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ART. I.—*History of the Rise and Influence of the Spirit of Rationalism in Europe.* By the Rev. W. E. H. LECKEY, M. A. In two volumes. New York: D. Appleton & Co. 1866.

History of Rationalism; embracing a Survey of the Present State of Protestant Theology. By the Rev. JOHN F. HURST, A. M. With Appendix of Literature. New York: Charles Scribner & Co. 1866.

Essays on the Supernatural in Christianity, with Special Reference to the Theories of Renan, Strauss, and the Tübingen School. By Rev. GEORGE P. FISHER, M. A., Professor of Church History in Yale College. New York: Charles Scribner & Co. 1866.

The Temporal Mission of the Holy Ghost; or, Reason and Revelation. By HENRY EDWARD, Archbishop of Westminster. New York: D. Appleton & Co. 1866.

THE simultaneous appearance of these and other important works, for and against Rationalism, from such various quarters—sceptical, Papal, and orthodox evangelical—only proves how profoundly the mind of all parties in Christendom is agitated on the subject. These several parties, of course, take very different views in regard to it. The sceptics laud Rationalism

are non-essential, to the outposts rather than the citadel of the Christian faith; to the speculative rather than the experimental side of Christianity. 4. The Papists are exposed to objections similar in kind, if not in degree. They do not pretend that the pope or the church is infallible in all things, or in things unimportant to salvation. They cannot deny that controversies have prevailed amongst their own divines and schools; they admit that it is only by degrees, and through the developments of successive controversies, that the pope and councils have been enabled accurately to articulate and formulate one doctrine after another. Their argument, therefore, from the controversies among Protestants, for the necessity of an infallible and oracular interpreter of Scriptures, proves too much. It recoils upon themselves with suicidal force. It brings us back to scripture for the interpretation of scripture, which we reach by comparing (συγκρινοντες) spiritual things with spiritual.

“God is his own interpreter,
And he will make it plain.”

ART. II.—*Normal Schools, and other Institutions and Agencies for the Professional Education of Teachers.* By HENRY BARNARD, D. D. 2 vols., 8vo. Case, Tiffany & Co., Hartford.

THE term Normal School is an unfortunate misnomer, and its general adoption has led to much confusion of ideas. The word “Normal,” from the Latin *norma*, a rule or pattern to work by, does not differ essentially from “Model.” A Normal School, according to the meaning of the word, would be a pattern school, an institution which could be held up for imitation, to be copied by other schools of the same grade. But this meaning of the word is not what we mean by the thing. When we mean a school to be copied or imitated, we call it a Model School. Here the name and the thing agree. The name explains the thing. It is very different when we speak

of a Normal School. To the uninitiated, the term either conveys no meaning at all; or, if your hearer is a man of letters, it conveys to him an idea which you have at once to explain away. You have to tell him, in effect, that a Normal School is not a Normal School, and then that it is something else, which the word does not in the least describe.

What then do we mean by a Normal School? What is the thing which we have called by this unfortunate name?

A Normal School is a seminary for the professional education of teachers. It is an institution in which those who wish to become teachers learn how to do their work; in which they learn, not reading, but how to teach reading; not penmanship, but how to teach penmanship; not grammar, but how to teach grammar; not geography, but how to teach geography; not arithmetic, but how to teach arithmetic. The idea which lies at the basis of such an institute, is that knowing a thing, and knowing how to teach that thing to others, are distinguishable and very different facts. The knowledge of the subjects to be taught, may be gained at any school. In order to give to the Teachers' Seminary its full power and efficiency, it were greatly to be desired that the subjects themselves, as mere matters of knowledge, should be first learned elsewhere, before entering the Teachers' School. This latter would then have to do only, with its own special function, that of showing its matriculants how to use these materials in the process of teaching. Unfortunately, we have not yet made such progress in popular education as to be able to separate these two functions to the extent that is desirable. Many of those who attend a Teachers' Seminary, come to it lamentably ignorant of the common branches of knowledge. They have consequently first to study these branches in the Normal School, as they would study them in any other school. That is, they have first to learn the facts as matters of knowledge, and then to study the art and science of teaching these facts to others. Instead of coming with their brick and mortar ready prepared, that they may be instructed in the use of the trowel and the plumb-line, they have to make their brick and mix their mortar after they enter the institution. This is undoubtedly a drawback and a misfortune. But it cannot be helped at present. All we can do

is to define clearly the true idea of the Teachers' School, and then to work towards it as fast and as far as we can.

A Normal School is essentially unlike any other school. It has been compared indeed to those professional schools which are for the study of law, divinity, medicine, mining, engineering, and so forth. The Normal School, it is true, is like these schools in one respect. It is established with reference to the wants of a particular profession. It is a professional school. But those schools have for their main object the communication of some particular branch of science. They teach law, divinity, medicine, mining, or engineering. They aim to make lawyers, divines, physicians, miners, engineers, not teachers of these branches. The Professor in the Law School aims, not to make Professors of law, but lawyers. The medical Professor aims, not to make medical lecturers, but practitioners. To render these institutions analogous to the Teachers' Seminary, their pupils should first study law, medicine, engineering, and so forth, and then sit at the feet of their Gamaliels to be initiated into the secrets of the Professorial chair, that they may in turn become Professors of those branches to classes of their own. Nor would such a plan, if it were possible, be altogether without its value. It surely needs no demonstration to prove, that in the highest departments, no less than in the lowest, something more than knowledge is needed in order to teach. An understanding of how to communicate one's knowledge, and practical skill in doing it, are as necessary in teaching theology, metaphysics, languages, infinitesimal analysis, or chemistry, as they are in teaching the alphabet. If there are bunglers, who know not how to go to work to teach a child its letters, or to open its young mind and heart to the reception of truth, whose school-rooms are places where the young mind and heart are in a state, either of perpetual torpor, or of perpetual nightmare, have these bunglers no analogues in the men of ponderous erudition that sometimes fill the Professor's chair? Have we no examples, in our highest seminaries of learning, of men very eminent in scientific attainments, who have not in themselves the first elements of a teacher? who impart to their students no quickening impulse? whose vast and towering knowledge may make them perhaps a grand feature in their College, attracting

to it all eyes, but whose intellectual treasures, for all the practical wants of the students, are of no more use, than are the swathed and buried mummies in the pyramid of Cheops!

