth must be kept busy; we cannot let children grow up wild. And their occupation has to be serious and severe, for government (45–55) must not be weak. But now, more than ever, doubt fastens on the choice of studies. Might not more useful things be offered for employment?

If, by way of rejoinder, the ancient languages are commended as being preëminently suited to give pupils diversity of work, this fact is accounted for by the faulty methods pursued in teaching the other subjects. With the proper method the same many-sided activity would be called forth. For the modern languages especially, the claim is made that they, too, are language studies involving reading, writing, [96] translating, and training in the forms of thought. To this argument the unfortunate answer should not be returned, that the classical high schools must retain their Latin and Greek because they are educating future officials to whom the ancient languages are just as useful, nay, indispensable, as the modern languages to other classes. For, if the classical studies have once been degraded to the level of the useful and necessary, the door is thrown open to those who go a step farther still and demand to know of what use Hebrew is to the country parson, and Greek to the practising jurist or physician.

99. Controversies like these have often been conducted as if the *humaniora* or humanistic studies were radically opposed to the *realia* and could not admit them to partnership. In reality, the latter are at least as much a legitimate part of a complete education as the former. The whole matter has been made worse by the practice of some of the older generation of teachers who, in order to make the prescribed studies more palatable, descended to all kinds of amusement and play, instead of laying stress on abiding and growing interest. A view that regards the end as a necessary evil to be rendered endurable by means of sweetmeats, implies an utter confusion of ideas; and if pupils are not given serious tasks to perform, they will not find out what they are able to do.

We must, however, note in this connection that there are legitimate occasions even for the sweetening [97] of study, just as in medicine there is a place for palliatives, notwithstanding the firm conviction of the physician that remedies promising a radical cure deserve the preference. Harmful and reprehensible as

habitual playing with a subject is when it usurps the place of serious and thorough instruction, in cases where a task is not difficult, but seems so to the pupil, it often becomes necessary to start him by a dexterous, cheerful, almost playlike presentation of that which he is to imitate. Superfluous prolixity and clumsiness, through the ennui alone that they produce, cause failure in the easiest things. All this applies especially to the teaching of younger children and to the first lessons in a new subject, *e.g.*, learning to read Greek, the beginning of algebra, etc.

100. If, among the conflicting opinions referred to, there is any vital point of controversy, it lies in the *a priori* assumption that certain subjects must be taught (96). Such an assumption educative instruction cannot allow to be severed from the end aimed at: the intellectual self-activity of the pupil. This, and not mere knowledge, any more than utility, determines the point of view with regard to the instruction-material. Experience and social intercourse are the primary sources of the pupil's ideas. It is with reference to these two factors that we estimate strength or weakness in the ideas, and decide what [98] instruction may accomplish with comparative ease or difficulty, at an earlier or at a later period. Good child literature turns to these sources even while children are only just learning to read, and gradually enlarges their range of thoughts. Not until this has been done can the question of instruction in one or the other department of knowledge claim consideration.

The term *educative instruction* frequently occurs. It means, primarily, instruction that has, in the broad sense, an ethical bearing, or an influence upon character. It is based on the idea that, not school discipline alone, but also school instruction in the common branches should be of service to the child in moral and especially in social growth. The studies help to reveal to him his place and function in the world, they form his disposition toward men and things, they give him insight into ethical relations. Instruction that contains this element of moral training is therefore called *educative instruction* (*Erziehender Unterricht*).

101. The *realia*—natural history, geography, history—possess this one unquestionable advantage, viz., easy association with experience and intercourse. Partially, at least, the pupil's spontaneous ideas (71) may go out toward them. Properly used, collections of plants, picture-books, maps, will contribute their share. In history, the fondness of youth for stories is utilized. The fact that these stories are partly taken from old books written in foreign languages, and that these languages were once actually spoken, has often to be mentioned in passing, before the study of these languages themselves is taken up, nay, even [99] after they have been begun.

It is useless to undertake a demonstration of the utility of the *realia*. The young do not act for the sake of the more remote ends. Pupils work when they feel they can do something; and this consciousness of power to do must be created.

The remark that it is useless to undertake to demonstrate to the young the ultimate utility of natural science studies leads naturally to a distinction between interest in the studies as ultimate ends and as immediate ends. It is suggested in this paragraph that pupils are interested in showing their capacity to accomplish results. It is very evident that one of the teacher's chief anxieties must be to awaken an interest in the studies as ends, not perhaps in their final utility in life, but as fields in which useful work can be done even in the immediate present. The chief category by which to measure the pupil's interest in the various activities of the schoolroom is the quality of work that he can be taught to accomplish. One need not go far to learn that children like those studies best in which they can do the best work. This is true in several respects. They are interested in the artistic perfection of what they can accomplish, as in drawing, painting, writing, the arrangement of arithmetical problems, so that the page presents a neat appearance, and so that all the processes are plainly revealed to the eye. They are interested in reading when they can call the words with facility, with neatness, without stumbling, mispronouncing or miscalling—when the tones of the voice are agreeable. The quality of the work, however, which appeals perhaps most powerfully to the children, [100] is that of intellectual comprehension. In the reading class it is a constant delight to discover the finer shades of meaning, to express them with the voice, to detect in others any deviation from the true thought. Reading in English is particularly susceptible to this kind of treatment. For the English language being largely devoid of inflections does not show through the form of the words the finer distinctions of thought, but the mind must perceive these from a text largely devoid of grammatical inflections. It is quite possible, therefore, to read in such a manner as to miss all but the most salient points of the matter presented. There is in reading an intensive and an extensive magnitude. Our older method of teaching reading was to devote the time to a few extracts from literary masterpieces, which were exhausted by minute study. The more recent tendency in elementary education is to neglect this side of reading and to devote the time to the cursory reading, not of extracts, but of whole masterpieces of literature. The danger of such a proceeding is that the finer qualities of reading will be neglected for the sake of quantitative mastery of a large amount of reading matter. A middle course between the two would doubtless bring better results. It would, on the one hand, secure an interest that attaches to masterpieces as wholes, and, on the other, the literary appreciation that comes from minute analysis both in thought and expression of the finer distinctions

of thought. In mathematical studies, the æsthetic interest of form, or the active interest of actual performance of problems, is not the sole or even the chief interest that should be appealed to. But the pupil should feel that he is making a progressive mastery of the principles of number. It is a pleasure to apply a rule, to solve a problem neatly; but it is a still greater pleasure to comprehend [101] thoroughly the meaning of the rule, to grasp and to feel its universality, so that although it is not worth while, as Herbart suggests, to urge the ultimate function of mathematics in the life of the world, it is quite worth while to set up those immediate ends of interest such as appear in the activity of solving problems, in the æsthetic appearance of the work upon paper or board or slate, and in the comprehension of mathematical principles. These ends are near at hand; they can be made to appeal to the pupil through the quality of the work that the teacher demands of him. The same is true in the natural sciences. Even though the ultimate function of biology is an idea too remote or too complex for the child to grasp with enthusiasm, the immediate mastery of a principle in physics, or the discovery of a law of plant life, or of a fact in chemistry, may be an end in which the pupil's most intense interest can be excited.

102. Geometry has other advantages of association, advantages we have begun only recently to turn to account in earnest. Figures made of wood or pasteboard, drawings, pegs, bars, flexible wires, strings, the use of the ruler, of compasses, of the square, counted coins arranged in long or short, in parallel or diverging series,—all these may be offered to the eye *ad libitum* and connected with other concrete objects. They may be made the basis of systematic employment and exercises, and this will be done more and more when the fact is once grasped that concrete ideas possessing the *proper degree of strength* constitute the surest foundation of a branch of instruction whose success depends on the manner in [102] which the pupil forms in his mind the ideas of spatial relations. This is not grasped, of course, by those who regard space once for all as a form of sense-perception common to all minds alike. A careful study of the data of experience will convince the practical educator that the opposite is true; for in this respect individual differences are very marked. Pupils rarely hit upon geometrical constructions unaided; the aptitude for drawing, that is, for imitating the objects seen, is met with more often.

It is easy by abstraction to form arithmetical concepts out of the apprehension of geometrical relations. To do so should not be regarded as superfluous, not even when the pupil has already fully entered upon his work in arithmetic.

103. To Germans the two ancient classical languages do not offer the advantages of easy transition. On the other hand, the study of Latin, even if only moderately advanced, prepares the soil for the most indispensable modern foreign languages. Herein lies an argument against beginning with French, as was often done formerly. The linking of Latin to French will, moreover, hardly win the approval of students of languages, since, not to mention other reasons, Gallicisms are a source of no little danger to Latinity.

The ancient languages require long-continued labor. This fact alone renders it advisable to begin them early. The strangeness of Latin for Germans should not lead to the conclusion that the study of Latin [103] should be commenced late, but rather that during the earlier years of boyhood it should be carried on slowly. The sounds of foreign languages must be heard early, in order that the strangeness may wear off. Single Latin words will be easily mastered even by a child. These may soon be followed by short sentences consisting of two or three words. No matter if they are forgotten again for a time. That which is said to be forgotten is not on that account lost. The real difficulty lies in the multitude of strange elements that accumulate in relatively long sentences; it lies also in the many ways of connecting subordinate clauses, in the qualifying insertions, in the order of words, and in the structure of the period. Furthermore, we must not overlook the fact that children are very slow to acquire the use of dependent clauses, even in German; their speech for a long time consists merely of a stringing together of the simplest sentences. The attempt to advance them more rapidly in the syntactical forms of Latin than is possible in their mother-tongue is a waste of time; and, besides, their inclination to study is put to a very severe test.

Perhaps the most serious defect of secondary education in the United States is its brevity. Languages are not begun until the pupil is well on to fifteen years old. A reform most urgently needed in this country is the extension of high school influence to the two grades of the grammar school lying immediately below the high school. This would enable pupils to begin foreign languages [104] at about the age of twelve, or two years later than they are now begun in Germany.

104. The foregoing remarks show plainly enough that in educative instruction some subjects will be found a comparatively easy and sure means of awakening intellectual activity, while others involve a more strenuous effort, which, under certain circumstances, may end in failure. The concrete studies are nearest to the pupil; mathematics requires some apparatus to render it tangible and vivid; to get pupils started properly in modern languages can be but a slow process. But this difference is, after all, not fundamental enough, nor does it affect the whole course of instruction sufficiently, to constitute a serious pedagogical objection to the study of foreign languages, so long as there is time to teach them. Their fruits mature later.

[105]

CHAPTER VII
The Process of Instruction

105. Whether or not instruction will begin well and go on properly depends on a combination of three factors,—the teacher, the pupil, and the subject taught. Failure of the subject-matter to excite the pupil's interest is followed by evil consequences moving in a circle. The pupil seeks to avoid the task set for him; he remains silent or returns wrong answers; the teacher insists on getting a correct answer; the lesson is at a standstill; the pupil's dislike grows more intense. To conquer dislike and indolence, the teacher now refuses altogether the assistance he could give; as best he may, he compels the pupil to collect his thoughts, to work by himself, to prepare his lesson, to memorize, even to apply in written exercises what he knows but imperfectly, etc. The presentation proper has come to an end; at all events it has ceased to be consecutive. Now the right kind of an example is wanting, which the teacher should set—one of reading, thinking, writing, that implies complete absorption in the subject. And yet it is this example concretely illustrating how to take hold of the subject, how to present it, and how to associate it with related subjects, which effects the best results in good instruction. The teacher must set such an [106] example, the pupil must imitate it as well as he can; the teacher must render him active assistance.

106. Instruction is either synthetic or analytic. In general, the term *synthetic* may be applied wherever the teacher himself determines directly the sequence and grouping of the parts of the lesson; the term *analytic*, wherever the pupil's own thoughts are expressed first, and these thoughts, such as they chance to be, are then, with the teacher's help, analyzed, corrected, and supplemented. But there are many things under this head that need to be defined and discriminated more sharply. There are analyses of experience, of facts learned in school, and of opinions. There is one kind of synthesis which imitates experience; there is another kind which consists in constructing designedly a whole whose component parts have been presented one by one previously.

Here, again, many differences arise, owing to diversities inherent in the subject-matter.

107. Since instruction builds on the pupil's experience, we shall deal first with that form of synthesis which imitates, or copies experience. We may name it *purely presentative instruction*. The term *synthetic*, on the other hand, will henceforth be reserved for that form of instruction which reveals clearly the process of building up a whole out of parts presented singly beforehand.

The purely presentative method of instruction, although practicable only to a limited extent, is [107] nevertheless so effectual as to entitle it to separate treatment, so effectual that the teacher—and this is the main thing—will do well to train himself carefully in its use. Skill in this direction is the surest means of securing interest.

It is customary to demand that the pupil acquire facility in narration and description, but we ought not to forget that here above all the teacher must lead the way by setting a good example. To be sure, there is an abundance of printed narrative and description, but reading does not produce the effect that hearing does. *Viva vox docet.* As a rule, we cannot take for granted that a boy has even the skill and patience required for reading; and if perfect facility has been attained, the reading is done too rapidly. There is too much hurry to get to the end, or too much delay over the wrong passages, so that the connection is lost. At the most, we may let the pupils that read exceptionally well read aloud to the class. By far the surer means to the end in view is the oral presentation by the teacher. But in order that such presentation may produce its effect undisturbed, it needs to be perfectly free and untrammelled.

108. The first requisite for free oral presentation is a cultivated style of speaking. Many teachers need to be warned against the use of set phrases, against mere expletives, faulty enunciation, pauses filled in [108] with inarticulate sounds, against fragments of sentences, clumsy parentheses, etc.

In the second place, adaptation of the vocabulary employed, both to the subject-matter and to the intelligence of the pupils, and adjustment of phraseology to the pupil's stage of culture are essential.

Lastly, careful memorizing. At first this should be done almost verbatim. At all events, the teacher must prepare his lesson as though he had his pupils before him and were talking to them. Later on he must memorize at least the facts and turning-points of the subject to be presented, in order that he may not be compelled to consult books or look at notes. A few remarks on some particular points will be made farther on.

109. The effect of the teacher's narrative and description should be to make the pupil realize events and objects as vividly as if they were actually present to his eye and ear. The pupil must, therefore, have actually heard and seen much previously. This recalls to our minds the necessity, pointed out before, of first enlarging the young pupil's range of experience, when found too limited, through excursions and the exhibition of objects. Again, this form of instruction is adapted only to things that might be heard or seen. We must therefore avail ourselves of all the help pictures can give.

If the presentation has been a success, the reproduction by the pupils will show that they recall, not [109] merely the main facts, but largely even the teacher's language. They have retained more exactly than they have been asked to do. Besides, the teacher who narrates and describes well gains a strong hold on

the affections of his pupils; he will find them more obedient in matters pertaining to discipline.

> The foregoing paragraphs on presentative instruction may seem strange to the American teacher. We must remember, however, that they were written before the modern era of text-books, when, in point of fact, the teacher was practically the sole reliance for the facts that the children were to learn. It is the custom, even to the present, in the lower schools of Germany, to rely very largely upon the teacher for the information which the children are to acquire. In American schools, this method is not followed, for so enormous has been the development of text-book industry, that in every field of education the richest material is offered to the schools in the form of text-books. There is, however, still a legitimate field for purely presentative instruction in the earlier grades of the elementary school, especially in literature and in the beginnings of history. The most primitive method of instruction, as we see clearly in the earlier periods of Grecian education, was the narrative. The children of those days received their instruction in history, mythology, literature, geography, by listening to the tales of heroes and heroic deeds narrated by their parents, by wandering minstrels and rhapsodists. To this day, the teacher who can narrate biographical or literary matter in an attractive manner is sure to awaken intense interest in the children under her control. Perhaps one [110]
> facility which the modern teacher needs to acquire more than any other is the capacity of happy, vivacious, interesting narrative cast, at the same time, into simple yet excellent literary form. Such a teacher is an undoubted treasure in the primary school. There is occasion, moreover, in nearly all school study for the presentation of supplementary material in almost every school study. This is true especially in literature and history. It is also true in geography and in mathematics, as where, for instance, the teacher narrates the methods of the ancient Egyptians in the development of geometrical ideas, or those of the Greeks. If one is teaching a foreign language, one may always find happy opportunities for introducing bits of history, biography, or other illuminating material. In the sciences nothing is more interesting to children, more stimulative of renewed effort, than narratives concerning our great scientists, their desire for education, their struggle to attain knowledge, their misfortunes, and their triumphs. Every aspect of instruction may be supplemented and illumined by instruction given in the purely presentative form of narration.

110. While skilful presentation produces results akin to an extension of the pupil’s range of actual experience, analysis helps to make experience more instructive. For, left to itself, experience is not a teacher whose instruction is systematic. It does not obey the law of actual progress from the simple to the complex. Things and events crowd in upon the mind in masses; the result is often chaotic apprehension. Inasmuch, then, as experience presents aggregates before it gives the component [111]
particulars, it becomes the task of instruction to reverse this order and to adjust the facts of experience to the sequence demanded in teaching. Experience, it is true, associates its content; but if this earlier association is to have the share in the work of the school that it should have, that which has been experienced and that which has been learned must be made to harmonize. With this end in view we need to supplement experience. The facts it has furnished have to be made clearer and more definite than they are, and must be given an appropriate embodiment in language.

111. Let us consider first the earliest stage of analytic instruction. In order to understand the significance of this method of teaching, we must examine the nature of a child’s experience. Children are indeed in the habit of familiarizing themselves with their surroundings; but the strongest impressions predominate. Objects in motion have greater attraction for them than objects at rest. They tear up and destroy without troubling themselves much about the real connection between the parts of a whole. In spite of their many why’s and what for’s, they make use of every tool or utensil without regard for its purpose; they are satisfied if it serves the impulse of the moment. Their eyes are keen, but they rarely observe; the real character of things does not deter them from making a plaything of everything, as their fancy may direct, and from making one thing stand for every other thing. They receive total impressions [112]
of similar objects, but do not derive concepts; the abstract does not enter their minds of itself.

These and similar observations, however, apply by no means equally to every child. On the contrary, children differ greatly from one another; and, with the child’s individuality, his one-sidedness already begins.

112. It follows at once that the first thing to be done, in a school where many children are to be taught together, is to make the children more alike in their knowledge. To this end the store of experiences which they bring with them must be worked over. But the homogeneity of pupils, desirable as it is, is not the sole aim. We must take care also that the whole of instruction acts upon the particular stock of ideas of each pupil taken individually. We must seek those points of contact and departure to which attention has repeatedly been called above, and hence cannot leave the pupil’s mass of ideas in its original crude state. Thoughtful teachers have long since testified to the necessity of this requirement, which mere scholars in their zeal for learning fail again and again to appreciate.

Niemeyer, in his widely read work, opens his treatment of the particular laws of instruction with a chapter entitled: “The First Steps in awakening Attention and Reflection through Instruction, or Exercises in Thinking.” These exercises are no other than the elementary processes of analytic [113]

instruction. He says: “When the age, the health, and the strength of children have made instruction proper seem expedient, the first lesson should be one of the kind described in the chapter heading. Such exercises might be profitably continued in some form or other until the ninth or tenth year, and probably even later. The fact that it is not easy to describe them in a word very likely explains why we fail to find them in most programmes of private and public schools. That at last some attention is being given even in the common schools to this matter is one of the venerable Canon Rochow’s imperishable services to education.”

Pestalozzi, in his book for mothers, strikes out in the same direction. It will not serve the purpose, to be sure, to confine oneself, as he does, to a single object; still, the kind of exercises is indicated very definitely by him; indeed, more definitely, in some ways, than by Niemeyer.

113. The notions of pupils about surrounding objects, that is, notions in which the strongest impressions predominate (111), must be made to approach uniformity first. This is accomplished by uniform reproduction.

On this point Niemeyer says, “The teacher should begin by talking with his pupils about those objects which are, at the time, affecting their senses directly. Pointing to these objects, he asks the pupils to name them. He then passes on to things that are not present, but that the children have seen or felt [114] before. At the same time he exercises their powers of imagination and expression by making them enumerate what they are able to recall. Suitable material: everything in the schoolroom; the human body; everything pertaining to food, dress, comfort; things found in the fields, in the garden, in the yard; animals and plants so far as they are known by the children.”

114. The next step consists in pointing out the main facts of a given whole, the relative position of these parts, their connection, and their movability, if they can be moved without damage. To this are properly linked the simplest facts concerning the uses of things. At the same time children are taught how they must *not* use things, and how, instead of ruining them, they ought to look after them and use them with care. The abundance and number of things, their size, form, and weight, should likewise be referred to as early as this stage, and should furnish occasion for comparisons.

But something more is needed to give distinctness to the ideas of pupils, and to prepare the way for future abstract thinking. Beginning first with the objects, we derive from them the predicates by searching out the attributes; this done, we must in turn make the predicates our starting-point, and classify the objects under the heads thus obtained. This distinction has been made before by Pestalozzi; [115] it is one of fundamental importance in the preparation for generalization. While engaged in such work pupils will of themselves learn to compare, to discriminate, and, in some instances, to observe more accurately: erroneous notions due to an active imagination will be corrected by the appeal to experience as the source of knowledge.

115. Of what remains to be done, the most important task consists in securing a comprehensive view of a somewhat extended time-series, of which objects, together with their natural or artificial origins, are members. An elementary knowledge will thus be gained, especially of the simplest facts about manufacturing processes, and about intercourse among human beings, which facts will serve subsequently as the groundwork for instruction in natural history and geography. But for history also the way must be prepared by referring, although only in the most general way, to times when the utensils and tools of the present had not yet been invented, when the arts of to-day were as yet unknown, and when people were still without those materials that are now imported from foreign countries.

116. It does not follow, because no definite periods are set apart for the instruction described, that it is not being given at all. We may find it incorporated, to a large extent, with something else, particularly [116] with the interpretation of elementary reading matter, which forms part of the first work in the mother-tongue. Nevertheless, a subject that is taught only incidentally is always liable to suffer, if not from indifference, at least from inadequate treatment.

On the other hand, we cannot fail to recognize that the appointment of separate periods for analytic instruction may prove difficult, owing to the fact that the rate of progress depends so largely on the stock of ideas pupils bring with them, and on their readiness to utter what they think and feel. Besides, while Niemeyer expressly says, “Children taught in this manner know nothing of tedium,” he also hastens to add, “but it is easy to spoil them by too rapid changes of subject.” The same, or similar bad consequences, may result from other school exercises where the teacher himself supplies a profusion of instruction-material, and so relieves his pupils of the trouble of gathering such material from their own recollections. On the whole, therefore, it will be well enough to set apart but few hours, or weeks, for the first attempts; and these can be made a part of the lessons in the mother-tongue.

In private instruction the difficulty spoken of is not encountered. Besides, the ample opportunities afforded for observing the pupil’s store of ideas make it easy to devise a suitable plan for the earliest analytic teaching.

[117] In the foregoing paragraphs on analytical instruction, the question naturally arises, “Is such instruction to be regarded as an end in itself, or as a means for preparing the mind for more perfect

assimilation of the subject-matter to be presented from day to day in the various studies?" Since the time these paragraphs were written, not only Germany herself, but also America has gone through a varied experience with respect to what we call object teaching. It was at one time conceived that a specific hour should be set apart each day for instructing the children in the observation of objects. In other words, object lessons were a distinct part of the programme. It was supposed that in this way the children could be made conscious of the significance of their environment, and that it was highly desirable that such an end should be brought about. In Germany the same effort was undertaken under the name of *Anschauungsunterricht*, but since the multiplication of text-books, and the increased pressure upon the schools brought about through the introduction of new subjects of study, it has been found inadvisable to devote a specific period of the day to isolated analytic instruction upon objects. Such instruction, however, has by no means passed from the field of usefulness, even in our very best schools. The necessity of appealing powerfully to previous experience, in and out of the schoolroom, as a basis for understanding a matter presented in the daily lessons, is everywhere recognized. From being an end of school work, therefore, analytic instruction has passed to the realm of a useful means for arousing the mental activity of the children concerning the regular lessons of the schoolroom. It is, in modern terms, an apperceptive basis for all instruction.

117. At a later time analytic instruction reappears in other forms, those of review and the correction of [118] written exercises. The teacher has presented a body of facts; he has furnished the helps necessary for the solution of certain problems. What he has given, the pupils are expected to produce again in their review exercises and essays. Where necessary, their work is analyzed and corrected.

In conducting reviews a pedagogical blunder is apt to be made—a blunder that brings on the evils specified in a former paragraph (105); review is confounded with examination. The two are radically different. If the teacher could be sure of both perfect attention and full comprehension, he himself would go over the ground covered by his first talk once more for the purpose of assisting the memory; the pupils would not be called upon to take part. In this case, we should have neither analytic instruction nor anything resembling an examination. As a matter of fact, however, pupils are usually asked to reproduce what and as much as they remember. This is easily taken to mean that they should have retained everything, which, strictly speaking, is not expected even in an examination. The purpose of an examination is to ascertain the actual state of knowledge, whatever it may prove to be; reviews are conducted for the purpose of increasing and deepening knowledge. If an examination is followed by praise or censure, well and good; a review has nothing to do with either.

Since reviewing and drilling, which resembles the former, claim the larger portion of the time devoted [119] to school work, it will be worth while to examine the subject somewhat more closely.

118. Repetition of several ideas intensifies those ideas. It does more than that. If they are of opposed nature, the reciprocal arrest that ensues resists their fusion less during the reproduction than it did in the original act of apprehension. The fusion increases in completeness, and, besides, becomes more uniform, *i.e.*, the weaker ideas hold their own better alongside of the stronger. Again, if a series of successive ideas is repeated, the first members of the series of themselves tend to reproduce those that follow before the latter are repeated—a tendency gathering energy in proportion to the frequency of repetition. This fact underlies the increase in rapidity which comes with growing skill. Extraneous thoughts, however, very easily interrupt the psychical process of reproduction.

Let us assume that the teacher's presentation has been an adequate one and has lasted no longer than the capacity of the pupils permitted, only a few minutes, perhaps. He himself might now repeat; but asks his pupils to do so, lest their thoughts begin to wander from the subject in hand. He comes to their aid and repeats only when their own attempts have failed. But very often they have retained some things and forgotten others. In this case it becomes his business to reinforce the ideas striving to rise into consciousness, but without disturbing their movement. In other words, he should prompt neither more [120] nor less, should lend aid neither sooner nor later, than will serve to make the pupil's train of thought coincide as nearly as possible with that of the presentation properly given. Unless this is done, the reproduction fails to effect the required association and facility. The same ground is gone over again and again in vain; fatigue sets in, and the wrong association takes place—a matter for grave apprehension. If the pupils are in an unresponsive mood, the teacher must go slow, for the time being; if interest is lacking, he cannot incite the proper movement of ideas. If the teacher is not conducting the repetition with skill, the fragmentary answers of the pupils indicate well enough after a time that the desired current of thought has not been generated.

119. We have taken it for granted that the presentation was an adequate one—one that might serve as a model (105). Where this adjustment of means and ends extends, as it may, even to the language, the latter should be closely followed in the repetition, but without pedantic insistence on unimportant details. But very frequently the essential feature of the presentation is found in the sequence of thought. In that case expression will vary, and the teacher is satisfied at first if, in repeating, the pupils furnish evidence that they understand; he allows them to use their own words, though less appropriate. He [121]

must, still, however, look carefully after the given sequence, which the repetition is to reproduce with the greatest possible coherence.

120. The case is different when later on larger sections of a course of successful instruction are to be repeated. During all the earlier stage particular facts were moved far apart (68) for the sake of clearness; by means of conversation, or of incidental mention in other recitations, or through experience itself (110), provision was made also for association of various kinds. Now it becomes the business of repetition in the first place to gather together into a smaller compass what has been expanded; next it subserves the purpose of systematic arrangement, and lastly, is often of use for making the instruction more complete and for adding the difficult to the comparatively easy. Here the mode of presentation itself changes to meet the requirements of a more advanced grade of work. But repetition immediately after the presentation, or, perhaps, during the next hour, will, as a rule, remain necessary even at this higher stage.

121. Here, where compression and insertions are to modify the material of instruction, we need to inquire into the forms of connection peculiar to the objects, together with those essential for use, and to determine accordingly the series and web of ideas to be formed in the mind of the pupil. For such organization of ideas, repetition is, at all events, far better adapted than presentation, which can [122] traverse only one of several series at a time, and which passes into repetition the moment an effort is made to bring the other series forward also. In natural history, for example, various classifications occur, in history the ethnographic divisions are crossed by the synchronistic, while the history of culture demands yet another basis of association; in geography each noted city is to be a landmark, enabling the pupil to take his bearings in every direction, but cities on rivers suggest river basins and mountain ranges; in mathematics each theorem is to be kept ready for separate application, but it has also its special place in the chain of demonstrations; grammatical rules, too, should be available when called for, but it is very necessary at the same time that the pupil become perfectly at home in his grammar and know where to look for information.

The teacher who, by skilful repetition, does justice to these multiform associations, is not always the one who shows most skill in systematic presentation, and who knows best how to make prominent the main thoughts, and to link to them those that are subordinate.

122. The impulse to repeat must, as a rule, come from points with which pupils are familiar. It is further requisite that the teacher, in conducting the repetition, adapt himself to their train of thought; he must not adhere strictly to an inflexible plan. The necessary corrections require delay here and there; [123] the corrected statements often constitute new points from which to take bearings. At times the pupils themselves should feel free to indicate which topics it seems most necessary to repeat. By so doing they assume a certain responsibility as to the rest, and are made to realize all the more their obligation to make up deficiencies.

123. The correction of written work likewise falls under the head of analytic instruction, but the toil exceeds the profit if written work is demanded too early. While writing the pupil consolidates his ideas. Now if he does so incorrectly, the effect is mischievous, his mistakes cling to him. Moreover, the teacher has to be on his guard lest, while orally correcting and reading over the composition, he overestimate the pupil’s attention. When many slips occur, when a whole forest of mistakes is found to have sprung up, the pupil becomes indifferent to them all; they make humble, but they also dishearten. Such tasks should, therefore, be very brief, if the pupil is weak; nay, it is preferable to have none at all, as long as progress is being made more surely by a different kind of exercises.

The teacher who assigns home work with a view to saving labor in school miscalculates utterly; his work will soon have become all the harder.

To many it seems that the exercises they assign should be very easy, rather than short; and to make [124] them easy, outlines, turns of expression, everything, is indicated as definitely as possible. This is a delusion. If composition has any purpose, it consists in making the pupil try to see what he can do without the teacher. Now if the pupil actually gets started on the exercise, the teacher ought not to step in his way with all sorts of prescriptions. If the pupil fails to make headway, the attempt was premature. We must either wait or else shorten the task, no matter if it should shrink to no more than three lines. Three lines of the pupil’s own work are better than three pages written by direction. It may take years before the self-deception due to leading-string methods is superseded by a true estimate of the pupil’s actual power.

124. The case is quite different if, before writing, the pupil has been assisted orally in developing his thoughts. This kind of analysis is of special importance in later boyhood; but the teacher should see to it that the pupil gives free expression to his own opinion. If he does, a theme has been furnished for discussion during which the teacher will avoid harsh dissent in proportion to his eagerness to accomplish something with his pupil. To rebuke presuming boldness or impudence is a different matter, of course.

Self-chosen themes are preferable by far to those that are assigned, only they cannot be expected of the majority of pupils. But when they do turn up, the character of the choice alone, but still more the [125]

execution, will throw light on the opinions current among the pupils, and on the impressions which not only the school, but experience and society as well, have been constantly at work to produce. The writer's individuality reveals itself even more distinctly. Every teacher must be prepared to come upon these individual traits, however much he might prefer to have his pupils reflect himself. It would be futile if he attempted to correct their essays by interpolating his own view; he would not by that means make the latter their own. The mode of treatment can be corrected; but other opportunities will have to serve for the rectification of opinions—provided this can ever be undertaken successfully.

125. With regard to synthetic instruction, we assume at the outset that it will be supported during the whole course of training by the merely presentative and the analytic methods of teaching, wherever these are in place. Otherwise the ultimate result will always remain problematical, particularly the union of learning and life.

Synthetic instruction brings in much that is new and strange; and we must take advantage of the universal charm of novelty. It must coöperate with acquired habits of application, and with the interest peculiar to each subject taught. The affairs, not of Italy alone, but also those of Greece and the Orient, [126] have become a matter of everyday discussion. There has been a general diffusion of knowledge about the facts and laws of nature. Hence even younger children cannot help but pick up many things now that will tend to forestall the indifference or aversion with which school studies were regarded not longer than fifty years ago. They seemed to be something foreign to life. At present, it cannot prove difficult to turn curiosity in the direction of distant lands, and of past ages even, especially where collections of rare articles and antiquities are accessible. This stimulation would not persist long, however, in the face of the labor of learning, if there did not exist at the same time a widespread conviction of the necessity of study, a conviction reinforced by the legal requirements of schools, particularly of the gymnasia. Accordingly, families exert a good influence with respect to the industry of children; and with the right sort of government and training in school, willingness to learn is easily secured. Less easy is it to incite a genuinely scientific desire to know, one that will endure beyond examinations. This brings us back to many-sidedness of interest (83–94). If interest were not already the end of instruction, we should have to look upon it as the only means whereby the results of teaching can be given permanence.

Interest depends partly, it is true, on native capacity, which the school cannot create; but it depends [127] also on the subject-matter of instruction.

126. Synthetic instruction must offer subjects capable of arousing lasting and spontaneously radiating interest. That which affords only temporary pleasure or light entertainment is of too little consequence to determine the plan of operation. Nor can the choice of such studies be recommended as stand isolated, as do not lead to continued effort; for, other reasons aside, we are unable to decide beforehand to which of the main classes of interest (83–94) the individual pupil will especially incline. The first place belongs rather to those studies which appeal to the mind in a variety of ways and are capable of stimulating each pupil according to his individuality. For such subjects ample time must be allowed; they must be made the object of prolonged, diligent effort. We may then hope that they will take hold in some way, and we shall be in a position to know what kind of interest they have inspired in one pupil or another. Where, on the contrary, the end of the thread of work is soon reached, it remains questionable whether any effort at all will be produced, let alone a lasting impression.

127. The subject-matter having been chosen, the treatment must be adjusted to it in such a way as to bring it within reach of the pupils. For the exercises growing out of such treatment, the well-known rule holds in general: the easy before the difficult, or, more specifically, that which prepares the way before [128] that which cannot be firmly grasped without preliminary knowledge. To insist, however, on perfect mastery in this respect, is often equivalent to scaring away interest. Absolute proficiency in preliminary knowledge is a late achievement, nor is it attained without fatigue. The teacher has to be satisfied if the mastery acquired is such that what is lacking can, without serious delay, be added by him in practice. To make the road so level as to do away entirely with the necessity for occasional leaps (96), means to provide for the convenience of the teacher rather than for that of the pupils. The young love to climb and jump; they do not take kindly to an absolutely level path. But they are afraid in the dark. There must be light enough for them to see by; in other words, the subject must lie spread out before their eyes with such distinctness that each step is seen to be a step forward, which brings them perceptibly nearer to a distant goal.

128. With regard to the sequence of studies we need to distinguish first of all between preparatory knowledge and ability to do. As is well known, the latter, even when it has been fully attained, can be secured against loss only by long-continued practice. Hence the practice of the pupil's skill must go on constantly from the time when he first learns to apply what he knows. But merely preliminary knowledge, which produced fatigue before it was mastered, may be allowed to drop out of the memory. [129] Enough remains to make it easier to resume the subject at a later time (92, 103). Accordingly, not the preliminary knowledge just referred to, but the pupil's facility in doing, supplies the principle determining sequence. In the case of all essential elementary information—knowledge of rudiments of grammar, arithmetic, and geometry—it will be found expedient to begin with the simplest elements long before any practical application is made. In such first lessons individual facts only are presented. These

are made clear to the pupils (68, 69); here and there they are associated. Fatigue is avoided if possible. Even if the earliest attempts at memorizing should prove successful, it will be safer, instead of relying on this fact, to postpone the whole matter for a time. At a later period the same subject is resumed from the beginning without any demand on the teacher's part that some things should have been retained. This time, however, it will be possible to introduce a somewhat larger quantity of the instruction-material, and it will not be too early to make pupils perceive the connection between individual facts. If pupils experience difficulty in comprehending, we should be careful not to advance too rapidly; the greater the difficulty, the greater the need for caution. When the time comes for practical application, an earnest, diligent effort must be insisted on, but only for tasks of moderate length, and without exacting too much [130] by harsh means. Not every pupil can do everything. Sometimes a pupil will at a later period acquire the power he does not possess now, if only his chances for success have not been spoiled by earlier blindness on the part of his teacher.

129. Again, corresponding to each stage of instruction, there is a certain capacity for apperceiving attention (77) which deserves careful consideration. For we ought to avail ourselves of the comparatively easy in order to facilitate indirectly what would otherwise prove difficult and time-consuming.

We need to distinguish between insertion and continuation, and to connect this distinction with the division of ideas into spontaneous and induced (71). It is easier to fill in between familiar points than it is to continue, because the continued series is in close contact with the well known only at the starting-point. Easiest of all is insertion between free-rising ideas, between those ideas that occur to the pupil spontaneously, when he has been led into a certain field of consciousness. Hardest of all, and least certain of success, is the continuation of lessons that can be revived in consciousness only by a laborious effort of memory. Intermediate in difficulty are the insertion of new elements between induced or reproduced ideas, and continuation on the basis of free-rising, or spontaneous, ideas. That there may be [131] many gradations besides is of course self-evident.

The teacher who knows his pupils well will be able to make frequent use of these distinctions. Only a very general outline of their application can be given here.

The realia and mathematics can be connected more easily than other studies with the pupil's experience (101, 102). If the teacher has properly availed himself of this advantage, he may count on ideas that rise spontaneously, and his task will then consist in first establishing a few suitable cardinal points so that insertions may be made farther on.

Languages present more serious difficulties. It is true that progress in the vernacular is made through apperception by the pupil's earlier attainments in his mother-tongue, and through the insertion of the new into the old. But in foreign languages, which associate themselves with the mother-tongue only gradually, apperception and insertion cannot take place until after some knowledge of the language has been acquired. And this knowledge must grow considerably before we can reasonably look for spontaneous ideas. If now the reproduced ideas become encumbered with additional new ones, worst of all through mere continuation, we need not wonder if the result is useless chaos.

This explains, no doubt, why the attempts to teach the ancient languages *ex usu*, after the manner in [132] which the language of a foreign country is easily learned by residence in that country, had to end in failure. One who learns French in France has persons and actions before his eyes; he easily infers that which concerns him. Such apperception takes place undoubtedly by means of spontaneous ideas with which the foreign language becomes associated. Before long the language itself becomes an apperceiving factor and participates in the process of learning. For the ancient languages, on the contrary, a grammatical working basis is needed first, especially a knowledge of inflectional endings, pronouns, and particles. The blunder should not be made, to be sure, of beginning with a marshalling of the hosts of grammar, as though grammar itself needed no base of operations. Long practice of what is most necessary must precede. But the worst plan would be to start in with cursory reading; in other words, to continue without making sure of anything.

Even cursory reading, however, produces good results under one condition; namely, the existence of a lively interest in the contents.

130. When the thoughts of the reader hasten on in advance of the words and get hold of the general sense correctly, the required apperception is performed by means of spontaneous ideas together with the insertion of whatever was not inferred. But this presupposes a very favorable relation of the book to [133] the reader. Hence texts used in the teaching of a language must be chosen with very great care, and their contents explained.

Such work should not be slighted in favor of grammar; on the other hand, as much grammar must be given as is necessary. Some of the essentials will have to precede the reading; complementary facts will be presented in connection with the reading; other portions of the grammatical apparatus will be introduced at suitable halting-places. Written exercises belong elsewhere and stand in a different relation to grammar.

The interest in an author depends very largely on historical preparation; here we cannot fail to discover connection between philology and the so-called real studies.

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CHAPTER VIII

Remarks on the Plan of Instruction as a Whole

131. Where many diverse means are to coöperate for the attainment of one end, where many obstacles have to be overcome, where persons of higher, equal, and lower rank enter as factors requiring consideration, it is always a difficult matter to keep the end itself, the one fixed goal, steadily in view. In instruction the difficulty is increased by the fact that no one single teacher can impart the whole, and that consequently a number of teachers are obliged to depend on one another. But for this very reason, however much circumstances may vary the courses of study, the common end, namely, many-sided, well-balanced, well-connected interest, in the achievement of which the true development of mental powers consists, needs to be lifted into prominence as the one thing toward which all details of procedure should point.

132. No more time, we need to realize at the outset, should be demanded for instruction than is consistent with the proviso that the pupils retain their natural buoyancy of spirits. This must be insisted on, and not merely for the sake of health and physical vigor; a more direct argument for our present [135] purpose lies in the fact that all art and labor employed to keep the attention awake will be thwarted by the disinclination to study caused by sitting too long, and even by excessive mental application alone. Forced attention does not suffice for instruction, even though it may be had through disciplinary measures.

It is urgently necessary that every school have not only spacious schoolrooms, but also a playground; it is further necessary that each recitation be followed by an intermission, that after the first two periods permission be granted for exercise in the open air, and that the same permission be given after the third period if there is a fourth to follow.

Still more urgent is the demand that pupils shall not be deprived of their hours of needed recreation by an excessive amount of school work to be done at home. The teacher who loads pupils down with home tasks in order to dispense as much as possible with perhaps uncertain home supervision, substitutes a certain and general evil for a possible and partial one.

The neglect of such precautions has given rise in recent times to very bitter complaints, which will continue to be heard in future for similar reasons. Violent gymnastic exercise is not the means to put a stop to them. They threaten to lead to another extreme—such restrictions upon instruction as will make an inner unity of work impossible.

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> The subjects of fatigue and school hygiene have now grown to unexpected dimensions. Many periodicals are devoted to them, while the volume of literature bearing upon them has passed the stage where one person can be expected to command it all. In his “Bibliography of School Hygiene,” published in the “Proceedings of the National Educational Association for 1898,” Professor William H. Burnham enumerates four hundred and thirty-six standard works, articles, and journals dedicated to this cause. Many of these books, like those of Eulenberg and Bach, or Burgerstein and Netolitzky, comprise hundreds of pages, being based on extended experiment and research.

133. The time properly belonging to instruction must not be scattered. The deep-rooted practice of assigning two hours per week to one study and two hours to another, each lesson separated from the next by an interval of two or three days, is absurd, because incompatible with continuity of presentation. Of course, if the teacher can stand this arrangement, the pupils will have to endure it.

The subjects of instruction must be taken up in order that each may have its share of continuous time. To give a whole term to each is not always practicable; frequently shorter periods will have to suffice.

Again, one subject must not be split into several, according to the names of its branches. If, for example, we should set apart separate hours for Greek and Roman antiquities and again for mythology in addition to the time designated for the reading of ancient authors, separate hours for the systematic [137] survey of the branches of knowledge besides those reserved for German in the highest class of the gymnasium, separate hours for analytic geometry alongside of algebra, we should tear asunder where we ought to join together, and should dissipate the time at our disposal.

Saving time depends on methods better than these,—on proficiency in presenting a subject and skill in conducting recitations.

> Despite the protest here entered, German schools still adhere to the plan of presenting many subjects simultaneously, few hours per week being devoted to each. American schools are fairly free from the reproach, it being an exception to find standard subjects taught less than four or five times per week.

134. As boys grow older, they may derive a great deal of profit from reading and doing many things by themselves. Following their own choice, they develop in accordance with their individual traits. We

question, however, the wisdom of calling for reports on such outside pursuits. Pupils of ordinary capacity should not be made ambitious to imitate what they are not fitted for; extensive reading must not impair feeling and thinking. Breadth of learning is not identical with depth, and cannot make up for lack of depth. Instead of reading, some engage in the study of a fine art. Others are compelled at an early age to give lessons in order to support themselves. These learn while teaching.

The essentials of a coherent scheme of studies must not be dependent on outside reading; they must [138] be embraced in the plan of instruction itself.

135. From beginning to end the course of study must be arranged so as to provide for each of the main classes of interest. The empirical interest, to be sure, is called forth everywhere more easily than any of the other kinds. But religious instruction always fosters sympathetic interest; in this it must have the assistance of history and language study. Æsthetic culture at first depends on the work in the mother-tongue; it is desirable to have, in addition, instruction in singing, which at the same time promotes the health of the pupil. Later on, the ancient classics contribute their share of influence. Training in thinking is afforded by analytic, grammatical, and mathematical instruction; toward the end, also, by the study of history, which then becomes a search for causes and effects. Coöperation of this sort is to be sought everywhere; the authors to be studied must be selected with this end in view, and interpreted accordingly.

If there is a defect in Herbart's scheme of interests as a guide to the selection of the studies of the curriculum, it lies in the fact that the interests named are too exclusively applied to the pupil's individual life, and not enough to his life as a member of the social whole. There is an important sense in which even natural science, which may be expected to cultivate the speculative interests, is social; for science becomes truly significant only when it contributes to the service of men. The fact [139] that we now live in an industrial age, that life is preserved from disease in so large a measure, that the well-being of every community is advancing so rapidly, that universal education is now a fact rather than a dream, is due to the application of science to human welfare. Consequently, we are not restricted to a few humanitarian topics, like history and literature, for the development of our social interests. We find that every study has its sociological as well as its personal bearings. On the other hand, since all studies are both subjective and objective in the interests they arouse, it would be possible to awaken all the six classes of interest enumerated by teaching but a fraction of what we now consider needful in a good curriculum. It would seem, therefore, that the six classes of interest, at best, indicate what the *quality* of our teaching should be, not with sufficient accuracy *what* subjects should be taught. The latter is determined quite as much by social as by psychological needs.

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SECTION III

TRAINING

CHAPTER I

The Relation of Training to Government and to Instruction

136. Training looks toward the pupil's future. It is founded on hope, and shows itself, to begin with, in patience. It tempers government, the object of which might perhaps be realized more speedily by greater rigor. It moderates even instruction in case the latter puts too great a strain upon the pupil. But it also combines with government as well as instruction, and lightens their work.

Training consists primarily in a certain personal attitude, identical if possible with a kind way of treating pupils. This implies readiness on the part of the teacher to listen to the wishes and utterances of the pupil, who, in the midst of strangers, looks to his teacher (and to the family in charge of his education) for sympathy and support. But training becomes active where the pupil needs help, especially [141] help against his own weaknesses and faults, which might frustrate the hopes centred in him.

137. Training insists on becoming conduct; it encourages cheerfulness of disposition. In either case it remains within limits compatible with the occupations connected with government and instruction. The pupil is never to lose sight of the subject on which he is engaged; it would be bad if a desire to show off, or to amuse himself, should take possession of him and cause him to forget his work.

The wise teacher will be glad to make himself personally agreeable to his pupil as long as the conduct of the latter does not call for the opposite treatment. Supervision grows less irksome in consequence. Gentle words forestall, if anything can, all severer measures.

138. The teacher does not look upon the progress resulting from his teaching with feelings of indifference. His sympathy, even solicitude it may be, coöperates powerfully with the greater or lesser degree of interest awakened in the learner. Training, however, can never be made a substitute where there is no interest or, worse still, where indifference has become positive dislike.

139. In instruction the presence of interest cannot be simply assumed; just as little can good intentions on the pupil's part always be presupposed in training. One thing, however, must be taken for granted: the pupil must not have come to feel that the discipline is weak and the instruction poor. Any [142] defect in either direction must therefore be traced to its source and remedied. When pupils feel free to do as they please, when they think they have good cause to blame the teacher for their failure to make progress, his manner will be of no avail; and futile attempts only make matters worse.

140. In some cases training becomes blended with government to such an extent that it can scarcely be distinguished from the latter. As an example, we may mention the large educational institutions conducted on a military basis, where the individual pupil is carried along by the general system, rather than made the object of special care. In other cases, training and government remain farther apart than is necessary; an instance of this is when a strict father keeps himself at a distance, and leaves the business of training, within the prescribed rigid limits, to the tutor of his children. At all events, a distinction must be made between the two concepts, training and government, in order that the teacher may know what he is doing, and may notice what is perhaps lacking; we are justified in adding, in order that he may save himself useless effort. For training is not uniformly effectual, regardless of circumstances; the teacher needs to be watchful in this matter in order that the opportune moment for doing what can be done may not escape him.

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CHAPTER II

The Aim of Training

141. While the aim of instruction was rendered sufficiently determinate, as we saw above (17, 64, 65), by the injunction, be perfect, the aim of training, which supplements educative instruction, comprehends virtue as a whole. Now virtue is an ideal, the approximation toward which is denoted by the term *morality*. Again, since, generally speaking, a child passes on from mere capacity for culture to culture itself, from the indeterminate to fixedness of knowledge, the approximation to virtue consists likewise in development toward stability. Where conduct in moral affairs vacillates, there is a deficiency; where something morally hateful becomes confirmed, there is a defect. Excluding both, we define the aim of training properly as moral strength of character.

> "Training" means such will-training as conduces to the formation of good character; "government" means such training as conduces to good order. The first is for a permanent, the second for an immediate, purpose. In government we can appeal both to a positive and a negative means. The positive means is interest in a study and the affairs of the schoolroom; the negative means is [144] inhibition of disturbing impulses. As Professor James, in his "Talks on Psychology,"[13] points out, this inhibition may be of two sorts,—that of forcible suppression, and that of substitution. A teacher who uses negative means of inhibiting mischief or inattention, employs command or punishment. This method, though sometimes seemingly unavoidable, often results in mental strain, if not permanent alienation between teacher and pupil. The method of substitution attempts to secure inhibition of the undesirable state of mind by giving rise to a set of favorable ideas strong enough to displace it. "If, without saying anything about the street disturbances," which may be distracting the attention of your pupils, "you open a counter attraction by starting some very interesting talk or demonstration yourself, they will altogether forget the distracting incident, and, without any effort, follow you along." Training, however, has a more difficult task. It must succeed in implanting what may be called regulative principles in the mind. It must furthermore succeed in establishing habits of conduct that will enable the pupil to become self-governing. That is, we must establish in him habits of feeling and action that will enable him to substitute the higher for the lower good, or, at least, instantly to inhibit the temptation to evil. This is a task not for a day or a year, but for the whole school period.

[13] James, "Talks on Psychology," p. 193, Henry Holt & Co., New York, 1899.

142. In succeeding chapters character and moral conduct will each have to be differentiated more minutely. For our present purpose we need only to remind ourselves that the determinateness of the will, which is called character, depends not only on willing, but also on not willing. The latter is either a [145] deficient or a denying willing, which repels or rejects. Stern methods of governing, which bar access to everything that might lead astray, are likely to produce a deficient will rather than the permanence of formed strength; with the end of school days, the dreaded opportunities arrive after all, and the pupil may quickly undergo a change beyond recognition. The task of training must therefore be thought of as embracing both affirmative willing and rejecting.

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CHAPTER III

Differentiation of Character

143. Our will activities result from ideas. Different masses of ideas give rise to different will action; hence the difficulty experienced in harmonizing and unifying the manifold acts of will.

The various groups of ideas do not simply succeed one another in consciousness; the relation of one to the other may also be that of apperception. Apperceiving attention is not confined to sense-perception (77); it embraces inner perception as well. The process of apperception, however, consists rarely or never in mere perceiving. It involves more: one mass of ideas exerts a determining influence on the other. Now, since each may be the source of will action, it happens that often one act of will accepts or rejects another. Again, conscious of himself preëminently as a being that wills, man gives commands to himself and decides concerning himself; he seeks to acquire self-control. In such efforts he makes himself more and more the object of his own observation. That part of his will activity which his self-observation reveals to be already in existence, we call the objective part of character. To the new will [147] action, on the other hand, which first springs into existence in and with self-examination, we give the name subjective part of character.

The subjective side of character can attain its full development only during the years of maturity. Its beginnings, however, reach back into boyhood, and its normal growth during adolescence is noticeably rapid, due allowance being made for variations of kind and degree in different individuals.

> The assumption of the unconditional primacy of ideas can no longer be seriously entertained. Just as there is an unfolding of ideas in sensation, perception, apperception, and rational insight, so there is an unfolding of our volitional life in impulse, conscious will action, and the control of conduct in accordance with the regulative principles of moral obligation. Knowledge and will doubtless spring from a common root, but they are not primarily so related that volition waits on knowledge. Impulse is antecedent to idea, while in the last analysis and in the highest realm of mind, the *actual* is subordinate to the *ideal*, the *ought* is more powerful than the *is*. In other words, there is, as Dr. Harris maintains, a sense in which the will is self-determining, even though the extent to which this self-active control obtains is uncertain. As Natorp says,[14] "It is folly to call upon the weak to be strong, to concentrate consciousness upon the categorical imperative, so that the inflexible demands of the ought shall be complied with." Yet even in the weak there is a bar of consciousness or perhaps conscience before which judgment must be pronounced as to the worthiness or unworthiness of a [148] given line of conduct. It is the function of moral education—and this includes all education—to make the weak strong, to strengthen the good impulses, to clarify the insight, to accustom the mind to dwell on the right set of ideas, to cultivate desirable feelings and interests. In this process of moral development, the world of ideas has perhaps all the validity claimed for it by Herbart. What is here called the "subjective" side of character pertains to that regulation of conduct which arises from its examination before the bar of consciousness as to its agreement or disagreement with the regulative principles of moral obligation. It is that advanced stage of development in character in which the mind is consciously self-directive. Naturally it is later than the "objective" side, where action is more spontaneous, more governed by impulses, more subject to hypnotic suggestion; in short, more subordinated to "ideo-motor" activity and less governed by reflection.

[14] Natorp, "Socialpädagogik," p. 9, tr. Fromman, Stuttgart, 1899.

144. In view of the very manifold volitional elements which the objective foundations of character may obviously contain, it will facilitate a survey if we distinguish (1) that which the pupil does or does not endure willingly, (2) that which he does or does not long to have, (3) that which he does or does not like to do. Now one, now the other class predominates, the strongest controlling and restricting the rest. But this restriction is not always an easy matter. Accordingly the objective phase of character attains at first to inner harmony only with difficulty.

145. In consequence of frequent repetitions of similar acts of will, general concepts are gradually [149] formed in the subjective side of character, concepts comprehending both the similar will actions already present under similar circumstances, and the requirements man sets up for himself with a view to determining his willing one way or another.

These requirements fall largely within the province of prudence; they pertain to forethought and cautious reserve, or, may be, to action, in order that an end may be gained by the choice of suitable means. The boy wants to be wiser than the child; the youth wiser than either. In this way man seeks to rise above himself.

146. Moral conduct is not always furthered by man's effort to surpass himself, so that the teacher's task becomes a twofold one,—a watching and directing not only of the objective but also of the subjective side of character. Temperament, native bent, habit, desire, and passion fall under the former;

to the latter belong the frankness or cunning displayed by the pupil, and his habitual method of practical reasoning.

147. As a rule, we may consider it auspicious for character building if the pupil, instead of being swayed by moods and whims, is constant in his willing. Such uniformity as requires no effort we may designate by the expression memory of will.

When a pupil possesses this natural advantage, the objective part of his character easily arrives at [150] harmony with itself. He sees that among his many preferences relative to enduring, having, doing, one imposes restrictions upon the other; that it is often necessary to submit and endure in order to have and do that which is desired; that pursuits of which he is fond do not always yield what he longs to have, and so on. When these truths have become sufficiently clear to him, he soon comes to a point where he decides which things he cares about a great deal, and which less. He chooses, and choice largely determines character, primarily character in its objective aspects.

In the course of the development of the subjective part of character, there are formed in succession resolves, maxims, and principles, a process involving subsumptions, conclusions, and motives. It will cost many a struggle before these motives can assert themselves.

The strength of a character depends on the agreement between its two parts, the objective and the subjective. Where there is want of accord, the character is weak. But both must be morally good; where that is not the case, strength ceases to be desirable.

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CHAPTER IV

Differentiation of Morality

148. Pupils at once active and kindly are not rare, and so far as the ideas of perfection and good-will are concerned, give rise to no anxiety, at least not at first. With a firm government, moreover, they are easily induced to make the golden rule their own, and they soon become disposed to yield in contention, or rather, become more careful about picking a quarrel. Accordingly, with reference also to equity and justice, they cause little anxiety. In time they gain mental balance, the basis of genuine self-control, and are now on the road to inner freedom. In short, they are in possession of that which, in the light of fundamental ethical ideas, constitutes morality.

But these constituents of moral conduct are not found together in every one, nor do they always remain together. Side by side with the praiseworthy traits mentioned, others of an opposite nature frequently manifest themselves; it becomes evident that the latter are not excluded, and thus the former do not determine the character.

149. In order to exclude the morally evil, the praiseworthy traits of the objective side of character need to be reinforced by the good resolutions of the subjective part. [152]

These resolutions, to be worth anything morally, must rest on that theoretical judgment whereby the pupil through examples comes to distinguish between better and worse in willing. As long as his judging lacks clearness, energy, and completeness, his resolutions are without a foundation in his mind and heart. They are hardly more than memorized words.

When, on the other hand, the theoretical judgment has become interwoven with the totality of interest growing out of experience, social intercourse, and instruction, it creates a warm affection for the good wherever found, an affection which influences not only all of the pupil's efforts of will, but also the manner in which he assimilates what instruction and life henceforth offer.

150. Finally, in order to fortify moral decisions, we must avail ourselves of the assistance derived from the logical cultivation of maxims, from the systematic unification of the same, and from their constant application in life.

Here the organic connection between character growth and the formation of habits of reflection becomes apparent; training is, therefore, obviously unable to accomplish its work except in conjunction with instruction.

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> As soon as a pupil gets a clear notion that a presented ideal of conduct promotes the true realization of his own being, he is in a position to acquire an interest in reaching that ideal. An end, hitherto remote, comes nearer, so that it begins to exercise influence upon the conduct that leads to it. Convention, appeal, or even compulsion from without, are now reinforced by the good resolutions arising from the pupil's own subjective states. Here we see the interaction of intellectual and emotional capacities. The intellect perceives relations, thus bringing into consciousness a new ideal; this distant end is mediated inasmuch as desire or feeling impels the pupil to enter upon a course of conduct whose stages lead to the ideal goal.[15]

[15] See Dewey, "Interest as Related to Will," reprint by the National Herbart Society for 1899, pp. 15–16.

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CHAPTER V

Helps in Training

151. The function of training does not consist, it is true, in always restraining and meddling; still less in ingrafting the practices of others to take the place of the pupil's self-activity. Nevertheless, refusal and permission are so much a part of training that the pupil becomes far more dependent through training than mere government could make him. In government a few rules may be enforced very strictly, while in other respects the boy is left to himself; in training a similar relaxation of vigilance is scarcely ever permissible. Only the strongest grounds for confidence in a pupil would justify such a course.

The watchful teacher, even without aiming to do so, always shows some degree of approbation or dissatisfaction. In many cases this is all that is necessary; at times, with sensitive pupils, even this is too much. Unaccustomed censure hurts them more than was intended, while no evidence, however slight, of approval, escapes their notice. The teacher should be considerate in his treatment of such sensibility.

152. With regard to restraint of freedom, keenness of sensibility is more common. In this connection [155] another point also calls for consideration. Freedom is of the utmost direct importance to formation of character, provided it issues in well-weighed and successful action. For from success springs the confidence of will whereby desire ripens into decision. Where rational action may be looked for, freedom of action must be granted; where the opposite is true, the early appearance of a vivid consciousness of self-activity is fraught with danger.