A Teachers' Seminary, if it were complete, would include in its curriculum of study the entire cycle of human knowledge, so far as it is taught by schools. Our teachers of mathematics and of logic, of law and of medicine, need indeed a knowledge of the branches which they are to teach, and for this knowledge they do not need a Teachers' Seminary. But they need something more than this knowledge. Besides being men of erudition, they need to be teachers, no less than the humbler members of the profession, who have only to teach the alphabet and the multiplication table; and there is in all teaching, high or low, something that is common to them all—an art and a skill which is different from the mere knowledge of the subjects; which is not necessarily learned in learning the subjects; which requires special, superadded gifts, and distinct study and training. There is, according to our observation, as great a lack of this special skill in the higher seminaries of learning, as in the lower seminaries. Were it possible to have a Normal School, not which should undertake to teach the entire encyclopædia of the sciences, but which, limiting itself to its one main function of developing the art and mystery of communicating knowledge, should turn out College Professors, and even Divinity, Law, and Medical Professors,—men who were really skilful teachers,—it would work a change in those venerable institutions as marked and decisive as that which it is now effecting in the common schools. Of course, no such scheme is possible; certainly, none such is contemplated. But we are very sure we shall not be considered calumnious, when we express the conviction, that there are learned and eminent occupants of Professors' chairs, who might find great benefit in an occasional visit to a good Normal School, or even to the class-room of a teacher trained in a Normal School. We certainly have seen, in the very lowest department of the common school, a style of teaching, which, for a wise and intelligent comprehension of its object, and for its quickening power upon the intellect and conscience, would compare favourably with

the very best teaching we have ever seen in a College or University.

We come back, then, to the point from which we set out, namely, that a Normal School, or Teachers' Seminary, differs essentially from every other kind of school. It aims to give the knowledge and skill that are needed alike in all schools. To make the point a little plainer, let us restate, with what clearness we can, some of the elementary truths and facts which lie at the foundation of the whole subject. Though to many of our readers it may be going over a beaten track, it may not be so to all; and we all do well, even in regard to known and admitted truths, to bring them occasionally afresh to the mind.

As it has been already said, a man may know a thing perfectly, and yet not be able to teach it. Of course, a man cannot teach what he does not know. He must first have the knowledge. But the mere possession of knowledge does not make one a teacher, any more than the possession of powder and shot makes him a marksman, or the possession of a rod and line makes him an angler. The most learned men are often unfortunately the very men who have least capacity for communicating what they know. Nor is this incapacity confined to those versed in book knowledge. It is common to every class of men, and to every kind of knowledge. Let us give an example. The fact about to be stated, was communicated to us by a gentleman of eminent commercial standing in Philadelphia, now the President of one of its leading banks. The fact occurred in his own personal experience. He was, at the time of its occurrence, largely engaged in the cloth trade. His faculties of mind and body, and particularly his sense of touch, had been so trained in this business, that in going rapidly over an invoice of cloth, as his eye and hand passed in quick succession from piece to piece, in the most miscellaneous assortment, he could tell instantly the value of each, with a degree of precision, and a certainty of knowledge, hardly credible. A single glance of the eye, a single touch, transient as thought, gave the result. His own knowledge of the subject, in short, was perfect, and it was rapidly winning him a fortune. Yet when undertaking to explain to a younger and less expe-

rienced member of the craft whom he wished to befriend, by what process he arrived at his judgment, in other words, to teach what he knew, he found himself utterly at a loss. His thoughts had never run in that direction. "Oh!" said he, "you have only—to look at the cloth, and—and—to run your fingers over it,—thus. You will perceive at once the difference between one piece and another." It seems never to have occurred to him that another man's sensations and perceptions might in the same circumstances be quite different from his, and that in order to communicate his knowledge to one uninitiated, he must pause to analyse it; he must separate, classify, and name those several qualities of the cloth of which his senses took cognizance; he must then ascertain how far his interrogator perceived by his senses the same qualities which he himself did, and thus gradually get no common ground with him.

Let the receiving-teller of a bank be called upon to explain how it is that he knows at a glance a counterfeit bill from a genuine one, and in nine cases out of ten he will succeed no better than the cloth merchant did. Knowing and communicating what we know, doing and explaining what we do, are distinct, separable, and usually very different processes.

Similar illustrations might be drawn from artists, and from men of original genius in almost every profession, who can seldom give any intelligible account of how they achieve their results. The mental habits best suited for achievement are rarely those best suited for teaching. Marlborough, so celebrated for his military combinations, could never give any intelligible account of his plans. He had arrived at his conclusions with unerring certainty, but he was so little accustomed to observing his own mental processes, that he utterly failed in attempting to make them plain to others. He saw the points himself with perfect clearness, but he had no power to make others see them. To all objections to his plans, he could only say, "Silly, silly, that's silly." It was much the same with Oliver Cromwell. It is so with most men who are distinguished for action and achievement. Patrick Henry would doubtless have made but a third-rate teacher of elocution, and old Homer but an indifferent lecturer on the art of poetry.

To acquire knowledge ourselves, then, and to put others in possession of what we have acquired, are not only distinct intellectual processes, but they are quite unlike. In the former case, the faculties merely go out towards the objects to be known, as in the case of the cloth merchant passing his eye and finger over the bales of cloth. But in the case of one attempting to teach, several additional processes are needed, besides that of collecting knowledge. He must turn his thoughts inward, so as to arrange and classify properly the contents of his intellectual storehouse. He must then examine his own mind, his intellectual machinery, so as to understand exactly how the knowledge came in upon himself. He must lastly study the minds of his pupils, so as to know through what channels the knowledge may best reach them. The teacher may not always be aware that he does all these things, that is, he may not always have a theory of his own art. But the art itself he must have. He must first get the knowledge of the things to be taught; he must secondly study his knowledge; he must thirdly study himself; he must lastly study his pupil. He is a teacher at all only so far as he does at least these four things.

In a Normal School, as before said, the knowledge of the subject is presupposed. The object of the Normal School is, not so much to make arithmeticians and grammarians, for instance, as to make teachers of arithmetic and grammar. This teaching faculty is a thing by itself, and quite apart from the subject matter to be taught. It underlies every branch of knowledge, and every trade and profession. The theologian, the mathematician, the linguist, the learned professor, no less than the teacher of the primary school, or of the Sabbath-school, all need this supplementary knowledge and skill, in which consists the very essence of teaching. This knowledge of how to teach is not acquired by merely studying the subject to be taught. It is a study by itself. A man may read familiarly the *Mechanique Celeste*, and yet not know how to teach the multiplication table. He may read Arabic or Sanskrit, and not know how to teach a child the alphabet of his mother tongue. The Sabbath-school teacher may dip deep into biblical lore, he may ransack the commentaries, and may

become, as many Sabbath-school teachers are, truly learned in Bible knowledge, and yet be utterly incompetent to teach a class of children. He can no more hit the wandering attention, or make a lodgment of his knowledge in the minds of his youthful auditory, than the mere unskilled possessor of a fowling-piece can hit a bird upon the wing.

The art of teaching is the one indispensable qualification of the teacher. Without this, whatever else he may be, he is no teacher. How may this art be acquired? In the first place, many persons pick it up, just as they pick up a great many other arts and trades,—in a hap-hazard sort of way. They have some natural aptitude for it, and they grope their way along, by guess and by instinct, and through many failures, until they become good teachers, they hardly know how. To rescue the art from this condition of uncertainty and chance, is the object of the Normal School. In such a school, the main object of the pupil is to learn how to make others know what he himself knows. The whole current of his thoughts and studies is turned into this channel. Studying how to teach, with an experimental class to practise on, forms the constant topic of his meditations. It is surprising how rapidly, under such conditions, the faculty of teaching is developed; how fertile the mind becomes in devising practical expedients, when once the attention is roused and fixed upon the precise object to be attained, and the idea of what teaching really is, fairly has possession of the mind. In furtherance of this end, every well-ordered Normal School has, in connection with it, and as a part of its organization, a Model School, to serve the double purpose of a school of observation, and a school of practice. Thus, after these pupil-teachers are once thoroughly familiar with the branches to be taught, and after they have become acquainted with the theory of teaching, as a science, it is surprising how soon, with even a little of this practice-teaching, they acquire the art. If the faculty of teaching is in them at all, a very few experimental lessons, under the eye of an experienced teacher, will develope it. The fact of possessing within one's self the teaching gift, sometimes breaks upon the possessor himself with all the force of a surprising and most delightful discovery. The good teacher does not indeed stop

here. He goes on to improve in his art as long as he lives. But his greatest single achievement is when he takes the first step,—when he first learns to teach at all. The pupil of a Normal School gains there a start, an impulse which carries him forward the rest of his life. Thus a very little judicious experimental training redeems hundreds of candidates from utter and pitiful incompetency, and converts for them an awkward and painful drudgery into keen, hopeful, and productive labour.

But what is teaching? Unless our ideas on this point are clear and well defined, it is in vain to look for any satisfactory results. Teaching, then, in the first place, is not simply telling. A class may be told a thing twenty times over, and yet not know it. Talking to a class is not necessarily teaching. We have known many teachers, who were brimful of information, and were good talkers, and who discoursed to their classes with ready utterance a large part of the time allotted to instruction, yet an examination of their classes showed little advancement in knowledge.

There are several time-honoured metaphors on this subject, which need to be received with some grains of allowance, if we would get at an exact idea of what teaching is. Chiselling the rude marble into the finished statue, giving the impression of the seal upon the soft wax, pouring water into an empty vessel,—all these comparisons lack one essential element of likeness. The mind is indeed, in one sense, empty, and needs to be filled. It is yielding, and needs to be impressed. It is rude, and needs polishing. But it is not, like the marble, the wax, or the vessel, a passive recipient of external influences. It is itself a living power. It is acted upon only by stirring up its own activities. The operative upon mind, unlike the operative upon matter, must have the active, voluntary coöperation of that upon which he works. The teacher is doing his work, only so far as he gets work from the scholar. The very essence and root of the work are in the scholar, not in the teacher. No one, in fact, in an important sense, is taught at all, except so far as he is self-taught. The teacher may be useful, as an auxiliary, in causing this action on the part of the scholar. But the one, indisputable, vital thing, in all learning,

is in the scholar himself. The old Romans, in their word education, (*educere*, to draw out) seem to have come nearer to the true idea than any other people have done. The teacher is to draw out the resources of the pupil. Yet even this word comes short of the exact truth. The teacher must put in, as well as draw out. No process of mere pumping will draw out from a child's mind knowledge which is not there. All the power of the Socratic method, could it be applied by Socrates himself, would be unavailing to draw from a child's mind, by mere questioning, a knowledge, for instance, of chemical affinity, of the solar system, of the temperature of the Gulf Stream, of the doctrine of the resurrection.

What then is teaching? Teaching is causing any one to know. Now no one can be made to know a thing, but by the act of his own powers. His own senses, his own memory, his own powers of reason, perception, and judgment must be exercised. The function of the teacher is to bring about this exercise of the pupil's faculties. The means to do this are infinite in variety. They should be varied according to the wants and the character of the individual to be taught. One needs to be told a thing; he learns most readily by the ear. Another needs to use his eyes; he must see a thing, either in the book, or in nature. But neither eye nor ear, nor any other sense or faculty will avail to the acquisition of knowledge, unless the power of attention is cultivated. Attention, then, is the first act or power of the mind that must be roused. It is the very foundation of all progress in knowledge, and the means of awakening it constitute the first step in the educational art.

When by any means facts, positive knowledge, are once in possession of the mind, something must next be done to prevent their slipping away. You may tell a class the history of a certain event, or you may give them a description of a certain place, or person, or you may let them read it, and you may secure such a degree of attention, that at the time of the reading or the description, they shall have a fair, intelligible comprehension of what has been described or read. The facts are for the time actually in the possession of the mind. Now, if the mind was, according to the old notion, merely a vessel

to be filled, the process would be complete. But mind is not an empty vessel. It is a living essence, with powers and processes of its own. And experience shows us, that in the case of a class of undisciplined pupils, facts, even when fairly placed in the possession of the mind, often remain there about as long as the shadow of a passing cloud remains upon the landscape, and make about as much impression.

The teacher must seek then, not only to get knowledge into the mind, but to fix it there. In other words, the power of the memory must be strengthened. Teaching then, most truly, and in every stage of it, is a strictly coöperative process. You cannot cause any one to know, by merely pouring out stores of knowledge in his hearing, any more than you can make his body grow by spreading the contents of your market-basket at his feet. You must rouse his power of attention, that he may lay hold of, and receive, and make his own, the knowledge you offer him. You must awaken and strengthen the power of memory within him, that he may retain what he receives, and thus grow in knowledge, as the body by a like process grows in strength and muscle. In other words, learning, so far as the mind of the learner is concerned, is a growth; and teaching, so far as the teacher is concerned, is doing whatever is necessary to cause that growth.

Let us proceed a step farther in this matter. One of the ancients observes that a lamp loses none of its own light by allowing another lamp to be lit from it. He uses the illustration to enforce the duty of liberality in imparting our knowledge to others. Knowledge, he says, unlike other treasures, is not diminished by giving.

The illustration fails to express the whole truth. This imparting of knowledge to others, not only does not impoverish the donor, but it actually increases his riches. *Docendo discimus*. By teaching we learn. A man grows in knowledge by the very act of communicating it. The reason for this is obvious. In order to communicate to the mind of another a thought which is in our own mind, we must give to the thought definite shape and form. We must handle it and pack it up for safe conveyance. Thus the mere act of giving a thought expression in words, fixes it more deeply in our own minds.

Not only so, we can, in fact, very rarely be said to be in full possession of a thought ourselves, until by the tongue or the pen we have communicated it to somebody else. The expression of it, in some form, seems necessary to give it, even in our own minds, a definite shape and a lasting impression. A man who devotes himself to solitary reading and study, but never tries in any way to communicate his acquisitions to the world, or to enforce his opinions upon others, rarely becomes a learned man. A great many confused, dreamy ideas, no doubt, float through the brain of such a man. But he has little exact and reliable knowledge. The truth is, there is a sort of indolent, listless absorption of intellectual food, that tends to idiocy. We knew a person once, a gentleman of wealth and leisure, who having no taste for social intercourse, and no material wants to be supplied, which might have required the active exercise of his powers, gave himself up entirely to solitary reading, as a sort of luxurious self-indulgence. He shut himself up in his room, all day long, day after day, devouring one book after another, until he became almost idiotic by the process, and he finally died of softening of the brain. Had he been compelled to use his mental acquisitions in earning his bread, or had the love of Christ constrained him to use them in the instruction of the poor and the ignorant, he might have become not only a useful, but a learned man.