Frequent censure and curtailment of freedom generally blunt sensibility, rather more, however, sensibility to words than to restrictions. Accordingly, where repetition of censure is necessary, the language may and should vary. On the other hand, the teacher's practice with respect to permission and prohibition must, where possible, be felt to be permanent, even if it were only to confine the granting of the same permission to stated times, in accordance with an adopted habit. Lack of uniformity, except for obvious reasons, impresses pupils as arbitrariness and caprice; fixed limits are endured more easily.

153. The sensibilities are irritated least by mere directions, by daily reminding, by calls at the appointed hour, without words of reproach. There are numerous details of daily life which must be placed under the rule of order, but it would be unwise to make more of them than they deserve. Sharp reprimands ought not to be wasted on petty acts of negligence; they are needed for important things. [156] Rules must be obeyed; but a light punishment, one that does not wound the feelings, is more suitable here than harsh words could be.

154. Closely related to the foregoing is the cultivation of habits that imply endurance, or the bearing of deprivation without murmur, or even an inuring to positive hardships. In efforts tending in this direction it is not sufficient merely to refrain from hurting the pupil's feelings; youthful good humor and love of fun must be allowed free expression besides.

155. Mischievous consequences follow if children become accustomed to frequent, unnecessary gratification of desires, or to a round of artificial pleasures which include neither work nor exercise. To mention only one such consequence, the attendant blunting of the sensibilities renders ineffectual numerous minor aids of training which may be employed to good advantage with unspoiled children. It takes little to give children a great variety of pleasures when great moderation is a matter of daily practice, and for this very reason we need to husband, as it were, our resources for giving enjoyment, in order that much may be accomplished with little. Harmless games, particularly, should not be spoiled for children by making them feel that they must cultivate the staid behavior of adults. Their own ambition fills them only too early with the desire to appear no longer as children. [157]

156. The good teacher's watchfulness will extend even to petty details, which may indeed prove momentous enough in his little world. These are not so important, however, as the mutual relations of the coöperating factors:—

(1) *Relation between Action and Rest.* The powers of the child must be given something to do, but exercise is to further their growth and hence must not be carried to the point of exhaustion. Now and then a boy must convince himself by experience that great things may be achieved by strenuous effort, but severe tests of this kind must never be permitted to become the rule.

(2) *Relation between that which puts down and that which lifts up.* The means of training that humble and those that encourage should balance as nearly as possible. That which rises of its own accord requires no raising up; but when along the whole course of training criticism perceptibly exceeds encouragement, it loses its effectiveness and often embitters pupils more than it benefits them.

(3) *Relation between Restraint and Freedom.* The child's surroundings and companionship should afford protection against temptation, but his environment must be sufficiently ample and rich to prevent much longing for that which is outside.

157. The outcome is uncertain in the case of those aids to training whose effect on the sensibilities of [158]

the pupils cannot be foreseen. Some of them are, nevertheless, well worth trying, final judgment being suspended until after the result has been observed. Under this head belong especially the strictly pedagogical punishments and rewards which are patterned after the natural consequences of doing or not doing. The boy who comes late loses the anticipated enjoyment; if he destroys his things, he must do without them; over-indulgence is followed by bitter medicine; tattling by removal from the circle in which matters requiring discretion are discussed, etc. Such punishments do not subserve moral improvement, but they warn and teach a lesson. To what extent they will do so we are often unable to tell beforehand; a profitable reminiscence may be retained at all events.

> The discipline of consequences has been much emphasized by Herbert Spencer in his “Education.” Its limited usefulness in moral training is pointed out in the foregoing section. Acting like a mechanical law, it tends to have the same effect upon the feelings that a physical law has. How could one’s moral sensibilities be impressed by the law of gravitation? Nature makes us prudent, but scarcely good.

158. Sometimes the question is how to set pupils on the right track again. They have grown listless, for instance, or pursue their tasks with reluctance. Here we may profitably resort to a sudden interruption by a change of employment. It happens occasionally that pupils, physically strong, are guilty [159] of very bad behavior that persists in spite of admonitions and punishments, or reappears in another form, but which is, after all, at bottom, only the result of a state of ill humor that can easily be corrected. An unexpected, trifling present, an unusual act of attention, will very likely break down the pupil’s reserve, and when the cause of the trouble has once been ascertained, it will be possible to discover a remedy.

159. In the case of those that are weak physically, furtherance of health combined with persevering patience is the first and chief duty. But kindness should not degenerate into weak indulgence; on the other hand, close supervision must take the place of every form of harsh treatment.

[160]

CHAPTER VI

General Method of Training

160. The distinctions relative to character and morality (143–150) furnish the thread of reflection on this subject. Concisely stated, the function of training is to support, to determine, and to regulate; to keep the pupil, on the whole, in a tranquil and serene frame of mind; to arouse him occasionally by approval and reproof; to remind at the proper moment, and to correct faults. A more definite significance will be imparted to this brief summary by a comparative study and application of the ideas analyzed in the preceding chapters.

While we may accept the statement that the function of training is to support, to determine, and to regulate, we must not forget to ask: To what end shall it do these things? The answer is, that though the means of moral training are always psychological, the ends are always social. Support must hold the pupil up to social standards, the directive power of the teacher must be exercised for social ends, while all regulation of the pupil's activities must point to the same result. There is scarcely a virtue to be named that does not find its ultimate meaning in its application to conduct as affecting others. This is true even in primitive society. In modern urban society it is not only true, but vastly [161] important. The discussion in Chapter VI is psychological throughout. It must be the purpose of the annotation to point out the social implications.

161. First, what is meant by the supporting activity of training becomes clearer if we recall the remarks made concerning memory of the will (147) as opposed to the thoughtlessness usually ascribed to youth. The thoughtless boy does not remember past acts of will. He stands in need of being supported by training. This, further analysis shows, is done in two ways: by holding him back from the wrong course, and by holding him up to the right course.

Training presupposes an efficient government and the obedience consequent to it. By implication, the pupil would not dare to disobey a command if given. But commands ought to be employed sparingly, and only when inevitable. Imposed too frequently, they would preclude self-development; if given to adolescents for any but obvious and urgent reasons, obedience would not long continue. In short, government acts at intervals. But the pupil cannot be permitted to live in a state of lawless liberty in the meantime. He must remain sensible, be it ever so little, of certain limits which he is not allowed to overstep. This result is the aim of the supporting function of training.

But the pupil, even though he be generally obedient, does not obey every one, nor under all circumstances, nor always fully, promptly, and without opposition; and when he once fails to comply [162] with gentle words, he will be still less ready to yield to a severe manner toward himself. Of course, the teacher must know on what support he may depend; the father needs to have made up his mind how far he would be willing to go with coercive measures if necessary; the private tutor, to what extent he may count on the backing of parents; the teacher in a public institution, how far his course of action would be upheld by his superiors. But all this involves an appeal from training to government, a step to be avoided as much as possible. Most of the unpleasant cases of intractability, where recourse to government becomes unavoidable, are the gradual result of continued weak indulgence. Of such cases no account is taken here, and justly so, since, apart from all else, even defiant obstinacy, provided restraint has not been cast off utterly, soon breaks down and gives way to remorse when it is met by serious and deliberate firmness.

The most obvious ways that the school has of securing a good "memory of will" are those by which it enforces the well-known school virtues,—regularity, punctuality, silence, and industry. It is to the acquisition of these habits that the government, or discipline, of the school is chiefly directed. Dr. Wm. T. Harris has pointed out in detail the significance of this acquisition in the development of character.[16] It is interesting to note how the teacher's personal authority is reinforced by social [163] pressure both within and without the school. The Superintendent of a city of thirteen thousand inhabitants reports that but 1462 cases of tardiness occurred during a whole school year. The pupils of each room are given a brief holiday, from time to time, provided nobody in that room is tardy during the stated period. This brings an immense social pressure within the school to bear in securing prompt attendance. Happening to visit the Superintendent's office in a city of some sixty thousand people, the writer observed the following scene: A young girl of perhaps fourteen years of age, accompanied by her father, who was a foreigner, unable to speak English fluently, entered the office. The girl began at once to make excuses for her brother who was a somewhat confirmed truant, and to beg that he might be excused and reinstated. To objections stated by the Superintendent, the father with much emotion replied, "Oh, Mr. Superintendent, won't you give my boy another trial?" The boy had been 'tried again' so many times that father and daughter were referred to the judge, an officer having jurisdiction over such cases. The penalty for persistent truancy was attendance at a state reformatory school. This is a case in which the authority of the

teacher in securing regularity of attendance was reinforced by the community outside the school. The constant pressure of school and community tend to establish habits of will memory that serve as an excellent foundation for later moral training.

[16] Third Year Book of the National Herbart Society.

162. Before training can have within itself the power to make up deficiencies in obedience, there must be awakened in the pupil a vivid feeling that the approval of his teacher is a valuable possession, which he would be loath to lose. This the teacher will bring about in proportion to the effective and welcome [164] share he has in the life of his pupil. He must give before he can receive. Furthermore, if in his opinion the pupil needs to be turned in a different direction, he should not underestimate the difficulty of the task before him; he must proceed slowly.

The initial steps in character training are admirably described by Niemeyer in the following words: “The teacher’s first duty is to study the positively good elements in the native character of the being to be educated. To preserve these, to strengthen them, to transform them into virtue, and to fortify them against every danger, should be his incessant endeavor. They should constitute the keynote, as it were, of his whole method of education. He should look for the good even in the spoilt and vicious pupil, and should try to bring it to light, no matter how many weeds may have sprung up alongside of it. For all subsequent moral education must start from this point.”

Although this passage belongs in strictness to the discussion on moral education, it is plainly entitled to a place here also. An appeal to the pupil’s better nature promotes ready compliance on his part, especially when it is accompanied by those little courtesies that go with cultivated social intercourse. It is most effective with those who possess at the same time the strongest memory of will, which it will not [165] be difficult for the supporting activity of training to strengthen still further.

163. On the other hand, the task of training grows arduous in proportion as the pupil fails to bear in mind his acts of will. But even here there is a difference between capricious unruliness and downright flightiness and levity.

Cases may arise where the impetuosity of the pupil challenges the teacher to a kind of combat. Rather than accept such a challenge, he will usually find it sufficient at first to reprove calmly, to look on quietly, to wait until fatigue sets in. The embarrassing situations into which such a pupil gets himself will furnish occasions for making him feel ashamed, and now it remains to be seen whether or not he can be made to adopt a more equable behavior. Here and there training may in this way even make good the lack of government; scarcely, however, for large numbers, after unruliness has once begotten vicious habits.

Combats of any kind between teacher and pupil are to be deplored. A good teacher is always strong enough in his mental superiority, his authority, and his influence as an executive to avoid it. Such a contest shows that the pupil has become self-conscious in a bad sense. He sets his personality over against that of the teacher. If the teacher is so weak as to meet him on his own ground, the pupil has a good chance for a bad victory—bad for himself, the teacher, and the school. It should be a [166] constant aim of the teacher to supplant introspection, whether pertaining to feelings or to wilfulness, with motor activity. The pupil should always be doing something that will promote not only his own best good, but that of the school also. Authority should rarely so assert itself as to incite or to permit a personal contest with the pupil. It should be a strong but almost unseen presupposition of all school affairs. Here as elsewhere idleness is the mother of mischief. Lively action is sure to banish morbid introspection.

164. Thoughtlessness in the narrower sense, which manifests itself in forgetfulness, in negligence, in want of steadiness, and in so-called youthful escapades, is a defect in native capacity, and does not admit of a radical cure, imperceptible as it may become with age, by reason of repeated warnings and diminishing susceptibility to external impressions. All the more imperative is it in such cases to support by training, in order that the evil consequences of this character weakness may be prevented, or at least reduced to a minimum. For as soon as a thoughtlessly impulsive boy comes to take pleasure in his conduct, he will set himself against order and industry, and will strive to discover the means which promise to secure for him a life without restrictions. This danger must be forestalled by training. At the beginning, and before an evil will has had time to develop, training must take the place of will. It must bring home to the pupil that of which he had lost sight. To his fluctuating and roving impulses it must [167] lend its own external firmness and uniformity, which cannot be created at once, if at all, within the pupil.

Here is the proper place for the injunction, not to argue with children. “I cannot be too emphatic and outspoken in my warning against too much arguing,” says Caroline Rudolphi; and Schwarz, who quotes this passage, adds, “Once is too often.” Niemeyer, after speaking of the excesses of abnormal liveliness and characterizing thoughtlessness, which, he says, “causes inattention, a disregard for consequences, and hasty actions,” continues thus: “All these are not faults of the heart; still they are faults that need to be amended, and about the only sure educational method for amending them is to cultivate right habits.

Positive punishments wisely chosen may indeed be employed as auxiliary means, but only when there are evidences of a lack of good intention, or when these faults have become ominously prominent." He further advises teachers to insist on this, that pupils rectify on the spot what can be rectified, since vague recollections prove barren of good results.

This does not, of course, dispose of the whole matter, but we are still discussing training as a supporting agency, and from this point of view it is true that argument should not be substituted for the cultivation of habits.

165. To restrain the lively but thoughtless boy is more difficult than to keep him properly active, for [168] the latter is comparatively easy, in some cases at least, if instruction excites his interest. The reverse holds true for the sluggish boy because an attack has to be made on his indolence. Here the stimulation to physical exertion through association with wide-awake playmates is the first thing to be secured; and where hard lessons cannot as yet be managed successfully, lighter occupations will have to suffice. Where sluggishness is traceable to bodily feebleness, improvement may be hoped for from sanitary measures and increasing years.

The following rule is to be observed everywhere: No exercise must exceed the pupil's strength, but that which has once been begun must be completed. At the least, pupils must not be allowed to drop their work as they choose; they must look upon it as a whole, however small.

166. That the supporting procedure of training rests on the teacher's own bearing—on the uniformity of his demeanor—need hardly be said; but this evenness must also stand out clearly before the eyes of the pupils. The teacher ought to guard particularly against causing the complaint that no one knows how to please him, that nothing one may do is done to his satisfaction. When matters have come to this pass, the first thing pupils do is to watch his moods as they might the weather, and to interchange observations. His ugly mood is dreaded; his pleasant mood is taken advantage of for importunate [169] requests. The pupils try to move the firm centre which is to support them, and the faintest signs of success awaken and foster extravagant hopes. Gradually the after-effects of earlier government die out, and a renewal of severe measures draws with it a train of new evils.

Goldsmith in his "Deserted Village" has well portrayed the "moody" teacher:—

"A man severe he was, and stern to view;
I knew him well, and every truant knew:
Well had the boding tremblers learned to trace
The day's disasters in his morning face;
Full well they laughed, with counterfeited glee,
At all his jokes, for many a joke had he;
Full well the busy whisper, circling round,
Conveyed the dismal tidings when he frowned."

167. Second. Training is to exert a determining influence; it is to induce the pupil *to choose* (147). Under this head falls the discrimination spoken of above between varieties of volitional impulse—the will to bear, to have, and to do; hence also experiential knowledge of the natural consequences of doing or of failure to do (157), for unless these are taken into consideration, the manifold of will cannot be reduced to harmony. Now the first point to be noticed in connection with this aspect of training is that the teacher does not choose for the pupil. The pupil himself must choose, for it is his own character that is to [170] be determined. He must himself experience a part, although only the smallest part, of that which is desirable or harmful. That the flame burns that a pin pricks, that a fall or knock hurts, this lesson even the little child must learn; and similar experiences must be gained later, provided they do not carry the pupil to the verge of serious danger. Everything essential has been accomplished if, in consequence of actual experiences confirming the teacher's words of warning, the pupil believes other warnings without waiting for confirmation.

Not second in importance to the act of choosing is the content of the choice. If conduct must have a social outcome, all the activities of the school will focus at this point. In order to have rational choice there must be first of all social intelligence. This it is the function of instruction to develop. According to a well-known doctrine of Herbart, it is the chief duty of instruction to make a progressive revelation to the pupil of the ethical world, in order that his puny will may gradually be reinforced by race experience. The instruments for this revelation are the studies on the one hand, and the conduct of the school according to social principles on the other. In the second place, that the ethical choice may truly express the pupil's inward state, rather than his outward constraint, it must grow out of his insight as suffused by his social responsiveness to ethical ideas. In other words, his disposition should confirm his intellectual perception of the right line of conduct. This raises the whole matter of interest as related to will.[17] Here again natural, spontaneous, almost unconscious [171] attitude is vastly superior to morbid introspection, no matter how 'good' the pupil's disposition may prove to be. A boy should not have to 'reflect' as to whether he will rob a bird's nest or not.

[17] See Dr. John Dewey, “Interest as Related to Will,” National Herbart Society, reprint for 1899.

168. Pleasure and pain arise so largely out of social relations that the pupil must grow up amidst a social environment in order to become somewhat acquainted with his natural place among men. This requirement gives rise accordingly to solicitous precautions against a bad example and rudeness. On the other hand, a boy’s companions should not be chosen with such anxious care as if the intention were to spare him the feeling of pressure which in all human society is generated by the efforts and counter-efforts of men. Too great complaisance on the part of playmates causes delusions as to the actual conditions of life.

Again, society and seclusion must alternate. The social current is not to carry everything else along with it, and to become more powerful than education. Even the boy, and much more the youth, must learn to be alone, and to fill up his time profitably.

> Unbroken association of the child with his mates tends to bring him too exclusively under the influence of imitation and of acting impulsively upon those forms of unreasoning suggestion which sway the crowd, the gang, and the mob. To quote Professor Baldwin:[18] “The characteristics of the social suggestions upon which the crowd act show them to be strictly suggestions. They are not [172] truths, nor arguments, nor insights, nor inventions.... The suggestible mind has very well known marks. Balzac hit off one of them in ‘Eugénie Grandet’ in the question, ‘Can it be that collectively man has no memory?’ We might go through the list of mental functions asking the same question of them one by one. Has man collectively no thought, no sense of values, no deliberation, no self-control, no responsibility, no conscience, no will, no motive, no purpose? And the answer to each question would be the same, No, he has none. The suggestible consciousness is the consciousness that has no past, no future, no height, no depth, no development, no reference to anything; it is only in and out. It takes in and it acts out—that is all there is to it.” It is here that we find the source of the youthful escapade so common to street, school, and college, as well as of the adult deeds of diabolism that have so often shocked the moral sense of the American people. The child needs frequent opportunities to be alone, when he can “come to himself” as a responsible person. Even where the association with his mates is perfectly innocent, there is a growing responsiveness to mere suggestion. This tendency is corrected by attention to individual tasks and responsibilities.

[18] “Social and Ethical Interpretations,” pp. 236–237.

169. By living alternately with his equals in age and with adults, the pupil grows familiar with diverse standards of honor. To unite these, and to subordinate one to the other in a proper manner, will prove an easy or a difficult part of training, according to the smaller or greater gap between the value set on brute force on the one hand, and the demand for good-breeding, as well as regard for talent and knowledge, on the other. The main thing is not to foster ambition artificially, though care must be taken [173] at the same time to refrain from crushing out a natural and true self-esteem. Usually, however, those interested in the progress of a pupil stand in need themselves of guarding against the self-deception due to extravagant hopes. By giving themselves up to these, they involuntarily turn flatterers, and push the boy, and the young man still more, beyond the position he is able to maintain. Bitter experiences follow.

> The tendency to an abnormal overestimation of the value of physical excellence is seen in the attitude of the modern college toward athletics. Doubtless the public as a whole still underestimates the importance of fine physical development. Our modern life with its nerve-racking occupation will shatter the efficiency of large portions of the race, unless the physical organism is so developed as to withstand the strain. This, if true of men, is still more true of women, who are now undertaking many new lines of exhausting labor, not the easiest of which is teaching. But the college student is prone to adore muscle. The successful athlete is, for a brief period, praised, petted, and advertised far more than is the ablest student or professor in the institution. Scarcely do the noblest achievements of science or philanthropy receive so much notice as a successful full-back on a foot-ball team. The athlete goes up indeed like a rocket, startling the ear and dazzling the eye for a moment—then oblivion, or deserved obscurity. The teacher must endeavor to displace this false estimate of values by one more true if less exciting.

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170. The regard for the value of things in their relation to the ordinary necessities of life develops somewhat more slowly than the natural sense of honor. This is true especially of money, which at first boys rarely know how to use. Instead of saying, either this or that, which a fixed sum will buy, the boy falls a victim to the deception that lurks in saying, this *and* that. In this respect also the pupil needs to gain experience on a small scale; he must, moreover, come to know the value of objects last, not merely in terms of money, but also in terms of the inconvenience of doing without them. Warnings against petty closeness are seldom necessary; not infrequently, however, a boy follows common talk, and it may happen that he practises parsimony by imitation, and squanders in obedience to his own impulses. Where faults of this sort are not conquered by the pupil’s own sense of honor, they fall within the

province of moral education.

A modern device for teaching children the value of money, and especially the usefulness of saving it, is the institution of school savings banks. Here the pupil develops his instincts for accumulation. At the same time he learns to inhibit his often inordinate fondness for spending. If indulgence to self, accompanied by penuriousness toward others, is permitted to grow into a habit in childhood and youth, it becomes a source of much unhappiness in later family life. Wife and children are often victims of this kind of selfishness. Now that women are in the main the teachers of children, they should have the interest of their sex sufficiently at heart to inculcate suitable ideals and habits [175] respecting the gathering and spending of money. No form of selfishness is so obnoxious as self-indulgence at the expense of those who have a natural right to an equitable share of what is produced. The 'meanness' of such conduct if constantly unveiled will effect its own cure.

171. When experience has taught the pupil to what extent he must endure or need not endure the pressure of human society, and what honors, objects, enjoyments, he can have or must do without, the question arises: How does he connect all this with the pursuits which attract or repel him? The thoughtful pupil soon realizes, without being told, that one thing often makes another possible, that one thing involves or conditions another. But upon the thoughtless boy this truth does not impress itself with sufficient force; consequently, the teacher has to help him to deepen that impression, because a man without a settled mind regarding these matters remains devoid of character.

Yet a lack of fixedness is often desirable rather than otherwise—a statement applying to those pupils whose intellectual interests it is the business of instruction to awaken, or whose moral and religious culture are as yet in a backward state. The objective part of character (142) should not become fixed too soon; and very often a large part of the value of training consists in retarding this process. Such an end is subserved by the restraint under which the pupil is kept by the subordinate position assigned to him in [176] conformity with his age, and particularly by the refusal of freedom to act without permission, and according to his own inclination (152). The theoretical judgment of will relations (149) is frequently late in maturing, or remains weak in comparison with the impression produced by the experiences mentioned. In that case moral ardor is also wanting, and if the pupil were given liberty to do as he chose, his character would be formed, to be sure, but in the wrong way. Rather would it be better to encourage juvenile amusements, and even boyish games, beyond the usual age limit.

172. Third. Regulative training begins its work with the first appearance of the subjective part of character (143). For an earlier period the rule not to argue with children holds good (164); that is, it holds good as long as we can get along with it. That stage, however, is passed when the pupil begins to reason for himself; in other words, when his thinking has acquired such consecutiveness that his thoughts no longer come and go as momentary fancies, but attain to permanency and coherence. Reasoning processes of this sort ought not to be left to themselves, nor can they be repressed by dictatorial decrees. The educator must now enter into his pupil's trains of reflection, must argue with him and prevent further development in the wrong direction.

The tendency to set up rules reveals itself early; for example, in the games of children. Commands as [177] to what to do are given every moment, only these imperatives are imperfectly obeyed and often changed. Neither is there lack of original, childish resolutions; but they can mean little so long as they do not remain the same. It is very different when they acquire stability, when means and ends combine into plans, when execution is attempted under difficulties, and finally when these resolves are thought in the forms of general concepts, thereby laying claim to validity in possible future instances, and becoming thus transformed into maxims.

173. The wise forethought essential to regulative training requires in the first place that the teacher shall rather tolerate an inconvenient discussion than check a frank expression of opinion, provided the objections of the pupil are indubitably sincere, and his vanity, we will say, is not flattered too much by the unexpected consideration accorded to his remarks. The same foresight is to be exercised in cases where it proves impossible to convince the pupil at once. Here the final judgment, instead of being insisted upon, should rather be postponed; it will always be easy to point out to the pupil his lack of adequate knowledge and to refer him to future studies. The positiveness that usually characterizes the assertions of boys and young men, generally has its roots in their great ignorance. They have not the [178] least inkling of how many opinions have been held and disputed. Instruction will gradually cure them of their excessive self-confidence.

Only in a pure despotism would the enforcement of unquestioning obedience to authority be admissible. No country aspiring to political liberty could tolerate such a system. Even if all political considerations were dismissed, the development of subjective character alone would demand a condemnation of such a method. But in a country like ours, where men are both personally and politically self-governing, education to leadership is not second to education to obedience. There comes a time, therefore, when argument is in place, provided its purpose is to clarify the pupil's insight into prudence or duty. It will not be too much to insist upon obedience without argument with

all pupils so far as the ordinary school virtues—regularity, punctuality, silence, and industry—are concerned. Old and young can see their necessity. When it comes to the more intricate phases of conduct, the grounds for authority, if it is still exercised, may be revealed through dialogue. It is the constant effort of training to establish regulative principles in the minds of the older pupils, so that within the range of their capacity they may become self-governing. In other words, the moral plateaus of Kant are to be attained, not at a bound, but by a gradual progress in moral autonomy. Herein we see the superiority of Herbart's conception of moral training. What Kant gave up as an unsolvable problem, can be seen to be only a natural process. Says Kant, "How a law can of itself directly determine the will is for human reason an insoluble problem, for it is identical with the problem how a free will is possible."[19] The difficulty with Kant's theory was that he admitted no [179] psychological means for attaining the free directive power of the mind. He could only say to the child: "You are free; be free. You are morally autonomous; exercise your power; be a free, self-governing citizen." Kant regarded natural impulses, emotions, desires, pleasures, interests, as impure, hence to be rejected. They are indeed to be rejected as the final ends of character, but what Kant did not recognize is that they are the psychological means for attaining character. Primarily these feelings, far from being radically bad, as he thought, are radically good, since they help to furnish the necessary conditions of survival, both for the individual and for the race. Hunger, fear, courage, combativeness, prudence, sexual instinct, inquisitiveness, love of adornment, frugality, and a hundred other elemental passions have preserved the race from destruction in the past. A new set of social and intellectual impulses will in the future provide the instruments of survival, now that the field of evolution is transported from the jungle to the city. It is through intellectual insights that new ideals are formulated; it is through these elemental feelings that the active powers of the mind are stirred up to motor efficiency for their realization. From being biological means for physical survival, the feelings of man have now become psychological means for civic survival. Psychologically, therefore, men are not born free; they become free. To become free they must have opportunity to exercise freedom; at first within definite but widening limits while they are under the tuition of the school; later within the limits set by civil society; at last absolutely, when they have recognized that what is rational law in society is the law of their own being.

[19] "Selections," p. 284.

174. But the matter of greatest importance from the point of view of training is consistency or inconsistency of action. One who lightly sets up maxims must be made to feel the difficulty of living up to [180] them. In this way a mirror is held up to the pupils, partly in order to put to rout untenable maxims, and partly to reinforce valid principles.

Among the untenable maxims we include also those which, although in accord with prudence, would offend against morality. If the pupil does not see already that they cannot be maintained, the application, by exhibiting their objectionable consequences, must bring to light their true character.

175. Regulative training often calls for rousing words from the teacher. He has to remind the pupil of happenings in the past and predict future consequences in case his faults should continue; he has to induce him to look within himself for the purpose of tracing the causal connection of his actions to its source. If, however, this was done earlier, with a view to moral education, no long speeches are now needed. Moreover, the teacher's remarks become calmer and briefer the more effective they have been, the more he is justified in expecting independent judgment on the part of the pupil, and finally the more fully the latter has entered upon that period during which he looks about him to observe the words and actions of strangers. For, at the time when he has begun to compare the new with the old, his receptivity for the old is very weak, and soon vanishes completely; unless, indeed, the old had been deeply [181] impressed beforehand.

The purpose of the "rousing word" is to stimulate the mind to exercise its dynamic force to moral ends. The pupil must not be permitted to assume the attitude of negation, or to be a mere passive observer, or an innocent, devoid alike of power and significance, but he must be roused into a responsible character, an efficient participant in life's activities. Successful appeal may be made to insights already acquired, but theoretically held; to dispositions implanted, but not yet actively exercised; to the application of old habits to new uses. Even where appeal must be made against objectionable conduct, it is better to apply the "inhibition of substitution" to that of "negation."[20] While protesting against the evil, point the way to the right road.

[20] James, "Talks on Psychology," p. 192.

176. Fourth. The pupil is to be kept in a quiet frame of mind; his intellect in a state suitable for clear apprehension. To outbursts of passion this applies absolutely; not so generally to emotions. Above all, tranquillity is the condition for the formation of theoretical judgments and hence also, although not exclusively so, for laying the foundation of morality.

Every desire may develop into passion, if the soul is so often and so long in a desiring state that thoughts become focussed in the object longed for, whereby plans shape themselves, hopes arise, and ill-will toward others strikes root. Accordingly, watchful attention must be given to all persistent and [182] recurrent desires.

177. The most usual desires are those which arise from the physical need of food and of bodily activity. Now the first step to take is, while guarding against excess, to satisfy these natural impulses in order to subdue the unruliness springing from unsatisfied cravings. We ought not to permit hunger to tempt a boy to steal, nor encourage truancy by making him sit still too long. This warning is not superfluous. Such things happen even in families where less irrational practices might be expected. Over-indulgence, to be sure, is of far more frequent occurrence.

When the natural wants have lost their sting, a positive and irrevocable refusal must be opposed to further desires. With it should be combined some occupation capable of diverting the attention.

If the object which continues to excite desire can be removed, all the better. In one's own home this is more often practicable, and more necessary as well, than in that of strangers. If the object cannot be removed, gratification may be put off until some future time. The foregoing statement may be illustrated by reference to the eating of fruit from the tree. An unconditional prohibition carries with it a dangerous temptation to disobedience, while unconditional permission would be equally inadmissible on account of [183] the plucking of green fruit, let alone the possible injury to the orchards of others.

Analogy will suggest many similar applications of the rule given.

178. Again, children must be watched at their games. The more free play of the imagination we discover, and the more change there is, the less cause for concern. But when the same game is frequently repeated according to the same fixed rules, when a species of study is devoted to it in order to attain special proficiency, passions may be generated, such, for instance, as an excessive fondness for playing at cards, even where no stakes are involved. Gambling must be forbidden entirely, and in case compliance with this prohibition is doubtful, obedience must be secured by watchful supervision.

> To what end shall a teacher watch the games of children? To prevent the bullying of the weak by the strong, to see that unfairness does not creep in, to ward off vulgarity and profanity—these and similar purposes will be in the mind of the teacher. One of the chief functions of play, however, is to cultivate social efficiency. This has two aspects, willingness to coöperate with a group and ability to lead a group. It is necessary that there should be alternation of leadership and coöperation. If one child is allowed to lead all the time, he becomes overbearing; if another is always compelled to follow, he becomes subservient. Each has a one-sided development. Without discouraging unduly natural capacity for leadership, it is well for the teacher quietly to see to it that each child has his chance, both to lead and to follow. Just as the kindergarten utilizes play to simulate the occupations [184] of men, arousing sympathy with them and respect for them, so the school may by proper modification make the numerous group games, in which children delight, a potent means for securing coöperative habits and a general aptitude for social activities. Not a little attention is now paid to the various forms of children's play. This is especially true of such publications as the *Pedagogical Seminary*, published at Clark University, Worcester, Massachusetts.

179. An excellent means to avert the dangers connected with passionate tendencies is to engage in the acquisition of one of the fine arts, say music or drawing, even though there should be no more than a modicum of talent. The student must be given to understand, however, that he is not to take up the study of several musical instruments at once, nor give himself up to distracting attempts in sundry branches of pictorial representation. On the contrary, he is to strive consistently for proficiency in one definite direction.

In the total absence of aptitude we may avail ourselves of preferences of one kind or other, such as fondness for collecting plants or shells, for work in papier-maché, for joinery, for gardening even, etc.

Poetical talent, highly desirable in itself, nevertheless demands a solid counterweight in the shape of serious scholarly effort; for the young poet sets up claims that are likely to prove dangerous if he becomes absorbed in them.

> The importance of this suggestion can hardly be overestimated. It is a case of the permanent [185] inhibition of a host of possible evil tendencies by substitution. The youth who can turn with pleasure to his violin at every spare moment, never seriously misses the companionship of his mates. He has, moreover, a never failing source of enjoyment when there is nothing to interfere with his happiness, and an equally inexhaustible source of consolation when the waves of life are rough.

180. Projects springing from passionate impulses, and betraying their existence by their interference with order, diligence, and the distribution of time, must be resolutely thwarted. This step is rendered all the more urgent when several share in the same plan, above all when ostentation, party spirit, and rivalry enter as impelling factors. Such things must not be allowed to gain ground; they very quickly

vitiate the soil which education has been at such pains to prepare for tillage.

181. The passions being kept at a distance, the successful grounding of the pupil in morality depends in general on the manner in which instruction coöperates with his occupations. The branch of instruction primarily most important in this respect is religious instruction. The most immediate source, however, of the development of disposition is found in the pupil's social environment, and it becomes the business of training to cultivate a right spirit or disposition. Let us, therefore, take up the practical ideas one by one. [186]

> England and Germany are a unit in insisting upon the necessity of religious instruction in the schools. Half the elementary schools of the former country are in charge of the Church of England, five per cent are controlled by Roman Catholics, three per cent by Wesleyans, and some forty-two per cent by public boards of education. All of these schools are subsidized by the state, yet all, with few exceptions, give religious instruction. In Germany there are but two strong religious organizations—the Roman Catholic Church, mostly at the south, and the Lutheran, mostly at the north. The state establishes all schools, furnishing most of the funds for sustaining them and controlling their administration in large measure; yet the morning hour of the day is devoted to instruction in religion. Not so in the United States. Here, religious teaching is, to all appearances, permanently excluded from the public schools. In this condition of affairs there is but one resource: we must the more diligently insist upon those things that reflect the content of religion. That is, we must teach children to live in close coöperative union with their fellows. The subjective side of this training is portrayed in the sections that follow, where the transformation of ethical insights into ethical habits is discussed.

182. To speak of strife first, which cannot easily be wholly prevented among children, and which is present to their minds, at least as a possibility, self-help against unexpected bodily assaults cannot be forbidden. A determined self-defence is rather to be recommended, but self-defence paired with a merciful treatment of one's assailant. On the other hand, it is necessary to prohibit absolutely any [187] arbitrary appropriation of objects, even though these objects should consist of ownerless or discarded trifles. No one must imagine that his mere pleasure is a law unto others. On the contrary, children ought to get used to limitations on ownership. That which has been given them for a certain purpose is to be used for that purpose alone, and must be taken care of with that purpose in view. Promises among children should not lightly be declared void, however foolish and impossible of fulfilment. The boy who, by a hasty promise, puts himself in an embarrassing position must be made conscious of the fact. Let his perplexity serve as a warning for the future. But over-hasty promises are to be accepted as little as they are to be made; and here is where we have to begin in untying the knots in which children occasionally entangle themselves.

It is not undesirable that pupils by their own acts furnish themselves with a few keenly-felt instances of complicated questions of rights. But pleasure in wrangling must be discountenanced; the pupils should learn to prevent and to avoid contention. They may gain enough familiarity with it to realize that it gives displeasure.

183. At this point two paths open to our reflection. In the first place, contention pleases children because it implies strength; in seeking it they are, as a rule, merely giving vent to excess of animal [188] spirits. The outlet in this direction we must block, but we must furnish another elsewhere. Gymnastic exercises, too, are exhibitions of strength; emulation, which is not contention, is a welcome feature of sport and play. Mental activity likewise affords suitable opportunities for excelling; it also provides proper occasions for making comparisons; but relative excellence, children must understand distinctly, is not to be advanced by them as a basis for claims. Where the question is one of degree of attainment,—therefore one of *perfice te*,—the pupil is supplied with a practically useful standard by his own progress and retrogression. To hold up one pupil as a model for another to follow awakens envy; it will be much better, instead, to make allowances where a weak pupil cannot do more than he is actually doing.

> In all the ages of the past men have been the teachers of boys. Being men, they have naturally taken the man's attitude toward youthful conduct. When one boy is gratuitously assaulted by another, they have upheld a sturdy self-defence as belonging to self-respect. In their eyes an unsuccessful defence is better than a cowardly retreat. With the advent of women as the teachers of boys it is natural that the doctrine of passive non-resistance should be emphasized. When women were only the physical mothers of the race, there was no danger of the decay of virility, but now that they have become the intellectual mothers as well, there may be such a danger. It is generally [189] conceded that the English boys' schools, like Eton, Harrow, and Rugby, have been the best English conservers of independent manhood, for there every boy stood on his own merits, having to fight his own battles, being responsible for his own conduct, and at the same time living under a high code of boyish honor. In our own public schools, where no such *esprit de corps* is possible, and where the doctrine of peace at any price is likely to be insisted upon, it is possible that there may be a distinct decline of virility in the boys. Such a result would be deplorable; it would work to the detriment of public education, and would decrease in public estimation the value of woman's services in the

schoolroom. While discouraging strife, a teacher may, by a word of approval or excuse, justify an exercise of primitive defence of the person against unwarranted assault. Manly social games, like foot-ball, basket-ball, base-ball, are our best resources in developing those phases of character that are closely associated with motor efficiency. Here under proper guidance, self-control, sense of power and efficiency, courage, and almost every characteristic of virility may be happily developed. That forethought and supervision are needed is most true, else unlovely traits of character may easily get the upper hand.

184. The second of the two ways alluded to takes us from the idea of rights to that of equity. Strife is displeasing, but revenge still more, notwithstanding the truth of the saying: what is fair for one is fair for another. Children may indeed exercise their ethical acumen by trying to determine how much one deserves to suffer or to receive at the hands of others for the liberties he has taken or the self-restraint he has practised, but they are not to arrogate to themselves the function of inflicting punishments or of [190] bestowing rewards. Without surrendering their own insight, they must in this respect submit willingly to the authority of their superiors.

A similar course is to be pursued with reference to the distribution of presents, enjoyments, and marks of approval. To avoid giving the appearance of favoritism, the teacher should not, except for very good reasons, depart from the principle of equal division; but, on the other hand, he should refuse to accord to the pupils a right to these free gifts. While permitting them to have an opinion on the appropriateness of a greater or smaller share, he will properly deny them any right to demand by virtue of this opinion.

185. In cases deeply engaging the children's own sense of justice and equity, complaisance and readiness to yield should not be exacted on the spot. Children must have time to get to the end of their thoughts, and to weary of what is often very fruitless brooding, before they realize that to yield is after all a necessity, and hence in no sense a matter of magnanimous choice. At some future time they may be reminded that their path would have been smoother if the sentiment of good-will had been in control from the beginning and had arbitrated the dispute, or rather had prevented it entirely.

Good-will is to be revered everywhere as higher than right; still the latter must be represented as [191] something that cannot be set aside with impunity, unless it be by common agreement; that is, in consequence of the consent of the holders of rights.

There are two distinct aspects to good-will,—the benevolent, and the coöperative or social. The well-known story of the Jericho Road illustrates the first. He is the good neighbor who rescues the life of the man who has been assaulted by the way. But social good-will is more than benevolence; it is coöperation for the accomplishment of common purposes. Among farmers it means mutual care to prevent aggression, because of unruly stock or bad fences; it involves combined efforts for good schools, good roads, public libraries, educational agencies for promoting successful farming, associations for promoting successful pleasures. In cities social good-will means coöperation for paving and lighting streets, for the suppression of crime, for furnishing good water and efficient sewerage, for defence against fire, for rapid transit, besides the myriad agencies for promoting the mental, moral, and spiritual welfare of the people. A man in a city needs to be a good neighbor to everybody, even though he may know personally but one in a million. In other words, the civic man must be a brother, not only to him who falls among thieves, but to him who lives among them; not only to his brother in adversity, but also to his brother in prosperity.

186. Finally, the degrees of difference among older boys, and especially among young men, with respect to the nearness with which they approach the still distant realization of the idea of inner freedom, are, as a rule, sufficiently marked to be patent to all. The superior excellence of those [192] distinguished for steady and rational conduct is usually dwelt on by the teacher rather too much than too little; children are themselves too keen in observing each other's shortcomings not to see how far behind the best some are. We ought, therefore, rather to avoid stimulating in children the tendency to belittle others, than to turn their attention to that which does not escape them anyway.

187. The bad conduct of adults near to the pupils will not, of course, be exposed by the teacher; and if publicly known, the example set will repel more than allure, so long as self-interest does not prompt imitation or a search for excuses. But we need not entertain much hope either that a worthy example will be followed; youth is too prone to regard rectitude as a matter of course. Hence it will not be superfluous to call special attention to right conduct, and to give expression to the esteem which is its due. This applies particularly to the time when a growing boy's outlook over society widens, and he begins to compare many things whose false glitter might deceive him.

There are many aspects of inner freedom. It is possible for a narrow-minded man to live in perfect tranquillity, so far as his conscience is concerned. Even if one lived true to Kant's categorical imperative, which says, "So act that the maxims, or rules, of your conduct might, through your own will, become universal laws," it would still be possible for one to have a mind at peace with itself [193] while doing things that a higher code of morality would forbid. For example, suppose I am an

American Indian, and the question arises, Shall I torture my enemies? Of course: do not the traditions of my tribe prescribe it? This simply means that our ideals of conduct grow out of our environment; they are social in their genesis. This truth shows the infinite importance of making instruction reveal clearly the best ideals of religion and civilization, for there may be as much inward freedom, or good conscience, in the slums as in the wealthy districts of the city. Subjective peace of mind may mean much or little. A murderer may sleep as soundly as a missionary, but a man of high ideals is whipped as with scorpions, if his conduct be base. He feels that his higher self is outraged; he has no peace except through repentance, restitution, and reform.

188. Fifth. The pupil's mind, we will suppose, has been properly directed, partly through the social relations obtaining among children, partly through examples and instruction, to the requirements of the various moral ideas, and he has learned accordingly to discriminate with some keenness between will relations. Now the time has arrived for moral education in the strict sense. For we cannot leave it to chance whether our young charges will, of their own initiative, synthesize for themselves noble actions on the one hand and base actions on the other, whether they will take time to reflect, and will, each for himself, apply the lessons taught. On the contrary, they all have to be told, each one individually has to [194] be told, truths that no one is wont to hear with pleasure. The more thoroughly the teacher knows his pupils, the better. By showing them that he divines their thoughts, he supplies them with the most effectual incentive to self-observation. Now the basis of what is commonly known as moralizing is furnished by a retrospective view of the pupil's conduct for some time past, by references to influences formerly at work within him, and by an analysis of his good and bad qualities. Such teaching is by no means to be condemned, nor even to be regarded as superfluous. In its proper place it is absolutely essential. Many, it is true, grow up without ever having heard a serious word of deserved censure, but no one ought to grow up in that way.

189. Only praise and censure are thought of here, not harsh words, much less harsh treatment. Reprimands and punishments following upon single acts are something different; they, too, may lead to moral reflections, but must first have become things of the past. Moral improvement is not brought about by the constraint of government, nor is it the result of those pedagogical punishments which warn the pupil and sharpen his wits by means of the natural consequences of actions (157). But it is brought about through the imitation of the language of conscience and of genuine honor, as seen in impartial spectators. Moreover, this does not exclude consideration of the excuses which every one readily finds in [195] his heart. But while due allowance is made for mitigating circumstances, the pupil is cautioned against relying on them in future.

190. Ordinarily youth deserves neither strong commendation nor severe criticism, and it is well to guard carefully against exaggeration in either direction, if for no other reason than merely this, that exaggeration either detracts from effectiveness, or else causes, if not timidity, at least an unfortunate embarrassment. There is one species of magnifying, however, which subserves a good purpose, because it enables pupils to see more clearly the importance of trifles and the great significance of their own actions, and in this way helps to counteract thoughtlessness. We refer to viewing the present in the light of the future. The pettiest faults are liable to grow through habit; the faintest desire, unless kept under control, may turn into passion. Then, too, the future circumstances of one's life are uncertain; allurements and temptations may come into it, or unlooked-for misfortunes. This prevision of the possibilities of the future is, of course, not prophecy, and no such claim should be made for it; nevertheless, it does good service as a warning.

191. When the pupil has been brought to the point where he regards his moral education as a matter of serious import, instruction in conjunction with a growing knowledge of the world may bring it about [196] that a glow of moral sentiment permeates his whole thought, and that the idea of a moral order unites on the one hand with his religious concepts, and with his self-observation on the other. Henceforth the direct, emphatic expression of praise or censure will have to be less frequent. It will no longer be as easy as formerly to give a clearer account to the pupil of what goes on within him than he has already rendered to himself. We may still, however, come to his assistance from another direction, namely, that of general concepts,—a field in which advancing youthful reflection is little by little finding its bearings.

192. Sixth. It is the business of training to remind at the right moment and to correct faults. We may safely assume that, even after a young man has reached the plane of moral decisions, he will still stand in need of frequent reminders, although in this respect individuals exhibit great differences, which observation alone is able to reveal. But that which he is reminded of consists of resolves which lay claim to something like universal validity, but which are not likely to make good that claim when incorrectly formulated or conceived in the wrong connection. General considerations become predominant with only a very few at best; but youth especially sees and experiences so much that is new that the old is easily slighted for the new, and, accordingly, the general for the particular still more. Nevertheless, it is far [197] easier for training to remind and to correct with success where a good, firm foundation has been laid, than it is to support (161–166) when in adolescence nothing is found by which the pupil might try to steady himself.

193. It is evident from the wide divergence among the principles which schools old and new have accepted as the basis of ethics and of systems of justice, that many conflicting, or at any rate, one-sided views may arise when the attempt is made to introduce order, definiteness, and consistency into existing ethical concepts. This whole conflict and one-sidedness of opinion, together with the innumerable fluctuations that may find a place here besides,—all this is likely to be reproduced in youthful minds, particularly where they make it a point of going their own way. Very frequently acquired principles adjust themselves to inclinations; the subjective side of character adapts itself to the objective. Now, while it is the business of instruction to correct error, training must avail itself of those opportunities that reveal a directing of thoughts by inclination.

194. When, however, the pupil has once established confidence in his disposition as well as in his principles, training must withdraw. Unnecessary judging and over-anxious observation would only impair naturalness, and give rise to extraneous motives. When once self-culture has been assumed, it should be left alone.

SECTION IV

SYNOPSIS OF GENERAL PEDAGOGICS FROM THE POINT OF VIEW OF AGE

CHAPTER I

The First Three Years

195. Owing to the delicate character of the thread of life during the earliest years, care for the body, a subject falling outside the limits of the present discussion, has precedence of everything else. The state of health, accordingly, implies great variations in the time available for profitable culture of the mind. But short as this time may be, it is extremely important, because of the great receptivity and susceptibility of the first period of life.

The lines of study suggested by these few remarks upon infancy have been arduously pursued in recent years by Perez,[21] Preyer,[22] Baldwin,[23] and others. The attempt has been made in these works to show how the psychical and physical powers of the young child actually unfold. In this way it has been possible to correct many erroneous deductions from adult psychology, thus making elementary training more successful. [199]

[21] Perez, "The First Three Years of Childhood."

[22] Preyer, (*a*) "Mental Development in the Child," (*b*) "The Development of the Intellect," (*c*) "The Senses and the Will."

[23] Baldwin, (*a*) "Mental Development in the Child and the Race," (*b*) "Social and Ethical Interpretations."

196. Those moments when the child is fully awake and free from suffering should always be utilized by presenting, but not obtruding, something for sense-perception. Powerful impressions are to be avoided. The same caution applies to violent changes; very slight variations often suffice to revive waning attention. It is desirable to secure a certain completeness of eye- and ear-impressions, so that the senses may be equally at home everywhere within the fields of sight and sound.

197. As far as safety permits, the spontaneous activity of the child should have free play, primarily that he may get practice in the use of every limb, but also in order that by his own attempts his observations of objects and their changeableness may be enlarged.

198. Unpleasant, repellent impressions of persons, whoever they are, must be most carefully guarded against. No one can be allowed to treat a child as a plaything.

199. On the other hand, no one must allow himself to be ruled by a child, least of all when the child becomes importunate. Otherwise, wilfulness will be the inevitable consequence, a result almost unavoidable with sickly children, by reason of the attention demanded by their sufferings.

200. A child must always feel the superiority of adults, and often his own helplessness. The necessary obedience is founded on this feeling. With consistent treatment, persons constantly about the child will secure obedience more readily than others who are rarely present. Outbursts of passion must be given time to subside unless circumstances urgently require a different course. [200]

201. On rare occasions there may be an exhibition of force inspiring enough fear to make a threat effective and to check an excess of animal spirits. For if government is to escape the extremely harmful necessity of severe disciplinary measures later on, it must become firmly established during the earliest years of childhood.

202. The language of children demands scrupulous attention from the beginning, in order to prevent the formation of incorrect and careless habits of speech, which at a later period it usually requires much trouble and loss of time to eradicate. But literary forms of expression that are beyond the comprehension of children are to be strictly avoided.

[201]

CHAPTER II

The Ages from Four to Eight

203. The real boundary line is fixed not by age, but by that stage of development when the helplessness of the first stage is superseded by control of the limbs and a connected use of language. And the mere fact that children are now able to free themselves from much momentary discomfort carries with it greater calmness and cheerfulness.

204. In proportion as the child learns to help himself, assistance from without must be withdrawn. At the same time government must increase in firmness, and with many children in severity, until the last traces of that wilfulness vanish, which the former period does not as a rule wholly escape. But this presupposes that no one provoke the child unnecessarily to any kind of resistance. The firmer the established order of things about the child, the readier his compliance.

205. The child must be given as much freedom as circumstances will permit, one purpose being to induce frank self-expression, and to obtain data for a study of his individuality. Still, the main thing at this age is to guard against bad habits, especially such as are connected with objectionable tendencies of [202] disposition.

206. Two of the ethical ideas concern us here directly, each, however, in its own way. They are the ideas of good-will and perfection. Some particular aspects of the latter a child will almost always hit upon himself. The former less often springs up spontaneously; it has to be implanted, and this cannot always be done directly.

207. The ill-will, which many children exhibit frequently, is always a bad sign,—one that needs to be treated very seriously. A character once perverted in this respect can no longer be radically changed for the better. And this perversion sometimes begins very early. The steps to be taken in this connection are determined by the following considerations:—

208. In the first place, younger children are not to be left alone very much. Their life should be a social life, and their social circle one subject to strict order. This requirement fulfilled, all manifestations of ill-will are at variance with the rule; and as soon as they appear, the child finds himself opposed by the existing state of things. Now, the more he has grown accustomed to participation in the common will, to occupying his time, and being happy within its pale, the less will he be able to bear the feeling of isolation. To punish a child for an exhibition of ill-will, leave him alone.

209. But such punishment presupposes the undiminished sensitiveness of the younger child, who, on [203] being left alone, begins to cry, and feels utterly helpless and weak, but who, on the other hand, becomes cheerful again the moment he is readmitted into the social circle. If this period has been neglected, if the ill-disposed child has already caused aversion in the circle in which he could have been happy, one feeling of ill-will begets another in return, and nothing remains but to insist on strict justice.

210. The mere social spirit which keeps ill-will at a distance, is, of course, very far from being good-will; children are even prone to look upon descriptive illustrations of the latter, in the ordinary run of books for children, as fables easily invented. Hence the first thing to make sure of is faith in good-will. We have in mind here especially the child who through force of habit has lost his appreciation of the kindnesses constantly showered upon him in the course of his education. Deprive him of some of the care to which he is accustomed; its renewal will then make him recognize and prize it as a voluntary act. When, on the contrary, children regard what is being done for them as their right, or as the effect of some sort of mechanism, this blunder of theirs becomes a fruitful source of the most manifold moral evils.

211. To the union of kindness with the necessary degree of severity, we must add friendliness, lest the [204] heart of the child become chilled, and the germs of good-will perish. During the period under consideration, the child's frame of mind is still determined directly by the treatment he receives. Continued unfriendliness of manner produces dull indifference. The twofold problem of lifting the idea of good-will into adequate prominence and of actually awakening sentiments of good-will can, it is true, not be solved as early as childhood. But much has been gained if sympathy, supported by sociable cheerfulness, unites with a belief in the good-will of those on whom the child feels dependent, as if they were higher beings. The soil is ready now for religious culture and its furthering influences.

212. The idea of perfection in its universal aspect is indeed as foreign to the child's mind as that of good-will; nevertheless, the rudiments of what this idea implies can be imparted with far greater assurance of success. As the child grows and thrives, his strength and accomplishments increase likewise, and he takes pleasure in his own progress. But here innumerable differences in kind and in degree demand our observation, particularly in view of the purpose of linking instruction to the stage of growth. For it is during this period that synthetic as well as analytic instruction begins, although it does not as yet normally constitute the chief occupation of the child.

213. As the child's sphere of free activity widens and his own attempts create a growing store of [205]

experiences, which the teacher will often find it very necessary to augment by purposely showing him about, the earlier fancies are gradually being overbalanced by experiential knowledge, although different individuals may exhibit great variations of ratio. From this impulse to appropriate the new, spring the numerous questions children put to the teacher, on the tacit assumption that he is omniscient. They are the outcome of the mood of the moment, they are purposeless, and most of them do not recur if not answered then and there. Many of them concern words alone, and cease on mention of some suitable designation of the object in question. Others relate to the connection of events, especially to motives underlying the actions of human beings, fictitious and real alike. Now, although many questions cannot, while others must not, be answered, the tendency to ask questions should, generally speaking, receive constant encouragement as a sign of native interest, of the absence of which the teacher often becomes painfully aware later on without being able by any skill on his part to revive it. Here an opportunity is presented for preparing the ground in many directions for future instruction. Only, the teacher has to refrain, in answering questions, from the prolixity of untimely thoroughness; what he ought to do is to sail on the waves of childish fancy. And this does not usually lend itself to experiments; its movements [206] are, on the contrary, often inconveniently capricious.

214. So long as there can be no fixed time for the analytic lessons woven into answers to the questions of children, analytic instruction is coincident with the guidance of the child's attention, with his social intercourse, with his occupations and the consequent cultivation of habits, with hardening exercises, ethical judgments, and the earliest religious impressions; in some measure also with reading exercises.

215. To the latter portion of this period belong the first steps in synthetic instruction, reading, writing, ciphering, the simplest modes of arrangement, and the first observation exercises. If the child is as yet incapable of uniform attention during a whole hour, the teacher will be satisfied with smaller divisions of time; the degree of attention is more important than its duration.

Note that the subjects enumerated fall into different groups. Counting, arranging, observing, are different phases of the natural development of the mind. Instruction does not create these activities; its business is merely to accelerate them. At the beginning, therefore, our mode of procedure must be as much as possible analytic. On the other hand, reading and writing can be taught only synthetically, although on the basis of an antecedent analysis of speech sounds.

(1) Arranging—commonly neglected, though wrongly so—is an exceedingly easy exercise in itself, and [207] facilitates the performance of many other tasks. It is therefore appropriate for children. That three objects may change places from right to left (from front to rear, from above to below) and *vice versa*—this is the beginning. The next step is to show that three objects admit of six permutations in a straight line. To find how many pairs can be formed out of a given number of objects, is one of the easiest problems. How far to go, is a matter to be determined by circumstances. Not letters, however, but objects,—the children themselves,—should be changed about, permuted, and varied in position. The teaching of a subject like this must in a measure have the semblance of play.

(2) The first observation exercises begin with straight lines drawn vertically or cross-wise. Use may be made also of knitting needles variously placed, side by side or across each other, of domino checks, and of similar objects. Next comes the circle, subdivided and presented in manifold ways.

(3) For arithmetic, likewise, concrete objects are needed,—coins, for example, which are counted and arranged in different groups to illustrate sums, differences, and products. At first the highest number employed should not exceed, say, twelve or twenty.

(4) For work in reading we may avail ourselves of letters and numbers printed on cards, which lend [208] themselves to a variety of arrangements. If children are slow about learning to read, the blunder must not be made of neglecting their mental culture in other directions, as though reading were its necessary prerequisite. Reading often demands a large amount of patience, and should never be allowed to produce a feeling of aversion to teachers and books.

(5) Writing is ushered in by the elementary drawing that must accompany observation exercises. Writing itself, when once well started, furthers reading.

216. But already at this point many fall behind. Puzzled at first by the demand upon them for the dull labor of learning, they surrender themselves later on to the feeling of incapacity. In large schools, where there are always some outstripping the rest, and where the majority are trying to keep up with the pace set, performance can be had more readily, although it is performance by imitation rather than by an inner sequence of thought. And even here we find thoroughly disheartened laggards.

[209]

CHAPTER III

Boyhood

217. The boundary line between boyhood and early childhood is fixed, so far as this is possible at all, by the fact that the boy, if allowed to do so, will leave the company of adults. Formerly he felt insecure when left alone: now he considers himself fairly well acquainted with his immediate environment, beyond which vistas of all sorts are opening. Accordingly, at this stage it becomes incumbent on the adult to attach himself to the boy, to restrain him, to divide the time for him, and to circumscribe the fancies born of his self-confidence,—a course of action rendered all the more necessary by the circumstance that the boy is a stranger as yet to the timidity with which the youth joins the ranks of men. For boyhood is marked off from adolescence by this, that the boy's aims are still unsettled; he plays and takes no thought of to-morrow. Moreover, his dream of manhood is one of arbitrary power. The play-impulse remains active for a long time, unless checked by conventionality.

During this period, the work of linking instruction to sense-impression is by no means to be omitted [210] entirely, not even where fair progress has already been made in scholarship. We must make sure of a solid foundation.

218. Our chief concern during the age of boyhood must be to prevent the premature fixation of the circle of ideas. It is for instruction to undertake the task of doing so. True, by far the greatest part of the process of learning, however manifold, is performed through the interpretation of words, the pupil supplying the meaning out of the mental store collected previously. But this very fact obviously implies that quantitively the pupil's stock of ideas is for the most part complete; instruction merely works it up into new forms. Accordingly, such shaping must take place while the material is still in a plastic state; for with increasing years it gradually assumes a more solid character.

219. Boys differ from girls, individuals differ from one another; and the subjects taught, together with the methods of teaching them, should be differentiated accordingly. But here the family interposes the interests of rank or station, and claims the right to determine by these how much or how little instruction a boy needs.

Looked at pedagogically, each study calls for a corresponding mental activity to be suited to the general condition of the individual. Its success must not involve exhaustion of the pupil's powers, nor make demands upon them at the wrong time.

But it would be an error to argue that one who is being initiated into one subject ought to combine [211] with that subject a second, third, or fourth, on the ground that subjects one, two, three, and four are essentially interrelated. This conclusion holds for scholars, who, so far as they are personally concerned, have long passed beyond preliminary pedagogical considerations, and even in their case it applies only to those branches which are intimately connected with their specialties; it has nothing to do with the psychological conditions by which the course of education must be governed. Only too frequently do masses of ideas remain isolated despite the fact that the objects corresponding to them are most intimately and necessarily interconnected; and such isolation could not have been prevented by merely starting work in a large web of erudition in a number of places.

The case is different where certain studies constitute the necessary preparation for thorough knowledge of one kind or another. Here we are right in concluding that one who cannot master the former is equally unable to get hold of the latter.[24]

[24] These remarks upon correlation are instructive in view of later developments of the Herbartian school in Germany. The reader is referred to discussions in the First and Second Year-Books of the National Herbart Society.

220. It is difficult to deal with the rare instances of tardy development unless we find that they are due to neglected health, or to lack of assistance in enlarging the range of experience, and to failure to [212] change the mode of instruction. Here an attempt may be made to supply what is wanting. But even where the rate of progress becomes more rapid at once, the teacher's efforts will have turned out favorably only when the boy gives also clear proof of a vigorous striving for advancement.