We see a beautiful illustration of this doctrine in the case of Sabbath-school teachers, and one reason why persons so engaged usually love their work, is the benefit which they find in it for themselves. We speak here, not of the spiritual, but of the intellectual benefit. By the process of teaching others, they are all the while learning. This advantage in their case is all the greater, because it advances them in a kind of knowledge in which, more than in any other kind of knowledge, men are wont to become passive and stationary. In ordinary worldly knowledge, our necessities make us active. The intercourse of business and of pleasure even, makes men keen. On these subjects we are all the while bandying thoughts to and fro, we are accustomed to give as well as take, and so we keep our intellectual armor bright, and our thoughts well defined. But in regard to growth in scriptural knowledge, we have a tendency

to be mere passive recipients, like the young man just referred to. Sabbath after Sabbath we hear good, instructive, orthodox discourses, but there is no active putting forth of our own powers in giving out what we thus take in, and so we never make it effectually our own. The absorbing process goes on, and yet we make no growth. The quiescent audience is a sort of exhausted receiver, into which the stream from the pulpit is perennially playing, but never making it full. Let a man go back and ask himself, what actual scriptural knowledge have I gained by the sermons of the last six months? What in fact do I retain in my mind, at this moment, of the sermons I heard only last Sabbath? So far as the hearing of sermons is concerned, the Sabbath-school teacher may perhaps be no better off than other hearers. But in regard to general growth in Biblical knowledge, he advances more rapidly than his fellow worshippers, because the exigencies of his class compel him to a state of mind the very opposite of this passive reciprocity. He is obliged to be all the while, not only learning, but putting his acquisitions into definite shape for use, and the very act of using these acquisitions in teaching a class, fixes them in his own mind, and makes them more surely his own.

We have used this instance of the Sabbath-school teacher because it enforces an important hint already given, as to the mode of teaching. Some teachers, especially in Sabbath-schools, seem to be ambitious to do a great deal of talking. The measure of their success, in their own eyes, is their ability to keep up a continued stream of talk for the greater part of the hour. This is of course better than the embarrassing silence sometimes seen, where neither teacher nor scholar has anything to say. But at the best, it is only pouring into the exhausted receiver enacted over again. We can never be reminded too often, that there is no teaching except so far as there is active coöperation on the part of the learner. The mind receiving must reproduce and give back what it gets. This is the indispensable condition of making any knowledge really our own. The very best teaching we have ever seen, has been where the teacher said comparatively little. The teacher was of course brimful of the subject. He could give the needed information at exactly the right point, and in the right

quantity. But for every word given by the teacher, there were many words of answering reproduction on the part of the scholars. Youthful minds under such tutelage grow apace.

It is indeed a high and difficult achievement in the educational art, to get young persons thus to bring forth their thoughts freely for examination and correction. A pleasant countenance and a gentle manner, inviting and inspiring confidence, have something to do with the matter. But, whatever the means for accomplishing this end, the end itself is indispensable. The scholar's tongue must be unloosed, as well as the teacher's. The scholar's thoughts must be broached as well as the teacher's. Indeed, the statement needs very little qualification or abatement, that a scholar has learned nothing from us except what he has expressed to us again in words. The teacher who is accustomed to harangue his scholars with a continuous stream of words, no matter how full of weighty meaning his words may be, is yet deceiving himself, if he thinks that his scholars are materially benefitted by his intellectual activity, unless it is so guided as to awaken and exercise theirs. If, after a suitable period, he will honestly examine his scholars on the subjects, on which he has himself been so productive, he will find that he has been only pouring water into a seive. Teaching can never be this one-sided process. Of all the things we attempt, it is the one most essentially and necessarily a coöperative process. There must be the joint action of the teacher's mind and the scholar's mind. A teacher teaches at all, only so far as he causes this co-active energy of the pupil's mind.

It cannot be too often repeated, the measure of a teacher's success, is not what he himself does, but what he gets his scholars to do. In nothing is this more noticeable, than in the different modes of putting a question to a scholar. One teacher will put a question in such a manner as to find out exactly how much or how little of the subject the child knows, and thereby encourage careful preparation; to give the pupil an open door, if he really knows the subject, to express his knowledge in a way that will be a satisfaction and pleasure to him; to improve his power of expression, to cultivate his memory, to increase his knowledge, and to make it more thorough and definite.

Another teacher will put his questions so as to secure none of these ends, but on the contrary so as to induce a most lamentable degree of carelessness and inaccuracy. Let us illustrate this point, taking our example for greater convenience from a scriptural subject. Suppose it to be a lesson upon Christ's temptation, as recorded in the 4th chapter of Matthew. The dialogue between teacher and scholar may be supposed to proceed somewhat in this wise:

Teacher. Who was led up of the Spirit into the wilderness to be tempted of the devil?

Pupil. Jesus.

T. Yes. Now, when Jesus had fasted forty days and forty nights, he was afterward a—— what? How did he feel after that?

P. Hungry.

T. Yes, that is right. He was afterward "ahungered," how then?—the next scholar. Who then came to Jesus and said, if thou be the Son of God, command that these stones be made bread?

(Scholar hesitates.)

T. The t——?

P. The tempter.

T. Yes, you are right. It was the tempter. Who do you think is meant by the tempter?—the devil?

P. Yes.

T. When a man has fasted, that is, has eaten nothing, for forty days and forty nights, and feels very hungry, would the suggestion of an easy mode of getting food be likely to be a strong temptation to him, or would it not?

P. It would.

T. Yes, you are right again. It would be a strong temptation to him.

We need not pursue this dialogue further. The reader will see at once how there may thus be the appearance of quite a brisk and fluent recitation, to which however the pupil contributes absolutely nothing. It requires nothing of him in the way of preparation, and only the most indolent and profitless use of his faculties while reciting. He could hardly answer amiss, unless he were an idiot, and yet he has the appearance,

and he is often flattered into the belief, of having given some evidence of knowledge and proficiency.

The opposite extreme from the method just exhibited, is that known as the topical method. It is the method pursued in the higher classes of schools, and among more advanced students. In the topical method, the teacher propounds a topic or subject, sometimes in the form of a question, but more commonly only by a title, a mere word or two, and then calls upon the pupil to give, in his own words, a full and connected narration or explanation of the subject, such as the teacher himself would give, if called upon to narrate or explain it. The subject already suggested, if propounded topically, would be somewhat in this wise:

The first temptation of Jesus.

Or, more fully: Narrate the circumstances of the first temptation of Jesus, and show wherein his virtue was particularly tried in that transaction.

The teacher, having propounded the subject clearly to the class, then waits patiently, maintaining silence himself, and requiring the members of the class to be silent and attentive, until the pupil interrogated is quite through, not hurrying him, not interrupting him, even with miscalled helps and hints, but leaving him to the free and independent action of his own faculties, in giving as full, connected, and complete an account of the matter as he can. When the pupil is quite through, the teacher then, but not before, makes any corrections or additional statements that may seem to be needed. In such an exercise as this, the pupil finds the absolute necessity of full and ample preparation; he has a powerful and healthy stimulus thus to prepare, in the intellectual satisfaction which one always feels in the successful discharge of any difficult task; and he acquires a habit of giving complete and accurate expression to his knowledge, by means of entire sentences, and without the help of "catch words," or leading-strings of any kind.