221. To revert to fundamental ethical principles, particular mention of the ideas of justice and equity needs to be made in this connection. These ideas issue from reflection on human relations; they are consequently less accessible to early childhood, which finds itself subordinated everywhere to the family. The boy, on the other hand, lives more among his peers, and the necessary corrections are not always administered so promptly as to leave no time for independent judgment. Not infrequently voluntary association takes place among boys, personal authority plays a part, and even usurpation of power is not rare. Now, education has to provide for clear ethical concepts and for government and training besides. But not only that; it must also furnish the kind of instruction that will exhibit similar but remote relations, for purposes of unbiassed contemplation. Such instruction must borrow its material from poetry and history.

222. To history we are referred by still another consideration. As has already been shown (206–211), the idea of good-will points to the necessity of religious culture; and this relies for support on stories, old [213] stories at that. The expansion of the pupil's power of thought which is here demanded must be generally attained, even though very incompletely, in every course of instruction, that of the village school included.

223. Another fixed goal, the importance of which exceeds even that of reading and writing, is furnished by arithmetic, which gives clearness to the common concepts of experience, and is indispensable in the practical affairs of life.

224. Decimal arithmetic no pupil would be likely to think out by himself; he would very certainly not invent Bible history. Both must accordingly be regarded as belonging preëminently to the province of synthetic instruction, which always involves the difficult problem of how to assure its entrance, as a potent factor, into existing masses of ideas. As to this, it would be a blunder to conclude that, since Bible history and history as a whole, arithmetic and mathematics as a whole, hang together, there is also a corresponding pedagogical connection (219). But so much is certain, that the efficiency of a group of ideas increases with expansion and with multiplied association. It will be an advantage, therefore, to Bible history and to arithmetic, if as wide a range is given to historical and mathematical teaching as circumstances and ability permit, even if the conditions should be such that a many-sided culture is not [214] to be expected.

225. The subjects next to be considered in the choice of material for instruction are poetry and natural history, great care being taken not to disregard the necessary sequence. The time for fables and stories should not be curtailed; it is important to make sure that boys do not lose the taste for them too early. The easiest and safest facts of zoölogy will have been presented already in connection with the picture-books of childhood. The right moment for introducing the elements of botany has arrived when the boy is collecting plants. Foreign languages would be assigned the lowest place, if particular circumstances did not in many cases lend them a special importance. The ancient classical languages, at any rate, form to such an extent the basis of the study of theology, of jurisprudence, and of medicine, they are so necessary to all higher scholarship, that they will always constitute the fundamental branches of instruction in academic preparatory schools.

It is obvious, however, that the extent of instruction depends too much on external conditions of rank and means to permit a definite prescription of instruction-material for all cases. Far less dependent is the development of many-sided interest in its relation to branches of study. If the limits set to the latter are narrow, it is still the business of instruction to secure an approximation to many-sided culture; while [215] under highly favorable circumstances the very abundance of educational help must put the teacher on his guard against losing sight of the real aim of instruction.

226. Frequently the burden of necessary and useful studies is made excessively heavy, a fact which the members of the teaching profession try to conceal from themselves, but which attracts the attention of outsiders. A few hours of gymnastics do not sufficiently counteract such evil effects. As an offset we have at best the prevention of the vices of idleness. From every point of view, for the mere reason that this matter calls for special attention and that the method of procedure has to be determined in accordance with the results of observation, the home must do its part toward relieving that natural strain which even good instruction exerts—and the school must not encroach on the time necessary for that purpose. In extreme cases, to be sure, it may be expressly demanded that the school engage the whole of a boy's time. But, as a rule, outside school-work should take up, not the largest, but, on the contrary, the smallest amount of time possible. How the remaining hours are to be employed is for parents and guardians to decide according to individual needs, ascertained by observation; and it is on them that the responsibility for the consequences rests.

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CHAPTER IV

Youth

227. Whether instruction comes to an end or is continued during this period, all it can accomplish depends now on the fulfilment of the condition that the young man himself regard the retention and increase of his attainments as something valuable. Accordingly, the interrelations of knowledge, as well as its connection with action, must be brought before his mind with the greatest possible distinctness. He must be furnished, also, with the strongest incentives to reach the goal determined upon, provided the question is merely how to overcome indolence and thoughtlessness. For it is just at this stage that the teacher needs to fear and to prevent those wrong motives which would issue merely in an artificial semblance of talent.

228. Moreover, the allowance made for the child and the boy can no longer be made for the youth. His whole ability is to be put to the test, and his position in human society determined according to the outcome. He must experience something of the difficulty of obtaining a foothold among men. Positions for which he does not seem quite prepared are contested; he is surrounded by rivals, and is spurred on [217] by expectations, which it is often difficult to moderate when most necessary.

229. If now the young man puts his trust in favorable circumstances, and, in spite of all appeals, gives himself up to the pursuit of ease and pleasure, education is at an end. It only remains to conclude with precepts and representations which future experiences may possibly recall.

230. If, on the other hand, the youth has his eyes fixed on a definite goal, the form of life which he is striving to attain, and the motives that impel him, will determine what else may be done for him. According as the ideals of honor that he makes his own are directed more outwardly or inwardly, they stand more or less midway between plans for actions and maxims.

231. The youth is no longer pliant, except when his failures have made him feel ashamed of himself. Such cases must be made use of for the purpose of making good deficiencies. But on the whole, duty requires that the stern demands of morality be held up to him without disguise. Perfect frankness can hardly be looked for any longer, and to insist on it is out of the question entirely. The reserve of the age of adolescence marks the natural beginning of self-control.

These brief paragraphs on the development of the individual through infancy, childhood, boyhood, and youth, mark an early interest in what is now known as child-study, the literature of which has [218] become voluminous. For a dissertation on the experimental study of children, and a bibliography of the subject, the reader is referred to the monograph by Arthur McDonald, of the United States Bureau of Education, entitled “Experimental Study of Children.” A smaller but more useful bibliography has been compiled by L. N. Wilson. It is found in *Pedagogical Seminary* for September, 1899.

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PART III

SPECIAL APPLICATIONS OF PEDAGOGICS

SECTION I

REMARKS ON THE TEACHINGS OF PARTICULAR BRANCHES OF STUDY

CHAPTER I

RELIGION

232. THE content of religious instruction is for theologians to determine, while philosophy bears witness that no knowledge is able to surpass the trust of religious faith. But both the beginning and the end of religious instruction call for remarks from the point of view of pedagogy.

Religious instruction culminates, if it does not end, in the rite of confirmation, and the subsequent admission to the Holy Communion. The former is characteristic of a particular Christian denomination; the latter, on the contrary, of the whole brotherhood of Christians. Now the profound emotion which [220] marks the first Communion service should imply a conquest over the feeling of separation from other denominations, especially since the mere admission to Communion is conditioned on the general requirement of earnest ethical aspiration. It is thus assumed that members of other confessions, provided they are communicants at all, have fulfilled the same condition. Preparatory instruction must work toward this end all the more, since with many persons Christian love for those who differ from them in important articles of faith belongs to the more difficult duties. Moreover, the fact that this same instruction necessarily had to set forth clearly fundamental denominational differences, lends additional weight to the necessity of inculcating the virtue of Christian charity.

233. In academic schools, if Greek is begun early enough, it is possible to deepen the impressions of Christian teaching by the dialogues of Plato that bear on the death of Socrates, particularly the “Crito” and the “Apology.” Being the weaker, however, impressions of this sort should precede the time when the solemn initiation into Christian fellowship produces its whole powerful effect.

234. Going back in thought, we find that the portion of religious instruction which deals with characteristic denominational distinctions, presupposes that which deals with tenets common to all Christians, and we find that this in turn has been preceded by Bible stories, including those of the Old [221] Testament. But the question arises, “Must we not go back to something more fundamental still?”

235. Religion cannot possibly be adequately presented by treating of it merely as a perpetuation of something historical and past. The teacher must needs make use also of the present testimony furnished by the adjustment of means to end, in nature. But even this, for which some knowledge of nature is prerequisite, and which leads up to the ideas of wisdom and power, is not the first step.

236. True family feeling is elevated easily and directly to the idea of the Father, of the father and mother. Only where such feeling is wanting does it become necessary to make churches and Sunday observance the starting-point as indications of humility and gratitude. An all-pervading love, providence, and watchful care constitute the first concept of the Highest Being,—a concept limited by the mental horizon of the child, and expanding and becoming more elevated only by degrees.

237. The process of elevating religious concepts and purifying them of unworthy admixtures must, however, have taken place, and the true concepts must have been deeply impressed, before the mythological conceptions of antiquity become known; in which case the latter will produce the right effect by the contrast between the manifestly fabulous and crude, and the worthy and sublime. If [222] managed properly, this subject presents no difficulties.

238. But there are other difficulties,—difficulties growing out of individual peculiarities. While some would be harmed by much talk about sin, because they would thus either become acquainted with it, or else be filled with fantastic terror, there are others whom only the strongest language can move, and still others who themselves preach against the sins of the world, and, at the same time, front the world in proud security. Then there are those who brood over ethical problems, and who, without having heard of Spinoza, argue that what the Highest Judge has permitted to happen he has approved of, whence might is the practical proof of right. There are contemners of mere morality, who think that prayers will consecrate their evil actions. Isolated traces of such perversions may indeed be met with even in children, especially if their glib reproduction of the sermon, or worse yet, their praying aloud, has happened to receive praise.

Hence it is necessary to observe the effect of religious instruction on each individual. Another task for home training.

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CHAPTER II

History

239. The most common blunder that younger teachers of history are apt to make is that, without intending it, they become increasingly prolix in presentation. It is not that interest deepens, but that the network of events lures them, now one way, now another. This of itself evinces preparation; but mental preparation alone does not suffice; preliminary practice, too, is necessary.

Young teachers of history, like young teachers in other subjects, are prone to error. What the prevailing error in a given study will be, is likely to depend upon conventional methods of presenting it. In Germany it is customary for the teacher himself to be the historian through whose mind all historical knowledge passes on its way to the children. But just as good writers of history are rare, so good teachers of history are likely to be few, since in an important sense they are at once teachers and oral historians. Where the text-book is depended upon for the narrative, as in the United States, a different difficulty presents itself to the teacher. What shall he do with the text, all the pupils having read it? Perhaps the commonest method is to call upon them one by one to reproduce it in class. But this is a deadening process, since it compels nineteen pupils to sit passive while the twentieth recites the words that the nineteen could repeat equally well. If, therefore, the besetting [224] fault of the teacher of history in German is prolixity, that of the American teacher is tediousness. The German method is that of primitive man, where the legends of the tribe are handed down from father to son by word of mouth; the American presentation of history is modern, where all the resources of scholarship and the advantages of the printing press are utilized. Each method has peculiar advantages, the former having the possible charm of first-hand narrative, the latter that of accuracy and comprehensiveness. The narrative method is greatly superior to that of the text-book with children whose powers of reading are not well developed; the text-book, together with its available accessories, is greatly to be preferred with older pupils capable of large amounts of reading. The following sections give a vivid description of the narrative method at its best; the commentary will attempt to show how the printed page may be made equally attractive, and, at the same time, much more useful.

240. If, to begin with, a purely chronological, but accurate, outline-view of history is to be imparted, the teacher must be able to traverse mentally the whole historical field, going with equal readiness back, forward, or across (synchronistically). The notable names must form definite groups and series; and the teacher must possess facility in making the most notable names stand out clearly from the groups, and in condensing the most salient points of a long series into a short series.

If this mastery of subject-matter is important for the narrator, it is equally important for the teacher who depends upon print for the narration. Observation of current history teaching betrays [225] the fact that the teacher rarely becomes master of his material to such an extent that he can throw it into new forms. As it stands in the book, he probably knows it; but to take liberties with the facts, to expand parts, or throw masses into brief outline, to make new groupings, or to change a long series into a short one, usually lies beyond his ability. This lesson the American teacher must learn through a better mastery of his materials.

241. Again, the teacher must make himself perfectly familiar with general notions that relate to classes of society—constitutions, institutions, religious customs, stages of culture—and that serve to explain events. But not only this; he must study likewise the conditions under which he can develop them and keep them present in the minds of his pupils. This consideration alone shuts out most generalizations from the first lessons in history. And, accordingly, ancient history, whose moving causes are simpler than the more modern political factors, maintains its place in presentations of historical material to younger pupils.

American history is better than ancient history in respect to its richness of picturesque variety. It is, moreover, easier for children to comprehend, since our present conditions have emerged directly from our pioneer state. Not only are constitutions, institutions, and religious customs to be studied, but the economic conditions of those early times are particularly worthy of study, since they are both important and interesting. Methods of farming, of conducting household affairs, such as cooking, [226] making fires, producing clothing, securing shelter, means of transportation on land and water, methods of communication, and many other similar topics are of interest to the young.

242. Furthermore, due attention must be given to the difficulty of narrating well a complex event. The very first condition is continuity of the thought-current, in order that the thread of the story may remain unbroken, except where there are intentional rests. This, in turn, presupposes fluency of speech, careful cultivation of which is indispensable to a good presentation of historical events. But mere fluency does

not suffice. There must also be resting-places, because otherwise alternate absorption and reflection cannot be secured; and because, without such pauses, even the formation of the series fails, since what has preceded arrests what follows. It is therefore not immaterial where a historical lesson begins and ends, and where the reviews are inserted.

While the narrator can utter words in succession only, the event has, in his mind, a very different form, which it is his business to convey to his hearers. Nor does the form of the event resemble a level plane; on the contrary, a manifold interest lifts some things into prominence and lets others sink. It is essential, accordingly, to distinguish how far, in a given instance, the narration should follow in a straight line the succession of events, and where, on the other hand, it should deviate to include [227] accessory circumstances. The very language used must possess the power to induce side-glances and retrospective views, even without leaving the main road. The narrator must have skill to introduce descriptions here and to linger over pictures there, but must be able also, while moving his hearers, to retain his own self-control and to keep his bearings.

243. There remains one other requisite of prime importance, namely, the utmost simplicity of expression. The condensed and abstract language of more recent historians is hardly suited even to the highest class of a secondary school; a sentimental or witty treatment, such as that found in modern novelists, must be avoided entirely. The only safe models are the ancient classics.

> The most serious fault with the text-book method is the barrenness arising from condensation. To teach history solely from a single book, even if this be among the best, is to produce an atrophy of the historical interest. It is on this account that successful teachers introduce large amounts of collateral reading, not of similarly condensed books, which would be like remedying the drouth with more dry weather, but of sections from fuller works on the same subject. In American history the pupil is directed to read selected portions of standard works like those of Fiske, Parkman, McMaster, Turner, Tyler, or earlier historians. In English history he is sent directly to such men as Gardiner, Green, Freeman, Traill, Ransome, Cunningham and McArthur, Harrison and Macaulay. The method [228] of copious readings has, in turn, its disadvantages, the most conspicuous of which is diffusiveness. It is easy for the student to become so absorbed in a mass of details that he lose the proper sense of proportion, or overlook the relative importance of events, or fail to fix firmly in mind the causal series that binds all together. In the case of either of the methods described, it is the teacher who is responsible for order and for clearness of detail. In the one case his narrative must have the artistic unity of the finished historian; in the other he must so manage a wealth of given material that the golden chain of cause and effect shall be seen binding diversity into unity. The ability to do the first is of a much rarer order than that of the second, for the art of teaching is not so difficult as the art of historical composition. The remedy for the specific difficulty which modern text-book teaching of history encounters will be discussed under paragraph 247.

The stories of Herodotus should serve the teacher as the basis for practice. In fact, they should actually be memorized in an accurate but fluent translation. The effect on children is surprising. At a later stage use may be made of Arrian and Livy. The method of the ancients of letting the principal characters utter their views and set forth their motives with their own lips, the narrator abstaining from reflections of his own, should be scrupulously imitated, and should be departed from only in the case of manifestly artificial rhetorical devices.

244. The course of preparation outlined above (240–243) having gone hand-in-hand with a thorough, pragmatic study of history, it is further necessary, in the exercise of the art acquired, to learn to expand [229] or contract, according to circumstances and the specific aims of each occasion. Concerning this point no generally applicable rules can be given, on account of the great variety of possible cases; but the following suggestions should be noted:—

In general, all helps whereby historical objects may be represented to sense—portraits, pictures of buildings, of ruins, etc.—are desirable; maps for the more ancient times must be regarded as particularly indispensable. They should always be at hand, and their study should not be neglected. Among these helps must be included charts, substantially like that by Strass entitled “The Stream of Time,” which places before the eye not only synchronistic events, but at the same time shows also the alternate union and division of countries. The lack of such aids causes the loss of much time and temper over mere memory work.

Again, attention is due to the following four aspects of the teaching of history:—

245. (1) In the first place, even the earliest lessons in geography give rise to the question, whenever the description of a country is finished, “How did things look in this country formerly?” For it is a part of correct apprehension that cities and other works of man should not be regarded as of equal age with mountains, rivers, and oceans. Now, although the teacher cannot stop, during the time set apart for [230] geography dealing with the present, to show and explain maps illustrative of the past, it will be useful, nevertheless, to add a few remarks about the early history of the country under discussion. The art of narration, however, is out of place here, inasmuch as the question, although reaching back in time, is

suggested by the country. Mention of former activity, such as migrations and wars, is made simply for the purpose of adding life to the conception of a stationary surface. At the beginning, the notes on by-gone periods in connection with the geography of Germany will accordingly be as brief as possible; gradually, however, as France, England, Spain, Italy, are being studied in succession, these historical notes become knit together, and history is thus, so to speak, made to loom up in the distance. How far to go in this direction can be determined more definitely by distinguishing between the requirements of the first, and of the second course in geography. In the first course the most general statements may suffice, *e.g.*, that not so very long ago Germany was split up more than now; that there were older times, when cities and neighboring princes often made war upon each other; that the barons used to live on more or less inaccessible heights; but that, in the interest of better order and stricter surveillance, Germany was divided into ten districts, etc.

The second course will admit of more historical facts than the first, although still only very few [231] pertaining to an older epoch. Only the more recent events can be conveniently connected with geography, except in the case of still extant historical monuments,—such, for instance, as the ruins in Italy, the composite language of England, the peculiar political organization of Switzerland with its many subdivisions, visible on the map, and its diversities of language.

If, as is sometimes recommended, the plan is adopted of preparing the way for the study of mediæval and modern history by a separate introductory course in short biographies, such a plan, though at best only fragmentary in its results, becomes at least more feasible where historical notes of the kind just mentioned are incorporated with the lessons in geography. But in this case it is all the more essential to have a chronological chart upon the wall, to some dates of which the teacher must take every opportunity to refer, in order that the pupils may obtain at least some fixed points. Otherwise scattered biographies are liable to occasion great confusion.

246. (2) The chief basis for the earlier stages of historical teaching will always be Greek and Roman history. It will not be inappropriate to commence with a few charming stories from Homeric mythology, since there is a close connection between the history of a people and their religion. Two wrong ways, however, are to be avoided: one, that of giving a detailed theogony or of including objectionable myths, [232] for the sake of completeness, which would here be devoid of a rational purpose; the other, that of having the mythological elements memorized. Only true history should be memorized by children. Mythology is a study for youths or men.

Persian history must be told approximately in the sequence and setting given by Herodotus; to it the history of Assyria and of Egypt may be joined in the form of episodes, Greece being kept well in the foreground. The stories from the Old Testament, on the other hand, form a chain of lessons by themselves. The history of Rome must at first retain its mythical beginnings.

> Whatever German opinion may be regarding the beginnings of historical instruction for their own children, American history possesses strong claims for precedence when we come to children of the United States. If we regard the chief intellectual purpose of history for the student to be the understanding of the present status through a knowledge of the historical progress that has led to it, then the primitive and pioneer history of this country is infinitely more valuable than any other to an American child, for in it lie enfolded the forces that have developed our people; whereas Greece and Rome are as distant in influence as they are in time. It is the mythology of Greece and Rome that most attracts children; but this belongs to literature rather than to history. Accounts of battles are about the same the world over, but it takes more maturity of mind to understand the Greek rage for individuality after the rise of philosophy, than it does to understand a corresponding feeling among [233] the American pioneers, to say nothing of the desirability of teaching the latter as a phase of our own development. For reasons of simplicity, therefore, as well as for psychological nearness and national importance, American history must take precedence over that of Greece and Rome for American children.

247. Suppose, now, that detailed stories after the models furnished by the ancients have won the attention of the pupils; the mere pleasure of listening to stories can nevertheless not be allowed to determine continuously the impression to be produced. Condensed surveys must follow, and a few of the main facts be memorized in chronological order.

The following suggestions will be in place here. The chief events are to attach themselves in the memory to the memorized dates in such a way that no confusion can arise. Now, a single date may suffice for the group of connected incidents constituting one main event; if it seems necessary to add another, or a third, well and good, but to keep on multiplying dates defeats the very end aimed at. The more dates the weaker their effect, on account of the growing difficulty of remembering them all. In the history of one country dates should rather remain apart as far as possible, in order that the intervening numbers may be all the more available for purposes of synchronistic tabulation, by which the histories of [234] different countries are to be brought together and connected. The same sparing use should be made of the facts of ancient geography, but those that are introduced must be learned accurately.

Granted that the primitive method of historical narration by the teacher is the most effective in its appeal to the beginner, it must be maintained that the combined knowledge and literary skill of modern historians infinitely surpass the powers of the ordinary teacher. The modern problem is, not how to compose history, but how to utilize that which has been composed. It is, in short, to guard against the confusion that comes from diffuseness. Wide historical reading may be as bad for the student as wide reading of novels. The mind may surrender itself to the passing panorama as completely in the one field as in the other, until the impressions made are like those of a ship upon a sea. The remedy is the thorough organization in the mind of the student of the knowledge gained in diverse fields. This is secured by teacher or author, or both. Some authors secure clearness of outline by topics, references, and research questions. Larned's "History of England" concludes every chapter in this way. As an illustration we may quote from Chapter XVI, which narrates the quarrel between King Charles and his people:—

202. *Charles I.*

Topic.

1. Charles's character and views.

References.—Bright, II, 608, 609; Green, 495; Montague, 118; Ransome, 138, 139.

203. *Bad Faith in the Beginning of the Reign.*

Topic.

1. Charles's marriage and broken pledges.

Reference.—Bright, II, 608, 614. [235]

204. *The First Parliament of King Charles.*

Topics.

1. Charles's designs and his treatment of Parliament.
2. Attitude of Commons and their dissolution.
3. The King's levies.

Reference.—Gardiner, II, 502, 503.

Research Questions.—(1) What were the legal and illegal sources of the King's revenues? (Ransome, 151, 155). (2) What might be said to constitute the private property of the crown? (3) What contributed to make Charles's court expensive? (Traill, IV, 76). (4) How would this need for money make for parliamentary greatness?[25]

In a similar way the remaining topics of this section of English history are recorded, guiding the pupil in his outlines and his readings. With suitable care on the part of the teacher to see that the student fixes the outline firmly in mind, there is no danger of becoming lost in a wilderness of words. At the same time the pupil's mind is enriched from many noble sources, instead of being limited by the presumably meagre resources of a single teacher. By this method the child may enjoy the benefits of modern erudition, without at the same time being harmed by dissipation of mental energy.

Other authors reach the same ends by different means. Fiske's "History of the United States," for example, concludes each chapter with a topical outline in which cause and effect are emphasized. At the close of Chapter X, on the "Causes and Beginning of the Revolution," we find the following:—

Topics and Questions

76. *Causes of Ill Feeling between England and her Colonies.*
    1. What was the European idea of a colony, and of its object? [236]
    2. What erroneous notions about trade existed?
    3. What was the main object of the laws regulating trade, etc.?
77. *The Need of a Federal Union.*
    1. One difficulty in carrying on the French wars.
    2. An account of Franklin.
    3. Franklin's plan of union, etc.
78. *The Stamp Act Passed and Repealed.*
    1. The kind of government needed by the colonies.
    2. How Parliament sought to establish such a government.
    3. The nature of a stamp act, etc.
79. *Taxation in England.*
    1. How Pitt's friendship for America offended George III.
    2. The representation of the English people in Parliament.
    3. How the representation of the people is kept fair in the United States.
    4. How it became unfair in England.
    5. Corrupt practices favored by this unfairness.
    6. The party of Old Whigs.
    7. The Tories, or the party of George III.
    8. The party of New Whigs and its aims.

9. Why George III was so bitter against Pitt.
10. The attitude of the King toward taxation in America.
11. The people of England not our enemies, etc.

At the close of these topics there follows a list of fifteen “Suggestive Questions and Directions,” with page references to Fiske’s “The American Revolution,” Vol. I, the whole being concluded by eighteen topics for collateral reading from “The American Revolution,” and from Cooke’s “Virginia.”[26]

It is a significant fact that modern text-books for children are being prepared by masters in the various departments of knowledge, not a little thought being bestowed upon the highest utilization of all modern instruments for arousing the intelligent interest of the pupils. This being the case, it is idle to rely upon primitive methods, however potent they may have been in the past, with pupils who have learned to read fluently. [237]

[25] Larned, “History of England,” Houghton, Mifflin & Co., p. 396.

[26] Fiske, John, “A History of the United States for Schools,” Houghton, Mifflin & Co., Boston, pp. 211–215.

248. The general surveys that follow the detailed narratives have this advantage for the pupil: he infers of his own accord, that in periods of which not much is told, a great deal took place, nevertheless, which the history or the teacher passes over in silence. In this way the false impressions are prevented that would be produced by purely compendious instruction, which indeed, at a later stage, becomes in a measure unavoidable.

249. (3) Mediæval history derives no assistance from the study of the ancient languages, nor is it closely related to present conditions; there is difficulty in imparting to the presentation of it more than the clearness obtainable through geography and chronology. But more than this is requisite: the burden of mere memory work without interest would become too great. The fundamental factors, Islamism, Papacy, the Holy Roman Empire, Feudalism, must be explained and given due prominence. Most of the facts down to Charlemagne may be made to contribute additional touches to the panorama of the Great Migration. With Charlemagne the chain of German history begins, and it will usually be considered [238] advisable to extend this chain to the end of the Middle Ages, in order to have something to which synchronous events may be linked later on. Yet some doubt arises as to the value of such a plan. To be sure, the reigns of the Ottos, the Henrys, the Hohenstaufen, together with intervening occurrences, form a tolerably well-connected whole; but as early as the interregnum there is a sad break, and although the historical narrative recovers, as it were, with the stories of Rudolph Albrecht and Ludwig the Bavarian, there is nothing in the names of succeeding leaders, from Carl IV to Frederick III, that would make them proper starting-points and connecting centres for the synchronism of the whole period in question. It might be better, therefore, to stop with the excommunication of Ludwig the Bavarian, with the assembly of the electors at Rhense, and with the account of how the popes came to reside in Avignon. Then—going back to Charlemagne—France, Italy, even England, may be taken up, and greater completeness given to the history of the crusades. Farther on, special attention might be called, in a synchronistic way, to Burgundy and Switzerland, and to the changing fortunes of the wars between England and France. French history may then leave off with the reign of Charles VIII, and English history with that of Henry VII, while German history, from Maximilian on, is placed again in the foreground. The Hussite [239] wars will be treated as forerunners of the Reformation. Other events must be skilfully inserted. Many modifications of grouping will have to be reserved for subsequent repetitions.

250. (4) In presenting modern history, the teacher will do well to avail himself of the fact that modern history does not cover so long reaches of time as mediæval history does, and that it falls into three sharply defined periods, the first of which ends with the treaty of Westphalia, the second extends from this date to the French Revolution, and the third, to the present. These periods should be carefully distinguished, the leading events of each should be narrated synchronistically, and a recital of the most essential historical facts about each country should follow. Only after each has been handled in this way, and the subject-matter presented has been thoroughly impressed upon the memory by reviews, will it be well to pass on to a somewhat fuller ethnographical account reaching back into the mediæval history of each country and extending forward to our own times. No harm is done by going over the same ground again for the purpose of amplifying that which before appeared in outline only.

The chief point is, that no course of instruction which claims at all to give completeness of culture can be regarded as concluded before it has introduced the pupil to the pragmatic study of history, and has [240] taught him to look for causes and effects. This applies preëminently to modern history, on account of its direct connection with the present; but mediæval and ancient history, too, have to be worked over once more from this point of view. History should be the teacher of mankind; if it does not become so, the blame rests largely with those who teach history in schools.

251. A well-compiled and well-proportioned brief history of inventions, arts, and sciences should conclude the teaching of history, not only in gymnasia, but also and especially in higher burgher schools, because their courses of study are not supplemented by the university.

Moreover, the whole course in history is properly accompanied by illustrative poetical selections, which, although perhaps not produced during the different epochs, yet stand in some relation to them; and which in some measure, even if only by illustrating ages very far apart, exhibit the vast differences in the freest activities of the human mind.

NOTE.—National history is not the same for each land, nor everywhere of equal interest, and, owing to its connection with larger events, often unintelligible to young minds when torn out of its place and presented by itself. If its early introduction is desired in order to kindle the heart, special pains must be taken to select that which is intelligible and which appeals to boyhood.

CHAPTER III

Mathematics and Nature Study

252. Aptitude for mathematics is not rarer than aptitude for other studies. That the contrary seems true, is owing to a belated and slighted beginning. But that mathematicians are seldom inclined to give as much time to children as they ought is only natural. The elementary lessons in combination and geometry are neglected in favor of arithmetic, and demonstration is attempted where no mathematical imagination has been awakened.

The first essential is attention to magnitudes, and their changes, where they occur. Hence, counting, measuring, weighing, where possible; where impossible, at least the estimating of magnitudes to determine, however vaguely at first, the more and the less, the larger and the smaller, the nearer and the farther.

Special consideration should be given, on the one hand, to the number of permutations, variations, and combinations; and, on the other hand, to the quadratic and cubic relations, where similar planes and bodies are determined by analogous lines.

[242]

Note.—This is not the place for saying much that might be said concerning that which renders early instruction in mathematics unnecessarily difficult. But it may be remarked in brief that some of these difficulties arise from the terminology, some from the teacher's accustomed point of view, and some from the multiplication of varying requirements.

(1) The phraseology used forms an obstacle, even to the easiest steps in fractions. The fraction ⅔, for example, is read two-thirds, and, accordingly, ⅔ × ⅘, two-thirds times four-fifths, instead of, multiplication by two and by four, and division by three and by five. The fact is overlooked that the third part of a whole includes the concept of this whole, which cannot be a multiplier, but only a multiplicand. This difficulty the pupils stumble over. The same applies to the mysterious word *square root*, employed instead of the expression: one of the two equal factors of a product. Matters grow even worse later on when they hear of roots of equations.

(2) Still more might be said in criticism of the erroneous view according to which numbers are recorded as sums of units. This is true as little as that sums are products; two does not mean two things, but doubling, no matter whether that which is doubled is one or many. The concept of a dozen chairs is not made up of 12 percepts of single chairs; it comprises only two mental products,—the general concept chair and the undivided multiplication by 12. The concept one hundred men likewise contains only two concepts,—the general concept man and the undivided number 100. So, also, in such expression as six foot, seven pound, in which language assists correct apprehension by the use of the singular. Number concepts remain imperfect so long as they are identified with series of numbers and recourse is had to successive counting.

(3) In arithmetical problems the difficulty attaching to the apprehension of the things dealt with is confounded with that of the solution itself. Principal and interest and time, velocity and distance and time, etc., are matters which must be familiar to the pupils, and hence must have been previously explained, long before use can be made of them for practice. The pupil to whom arithmetical concepts still give trouble should be given concrete examples [243] so familiar to him that out of them he can create over again the mathematical notion and not be compelled to apply it to them.

253. The measuring of lines, angles, and arcs (for which many children's games, constructive in tendency, may present the first occasion) leads over to observation exercises dealing with both planes and spheres. Skill in this direction having been attained, frequent application must be made of it, or else, like every other acquirement, it will be lost again. Every plan of a building, every map every astronomical chart, may afford opportunities for practice.

These observation exercises are to be organized in such a manner that upon the completion of mensuration the way is fully prepared for trigonometry, provided that besides the work in plain geometry, algebra has been carried as far as equations of the second degree.

Extended discussions as to the place and value of the ratio idea in elementary arithmetic are found in "The Psychology of Number," by McLellan & Dewey,[27] and in "The New Arithmetic," by W. W. Speer.[28] The former work advocates early practice in measuring with changeable units, claiming that the child should early acquire the idea of number as the expression of the relation that a measured somewhat bears to a chosen measurer, and making counting a special case of measuring. [244] Mr. Speer makes the ratio idea still more prominent by furnishing the school with numerous sets of blocks of various sizes and shapes with which to drill the pupils into instantaneous recognition of number as the ratio between two quantities. For an extended examination of these principles the reader may well consult Dr. David Eugene Smith's able treatise on the teaching of elementary mathematics.[29]

Note.—It is now nearly forty years since the author wrote a little book on the plan of Pestalozzi's A, B, C, of observation, and he has often had it used by teachers since. Numerous suggestions have been given by others under the title, "Study of Forms." The main thing is training the eye in gauging distances and angles, and combining such exercises with very simple computations. The aim is not merely to secure keenness of observation for objects of sense, but, preëminently, to awaken geometrical imagination and to connect arithmetical thinking with it. Indeed,

exercises of this sort constitute the necessary, although commonly neglected, preparation for mathematics. The helps made use of must be concrete objects. Various things have been tried and cast aside again; most convenient for the first steps are triangles made from thin hard-wood boards. Of these only seventeen pairs are needed, all of them right-angled triangles with one side equal. To find these triangles, draw a circle with a radius of four inches, and trace the tangents and secants at 5°, 10°, 15°, 20°, etc., to 85°. The numerous combinations that can be made will easily suggest themselves. The tangents and secants must be actually measured by the pupils; from 45° on, the corresponding figures, at first not carried out beyond tenths, should be noted, and, after some repetition, learned by heart. On this basis very easy arithmetical examples may be devised for the immediate purpose of gaining the lasting attention of the pupils to matters so simple. Observations relating to the sphere require a more complicated apparatus, namely, three movable great circles of a globe. It would be well to have such means at hand in teaching [245] spherical trigonometry. Needless to say, of course, observation exercises do not take the place of geometry, still less of trigonometry, but prepare the ground for these sciences. When the pupil reaches plain geometry, the wooden triangles are put aside, and observation is subordinated to geometrical construction. Meanwhile arithmetic is passing beyond exercises that deal merely with proportions, to powers, roots, and logarithms. In fact, without the concept of the square root, not even the Pythagorean Theorem can be fully grasped.

"Herbart's A, B, C, of Sense Perception," together with a number of minor educational works, has been translated into English.[30] It abounds in shrewd observations and ingenious devices, yet as a whole it represents one of those side excursions, which, though delightful to genius, is not especially useful to the world. To drill children into the habit of resolving a landscape into a series of triangles, may indeed be possible, but like any other schematization of the universe, is too artificial to be desirable. Nevertheless, a limited use of the devices mentioned in this section might tend to quicken an otherwise torpid mind.

[27] McLellan & Dewey, "The Psychology of Number," International Education Series, D. Appleton & Co., New York, 1895.

[28] Speer, W. W., "The New Arithmetic," Ginn & Co., Boston, 1896.

[29] Smith, David Eugene, "The Teaching of Elementary Mathematics," Ch. V, The Macmillan Co., New York, 1900.

[30] Eckoff, William J., "Herbart's A, B, C, of Sense Perception," International Education Series, D. Appleton & Co., New York, 1896.

254. But now a subject comes up that, on account of the difficulties it causes, calls for special consideration, namely, that of logarithms. It is easy enough to explain their use, and to render the underlying concept intelligible as far as necessary in practice—arithmetical corresponding to geometrical series, the natural numbers being conceived of as a geometrical series. But scientifically considered, logarithms involve fractional and negative exponents, as also the application of the Binomial [246] Theorem. The latter, to be sure, is merely an easy combinatory formula so far as integral positive exponents are concerned, but, limited to these, is here of comparatively little use.

Now, since trigonometry in its main theorems is independent of logarithms, but is little applied without their aid, the question arises whether beginners should necessarily be given a complete and vigorously scientific course in logarithms, the highly beneficial instruction in trigonometry being postponed until after the successful completion of such a course, or whether the practical use of logarithms is to be permitted before accurate insight into underlying principles has been gained.

NOTE.—The difficulty encountered in this subject—undoubtedly one of those difficulties most keenly felt in teaching mathematics—is after all only an illustration of the injurious consequences of former sins of omission. If the geometrical imagination were not neglected, there would be ample opportunity, not only for impressing far more deeply the concept of proportion, demanded even by elementary arithmetic, but also for developing early the idea of function. The object lessons mentioned above have already illustrated the dependence of tangents and secants on angles. When these relations of dependence have become as familiar as may be expected after a half year's instruction, sines and cosines also are taken up. But it is not sufficient to leave the matter here. Somewhat later, about the time when mensuration is introduced, the squares and cubes of natural numbers must be emphasized, and very soon committed to memory. Next it should be pointed out how by finding the differences of squares and cubes respectively, and then adding these differences, the original numbers may be obtained again. A [247] similar treatment should be accorded to figurate numbers.

Small wooden disks, like checker-pawns, commend themselves for the purpose. By means of them various figures are found. The pupils are asked to indicate how many disks they need to construct one or the other kind of figures. A further step will be to show the increase of squares and cubes corresponding to the increase of the root, and to make this information serve as the preparation for the elementary parts of differential calculus. Now the time has come for passing on to the consideration of consecutive values of the roots, which are found to differ by quantities of continuously decreasing smallness as one progresses continuously through the number system. And so, after the logarithms of 1, 10, 100, 1000, etc., also of 1/10, 1/100, etc., have been gone over many times, forward and backward, the conception is finally reached of the interpolation of logarithms.

255. In schools where practical aims predominate, logarithms should be explained by a comparison of the arithmetical with the geometrical series, and the practical application will immediately follow. But even where recourse is had to Taylor's Theorem and the Binomial Theorem, the gain to the beginner will not usually be very much greater. Not as though these theorems, together with the elements of differential calculus, could not be made clear; the real trouble lies in the fact that much of what is comprehended is not likely to be retained in the memory. The beginner, when he comes to the

application, still has the recollection of the proof and of his having understood it. Indeed, with some assistance he would be able, perhaps, to again retrace step by step the course of the demonstration. But [248] he lacks perspective; and in his application of logarithms it is of no consequence to him by what method they have been calculated.

What has been said here of logarithms may be applied more generally. The value of rigid demonstrations is fully seen only when one has made himself at home in the field of concepts to which they belong.

It is customary in American schools to take up elementary algebra and elementary geometry upon the completion of arithmetic, both algebra and geometry being anticipated to some extent in the later stages of arithmetic. The following paragraphs from the pen of David Eugene Smith[31] indicate some of the advance in algebra since Herbart's time:—

"The great revival of learning known as the Renaissance, in the sixteenth century, saw algebra take a fresh start after several centuries of complete stagnation. Tartaglia solved the cubic equation, and a little later Ferrari solved the biquadratic. By the close of the sixteenth century Vieta had put the keystone in the arch of elementary algebra, the only material improvements for some time to come being in the way of symbolism. For the next two hundred years the struggle of algebraists was for a solution of the quintic equation, or, more generally, for a general solution of an equation of any degree.

"The opening of the nineteenth century saw a few great additions to the theory of algebra. The first was the positive proof that the general equation of the fifth degree is insoluble by elementary algebra, a proof due to Abel. The second was the mastery of the number systems of algebra,—the [249] complete understanding of the negative, the imaginary, the incommensurable, the transcendent. Other additions were in the line of the convergency of series, the approximation of the real roots of numerical equations, the study of determinants—all finding their way into the elements, together with the theories of forms and groups, which must soon begin to influence the earlier chapters of the subject.

"This hasty glance at the development of the subject is sufficient to show how it has been revolutionized in modern times. To-day it is progressing as never before. The higher culture is beginning to affect the lower; determinants have found place in the beginner's course; graphic methods, objected to as innovations by some who are ignorant of their prominence in the childhood of science, are reasserting their rights; the 'imaginary' has become very real; the inheritances of the algebra-teachers' guild are being examined with critical eyes, and many an old problem and rule must soon go by the board. It is valuable to a teacher to see what changes have been wrought so that he may join in the movement to weed out the bad, to cling to the good, and to reach up into the realm of modern mathematics to see if, perchance, he cannot find that which is good and usable and light-shedding for the elementary work."

The true order of elementary mathematics, according to Dr. Smith, is substantially as follows:—

1. Elementary operations of arithmetic.
2. Simple mensuration, correlation with drawing, the models in hand:—
   Inductive geometry—the primitive form of the science.
3. Arithmetic of business and of science, using the simple equation with one unknown quantity wherever it throws light upon the subject. [250]
4. Simple theory of numbers, the roots, series, logarithms.
5. Elementary algebra, including quadratic and radical equations.
6. Demonstrative plane geometry begun before the algebra is completed and correlated with it.
7. Plane trigonometry and its elementary applications.
8. Solid geometry. Trigonometry. Advanced algebra, with the elements of differentiation and integration.

"The student should then take a rapid review of his elementary mathematics, including a course in elementary analytic geometry and the calculus. He would then be prepared to enter upon the study of higher mathematics."

[31] Compare Smith, David Eugene, "History of Modern Mathematics," in Merriman & Woodworth's "Higher Mathematics," Wiley, New York, 1896.

256. Demonstrations taking a roundabout way through remote auxiliary concepts are a grave evil in instruction, be they ever so elegant.

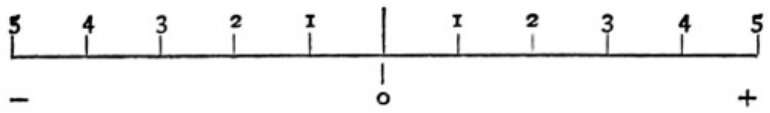
Such modes of presentation are rather to be selected as start from simple elementary notions. For with these conviction does not depend on the unfortunate condition requiring a comprehensive view of a long series of preliminary propositions. Thus Taylor's Theorem can be deduced from an interpolation formula, and this, in turn, from the consideration of differences, for which nothing is needed beyond addition, subtraction, and knowledge of the permutation of numbers.

The following account of imaginary and complex numbers by Dr. David Eugene Smith is so lucid that it is given at length:—

"The illustrations of the negative number are so numerous, so simple, and so generally known from [251] the common text-books that it is unnecessary to dwell upon them.[32] Debt and credit, the scale on the thermometer, longitude, latitude, the upward pull of a balloon compared with the force of gravity, and the graphic illustration of these upon horizontal and vertical lines—all these are familiar.

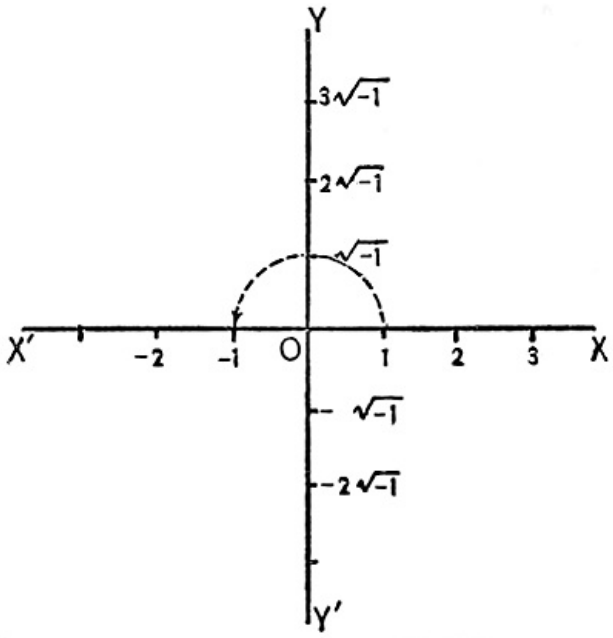
"But the imaginary and complex numbers have been left enshrouded in mystery in most text-books. The books say, *inter lineas*, 'Here is $\sqrt{-1}$; it means nothing; you can't imagine it; the writer knows nothing about it; let us have done with it, and go on.' Such is the way in which the negative was treated in the early days of printed algebras, but now such treatment would be condemned as inexcusable. But there is really no more reason to-day for treating the imaginary so unintelligently than for presenting the negative as was the custom four hundred years ago. The graphic treatment of the complex number is not to-day so difficult for the student about to take up quadratics as is the presentation of the negative to one just beginning algebra.

"Briefly, the following outline will suffice to illustrate the procedure for the complex number:—



"1. Negative numbers may be represented in a direction opposite to that of positive numbers, starting from an arbitrary point called zero. Hence, when we leave the domain of positive numbers, *direction* enters. But there are infinitely many directions in a plane besides those of the positive and negative numbers, and hence there may be other numbers than these.

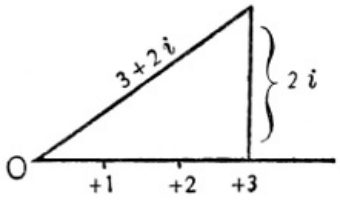
"2. When we add positive and negative numbers we find some results which seem strange to a [252] beginner. For example, if we add +4 and −3 we say the sum is 1, although the *length* 1 is less than the length 4 or the length −3; yet this does not trouble us because we have considered something besides length, namely, direction; it is true, however, that the sum of 4 and −3 is less than the absolute value of either. This is seen to be so reasonable, however, from numerous illustrations (as the combined weight of a balloon pulling up 3 lbs., tied to a 4-lb. weight), that we come not to notice the strangeness of it; graphically, we think of the sum as obtained by starting from 0, going 4 in a positive direction, then 3 in a negative direction, the *sum* being *the distance from 0 to the stopping-place*.



"3. If we multiply 1 by −1, or by $\sqrt{-1} \cdot \sqrt{-1}$, or by $\sqrt{-1}$ twice, we swing it counter-clockwise through 180°, and obtain −1; hence, if we multiply it by $\sqrt{-1}$ once, we should swing it through 90°. Hence we may graphically represent $\sqrt{-1}$ as the unit on the perpendicular axis YY′, and this gives illustration to

$$\sqrt{-1},\ 2\sqrt{-1},\ 3\sqrt{-1},\ \cdots\ -\sqrt{-1},\ -2\sqrt{-1},\ -3\sqrt{-1},$$

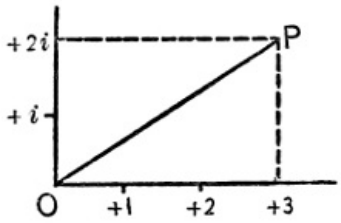
or, more briefly, $\pm i$, $\pm 2i$, $\pm 3i$, $\cdots$ where i stands for $\sqrt{-1}$. We therefore see that i is a symbol of quality (graphically of direction), just as is + or −, and that $-3 \cdot 5i$, $i\sqrt{5}$, etc., are just as real as [253] $-3 \cdot 5$, $\sqrt{5}$, etc. It is impossible to look out of a window $-3 \cdot 5$ times as it is to look out $-3 \cdot 5i$ times; strictly, one number is as 'imaginary' as the other, although the term has come by custom to apply to one and not to the other.



"4. The complex number 3 + 2*i* is now readily understood. Just as 3 + (−2) is graphically represented by starting from an arbitrary zero, passing 3 units in a positive direction (say to the right), then 2 units in the opposite direction, calling the sum the distance from 0 to the stopping-point, so 3 + 2*i* may be represented graphically. Starting from 0, pass in the positive direction (to the right in the figure) 3 units, then in the *i* direction 2 units, calling the sum the distance from 0 to the stopping-place.

"Of course the question will arise as to the hypotenuse being the sum of the two sides of the right-angled triangle. But the case is parallel to that mentioned in paragraph 2; it is not the sum of the *absolute values*, any more than is 1 the sum of the absolute values of 4 and −3; it is the sum when we define addition for numbers involving direction as well as length.

"A simple illustration from the parallelogram of forces is often used to advantage.



"Suppose a force pulling 3 lbs. to the right (+3 lbs.) and another pulling 2 lbs. upwards (+2*i* lbs.); required the resultant of the two. It is evident that this is *OP*, *i.e.*, *OP* = 3 + 2*i*.

"This elementary introduction to the subject of complex numbers shows that the 'imaginary' element is easily removed, and that students about to begin quadratics are able to get at least an [254] intimation of the subject. This is not the place for any adequate treatment of these numbers: such treatment is easily accessible. It is hoped that enough has been presented to render it impossible for any reader to be content with the absolutely meaningless and unjustifiable treatment found in many text-books."[33]

[32] See Beman & Smith's "Elements of Algebra," p. 17.

[33] For an elementary presentation of the subject, see Beman and Smith's "Elements of Algebra," Boston, 1900. For a history of the subject, see Beman and Smith's translation of Fink's "History of Mathematics," Chicago, 1900, or Professor Beman's Vice-Presidential Address before the American Association for the Advancement of Science, 1898, or the author's "History of Modern Mathematics," already mentioned.

257. The pedagogical value of mathematical instruction, as a whole, depends chiefly on the extent to which it enters into and acts on the pupil's whole field of thought and knowledge. From this truth it follows, to begin with, that mere presentation does not suffice; the aim must be rather to enlist the self-activity of the pupil. Mathematical exercises are essential. Pupils must realize how much they can do by means of mathematics. From time to time written work in mathematics should be assigned; only the tasks set must be sufficiently easy. More should not be demanded and insisted on than pupils can comfortably accomplish. Some are attracted early by pure mathematics, especially where geometry and arithmetic are properly combined. But a surer road to good results is applied mathematics, provided only the application is made to an object in which interest has already been aroused in other ways. [255]

But the pupils ought not to be detained too long over a narrow round of mathematical problems; there must also be progress in the presentation of the theory. Were the only requisite to stimulate self-activity, the elementary principles might very easily suffice for countless examples affording the pupil the pleasure of increasing facility, and even the delight arising from inventions of his own, without giving him any conception of the greatness of the science. Many problems may be compared to witty conceits, which may be welcome enough in the right place, but which should not encroach on the time for work. There ought to be no lingering over things that with advancing study solve themselves, merely for the sake of performing feats of ingenuity. Incomparably more important than mere practice examples is familiarity with the facts of nature, and such familiarity renders all the better service to mathematics if combined with technical knowledge.

258. Even young children may very well busy themselves with picture books illustrating zoölogy, and later with analyses of plants which they have gathered. If early accustomed to this, they will, with some guidance, readily go on by themselves. At a later time they are taught to observe the external

characteristics of minerals. The continuation of the study of zoölogy is beset with some difficulties on account of the element of sex.

[256] Though industriously debated, there is no field of education more undecided both as to matter and method than nature work in the grades. Some scientists would teach large amounts of well-classified knowledge; others are content when they have secured a hospitable frame of mind toward nature. If a love for flowers and birds can be cultivated in children, the latter class are satisfied that the best result has been attained. Thus a discussion arises as to which is the more valuable, *attitude* or *knowledge*.

It is feared by some that any attempt to teach real science, even of an elementary kind, will result in a paralysis of permanent scientific interest. To this it is replied that a sentimental regard for æsthetic aspects of nature insures little or no true scientific interest.

Both sides are, in large measure, wrong; for, though apparently antagonistic in their aims, they make merely a different application of a common principle, which, if not wholly erroneous, is at least inadequate. Both parties assume that the end to be attained in nature study is something only remotely related to the pupil's practical life. One would present nature for its own sake as scientific knowledge; the other would offer it for its own sake as a source of æsthetic or other feeling. The scientist often assumes that to a pupil a scientific fact or law is its own excuse for being. He thinks there must be a natural, spontaneous response to such a fact or law in the breast of every properly constituted child, so that, to imbue the mind with the scientific spirit, it is only necessary to expose it to scientific fact.

Perhaps, unfortunately for the normal child, this view is somewhat encouraged by the biographies of scientific geniuses. On the other hand, those who hold the poetic view of nature assume that there must be a native response to natural beauties in every child; so that the true method is to expose him [257] to nature's beauty, when rapture is sure to follow. Unfortunately again for the pupil, this view is also encouraged by the influence of the nature poets. The result is that natural science is presented as an end in itself—in the one case as scientific knowledge, in the other as the lovable in nature.

While it may be admitted that a few children will respond now to the one stimulus, now to the other, the great mass are not thrilled with rapture at nature's beauty, nor are they fettered by scientific interest in her laws. To become an object of growing interest to children, nature must have a better basis than natural childish delight in the novel, or reverence for scientific law. The first of these is evanescent, the second feeble.

We may agree with the scientist as with the poet, that both science and poetic appreciation are desirable ends, but they cannot be imparted to the childish mind by didactic fiat.

If there is one service greater than another that Herbart has rendered to education, it is in bringing clearly to our consciousness the supreme importance of the principle of apperception, or mental assimilation, as a working basis for educative processes. So long as a fact or a principle or system of knowledge stands as an end in itself, just so long is it a thing apart from the real mental life of the child. Even a formally correct method of presentation, should it even appeal at once to all 'six' classes of interest, will fail to create more than a factitious mental enthusiasm. It is like conversation that is 'made' interesting; it may suffice to lighten a tedious hour, but it awakens no vital response. When, however, the natural love of novelty or inborn response to the true is reinforced by a sense of warm personal relationship, when the facts of forest, or plain, or mine, or animal life flood the mind [258] with unexpected and significant revelations concerning either the present or the past in close personal touch with the learner, then instruction rests upon an apperceptive basis. Abstractions that before were pale, beauties that were cold, now receive color and warmth because they get a new subjective valuation that before was impossible.

A sedate sheep nibbling grass or resting in the shade, a skipping lamb gambolling on the green, are suitable objects of nature study. Their pelts, their hoofs, their horns, their wool, are worthy of note as scientific facts. A diluted interest may even be added by recitation of the nursery rhymes about "Little Bo-Peep" and "Mary had a Little Lamb." But these are devices for the feeble-minded.

If the teacher can reveal to the pupil the function of wool in making garments for the race, and can lead him to repeat the processes by which, from time immemorial, the wool has been spun into yarn and woven into cloth; if, at the same time, the influence of this industry upon the home life, both of men and women, can be shown, the study of the sheep becomes worthy the attention even of a boy who can play foot-ball or of a girl who can cook. The literature of the sheep is no longer infantile or fatuous. We have a gamut reaching from Penelope to Priscilla. In the words of Professor Dewey: "The child who is interested in the way in which men lived, the tools they had to do with, the transformation of life that arose from the power and leisure thus gained, is eager to repeat like processes in his own action; to make utensils, to reproduce processes, to rehandle materials. Since he understands their problems and their successes only by seeing what obstacles and what resources they had from nature, the child is interested in field and forest, ocean and mountain, plant and animal.... The interest in history gives a more human coloring, a wider significance, to his own study [259]

of nature."[34]

The conclusion arising from this argument is that nature study as an end in itself, or a thing apart from the real or imagined experiences of the pupil, is but a faint reflection of what it may become under a more rational treatment. In order of time, nature study in the earliest grades may indeed rest upon the mere delight of the childish mind in the new, the strange, the beautiful, and especially in the motion of live creatures, and may be reinforced by childish literature. When boyhood and girlhood begin, however, then the industrial motive, first in the home environment, then of primitive times, becomes the chief reliance for an abiding interest. In the reproduction of primitive processes, there is of necessity a historical element. When nature has attained a firm apperceptive basis through imitation of primitive industrial processes, and has obtained a historical background, then it may properly be further reinforced by literary reference. The poetic value of nature will now appeal to the mind with a potency that springs from inner life and experience; scientific law will now have some chance of appealing to the mind with something of the same reverence that Kant besought for the moral law. The true order of appeal in nature study is therefore as follows: For infancy, natural curiosity and delight in the movements of living creatures; for the age of boyhood and girlhood, imitation, real or imaginary, of processes depending upon natural objects and forces, together with historical and literary reference; secondarily, nature work may also appeal to youthful interest in natural law or beauty.

[34] Dewey, John, "The Aim of History in Elementary Education," *Elementary School Record*, November, 1900, University of Chicago Press.

259. With the foregoing should be conjoined much attention to external nature, to the changes [260] corresponding to the seasons, and to means of intercommunication.

Under this head belongs, on the one hand, observation of the heavenly bodies,—where sun and moon rise, how the latter waxes and wanes, where the north star is found, and what arcs are described by the brighter stars and the most conspicuous constellations.

Here belongs, on the other hand, technological knowledge, acquired partly through direct observation, partly through lessons in descriptive physical science. Technology ought not to be considered merely from the side of the so-called material interests. It furnishes very important connecting links between the apprehension of the facts of nature and human purposes. Every growing boy and youth should learn to handle the ordinary tools of the carpenter as well as rule and compasses. Mechanical skill would often prove far more useful than gymnastic exercises. The former benefits the mind, the latter benefit the body. With burgher schools should go manual training-schools, which does not mean that the latter must necessarily be trade schools. Finally, every human being ought to learn how to use his hands. The hand has a place of honor beside language in elevating mankind above the brute.

The foregoing store of information also enters into the study of geography; how, will appear in the [261] next chapter.

The soundness of the foregoing remarks is witnessed by the rapid development of manual training-schools in the last decade, and the almost universal desire, if not practice, of providing considerable amounts of manual training for the pupils of the grammar grades. The girls usually have some form of sewing and cooking, while the boys have sloyd or other similar tool work in wood. The *rationale* of requiring girls to do carpenter work instead of the forms of manual exercise that especially pertain to their sex is not yet satisfactorily established.

260. On the observation of the heavenly bodies is based popular astronomy, which provides a test as to whether the mathematical imagination has been properly cultivated.

261. Elementary statics and mechanics will serve as an early introduction to physics, which combines with the easiest portions of chemistry. Long before physics is formally presented, it must be foreshadowed by many things stimulating the attention. Notice is directed to clocks, mills, the most familiar phenomena of atmospheric pressure, to electrical and magnetic toys, etc. In burgher schools, at least, so much must be said about buildings and machines as is necessary to incite to further study in the future. The same holds for the fundamental facts of physiology.

262. As often as a new topic for study is introduced, it is important to give prominence to some of the [262] salient facts, and these must be accurately memorized. Moreover, pupils need to have practice in exact description. Where practicable, these descriptions are corrected by actually looking at the objects themselves.

Hasty and superficial observation of objects presented for inspection always calls for severe criticism; else collections and experiments become valueless. Nor should objects be shown too lavishly; pupils must often be told beforehand what they will have to look for. Frequently it may serve the purpose to employ successively good descriptions, pictures, and direct observation.

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CHAPTER IV

Geography

263. As to geography, at least two courses may be distinguished. One of these is analytic and begins with the pupil's immediate neighborhood, the topography of the place, while the other starts with the globe. Here only the former will be discussed, as the latter can be had directly from good text-books.

Note.—The usual method of taking the globe as the point of departure would be less open to criticism, if, in order to render the conception of the earth's sphericity more intelligible, attention were directed to the shape of the moon, the observation being carried on occasionally with the aid of a telescope. But even if this is done, it still remains a blunder to substitute the faint and vague idea of a huge ball for direct perception. Equally injudicious is the plan of beginning with Portugal and Spain. That spot where pupils and teacher are at the moment is the point from which the pupils must take their bearings, and in thought extend their horizon. It will never do to pass over the natural starting-points provided by sense-perception.

Had the note to this section been properly heeded, we should not have had to wait for fifty years after Herbart's death before witnessing the present rational methods of applying geographical science to elementary education. It is the proud boast of the modern elementary geography that it begins with a study of the pupil's actual environment. The term *home geography* has now become a [264] familiar one. It signifies that the pupil is taught to observe the geographical elements as they exist in his own neighborhood. He studies hills, watercourses, soil, woods, lakes, together with the industrial phenomena that come within the reach of his investigation. Upon this primary sense-basis he rears the structure of his geographical knowledge.