Some classes, of course, are not sufficiently advanced to carry out fully the method here explained. But there are many intermediate methods, founded on the same principle, and suited to children in every stage of advancement. Only let it be understood, whatever the stage, that the object of the

recitation is, not to show what the teacher can say or do, but to secure the right thing being said and done by the pupil.

To recur once more to the same subject, the temptation of Christ. For a very juvenile class, the questioning might proceed on this wise:

T. Where was Jesus led after his baptism?

P. He was led into the wilderness.

T. By whom was he led there?

P. He was led by the Spirit.

T. For what purpose was he led into the wilderness?

P. He was led into the wilderness to be tempted.

T. By whom was he to be tempted?

P. He was to be tempted by the devil.

T. What bodily want was made the means of his first temptation?

If the class is quite young, and this question seems too difficult, the teacher, instead of asking it, or after asking it and not getting a satisfactory answer, might say to his class, that Jesus was first tempted through the sense of hunger. He was very hungry, and the devil suggested to him an improper means of relieving himself from the inconvenience. He might then go on with some such questions as these:

T. What circumstance is mentioned as showing how very hungry he must have been?

P. He had fasted forty days and forty nights.

T. Mention any way in which *you* might be tempted to sin, if you were suffering from hunger?

The foregoing questions, it will be perceived, are very simple, being suited to scholars just advanced beyond the infant class. Yet no one of the questions, in its form, or terms, necessarily suggests the answer. No one of them can be answered by a mere "yes" or "no." No scholar, unacquainted with the subject, and with his book closed, can guess at the answer from the way in which the question is put. Not a question has been given, simple as they all are, which does not require at least some preparation, and which does not, to some extent, give exercise to the pupil's memory, his judgment, and his capacity for expression.

If the class is more advanced, the questions may be varied,

so as to task and exercise these faculties more seriously. For instance, the teacher of a class somewhat older might be imagined to begin the exercise thus:

T. After the baptism of Jesus, which closes the 3d chapter of Matthew, we have an account of several temptations to which he was exposed. Now, open your books at the 4th chapter, and see if you can find out how many verses are occupied with the narrative of these temptations, and at what verse each temptation begins.

The teacher then requires all the class to search in silence, and each one to get ready to answer, but lets no answer be given until all are prepared. When all have signified their readiness, some one is designated to give the answer.

The books being closed, the questioning begins :

T. Name the different places into which Jesus was taken to be tempted, and the verse in which each place is named.

P. It is said in the 1st verse that Jesus was led up into the wilderness; in the 5th verse, that he was taken up into the holy city, and set on a pinnacle of the temple; and in the 8th verse, that he was taken up into an exceedingly high mountain.

T. What was the condition of Jesus, when the devil proposed his first temptation?

P. He had been fasting forty days and forty nights, and he was very hungry.

We need not multiply these illustrations. We have not made them entirely in vain, if we have succeeded in producing in the mind of the reader the conviction of these two things; first, that it is a most important and difficult part of the teacher's art, to know how to ask a question; and secondly, that the true measure of the teacher's ability is, not so much what he himself is able to say to the scholars, as the fulness, the accuracy, and the completeness of the answers which he gets from them.

Before leaving this part of the subject, and that there may be no possible misunderstanding on these elementary points, it seems proper that we should here explain briefly the difference between teaching and training, two processes which practically run into each other a good deal, but which nevertheless ought

not to be confounded. Training implies more or less of practical application of what one has been taught. One may be taught, for instance, the exact forms of the letters used in writing, so as to know at once by the eye whether the letters are formed correctly or not. But only training and practice will make him a penman. Training refers more to the formation of habits. A child may be taught by reasoning the importance of punctuality in coming to school. But he is trained to the habit of punctuality only by actually coming to school in good time, day after day.

The human machine on which the teacher acts, is in its essential nature different from the material agencies operated on by other engineers. It is, as we have once and again said, a living power, with laws and processes of its own. Constant care, therefore, must be exercised, in the business of education, not to be misled by analogies drawn from the material world. The steam engine may go over its appointed task, day after day, the whole year round, and yet, at the end of the year, it will have no more tendency to go than before its first trip. Not so the boy. Going begets going. By doing a thing often, he acquires a facility, an inclination, a tendency, a habit of doing it. If a teacher or a parent succeeds in getting a child to do a thing once, it will be easier to get him to do it a second time, and still easier a third time.

A teacher who is wise, when he seeks to bring about any given change in a child, whether it be intellectual or moral, will not ordinarily attempt to produce the change all at once, and by main force. He will not rely upon extravagant promises on the one side, nor upon scolding, threats, and violence on the other. Solomon hits the idea exactly, when he speaks of "leading in the way of righteousness." We must take the young by the hand and lead them. When we have led them over the ground once, let us do it a second time, and then a third time, and so keep on until we shall have established with them a routine, which they will continue to follow of their own accord, when the guiding hand which first led them is withdrawn. *This is training.*

The theory of it is true, not only in regard to things to be done, which is generally admitted, but also in regard to things

to be known, which is often ignored if not denied. A boy, we will say, has a repugnance to the study of arithmetic. Perhaps he is particularly dull of comprehension on that subject. We shall not remove that repugnance by railing at him. We shall never make him admire it by expatiating on its beauties. It will not become clear to his comprehension by our pouring upon it all at once a sudden and overpowering blaze of light in the way of explanation. Such a process rather confounds him. Here again let us fall back upon the method of the great Teacher, "Line upon line, precept upon precept." We will first patiently conduct our boy through one of the simplest operations of arithmetic, say, a sum in addition. The next day we will conduct him again through the same process, or through another of the same sort. The steps will gradually become familiar to his mind, then easy, then clear. He learns first the practice of arithmetic, then the rules, then the relations of numbers, then the theory on which the rules and the practice are based, and finally, he hardly knows how, he becomes an arithmetician. He has been trained into a knowledge of the subject.

You wish to teach a young child how to find a word in a dictionary. You give at first, perhaps, a verbal description of the mystery of a dictionary. You will tell him that, in such a book, all the words are arranged according to the letters with which they begin; that all the words beginning with the letter A are in the first part of the book. Then those beginning with the letter B, then those beginning with C, and so on; you tell him that all the words beginning with one letter, covering some one or two hundred pages, are again re-arranged among themselves according to the second letter of each word, and then again still further re-arranged according to the third letter in each, and so on to the end. Arouse his utmost attention, and explain the process with the greatest clearness that words can give, and then set him to find a word. See how awkward will be his first attempt, how confused his ideas, how little he has really understood what you have told him. You must repeat your directions patiently, over and over, "line upon line"; you must take him by the hand day after day, and train him into a

knowledge of even so apparently simple a thing as finding a word in a dictionary.

While teaching and training are thus distinguishable in theory, in practice they are well nigh inseparable. At least, they never should be separated. Teaching has never done its perfect work, until, by training, the mind has learned to run in accustomed channels, until it sees what is true, and feels what is right, with the clearness, force, and promptitude, which come only from long-continued habit.