264. Geography is an associating science, and use must be made of the opportunities it offers for binding together a variety of facts, none of which should be allowed to remain isolated in the mind of the learner. It is not the mathematical portion, supplemented and made interesting by popular astronomy, that serves as the first connecting link between mathematics and history (second course); even the rudiments of geography may, on the basis of observation exercises, furnish practice in the determination of triangles which occur on the first maps used, although this step is not always necessary when once some skill has been acquired in singling out features worthy of note. (The determination of position by latitude and longitude is, for the first course, as irrational as the action of a traveller in Germany or France would be if he set about to put together the picture of the places where he expects to remain, with the aid of their relation to the equator and the first meridian.)

Physical geography presupposes some knowledge of nature, and furnishes the occasion for enriching [265] that knowledge. Political geography designates the manner in which man inhabits and uses the earth's surface. It is the pedagogical aim of instruction in geography to associate all this.

265. The teacher must cultivate the art of narration; his accounts must resemble those of a traveller. But the narrative should conflict with the determination of the relative position of places (by grouping them about one principal place, and in the case of more than one by the use of triangles) as little as, in teaching history, the story of events should conflict with the scheme of chronology. The two go together. The narrative is to present a clear picture, and to this end requires the support of a few fixed points in space. On the other hand, these points should not remain isolated; they are to be connected by the lines of the picture.

266. It is not a matter of indifference how many unfamiliar names are mentioned in one minute or hour. Nor is it immaterial whether they are uttered before or after perception of the picture which the map presents. The first requisite is that every map placed before the pupils be conceived of as a country; three, at most four, names of rivers, and the names of a few mountains are sufficient; completeness is out of place here. The few names given provide ample opportunity for fixing the position of notable [266] points, both with reference to one another and to the boundary lines of the country.

Due prominence having been given to these geographical features, they should then be connected, say with the aid of a blackboard, on which they are roughly sketched one by one, and properly joined together afterward. In the case of the sources and outlets of rivers, this may be done by a line to indicate the course. If now the pupils have made good previous use of their eyes, especially if they have noticed the fall of brooks and rivers, and have observed the slope of the ground in a particular region,—if they have not, the deficiency must be made good first of all,—it will not be too early to pass on to a general description of the appearance which the country under consideration would present to a traveller. And now the time has come for a somewhat fuller mention of the names of rivers and mountains, but these names must at once be gone over several times by the pupils. Doing so will reveal whether the list of new names has been made too long; it is often largely due to carelessness in this respect, if the study of geography proves barren or onerous. Next in order follow detailed descriptions of particular wonders of nature, where there are such. Attention is then given to some of the principal cities, mention being made of the number of inhabitants. Here the determination of relative location comes in again, and for this the

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self-activity of the pupils is indispensable. Finally, human industry and art, so far as they relate to the products of the country, together with the little of political organization that pupils can grasp. The names of the provinces should ordinarily be omitted from the first course.

This section is suggestive of the old geography of the last half century,—location, names, maps, the barren details of the science. Geography is something richer than all this. The old geography was political in the foregoing sense. The first break was in making it physiographical, the last in making it social. Names as such are nothing, and physical facts little more, but both become of value as soon as they are brought into relation to man,—his life, his work, his recreation. Geography is not essentially the location of places, nor is it physiography, but it is a study of the essential facts concerning the surface of the earth as they are related to man himself; it is, in short, *human* in the fullest sense. It gives a concrete explanation of civilization; it explains the production, the exchange, and, to some extent, the consumption of goods. It contrasts countries, not so much by square miles, as by the number of miles of railroads they possess. (The most momentous fact of modern civilization is the railroad. Twelve billions of dollars are invested in it in the United States alone. In view of these facts, what shall be said of those recent geographies that keep the children poring over primitive maps for years—maps without a suggestion of a railroad in them? This is an illustration of how prone education is to lag behind the progress of society.)

267. The reviews, which should be frequent, must steadily work toward a growing firmness of association between names and places. Each name is to be referred to the place it designates; hence the [268] sequence of names must often be reversed, and the map looked over in all directions and from all points of view. How far to go is determined in accordance with individual capacity. From some, only what is absolutely essential can be demanded; from others, much more, in order that they may exert themselves properly.

268. In the midst of other studies on which greater stress is laid, geography is as a rule slighted by pupils and sometimes even by teachers. This attitude merits severe criticism. Instruction in geography may be reduced to a minimum, the first course even requires this, but it should not be disparaged. With many pupils, geography is the first study which gives them the consciousness that they can learn as they are expected to learn. With all pupils, geography must connect the remaining studies and must keep them connected. Without it everything remains unstable. Historical events lack places and distances; products of nature are without the regions where they are found; popular astronomy, which is called upon so often to prevent and dispel erroneous notions, is deprived of its very basis, and the geometrical imagination of one of its most important incentives. If the facts of knowledge are allowed to fall asunder in this way, instruction endangers the whole of education.

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CHAPTER V

The Mother-tongue

269. There would be less controversy about language teaching if existing differences in conditions were given proper attention.

The most general distinction to make is that between understanding and speaking. The distance between the two is a given factor at the time when regular instruction begins. It is very great in some cases, and, again, slight in others, according to individual aptitude and early surroundings.

270. First of all, one's language was acquired by hearing it spoken, by receiving it from others, by imitation; it was refined or vulgar; it was perceived accurately or indistinctly; it was imitated by organs, good, bad, or indifferent. Little by little the imperfections of the earliest stage are outgrown, where cultured persons set a daily example and insist on correctness of speech. Sometimes, however, it takes years to bring about such a result.

271. Another factor, and one deeply rooted in individual temperament, is the stronger or weaker impulse toward expression through language. This fact elevates the language of each one above mere [270] imitation; its improvement must start from the thoughts which it seeks to express. Striking progress of this kind often occurs during adolescence.

The differences noted in this and the two preceding sections are psychological, hence common to German and American children. The problem of teaching American children their mother-tongue, assumed to be English, is both harder and easier than to teach German to German children. It is easier in that English is mostly uninflected, hence unencumbered by nice distinctions in grammatical form. This same fact, on the other hand, causes didactic difficulties, since most teachers are at a loss as to what definite body of knowledge they should or can impart that will train the child into a mastery of good English speech. The last twenty years have seen a large number of experiments on the part of authors in the effort to present a body of information and exercises calculated to secure a good training in the mother-tongue. These efforts have met with but partial success, owing to the inherent difficulties of the subject. Many who can teach a foreign language, where there is a movable fulcrum of difficulties to be overcome, such as those found in inflection, or in the meaning of foreign words, fail when confronted by a language that is practically uninflected, and in which the words are easily understood.

The old recourse was technical grammar. But this is an analytical study, calculated to lead to apprehension of subtle meanings, rather than to an instinct for correct form. Furthermore, the grammar cannot be successfully studied until after the habits of speech are fairly fixed. For these reasons, it bears much the same relation to living speech that formal logic does to real thinking. Grammar makes the mind keen to detect formal errors of speech, just as logic trains one to detect [271] fallacies in reasoning.

The first important instrument for securing good English in the early primary grades is narration by the teacher and repetition by the children. This means, potent enough to form the speech of any child whether from the slums or from the homes of those who know no English, is rarely utilized up to the full measure of its efficiency. Teachers are filled with the prepossession that they must enable their pupils to write good English, forgetting that if the mind is habituated to *think* in good English first, the problem of writing it is well-nigh solved. The requisites for successful oral training in the mother-tongue are first, the selection of a body of interesting and appropriate literature, and second, skill in narration by the teacher. Given these two things, and we have the first in great abundance, and every child will be able in a year to give extended and correct speech within the range of his sphere of thought to an almost unlimited extent. His tenacious memory for forms frequently heard, together with his delight in repeating almost word for word stories told in his presence, will produce astonishing facility in correct speech. As much of this may be written as seems best, but it is probable that there would not be great loss if a child were not called upon to write a 'composition' before he is ten or twelve years old. Could we be sure he would go through the high school, formal writing might be postponed until he enters it. Not much is ever gained by attempts to produce fruit before its natural period for appearing.

Upon the basis of this training in correct oral speech, the children may begin, when nine or ten years of age, to have systematic language lessons, which should be calculated to produce two results: first, a facile use of the pen in recording thought, special caution being given not to weary the mind [272] and body too much by unduly extending the length of the written exercises; second, an inductive approach, through brief written exercises, toward the classifications and distinctions of technical grammar. To be of use, this latter requirement should be clearly understood. The method of approach is purely synthetic. It consists in devices to enable the pupil repeatedly to use a given construction, say a relative pronoun, until the name and construction seem natural from use alone.[35]

At the age of thirteen or fourteen the analytical study of grammar should be begun. The essential thing here is that the pupil should connect *words* with the *ideas* they express, and *sentences* with the *thoughts* that give rise to them.[36] Seeing mental distinctions clearly, he has small difficulty in their written or oral expression.

[35] For extended illustration of this point, see the "Annotator's Language Lessons," the Werner School Book Co., New York, Boston, and Chicago.

[36] This position is best exemplified by Mr. George P. Brown in his "Essentials of English Grammar," the Werner School Book Co., New York, Boston, and Chicago.

272. Now such facts might seem to point to the conclusion that no special periods of instruction are needed for the mother-tongue, or at least not for language lessons alone. On the one hand, it might be urged that cultured teachers will improve the language of their pupils by their mere example, and by the occasional corrections which will of course be necessary; while, on the other hand, the gradual progress of mental development will shape the means of expression from within, to the natural limits of individual [273] capacity. But before accepting the view here given, we need to remind ourselves, in the first place, that for a long time the educated teacher is only imperfectly understood by the uneducated listener, and that instruction is very much impeded if each unusual turn of expression necessitates an inquiry as to whether its meaning is clear.

273. But this is not all. Language is also to be read and written. Hence, it becomes a standing object for consideration, and, to one whose knowledge of it is deficient, a source of embarrassment. Accordingly, the first thing for the teacher to do is to show analytically, on the basis of what has been read or written, how the meaning would be lost or altered if either single words were interchanged, or the inflectional endings (especially in German) were incorrectly chosen. That the synthesis of sentences should follow next, advancing step by step toward greater complexity, especially by means of various conjunctions, may be assumed to be well understood.

274. Now if all experienced equal difficulty in their reading and writing, the language lessons designed as a remedy would commend themselves in all cases, and might fittingly be carried to the same extent everywhere.

But here the widest divergence appears. Accordingly, where many are being taught together, the teacher will seek to connect language work with other subjects. Thus, in the course of the same [274] recitation, analytic instruction may be directed to the language side for some pupils, while for others it may be given a far wider scope. Moreover, the accompanying written exercises may have a corresponding diversity.

275. The work of a recitation period will be further diversified by the introduction of exercises in reading aloud, and in oral reproduction. But never will it be possible to raise all pupils to the same plane of proficiency. Here, above all, the determining power of individuality must be acknowledged.

276. For older boys and young men, the work in the mother-tongue will consist partly in the study of excellent examples of the various kinds of poetry and oratory, partly in the writing of essays. Such study will prove the more profitable, the more perfect the models, the more suitably they are adapted to the stage of culture already attained by the student, and the more scrupulously the teacher refrains from forcing upon him a literary taste not congenial to his nature. The least promising of all written exercises are those in letter-writing. Confidential letters every one can write, each in his own way. Best of all are written exercises with a definite and rich store of thought to draw from and admitting of various forms of treatment. Several may then emulate each other in handling the same theme, and the process of correcting will awaken greater interest in consequence.

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CHAPTER VI

Greek and Latin

277. As is well known, the exposition of grammatical distinctions and of the many turns of expression whereby language may become an adequate symbolization of thought, gains very materially in clearness by a comparison of the mother-tongue with Latin and Greek. Even with boys not more than eight years old the attempt may be made to utilize this advantage in the teaching of English, whether it has been finally decided, or not, that they are to take the regular classical course. Some boys learn, without much trouble, enough of Latin inflections to enable them soon to translate short sentences from the mother-tongue into Latin, and *vice versa*.

The present plan in Germany is to have boys in the gymnasia begin the study of Latin at the age of ten. The study is continued for a period of nine years. Greek is begun three years later and continued for six years. In the United States the prevailing plan is to postpone the study of Latin until the pupil enters the high school at the age of fourteen or fifteen. Good private schools and many city grammar schools permit children to begin when some two years younger than this. The Report on College [276] Entrance Requirements made before the National Educational Association in 1899 suggested the propriety of extending the influence of the high school over the two highest grades of the grammar school, making in effect a six-year high school course. For students who expect to enter college or technical schools this plan offers great advantages, since it permits the desirable preparation to be distributed over six years instead of being concentrated into four.

278. This experiment will not, however, be long continued; since, with the large majority of pupils, the difficulties accumulate so rapidly as to lead unavoidably to the admission that the burden cannot be assumed merely for the sake of incidental advantages. Moreover, the customary view, handed down from the time of the Reformation, of the relation of the classical languages to the sciences, and to the needs of the age, is undergoing a change more and more apparent from decade to decade. The labor implied in the study of the ancient languages now pays only where talent combines with the earnest purpose to achieve the most complete scholarship.

This remark is prophetic of the enormous increase of instruction in the sciences since Herbart's day, yet Latin has also enjoyed a phenomenal increase in popularity in American schools. According to the Report of the National Commissioner of Education the increase of enrollment in high schools for the years between 1890 and 1898 was 84 per cent, while the increase in the number of students pursuing Latin was 174 per cent.[37] This surprising growth in the number pursuing an ancient [277] language can hardly be accounted for by increased stringency in college entrance requirements in Latin, but must rather be ascribed to a growing conviction among the people that the study is indispensable in secondary education. That this must be the case is seen by the attendant circumstances. In the first place, Latin has become an elective in nearly all high schools; in the next place, many rich equivalents are offered, both in science and in modern languages; and finally our system of universal elementary education has sent large classes of persons into the secondary schools that have never previously been there. Yet the number of students electing this study grows by leaps and bounds.

Note.—(1) The assertion is often heard that the ancient languages supply a permanent standard by which to judge of the progress and the decay of modern languages; also that the ancient classics must be regarded as furnishing the models for purity and beauty in style. These and similar contentions are undeniably correct, and carry the greatest weight, but they are unpedagogical. They embody the absolute requirement, but not that which younger pupils need for *their* culture; and the large majority of those who are fitting themselves for official positions cannot afford to make themselves guardians of language and style. They must take language as it is, and acquire the manner of expression which is adapted to the world of affairs. Those higher cares belong to authors, but no one is educated for authorship.

(2) It is a familiar notion that the difficulty would diminish if the ancient languages were begun later, that then the ability to learn would prove greater. On the contrary, the older the pupil the stronger the tendency of his thought-mass toward exclusion. Memory work must be introduced early, especially where its usefulness depends [278] wholly on the acquisition of facility. It is essential to begin early in order to make it possible to proceed slowly and to avoid unpedagogical pressure. Four hours a week of Latin do not hurt a healthy, bright boy, provided his other tasks are arranged with pedagogical correctness. To put modern languages first would be to put the cart before the horse. Useful enough, however, are single French and English expressions relating to everyday life. They will be of service in acquiring the pronunciation; but a few phrases do not constitute the teaching of a language.

[37] Bennett and Bristol, "The Teaching of Latin and Greek," Longmans, Green & Co., New York, 1900.

279. The manner of teaching the ancient languages, where they are regarded as a matter of necessity or conventionality, no account being taken of pedagogical considerations, need not be discussed here. It must rather be admitted at once that no pedagogical means whatever exist, whereby those who live with

their interests strictly confined to the present could be brought to acquire, with genuine sympathy, the content of the works of antiquity.

American teachers in estimating the value of Latin for the high school student lay more stress upon training in the mastery of the mother-tongue than upon the literary contents of the classical writings. Professor Bennett in his treatment of "The Teaching of Latin in the Secondary School,"[38] places in strong light the splendid linguistic training a youth undergoes when taught by a good teacher of this subject. In Germany, since Herbart's time, Professor Russell tells us that the teaching of Latin has fluctuated between two aims—"between that view which makes the classics a purely formal discipline, and that other view which bases the worth of such a study on the acquisition of [279] humanistic culture, in contact with 'the best thoughts of the best men of antiquity.' In the one case it is considered of equal value as a means of preparation for all trades and professions dependent on intellectual acumen; in the other case it is of worth only for those who can practically apply the technical knowledge thereby acquired, or may have sufficient leisure to enjoy its æsthetic qualities. It is a question of making the ancient literature a means to an end or an end in itself."[39]

The dogma of formal discipline as a leading aim in education has nowhere been more discredited than among Herbartian writers. A judicious estimate of its truth and error is made by Professor Hinsdale.[40] His main conclusions are as follows:—

1. The degree to which power generated by education is general depends upon the extent to which it energizes the mind, and particularly the extent to which it overflows into congruent channels.

2. Such power is far more special than general; it is only in a limited sense that we can be said to have a store of mobilized mental power.

3. No one kind of mental exercise—no few kinds—can develop the whole mind.

4. No study, no single group of studies, contains within itself the possibilities of a whole education.

On the other hand, American students rarely study classics long enough to acquire much facility in mastering the literary contents of the ancient writers. If, to considerable extent, the idea of formal discipline is a delusive one, and the idea of a broad, humanistic culture is an illusion of the American [280] schoolmaster, we must justify the study of Latin upon other grounds. The linguistic advantages arising from it are obvious and decided. Among these stands first the mastery of the mother-tongue, first through the comparative study rendered necessary by translation, then by study of the roots of a large part of the English vocabulary, and more remotely by the light thrown by Latin upon history and institutional life.

There is an advantage in Latin of great, though usually unmentioned, importance, and that is its peculiar usefulness as an educational instrument, in that it presents to the pupil a graduated scale of surmountable difficulties. In this respect it is surpassed only by mathematics. The difference between a good and a poor educational instrument lies in this: a study offering few surmountable obstacles is a poor educational instrument, for the pupil can find no fulcrum upon which to use his mental powers. Thus he may stare at a natural object when directed to observe its characteristics, but he finds it hard to think when no thought problem is presented to him. But a study that involves thought problems of a definite and solvable kind is a good educational instrument, for the pupil finds something to move and a fulcrum upon which he may exert his power. Translation from an ancient language exercises the working powers of a student up to their highest efficiency, for the translation of ten sentences may easily provide the hardest kind of work for an hour; if ten lines do not, then more lines will. When a foreign language ceases to offer such surmountable difficulties, we leave it for something else that does offer them.

[38] Bennett and Bristol, "The Teaching of Latin and Greek," pp. 11–32, Longmans, Green & Co., New York, 1900.

[39] Russell, "German Higher Schools," Longmans, Green & Co., New York, 1899.

[40] Hinsdale, "Studies in Education," pp. 46–61, Werner School Book Co., Chicago, 1896.

280. Pedagogically considered, every difference in the degree of vivid realization of antiquity, in the [281] degree of its correlation with other main departments of knowledge, and in the extent to which a disagreeable aftertaste of school-day drudgery is prevented, determines the greater or smaller value to be ascribed to the knowledge acquired. If the same realization could be secured without the ancient languages and without the potency of early impressions, then the studies mentioned in preceding chapters, which outline the work of burgher schools, would leave nothing further to be desired; and the study of the ancient languages in gymnasia would be a necessary evil, highly as their incidental advantages are usually extolled.

281. But languages alone give to a boy a picture neither of bygone ages nor of men of the past; to him they are solely troublesome tasks imposed by the teacher. Nor can golden maxims, fables, and short narratives change his attitude. For even if these are well suited to the youthful mind, they do not materially offset the aversion to the work on stems, which have to be memorized; inflections, which must be practised; and conjunctions, which are required for guidance in the study of periods.

Ancient history (243, 246) is the only possible groundwork for the pedagogical treatment of the ancient languages.

282. Now it is true that if Latin is begun first, Eutropius and Cornelius Nepos suggest themselves as suitable authors for study, as soon as the merest rudiments of Latin have been learned in connection [282] with instruction in the mother-tongue (277). And their use is not to be entirely condemned, provided the teacher takes it upon himself to make the past present through narration. But, as is well known, these authors are after all very meagre, and, besides, where to look for a path beyond them still remains an open question.

283. The reasons which accord to Homer's "Odyssey" the preference for early use are familiar.[41] They are patent to every one who attentively reads the "Odyssey" with constant reference to the various main classes of interest which teaching is to awaken (83–94). But the question involved is not merely one of immediate effect, but also of finding points of departure for the later stages of instruction. There can be no better preparation for ancient history than to establish an interest in ancient Greece by means of the Homeric story. At the same time, the soil is being made ready for the cultivation of taste, and for language study.

To reasons of this kind, derived directly from the chief aim of all teaching and opposed only by tradition (the conventional *doing* of the classics), the philologists will have to listen some time, if they are not willing that, with the growing importance of history and of the natural sciences, and with the [283] increasing pressure of material interests, the study of Greek in schools should be pushed into a corner and suffer a reduction similar to that which has already taken place in the case of Hebrew. (A few decades ago Greek came very near being remitted for all but those intending to study theology.)

Of course, the "Odyssey" possesses no miraculous power to inspire those who have no talent whatever for language studies or do not take them seriously; nevertheless, as many years of experience have shown, it surpasses every other work of antiquity that might be selected in definite pedagogical effect. Moreover, its study does not preclude an early commencement of Latin (nor even of Greek, where that seems necessary); only Latin cannot be pushed with the customary rapidity at the same time; for the "Odyssey" requires an hour daily, and grammatical and lexicological work besides.

Experience has proved that the grammatical rudiments pertaining to declension and conjugation must be worked over very carefully first, although reduced to what is absolutely essential. Besides, the first lessons in the "Odyssey" ought not to exceed a few lines each time; and, during the first months, no accurate memorizing of words is to be demanded. But farther on the acquisition of a vocabulary must be vigorously insisted on; in fact, it becomes the pupil's most necessary collateral work. By continued effort [284] in this direction a considerable portion of the whole stock of words is gradually acquired; the language forms are supplied with the content to which they refer, and through which they become significant. The teacher must know exactly, not only when to hasten on, but also when to delay; for every perceptible gain in facility is likely to betray pupils into some carelessness which needs to be corrected at once. With good pupils it is not infeasible to read the whole of the "Odyssey," since facility increases very rapidly toward the end. Nevertheless, such work should not extend much beyond two years; otherwise weariness sets in, or time is taken from other things. In schools it will be well to assign the first four books to one class, perhaps the class composed of pupils nine or ten years old, the next class to begin with Book V. To determine exactly how many books each class can work up thoroughly is unnecessary, as good translations can be used to fill in the gaps that occur. The reason for the division just made will be manifest at once upon a closer inspection of the "Odyssey." Some books more advanced pupils may later on read by themselves, but they should be expected to render an account of what they are doing. It is not necessary at this stage to explain in detail the rarer peculiarities of the Homeric dialect. Such things may well be deferred until, later in the course, the study of Homer (of the "Iliad") is resumed. The [285] teacher who is afraid of the difficulties connected with the plan presented should remind himself of the fact that progress by any other path is equally beset with difficulties. While at work on Homer, care should be taken to keep pupils from being influenced simultaneously by such tales as those from the Arabian Nights, because they blunt the sense of the wonderful.

[41] These reasons apply in no way to the "Iliad," but only to the "Odyssey." Moreover, it is presupposed that religious feeling has been sufficiently awakened long beforehand. In that case the mythical elements can do no harm whatever, for, in so far as they are inconsistent with religious feeling, their effect is decidedly repellent, and renders an excess of illusion impossible.

284. Only two poets, two historians, and two philosophers need to be mentioned to indicate the continuation of the course. Homer and Virgil; Herodotus and Cæsar; Plato and Cicero. What authors should precede these, or should intervene, or follow, may be left for circumstances to determine. Xenophon, Livy, Euripides, Sophocles, and Horace will probably always retain a place by the side of those mentioned; Horace especially offers brief maxims, the after-effect of which the educator should by no means underestimate. It is obvious that Virgil and Herodotus are rendered much easier by taking up Homer first; on the other hand, the return to Homer (to the "Iliad") during adolescence, is as little to be omitted, if only on account of mythology, as the return to ancient history for purposes of pragmatic

study (250). Again, the syntactical scheme of the ancient languages, which involves far greater difficulties than do even inflections and vocabulary, is more easily mastered by placing the poets before [286] the prose-writers, because then the pupils are not compelled to struggle with all the difficulties of sentence structure at once. At any rate, it is desirable that, just as the student's Greek vocabulary is built up from the "Odyssey," his hoard of Latin words should be drawn from the "Æneid." The latter, however, will hardly be read entirely, because it cannot be gone over with nearly the same rapidity as the latter books of the "Odyssey," when facility in reading has been attained. Cæsar's "Bellum Gallicum" must be studied with exceptional carefulness, since its style comes nearer to being a desirable first model for the student of Latin than the style of the other authors in use. After this has been accomplished, the strictly systematic teaching and memorizing of Latin syntax, together with selected brief examples, is in order as one of the main lines of work. In Plato several books of the "Republic," especially the first, second, fourth, and eighth, constitute a desirable goal. That Cicero should be revealed to young minds on his brilliant side first, namely, as orator, need scarcely be mentioned. Later on his philosophical writings become important; but many passages require a fuller development of the subject-matter than is given by him.

Cicero should frequently be read aloud, or rather declaimed, by the teacher. An orator demands the living voice; the usual monotonous reading by the pupils fails to do justice to him. As regards Tacitus for [287] school use, there is a difference of opinion. Generally speaking, authors that say much in few words are particularly welcome, not merely to the explaining teacher, but also to the responsive pupil. The opposite is true of Cicero; he must be read rapidly in order to be appreciated.

> For a full discussion of Latin texts to be read, the reader is referred to Professor Bennett's chapters on "The Teaching of Latin in the Secondary Schools,"[42] pp. 111–130. For a discussion of the Greek texts, see Professor Bristol's exposition in the same volume.

[42] Bennett and Bristol, "The Teaching of Latin and Greek," Longmans, Green & Co., New York, 1900.

285. Experience has long since shown how much or how little can be done with students in Greek and Latin composition; and no method will ever be devised which would induce earlier than at present that degree of mental maturity which reveals itself in a good Latin style. So long as gymnasium pupils are no more select than they now are, the majority, so far as writing Latin is concerned, will begin something that will never lead to successful performance. It would be better, instead, to practise diligently that which can be achieved, namely, composition during the recitation hour, with the assistance of the teacher, and, afterward coöperative consideration of the appointed task, by the pupils. This plan secures the advantage of set essays without the disadvantage of innumerable mistakes, the correction of which [288] the pupil rarely remembers. Joint labor is interesting, and can be adapted to every age. As a substitute for essays, abstracts in Latin of texts previously interpreted are to be recommended, these abstracts to be made at first with the help and afterward without the help of the book in question. To abstract does not mean to imitate, and ought not to mean that. To imitate Cicero requires Cicero's talent, and unless this exists, the attempt to imitate, it is to be feared, will result in cold artificiality. Even Cæsar is not so simple that his style could be taught and learned. But many passages of Cæsar may be memorized; at first short sentences, then longer periods, finally whole chapters. The usefulness of this practice is attested by experience.

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CHAPTER VII

Further Specification of Didactics

286. The more precise determination of the theory of instruction depends on the nature of particular subjects of instruction, on the individuality of the pupil, and on the external conditions of ethical life.

287. Where the goal to be reached is technical knowledge and multiformity of scholarship, each branch of study asserts its claims to thoroughness without regard to the rest. Such is the attitude of the state, which requires many men with special training, together constituting an efficient whole. Hence it disseminates knowledge and establishes institutions of learning, without inquiring, save with reference to future official appointments, who the individuals are that avail themselves of the offered opportunities.

288. The family, on the other hand, interested as it is in the individual, must take the pedagogical point of view, according to which every human being is to realize the best he is capable of. It is essential that families should grasp this distinction, and accordingly concern themselves, not with greatness of particular achievements, but with the totality of culture possible for the individual. [290]

289. Closely connected with the foregoing is the difference between interest and skill. Skill of various sorts can be obtained by force; but it is of no value to general culture when the corresponding interest is lacking.

Insistence on this distinction is a sufficient answer to much uncalled-for criticism and much unwarrantable assumption of superior knowledge concerning the results of early stages of instruction. These results, it is charged, are inadequate; if this or that had been converted earlier into ability to do, greater progress would have been made. But when interest has not been aroused, and cannot be aroused, compulsory acquisition of skill is not only worthless, leading as it does to soulless mechanical activity, but positively injurious, because it vitiates the pupil's mental attitude and disposition.

290. Whether the pupil's individuality will endure without injury the pressure which drill in skilful performance would necessitate, is a question which at times cannot be decided except by trial. Reading, arithmetic, grammar, are familiar instances.

291. The more perfect the instruction, the greater the opportunity it affords for comparing the excellences and faults of the individuals receiving it simultaneously. This point is of importance both to the continuation of instruction and to training; to the latter, because the teacher's insight into the causes [291] of the faults which training has to combat is deepened.

292. The ethical life may attach itself to views embracing the universe; it may, on the contrary, move within a very narrow range of thought. Now while it is true that external circumstances will usually set limits to instruction, its scope should nevertheless not be narrower, but in every way wider than the realm of necessary, everyday prudence. Otherwise the individual will always be in danger of exaggerating his own importance and that of persons closely related to him.

293. It is more difficult, as a rule, to extend the mental horizon in the direction of the past, than within the present. In teaching girls, therefore, and children from the lower classes, greater prominence is given to geography and whatever can be grouped about it than to historical studies. Again, in cases where a shortening of the course of study becomes necessary, it becomes well-nigh necessary to take account of the difference in question. But, conversely, where the scope of instruction is to be wide, the historical side, because more difficult, must receive increased attention.

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SECTION II

THE FAULTS OF PUPILS AND THEIR TREATMENT

CHAPTER I

General Differentiation

294. Some faults are inherent; they are a part of the pupil's individuality. Others have sprung up in the course of time; and of these, again, some have been influenced by the factor of individuality more than others. Faults that the pupil commits are left out of account for the present. With increasing years some of the inherent faults grow, others diminish. For there is a continual change of relation between that which man derives from experience,—between those ideas which rise spontaneously, and those masses of ideas which approach stability. There is, besides, an ever varying succession of diverse reproductions. All this change is pervaded throughout by the consciousness of one's own body (the original base of support for self-consciousness) with respect not merely to its needs, but also to its powers of motion and fitness for use. Again, the apprehension of the similar is being multiplied; the ideas of things [293] approximate to general concepts. In addition, the process of judging is shaping more and more the material presented; accordingly the manner in which the individual analyzes and puts in order his knowledge becomes gradually determined. On the one hand there is a growing confidence of affirmation; on the other, questions remain, the answer to which is given over to the future. In part they become transformed into longing expectation.

Upon all that has been enumerated, the physical organization of the individual exerts retarding and furthering influences. The effect of the body is seen in a certain physiological resistance to psychical processes, and in strong physical impulses far more complex, no doubt, than ordinary experience shows.

295. Very frequently the fact forces itself upon us, that persons who have passed through many vicissitudes of fortune can nevertheless be recognized by individual traits that were already noticeable in youth. Here a certain uniformity reveals itself in the characteristic way and manner in which such persons involuntarily seize upon and work up various impressions. In order to arrive at a just estimate of his pupils, the teacher should observe this permanent element as early as possible.

Some always know the right moment and whither it calls them; they always perform the nearest duty, [294] and have their stock of knowledge uniformly well in hand. Others bury themselves in thought, and give themselves up to hopes and fears, to plans and projects: they live in the past or in the future, resent being disturbed by the present, and require time and effort to bring themselves back to it. Between the former and the latter are found others, who do indeed note the given and the present, not, however, to take it as it appears, but rather to look beyond, for the purpose of spying what lies concealed behind, or in order to move, displace, interfere, perhaps to distort, ridicule, and caricature. With many the tendency described is merely superficial. They play and tease—a common manifestation of youthful animal spirits. Now the question arises: how much seriousness lies back of the playfulness. How much depth beneath the animated surface? Here temperament enters as a factor. The play of one with a sanguine temperament comes to an end; but where sourness of temper is habitual, there danger threatens, if, as commonly happens, sport turns to earnest. Self-assertion plays a part also, manifesting itself in various ways. It assumes one form in him who has confidence in his strength, physical or mental, and another form in those who know their weakness—with or without the mental reservation as to the future employment of artifice or cunning, and so also with more or less acknowledgment of the superior power or authority. Passionate playing, on the whole, implies little seriousness; but may well indicate [295] sensitiveness and a propensity to freedom from restraint. Prudence in sport is a sign of ability to take the opponent's point of view, and to foresee his plans. Love of play is far more welcome to the teacher than indolence, or languid curiosity, or gloomy seriousness; it is one of the minor faults, if now and then work is forgotten over a game and time wasted; the situation is more grave, sometimes very grave indeed, where extravagance, or greed of gain, or secretiveness, or bad company is involved. In such cases decided interference on the part of the teacher is necessary.

296. Since courage and rationality grow with increasing years, the faults of mere weakness leave room for hope of improvement, although there is need of an invigorating mode of life, invigorating physically and mentally, and of counsel and reproof in particular instances. Under continued watchful care weak natures improve much more than at first thought would seem to be likely.

297. Unsteadiness, continual restlessness, where they accompany good health without being the result of external stimulation, are doubtful indications. Here it will be well to look to the sequence of thoughts. Where, in spite of variableness in general, thoughts are sound and well connected, this restlessness is not a serious matter. The case is worse when the opposite is true, especially when the [296] vascular system appears very irritable, and dreamlike reveries occur. Here the danger of insanity is seen lurking in the distance.

The appropriate treatment for such pupils consists in holding them strictly to definite tasks, especially to those occupations that compel a close observation of the external world, and in exacting the performance of the work assigned, without failing to encourage whatever is undertaken from choice.

298. Sensual impulses and violence of temper are apt to go from bad to worse as pupils grow older. Against these, careful supervision, earnest censure, and the whole rigor of moral principles must be brought to bear. Momentary ebullitions of passion, however, unless persistently obstinate attempts are made to justify them, need to be handled gently, that is, as evils calling for precaution and vigilance.

299. The faults hitherto noted lie for the most part on the surface. Others have to be studied as occasion offers in instruction.

There are minds so dull that even the attempt merely to secure connection with definite portions of such thoughts as they have does not succeed. Easy questions intended to raise their ideas into consciousness only increase the resistance to be overcome. They are seized with embarrassment from which they seek to escape, sometimes by a simple, “I don’t know,” sometimes by the first wrong answer [297] that comes to hand. Mental activity has to be enforced, yet remains feeble at best, and it is only in after years, under pressure of necessity, that they acquire some facility for a limited sphere. Others, whom one would be inclined to call contracted rather than generally limited, because by them reproduction is performed successfully but within a narrow compass, exhibit a lively endeavor to learn, but they learn mechanically, and what cannot be learned in that way they apprehend incorrectly. These undertake, nevertheless, to form and express judgments, but their judgments turn out to be erroneous; hence they become first discouraged and then obstinate. Again, there are those whose ideas cannot be dislodged, and still others whose ideas cannot be brought to a halt. These two classes call for a more detailed consideration.

300. Among the various masses of ideas (29) some necessarily acquire permanent predominance, others come and go. But if this relation reaches full development and becomes fixed too early, the controlling ideas no longer admit of being arrested to the extent necessary for the reception of the new material offered by instruction. This fact explains the experience that clever boys, notwithstanding the best intentions to receive instruction, yet frequently appear very unreceptive, and that a certain rigidity of mind, which in later manhood would not occasion surprise, seems to have strayed, as it were, into [298] boyhood. No one should allow himself to be betrayed into encouraging such narrowness by commendatory terms such as pertain to strength and energy; just as little, however, should clumsy teaching and its sequel, listless learning, be left out of account, as having no bearing on this state of affairs.

For, rather may it be assumed that the fault mentioned might have been largely forestalled by very early instruction of all kinds, provided such instruction had been combined with a variety of attractive rather than of too difficult tasks. Where, on the other hand, mental nervousness has once taken root, it cannot be eradicated by all the art and painstaking effort of a multitude of teachers. When the questions of a child, six years old let us say, give rise to the apprehension that they proceed from a too contracted mental horizon, there should be no delay about resorting to manifold forms of stimulation, especially in the way of widening the pupil’s experience to the greatest practicable extent.

301. On the other hand, it is not rare to find boys, and even young men, in whose minds no one thought-mass attains to any very prominent activity. Such boys are always open to every impression and ready for any change of thought. They are wont to chat pleasantly, and to form hasty attachments. Here belong those who learn easily and forget as quickly.

This defect, too, when once confirmed, resists all skill and good intentions; strength of purpose, from [299] the very nature of the case, is out of the question. The situation varies in gravity, however, according to the influences of the earliest environment. If these proved distracting, the fault mentioned assumes alarming proportions even in minds otherwise well endowed. But where some form or other of necessary respect has been steadily at work, the youth will raise himself to a higher plane than the boy gave promise of doing. Least of all, however, can the teacher allow himself to be betrayed into hoping for a future development of talent by superficial alertness, combined, it may be, with droll fancies, bold pranks, and the like. Talent reveals itself through persistent endeavor, sustained even under circumstances little favorable to it, and not until such endeavor clearly manifests itself is the thought of giving it support to be entertained.

The two faults under discussion may indeed come to light only in the course of time; nevertheless, they are inherent faults, and can be mitigated, to be sure, but not completely cured.

302. Far easier to deal with are the erratic movements of energetic characters capable of ardent enthusiasm. The mere thoroughness and many-sidedness of good instruction, which emphasizes and aims to effect rational connection and balance of mind, obviously supply the corrective.

303. Originally it would have been easier to have prevented those faults which are due to the [300] mismanagement or to the omission of early government, instruction, or training. But with time, the difficulties of a cure grow in a very rapid ratio. In general, it is well to note that the teacher has every reason to congratulate himself, if, after early neglect, there appear under improved treatment some

belated traces of those questions which belong to the sixth or seventh year of childhood (213).

CHAPTER II

The Sources of Moral Weakness

304. Under this head five main points come up for consideration:—

(1) Tendencies of the child's will impulses.
(2) Ethical judgments and their absence.
(3) Formation of maxims.
(4) Organization of maxims.
(5) Application of organized maxims.

305. (1) Where training has not provided for occupation and for the distribution of time, we must always expect to encounter an activity which has no aim, and which forgets its own purposes. From such a state of affairs arise a craving for liberty averse to all control, and, where several pupils are grouped together, contention, either for the possession of something or for the sake of showing off. Each wants to be first; recognition of the just equality of all is deliberately refused. Mutual ill-will intrenches itself and stealthily waits for an opportunity to break forth. Here is the fountain head of many passions; even those which spring from excessive sensuousness must be classed under this first head, in so far as they are promoted by lack of regulated activity. The havoc caused by passions is a pervading element in the [302] discussion of all of the remaining topics.

306. (2) It is true that education usually counteracts the tendency to indolence and to unruliness, not only by the use of the spur and the bridle, but also through guidance in the direction of the proprieties; giving rise to the thought "what will others say," it shows existing conditions as mirrored in the minds of others. But when these others are compelled to remain silent, or when the pupil is sure of their partiality, or is exposed to their errors of judgment, the effect is to vitiate rather than to arouse the ethical judgment.

Nevertheless, calling attention to the judgment of others, and not merely of particular individuals, is very much better than waiting for the spontaneous awakening of ethical judgment. In most cases the waiting would be in vain. Matters of ethical import are either too close to the ordinary human being, and so, of course, to the boy left entirely to himself, or they are too remote, *i.e.*, either they have not as yet passed outside the pale of affection or aversion, or else they are already fading from the field of vision. In neither case can an ethical judgment be formed with success. At any rate, it will vanish before it can produce an effect.

In order to reach those ethical judgments on which morality rests, the child must see will images, see them without the stirring of his own will impulse.

These will images, moreover, must embrace relations, the single members of which are themselves [303] wills, and the beholder is to keep such members equally in sight, until the estimate of value rises spontaneously within him. But such contemplation implies a keenness and calmness of apprehension not to be looked for in unruly children. Hence it may be inferred how necessary training is—serious, not to say severe, training. Unruliness must have been tamed and regular attention secured. The preliminary condition fulfilled, it is further essential that there shall be no lack of sufficiently distinct presentations of the foregoing will images. And even then the ethical judgment often matures so tardily that it has to be pronounced in the name of other persons—persons higher in authority.

307. In this connection the instances of one-sidedness of ethical judgment must not be overlooked, such as occur when one of the practical ideas stands out more prominently than another, or when that which is outwardly proper rises above them all.

308. (3) All desires persistently operative and productive of fluctuating states of emotional excitement, therefore rightly called passions, lead to experiential knowledge of the beneficial and the injurious. The beneficial suggests frequent repetition in the future, the injurious continued avoidance. Accordingly rules of life take shape, and the resolution always to observe them is made. In other words, maxims result.

From simple resolution to actual observance is still, to be sure, a far cry. But the claim for the [304] universal validity of the rule, so that the individual may regard it as applicable to others as well as to himself, enters the mind far more directly by way of desires which point forward to similar cases in the future, than it does under the guidance of ethical judgments whose universal element is abstracted from given single instances with difficulty. In fact, this difficulty is often so great that the ethical judgment itself may be missed in the search for the universal.

309. Now, the promptness and loyalty of obedience to the sum total of duties, once recognized as such and fixed through the maxims adopted, are passed upon by the moral judgment. Correct moral judgment, therefore, presupposes true insight into the value of will, which insight again can be obtained only through the ethical estimate as a whole. But in view of the circumstances pointed out a moment ago, we must expect to come upon maxims that are false or at least inaccurate. Under the latter head

fall points of honor, social obligations, fear of ridicule.

310. (4) Maxims ought to form a unit, but in youth they are not fully determined even singly, much less are they closely united into a definite whole. The proviso of exceptions still clings to them, so also that of future tests through experience.

The maxims arising out of the desires and pleasures can never be brought into perfect union with [305] those springing from ethical judgments. Accordingly the wrong subordination takes place, or, at all events, a contamination of the latter by the former.

311. (5) In the application of maxims more or less unified, the volition of the moment is apt to prove stronger than the previous resolves. Hence, man becomes only too prone to condone and fall in with discriminations between theory and practice. The consequence is a certain moral empiricism, which, if nothing else will do to justify its disregard of moral law, falls back upon pious feelings. Plans of action are formed without regard to maxims, but with the apparent compensation of another kind of morally regular life.

Such contempt of moral judgment gains ground and spreads ruin all the more, the farther the ethical judgments on which morality must rest fall short of the clearness that ought to mark them, and the cruder the pupil's knowledge is of the antithesis between them and maxims of utility or pleasure.

312. The natural aid to the formation and union of maxims is the system of practical philosophy itself. But the teaching of it involves difficulties. One of them is that such marked differences occur among young men in the relation of systematic exposition to the grade of culture which they have attained. For observations of this nature, religious instruction prior to confirmation provides an early opportunity. [306] How such instruction is to be given, is, of course, by no means immaterial, but, after all, the moral sentiments, which it gathers together and strengthens, must, in substance, already exist.

Again, if the end sought were more strictly scientific form for the moral sentiments, there would have to be ground for presuming that the student is able to appreciate that form and has acquired skill in the use of logical methods. The study of logic, together with appropriate exercises, would obviously be a necessary preliminary step. Prerequisites like these need to be borne in mind, especially in the case of lower schools and all other institutions that do not, as a rule, lead to the university.

313. Erroneous systems of ethics, moreover, might occasion the adoption of very absurd measures, concerning which, on account of the importance of the subject, at least something has to be said. Everything would be turned upside down, if, instead of bringing together and uniting maxims under the concept virtue, the attempt were made to deduce from some one formula of the categorical imperative a multiplicity of maxims and from these, rather than from the original ethical judgments, the estimates of will values, the final undertaking being, perhaps, to divert the will itself by such operations.

On the contrary, the will must early have been given such direction by government and training, that [307] its lines of tendency will of themselves coincide as nearly as possible with the paths disclosed later, when the pupil is being shown the way through ethical judgments. Those beginnings of evil noted above (305) must not be permitted to appear at all, for their consequences usually prove ineradicable. But even so, it is not certain that a way can be hewn through the errors of others to truer judgments. When, however, both ends have been gained, experience and history and literature must next be called in, in order to show clearly the confusion into which the maxims based upon pleasure and passion plunge human beings. Not until now has the time come for more or less systematic lectures, or for the study of suitable classical writers. Lastly, there will still be need of frequent appeals to moral obedience, and it will be found necessary to reinforce these appeals by reflections of a religious character.

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CHAPTER III

The Effects of Training

314. A. Training prevents passions in that it:—
(1) satisfies needs,
(2) avoids opportunities for violent desires,
(3) provides employment,
(4) accustoms to order,
(5) demands reflection and responsibility.

B. Training influences the emotions in that it:—
(1) checks violent outbreaks,
(2) creates other emotions,
(3) and supplements self-control.

C. Training impresses the courtesies of life (counteracts bad manners), consequently:—
(1) the deportment of individuals is made approximately uniform;
(2) the number of possible points of social contact becomes much greater than where strife and contention rule;
(3) while the development of one or the other individual is checked, the more important energies are not stifled, provided excess of severity be avoided. [309]

D. Training makes cautions, for:—
(1) It restricts foolhardiness,
(2) It warns against dangers,
(3) It punishes in order to make wiser,
(4) It observes and accustoms the human being to the thought of being observed.

315. Looked at as a whole, these obvious and familiar effects of training show at once that, generally speaking, its power to lessen evil is very great, and that it is capable of effectively acting upon the interrelations of various masses of ideas. But they suggest also the presence of danger. Training, by driving evil from the surface, may give rise to clandestine deeds.

316. When this happens, the relations between teacher and pupils grow increasingly abnormal, since secret practices become general and concerted, and the pupils assume a studied behavior in the presence of the teacher.

The consequences are well known:—Inexorable severity in dealing with concealed offences when discovered; great leniency in the case of open transgressions; recourse to the machinery of supervision, often even to secret watching, in order that the system of concealment may not get the better of education.

317. It lowers the dignity of the teacher to take part habitually in a competition between spy and concealers. He must not demand to know everything, although he ought not to allow his confidence to be [310] victimized by clumsy or long-continued deception.

Such difficulties, however, only make it more intensely necessary that the foundation of education be laid during the earliest years, when supervision is still easy, and the heart is reached by formative influences with greater certainty than ever afterward, and that, if possible, families should not for any length of time lose sight of their own members.

Ethical and moral judgments can be simulated; the finest maxims and principles may be learned by rote; piety may be put on as a cloak. Unmask the hypocrite, however, and turn him out, and, forthwith, he plays his game over again elsewhere. Nothing remains but recourse to severity which deters, and constant occupation under close supervision in another quarter, in order that he may get away from the hiding places of his misdeeds. Sometimes banishment is capable of bringing about improvement.

318. The will is most directly tractable in social relations, where it appears as common will. In infancy, the child, wholly devoted to his mother, is manageable through her; at a later period training is surest of success when it promotes attachments among the young and carefully fosters the seeds of goodness. The social ideas, purified by teaching, must gradually be added.

319. But as far back as boyhood, factions spring up and exclusive sets are formed, facts which the [311] teacher cannot permit to elude his vigilance.

When a kind of authority is granted to some older and tried pupils over those younger and less mature in judgment, the former become responsible; but the latter are not on that account relieved of all reflection on their own part, nor are they obliged to submit to every, though plainly unreasonable, demand of the former.

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CHAPTER IV

Special Faults

320. First of all it is necessary to distinguish between those faults which the pupil commits and those which he has. Not all faults one commits are direct manifestations of those he possesses; but those which are committed repeatedly may grow permanent. This truth must be made clear, and must be impressed upon the mind of the pupil to the full extent of his powers of comprehension.

321. In the case of false steps caused from without by unnoticed pitfalls, or made in spite of a firm resolve to the contrary, the pupil is himself usually frightened by what he has done. If so, all depends on the gravity of his offence as compared with the degree of his horror.

There is a host of minor faults, blunders, and even acts resulting in damage, which tax the patience of the teacher severely; but it would imply a mistaken conception of the difficulty of moral education, if he should repel the frankness of his pupils by harsh treatment of such offence. Frankness is too essential a factor to be sacrificed; once gone it will hardly ever wholly return.

322. But the first lie uttered with evil intent, the first act of theft, and similar actions positively [313] detrimental to morality or health, have to be dealt with severely, and always in such a way that the pupil who thought he was permitting himself a slight fault, is made to experience most thoroughly both fear and censure.

323. Serious treatment of a first offence is demanded also where pupils try to see how far they may safely disregard authority and command. It is important, however, not to overestimate the intention of these attempts; important also to exhibit strength, but not anger. Yet there are cases where the teacher must seem to act with some warmth, because the necessary treatment, if combined with coldness, would only intensify bitterness and cause pain an inordinate length of time. But very likely as much feeling as is expedient will show itself upon simply laying aside the assumed coldness.

324. On the restoration of perfect order after a period during which government and training were lacking, a large number of faults will disappear of themselves, and accordingly do not require to be combated one by one. Respect for order, and incentives sufficiently strong to regular activity, are the main things.

325. Faults which the pupil seems to possess are often only the borrowed maxims of the society which he hopes to enter. Here it becomes the business of education to set him right, if possible, and to elevate [314] his view of human relations, in order that he may disdain the false appearances he before held in esteem.

326. Faults which an older pupil actually possesses rarely occur singly. Moreover, they are seldom fully disclosed; their appearance is determined by a prudent regard for circumstances. During the period of education such faults can, indeed, be largely prevented from growing worse, but the radical improvement of those who are secretive from prudence is rarely to be thought of before they have become more prudent still, too proud for concealment, and more susceptible to the true estimate of moral values.

Where older boys and young men are found to possess unused talents, and where instruction can be so arranged as to develop them, there is some prospect of supplying a counterbalance to those habits which have been contracted. But, in general, efforts looking toward a lasting reform are successful only when made at an early age. At all events, where there is much to amend, the feeling of dependence on strict training must be kept alive for a long time.

327. More success is likely to attend the endeavor to correct those faults which are not tolerated within the social class of which the pupil regards himself a member. Two factors determine the proper mode of procedure: the importance of making the pupil acquainted with the worthiest side of his social group, and, on the other hand, the unavoidable necessity of causing him to see its less noble features in [315] case he discovers in it free scope for his inherent faults.

328. Here the pupil's capacity for education, as well as the limits of that capacity, are brought home to the teacher. As boys approach manhood, they let birth and external circumstances designate for them that class of society to which they will belong. The class defined, they seek to acquire its form of life, and to get into its main current. On the way thither they accept and take along so much of higher motives, of knowledge and insight, as, on the one hand, instruction offers and training favors, and as, on the other hand, the individuality of each one, which the earliest impressions have further determined, is ready to assimilate. Those are rare exceptions who, through the development of an absorbing interest of some kind, in religion, or science, or art, have become less susceptible to the attractive force of their social class. Their course has been marked out by the instruction which induced the absorption; henceforth they are self-actively engaged in the pursuit of whatever accords with the end in view, and accept only a small part of what is presented to them.

329. Specific forms of a pupil's attitude toward society, especially the relative prominence in his mind

of state or family relations, will have to receive due consideration in marshalling motives to counteract particular faults. Indeed, the same is true of the appeal to those motives through which it is sought to establish a preponderance of worthier endeavor over moral imperfection in general. [316]

[317]

SECTION III

REMARKS ON THE ORGANIZATION OF EDUCATION

CHAPTER I

Home Education

330. On discovering that his own efforts encounter impediments, the individual teacher might easily come to think that society could do everything, if it only would, and if it possessed the necessary insight. Further reflection, however, reveals the existence of difficulties peculiar both to state and family.

331. The state needs soldiers, farmers, mechanics, officials, etc., and is concerned with their efficiency. Its attitude toward a large number of persons, whose existence as individuals has significance only in a narrow sphere, is, in general, far more that of supervision designed to prevent the harm they might do, than one of direct helpfulness. He who is able to render competent service receives preferment; the weaker has to give way to the stronger; the shortcomings of one are made good by another.

332. The state applies its tests to what can be tested, to the outward side of conduct and of [318] knowledge. It does not penetrate to the inner life. Teachers in public schools cannot penetrate much farther; they, too, are more concerned with the sum total of knowledge imparted by them, than with the individual and the way in which he relates his knowledge to himself.

333. To the family, however, no stranger can make up for what one of its members lacks; to the family the inner condition becomes so manifest, and is often felt so keenly, that the merely external does not satisfy. It is obvious, therefore, that moral education will always remain essentially a home task, and that the institutions of the state are to be resorted to for educative purposes only with a view to supplementing the home.

But on closer inspection it is found that family life is very often too busy, too full of care, or too noisy, for that rigor which is undeniably required both for instruction and for morality. Luxury and want alike harbor dangers for youth. Consequently families lean on the state for support more than they ought.

334. Private institutions as such do not possess the same motive power as either state or family, and are seldom able to make themselves independent of the comparisons to which they are exposed, because of the fact that they are expected in one case to take the place of the state schools, and in another that of the family.

Nevertheless, sturdy minds which do not require the emulation obtaining in schools can be advanced [319] more rapidly, and instruction adapted more easily to individual needs, than in public institutions. As for training, moreover, the evils that may spring from environment can be prevented more successfully than is possible in many families.

If the institutions in question could choose from among many teachers and many pupils, they might, under otherwise favorable circumstances, be able to achieve great results. But the fact of a picked set of pupils alone shows how little the whole need of education would be met. Besides, even those that were chosen would bring with them their earliest impressions; they would incline toward the social conditions for which they believe themselves to be destined; the faults of individuality (294 *et seq.*) would cling to them, unless such faults were recognized before the selection, and were avoided by exclusion.

335. As much as possible, then, education must return to the family. In many cases private tutors will be found to be indispensable. And of instructors excellently equipped as to scholarship, there will be the less lack, the better the work done by the gymnasia.

It must be noted, also, that instead of being the most difficult, the most advanced instruction is the easiest of all, because imparted with the least departure from the way in which it was received. People are therefore mistaken when they assume that private tutors are capable of furnishing an equivalent [320] only for the lowest classes in gymnasia. A far greater difficulty lies in the fact that even the most skilful and active tutor cannot give as many lessons as a school provides, and that accordingly more has to be left to the pupil's own efforts. To be sure, this is exactly the mode of instruction which suits the bright student better than one that must accommodate itself to the many, and which on that account must progress but slowly.

336. But home education presupposes that sound pedagogical views have been arrived at in the home, and that their place is not occupied by absurd whims or half knowledge. (Niemeyer's famous work, "The Principles of Education and of Instruction," is intelligible to every educated person, and has been widely known for many years.)

337. The necessity of sound pedagogical knowledge in the home becomes all the more urgent where teachers, private or public, change frequently—whereby inequalities of instruction and treatment are introduced which need to be corrected.

[321]

CHAPTER II

Concerning Schools

338. The school system and its relations to local authorities, on the one hand, and to the general government, on the other, form a vast and difficult subject involving not merely pedagogical principles, but also such aims as the maintenance of higher learning, the dissemination of useful information, and the practice of indispensable arts. In university lectures a few words on such topics suffice, since young men who accept a school position assume, at the same time, obligations which for a long time to come prescribe for them the path they must follow.

339. They must, in the first place, consider the character of the school in which they are to instruct. The school programme provides them with information concerning the scope of the curriculum, the established relations of the branches of instruction to one another, and the various stages in each subject. The teachers' conference affords them an insight into multiplex relations to authorities, parents, and guardians, and to the pupils, also relations leading to coöperation, more or less perfect, on the part of the teachers. The whole of the educational effort directed upon younger, intermediate, and older [322] pupils is presented in one view; it is known also where the pupils come from, with what kind of preparation, and where as a rule they go upon leaving the school.

340. It must obviously make a vast difference whether pupils look forward to the university, or whether the gymnasium is filled with boys who do not intend to pursue higher studies; whether a burgher school sets a final examination to mark the stage of general culture to which the school is expected to advance the pupils, or whether the pupils enter and leave without well-defined reasons according to what seems best to their respective families; whether an elementary school is conducted merely as an institution preparing for gymnasia or burgher schools, or whether its course provides for the suitable education, during his whole boyhood, of the future artisan, etc.

The American school system possesses this great advantage over that of Germany,—it has an educational ladder planted in every elementary school upon which any child from any social class may mount as high as his ambition incites, or his means and ability permit. It is the only suitable system in a democracy, where opportunity should be open to all. Even to obtain greater perfection than the German school system has ever attained, a democratic nation cannot afford to impair its present organization, in so far as it makes advancement possible to every aspiring soul. [323]

341. In each case the official activity entered upon must adjust itself properly to the whole, the outlines of which are given. These determine the proportion and the subdivision of the store of learning to be kept ready for use, the degree of confidence to be shown to pupils as to knowledge already acquired, and the manner in which they are to be addressed. It is important that the teacher should appear before his class adequately prepared and with confident self-possession, that he should look about attentively at every one and make each pupil feel at once that it would not be easy for him to undertake anything without being noticed.

342. The questions to be put to the pupils need to be formulated clearly and concisely, and they must follow each other in easy sequence. The answers must be corrected and, when necessary, repeated, in order that all may hear them. No pause should be unduly prolonged; no explanation to the weaker pupil should be allowed to become oppressively tedious to the more advanced. Those who are at work at the moment must be assisted, but ought not to be disturbed by much interrupting talk. The current of thought is to be invited and accelerated in all, but not hurried, etc.

Such requirements instruction will meet with greater or less difficulty, according as classes are small or large and the inequality of pupils great or slight.

343. In the assigning of work the capacity of each pupil must be taken into account as much as [324] possible, in order that no one may surrender to ill-humor and discouragement on account of excessive demands, nor any one permit himself carelessly to abuse a task too easy for him.

344. Inequalities of division resulting from rearrangements of classes, or other changes, must be pointed out to the authorities as clearly as possible, for the purpose of urging a more even distribution and a reduction of excessive numbers.

345. In the course of the gradual extension of such efforts many a defect will come to light. It may be found, for instance, that the school is not a whole, because of the lack of a competent teacher for an important subject, or because of marked inequalities of knowledge and culture due to the preparatory schools, or because the school (such as those in small towns) follows the curriculum of a gymnasium while its real aim is supposed to be that of a burgher school, etc.

346. Reports of such single defects will as a rule lead only to correspondingly partial improvements in the system and to relief from the most onerous perplexities, since it is seldom found possible to organize the system of a whole province at once in such a way as to make one harmonious whole.

347. But in case comprehensive reforms of the school system were undertaken, it would be necessary [325]

not merely to tolerate great multiformity, but even to create it purposely. For division of labor is in all human performance the right path to better things; and the preceding discussion must have shown with sufficient clearness how much depends on a more discriminating segregation of pupils.

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All punctuation errors were corrected.

Inconsistent hyphenation was retained.

In Contents, the following changes were done to match chapter titles in the text:

"of" after "Conditions" was deleted.
"Material" was changed from "Materials".
"The" was inserted before "Relation".

In paragraph 36, "one-sidedness" was changed from "one-sideness".

In paragraph 38, "counteracting" was changed from "counter: acting".

In paragraph 70, alternate spelling of annotator's surname as "DeGarmo" was retained.

In the Index,

"as" after "Disorder" was changed from "an".
"*Humaniora*" was changed from "*Humanoria*".

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