Supposing a man to know clearly what teaching is, and to have himself the gift, how endless are the modes by which it is to be exercised! How numerous are the methods of doing even that one function of the teacher's office, the hearing of recitations! Suppose we spend a few moments in considering two or three of these modes, by way of still farther illustrating the subject, and before drawing the general conclusion to which all these illustrations point.

The first that we shall name is called the concert method. This is practised chiefly in schools for very young children, especially for those who cannot read. There are many advantages in this method, some of which are not confined to infant classes. The timid, who are frightened by the sound of their own voices when attempting to recite alone, are thereby encouraged to speak out, and those who have had any experience with such children, know that this is no small, or easy, or unimportant achievement. Another benefit of the method is the pleasure it gives the children. The measured noise and motion connected with such concert exercises, are particularly attractive to young children. Moreover, one good teacher, by the use of this method, may greatly multiply his efficiency. He may teach simultaneously fifty or sixty, instead of teaching only five or six. But in estimating this advantage, one error is to be guarded against. Visitors often hear a large class of fifty or more go through an exercise of this kind, in which the scholars have been drilled to recite in concert, and if such persons have never been accustomed to investigate the fact, they often suppose that the answers given are the intelligent responses of all the members of the class. The truth is, however, in very many such cases, that only some half-dozen or so

really recite the answers from their own independent knowledge. These serve as leaders; the others, sheep-like, follow. Still by frequent repetition, even in this blind way, something gradually sticks to the memory, although the impression is always apt to be vague and undefined.

The method of reciting in concert is, in our opinion, chiefly useful in reciting rules and definitions, or other matters, where the very words are to be committed to memory. The impression of so large a body of sound upon the ear is very strong, and is a great help in the matter of mere verbal recollection. Children too are very sympathetic, and a really skilful teacher, by the concert method, can do a great deal in cultivating the emotional nature of a large class.

Young children, too, it should be remembered, like all other young animals, are by nature restless and fidgetty, and like to make a noise. It is possible, indeed, by a system of rigorous and harsh repression, to restrain this restlessness, and to keep these little ones for hours in such a state of decorous primness as not to molest weak nerves. But such a system of forced constraint is not natural to children, and is not a wise method of teaching. Let the youngsters make a noise; we had almost said, the more noise the better, so it be duly regulated. Let them exercise, not only their lungs, but their limbs, moving in concert, rising up, sitting down, turning round, marching, raising their hands, pointing to objects to which their attention is called, looking at objects which are shown to them. Movement and noise are the life of a child. They should be regulated indeed, but not repressed. To make a young child sit still and keep silence for any great length of time, is next door to murder. We verily believe it sometimes is murder. The health, and even the lives of these little ones, are sacrificed to a false theory of teaching. There is no occasion for torturing a child in order to teach him. God did not so mean it. Only let your teaching be in accordance with the wants of his young nature, and the schoolroom will be to him the most attractive spot of all the earth. Time and again have we seen the teacher of a primary school obliged at recess to compel her children to go out of doors, so much more pleasant did they find the schoolroom than the play-ground.

Quite the opposite extreme from the concert method, is that which, for convenience, may be called the individual method. In this method, the teacher examines one scholar alone upon the whole lesson, and then another, and so on, until the class is completed.

The only advantage claimed for this method is that the individual laggard cannot screen his deficiencies, as he can when reciting in concert. He cannot make believe to know the lesson by lazily joining in with the general current of voice when the answers are given. His own individual knowledge, or ignorance, stands out. This is clear, and so far it is an advantage. But ascertaining what a pupil knows of a lesson, is only one end, and that by no means the most important end of a recitation. This interview between the pupil and teacher, called a recitation, has many ends besides that of merely detecting how much of a subject the pupil knows. A far higher end is to make him know more,—to make perfect that knowledge which the most faithful preparation on the part of the pupil always leaves incomplete.

The disadvantages of the individual method are obvious. It is a great waste of time. If a teacher has a class of twenty, and an hour to hear them in, it gives him but three minutes for each pupil, supposing there are no interruptions. But we know there always are interruptions. In public schools the class oftener numbers forty than twenty, and the time for recitation is oftener half an hour than an hour. The teacher who pursues the individual method to its extreme, will rarely find himself in possession of more than one minute to each scholar. In so brief a time, very little can be ascertained as to what the scholar knows of the lesson, and still less can anything be done to increase that knowledge. Moreover, while the teacher is bestowing his small modicum of time upon one scholar, all the other members of the class are idle, or worse.

Teaching, of all kinds of labour, is that in which labour-saving and time-saving methods are of the greatest moment. The teacher who is wise, will aim so to conduct a recitation that, first, his whole time shall be given to every scholar; and secondly, the scholar's mind shall be exercised with every part of the lesson, and just as much when others are reciting, as

when it is his own time to recite. A teacher who can do this is teaching every scholar, all the time, just as much as if he had no scholar but that one.

Even this does not state the whole case. A scholar in such a class learns more in a given time, than he would if he were alone, and the teacher's entire time were given exclusively to him. The human mind is wonderfully quickened by sympathy. In a crowd each catches, in some mysterious manner, an impulse from his fellows. The influence of associated numbers, all engaged upon the same thought, is universally to rouse the mind to a higher exercise of its powers. A mind that is dull, lethargic, and heavy in its movements, when moving solitarily, often effects, when under a social and sympathetic impulse, achievements that are a wonder to itself.

The teacher, then, who knows how thus to make a unit of twenty or thirty pupils, really multiplies himself twenty or thirty-fold, besides giving to the whole class an increased momentum such as always belongs to an aggregated mass. We have seen a teacher instruct a class of forty in such a way, as, in the first place, to secure the subordinate end of ascertaining and registering with a sufficient degree of exactness how much each scholar knows of the lesson by his own preparation, and secondly, to secure, during the whole hour, the active exercise and coöperation of each individual mind, under the powerful stimulus of the social instinct, and of a keenly awakened attention. Such a teacher accomplishes more in one hour than the slave of the individual method can accomplish in forty hours. A scholar in such a class learns more in one hour than he would learn in forty hours, in a class of equal numbers taught on the other plan. Such teaching is labour-saving and time-saving, in their highest perfection, employed upon the noblest of ends.

But besides these questions of methods, there are other and higher questions, growing out of what may be called the philosophy of education. One of these relates to the observance of a proper order in the development of the mental faculties, and a mistake on this point leads often to a sad waste of time, even where it does not cause a mischievous perversion of ideas. Education may be defined to be the process

of developing in due order and proportion all the good and desirable parts of human nature. On this point all educators are substantially agreed. Another truth, to which there is a general theoretical assent, is that, in the order in which we develop the faculties, we should follow the leadings of nature, cultivating in childhood those faculties which seem most naturally to flourish in childish years, and reserving for maturer years the cultivation of those faculties which in the order of nature do not show much vigor until near the age of manhood, and which require for their full development a general ripening of all the other powers. The development of a human being is in some respects like that of a plant. There is one stage of growth suitable for the appearance and maturity of the leaf, another for the flower, a third for the fruit, and still a fourth for the perfected and ripened seed.

The analogy has of course many limitations. In the human plant, for instance, one class of faculties, after maturing, does not disappear in order to make place for another class, as the flower disappears before there can be fruit. Nor, again, is any class of faculties wanting altogether until the season for their development and maturity. The faculties all exist together, leaf, flower, fruit, and seed, at the same time, but each has its own best time for ripening.

While these principles have received the general assent of educators, there has been a wide divergence among them as to some of the practical applications. Which faculties do most naturally ripen early in life, and which late in life?

According to our own observation, the latest of the human powers in maturing, as it is the most consummate, is the Judgment. Next in the order of maturity, and next also in majesty and excellence, is the Reasoning power. Reason is minister to the judgment, furnishing to the latter materials for its action, as all the other powers, memory, fancy, imagination, and so forth, are ministers to reason, and supply it with its materials. The reasoning power lacks true vigor and muscle, the judgment is little to be relied on, until we approach manhood. Nature withholds from these faculties an earlier development, for the very reason, apparently, that they can ordinarily have but scanty materials for action until after the efflorescence of the

other faculties. The mind must first be well filled with knowledge, which the other faculties have gathered and stored, before reason and judgment can have full scope for action.

Going to the other end of the scale, we have as little doubt that the earliest of all the faculties to bud and blossom, is the Memory. Children not only commit to memory with ease, but they take actual pleasure in it. Tasks, under which the grown-up man recoils and reels, the child will assume with light heart, and execute without fatigue. Committing to memory, which is repulsive drudgery to the man, is the easiest of all tasks to the child. More than this. The things fixed in the memory of childhood are seldom forgotten. Things learned later in life, not only are learned with greater difficulty, but more rapidly disappear. We recall instantly and without effort, texts of Scripture, hymns, catechisms, rules of grammar and arithmetic, and scraps of poetry and of classic authors, with which we became familiar when boys. But it is a labour of Hercules to repeat by memory anything acquired since attaining the age of manhood. The Creator seems to have arranged an order in the natural development of the faculties for this very purpose, that in childhood and youth we may be chiefly occupied with the accumulation of materials in our intellectual storehouse. Now to reverse this process, to occupy the immature mind of childhood chiefly with the cultivation of faculties which are of later growth, and actually to put shackles and restraints upon the memory, nicknaming and ridiculing all memoriter exercises as parrot performances, is to ignore one of the primary facts of human nature. It is to be wiser than God.

Another faculty that shoots up into full growth in the very morning and spring-time of life, is Faith. We speak here, of course, not of religious belief, but of that faculty of the human mind which leads a child to believe instinctively whatever is told him. That we all do thus believe, until by slow and painful experience we learn to do otherwise, needs no demonstration. Everybody's experience attests the fact. It is equally plain that the existence and maturity of this faculty in early childhood is a most wise and beneficent provision of nature. How slow and tedious would be the first steps in knowledge, were the child born, as some teachers seem trying to make him,

a sceptic, that is, with a mind which refuses to receive anything as true, except what it has first proved by experience and reason! On the contrary, how much is the acquisition of knowledge expedited, during these years of helplessness and dependency, by this spontaneous, instinctive faith of childhood. The same infinite wisdom and love, which in the order of nature provide for the helpless infant a father and mother to care for it, provide also in the constitution of the infant's mind that instinctive principle or power of faith, which alone makes the father's and mother's love efficacious towards its intellectual growth and development. Of what use were parents or teachers, in instructing a child which required proof for every statement that father, mother, or teacher gives? How cruel to force the confiding young heart into premature scepticism, by compelling him to hunt up reasons for everything, when he has reasons, to him all-sufficient, in the fact that father, mother, or teacher told him so?

It may seem trifling to dwell so long upon these elementary points. Yet there are wide-spread plans of education which violate every principle here laid down. Educators and systems of education, enjoying the highest popularity, seem to have adopted the theory, at least they tacitly act upon the theory, that the first faculty of the mind to be developed is the Reasoning power. Indeed, they are not far from asserting that the whole business of education consists in the cultivation of this power, and they bend accordingly their main energies upon training young children to go through certain processes of reasoning, so called. They require a child to prove everything before receiving it as true, to reason out a rule for himself for every process in arithmetic or grammar, to demonstrate the multiplication table before daring to use it, or to commit it to memory, if indeed they do not forbid entirely its being committed to memory as too parrot-like and mechanical. To commit blindly to memory precious forms of truth, which the wise and good have hived for the use of the race, is poohed at as old fogyish. To receive as true anything which the child cannot fathom, and which he has not discovered or demonstrated for himself, is denounced as slavish. All authority in teaching, growing out of the age and the reputed wisdom of the teacher,

all faith and reverence in the learner, growing out of a sense of his ignorance and dependence, are discarded, and the frightened stripling is continually rapped on the knuckles, if he does not at every step show the truth of his allegations by what is called a course of reasoning. Children reason, of course. They should be encouraged and taught to reason. No teacher, who is wise, will neglect this part of a child's intellectual powers. But he will not consider this the season for its main, normal development. He will hold this subject for the present subordinate to many others. Moreover, the methods of reasoning, which he does adopt, will be of a peculiar kind, suited to the nature of childhood, the results being mainly intuitional, rather than the fruits of formal logic. To oblige a young child to go through a formal syllogistic statement in every step in elementary arithmetic, for instance, is simply absurd. It makes nothing plain to a child's mind which was not plain before. On the contrary, it often makes a muddle of what had been perfectly clear. What was in the clear sunlight of intuition, is now in a haze, through the intervening medium of logical terms and forms, through which he is obliged to look at it.

A primary teacher asks her class this question: "If I can buy 6 marbles with 1 penny, how many marbles can I buy with 5 pennies?" A bright boy who should promptly answer "30" would be sharply rebuked. Little eight-year old Solon on the next bench has been better trained than that. With stately and solemn enunciation he delivers himself of a performance somewhat of this sort. "If I can buy 6 marbles with 1 penny, how many marbles can I buy with 5 pennies? Answer—I can buy 5 times as many marbles with 5 pennies as I can buy with 1 penny. If, therefore, I can buy 6 marbles with 1 penny, I can buy 5 times as many marbles with 5 pennies; and 5 times 6 marbles are 30 marbles. Therefore, if I can buy 6 marbles with 1 penny, I can buy 30 marbles with 5 pennies."

And this is termed reasoning! And to train children, by forced and artificial processes, to go through such a rigmarole of words, is recommended as a means of cultivating their reasoning power and of improving their power of expression! It is not pretended that children by such a process become more expert in reckoning. On the contrary, their movements as

ready reckoners are rather retarded by it. Instead of learning to jump at once to the conclusion, lightning-like, by a sort of intuitional process, which is of the very essence of an expert accountant, they learn laboriously to stay their march by a cumbersome and confusing circumlocution of words. And the expenditure of time and toil needed to acquire these formulas of expression, which nine times out of ten are to those young minds the mere *dicta magistri*, is justified on the ground that the children, if not learning arithmetic, are learning to reason.

Let us not be misunderstood. We do not advocate the disuse of explanations. Let teachers explain, let children give explanations. Let the rationale of the various processes through which the child goes, receive a certain amount of attention. But the extreme into which some are now going, in primary education, is that of giving too much time to explanation and to theory, and too little to practice. We reverse, too, the order of nature in this matter. What it now takes weeks and months to make clear to the immature understanding, is apprehended at a later day with ease and delight at the very first statement. There is a clear and consistent philosophy underlying this whole matter. It is simply this. In the healthy and natural order of development in educating a young mind, theory should follow practice, not precede it. Children learn the practice of arithmetic very young. They take to it naturally, and learn it easily, and become very rapidly expert practical accountants. But the science of arithmetic is quite another matter, and should not be forced upon them until a much later stage in their advancement.

To have a really correct apprehension of the principle of decimal notation, for instance, to understand that it is purely arbitrary, and that we might in the same way take any other number than ten as the base of a numerical scale,—that we might increase for instance by fives, or eights, or nines, or twelves, just as well as by tens—all this requires considerable maturity of intellect, and some subtlety of reasoning. Indeed we doubt whether many of the pretentious sciolists, who insist so much on young children giving the rationale of everything, have themselves ever yet made an ultimate analysis of the first step in arithmetical notation. Many of them would open their

eyes were you to tell them, for instance, that the number of figures on your two hands may be just as correctly expressed by the figures 11, 12, 13, 14, or 15, as by the figures 10,—a truism perfectly familiar to every one acquainted with the generalizations of higher arithmetic. Yet it is up-hill work to make the matter quite clear to a beginner. We may wisely therefore give our children at first an arbitrary rule for notation. We give them an equally arbitrary rule for addition. They accept these rules and work upon them, and learn thereby the practical operations of arithmetic. The theory will follow in due time. When perfectly familiar with the practice and the forms of arithmetic, and sufficiently mature in intellect, they awaken gradually and surely, and almost without an effort, to the beautiful logic which underlies the science.

How do we learn language in childhood? Is it not solely on authority and by example? A child who lives in a family where no language is used but that which is logically and grammatically correct, will learn to speak with logical and grammatical correctness long before it is able to give any account of the processes of its own mind in the matter, or indeed to understand those processes when explained by others. In other words, practice in language precedes theory. It should do so in other things. The parent who should take measures to prevent a child from speaking its mother tongue, except just so far and so fast as it could understand and explain the subtle logic which underlies all language, would be quite as wise as the teacher who refuses to let a child become expert in practical reckoning, until it can understand and explain at every step the rationale of the process,—who will not suffer a child to learn the multiplication table until it has mastered the metaphysics of the science of numbers, and can explain with the formalities of syllogism exactly how and why seven times nine make sixty-three.

These illustrations have carried us a little, perhaps, from our subject. But they seemed necessary to show that we are not beating the air. We have feared lest, in our very best schools, in the rebound from the exploded errors of the old system, we have unconsciously run into an error in the opposite extreme.

Our position on the particular point now under consideration,

may be summed up briefly, as follows: 1. In developing the faculties, we should follow the order of nature. 2. The faculties of memory and faith should be largely exercised and cultivated in childhood. 3. While the judgment and the reasoning faculty should be exercised during every stage of the intellectual development, the appropriate season for their main development and culture is near the close, rather than near the beginning, of an educational course. 4. The methods of reasoning used with children should be of a simple kind, dealing largely in direct intuitions, rather than formal and syllogistic. 5. It is a mistake to spend a large amount of time and effort in requiring young children formally to explain the rationale of their intellectual processes, and especially in requiring them to give such explanations before they have become by practice thoroughly familiar with the processes themselves.

We have thus endeavoured to set forth, in the first place, what a Normal School is, namely, a seminary for professional training in the art and science of teaching; and, secondly, to show, with some particularity and variety of illustration, what teaching is, in its very root and essence; and, to make the matter plainer, we have attempted to show the difference between teaching and training, and to explain some two or three out of very many different modes of teaching, and to discuss briefly one of the many points that are involved in the philosophy of education. Some distinct consideration of these subjects, which come up continually for discussion in a Normal School, seemed to be the very best line of argument for showing the necessity of such an institution. To appreciate the full force of this argument, it would be necessary, indeed, to consider the vast array of similar and connected subjects which beset the teacher's path, and which there is not time now even to enumerate. Let us merely name some few of these subjects.

The Monitorial method of teaching.

The Catechetical method.

The Explanatory method.

The Synthetical method.

The Analytical method.

Modes of securing in a large school all the while something for all the children to do.

Modes of teaching particular branches: as Spelling, Reading, Mental Arithmetic, Written Arithmetic, Grammar, Geography, Composition, Drawing, Penmanship, Vocal Music, &c.

School apparatus and means for visible illustration.

The development and cultivation of the faculties of observation, attention, memory, association, conception, imagination, &c.

Modes of inspiring scholars with enthusiasm in study, and of cultivating habits of self-reliance.

Topics and times for introducing oral instruction.

Teaching with and without books.

Object Teaching.

The formation of museums, and collections of plants, minerals, &c.

Exchange of specimens of penmanship, maps, drawings, minerals, &c., with other schools.

School examinations. Their object, and the different modes of conducting them.

School celebrations, festivals, and excursions.

The daily preparation which a teacher should make for school.

Circumstances which make a teacher happy in his work.

Requisites for success in teaching.

Causes of failure in teaching.

Course to be pursued in organizing a new school.

Course to be pursued in admitting new scholars.

Making an order of exercises.

Making a code of rules.

Keeping registers of attendance and progress.

Duties of the teacher to the parents and to school directors.

Opening and closing exercises of a school.

Moral and religious instruction and influences.

Modes of cultivating among children a love of truth, honesty, benevolence, and other virtues.

Modes of preventing lying, swearing, stealing, and other vices.

Modes of securing cleanliness of person, neatness of dress, courtesy of language, and gentleness of manners.

Modes of preserving the school-house and appurtenances from defacement.

Keeping the school-room in proper condition as to temperature and ventilation.

Length of school day.

Length and frequency of recess.

Games to be encouraged or discouraged at recess.

Modes of preventing tardiness.

Causes by which the health of children at school is promoted or injured.

Modes of establishing the teacher's authority.

Modes of securing the scholars' affections.

Mode of treating refractory children.

Modes of bringing forward dull, backward children.

Modes of preventing whispering.

The use of emulation.

Prizes and rewards.

But we pause. The mere enumeration of such a list, it seems to us, shows of itself, with overwhelming force, how urgent is the necessity that the teacher should have a time and an institution for considering them, and for obtaining in regard to them definite, well settled views. Some of these questions come up for practical decision every day of a teacher's life, and they are of too serious import to be left to the unpremeditated exigencies of the moment of execution. In a Normal School the novice hears these subjects discussed by teachers and professors of learning and experience, and he is made acquainted with the general usage of the most successful members of the profession. He enters upon his important and responsible work, not only fortified with safeguards against mistake, but furnished with a kind of knowledge which reduces to a minimum his chances of failure, and increases to almost a certainty his chances of success.