SCIENCE.—SUPPLEMENT.

FRIDAY, MAY 13, 1887.

THE RESPECTIVE FUNCTIONS IN EDUCATION, OF PRIMARY, SECONDARY, AND UNIVERSITY SCHOOLS.[1] — *II.*

I. I HAVE said that the chief aim of the primary school is the nutrition of feeling, inner and outer. The child is receptive, and his will is weak. This receptivity is a wise provision of nature for future growth. To all the primary sentiments which distinguish man, the child is more open than the youth. You may play what tune you please on his sensitive chords. Let us take care that it is always a melody, and not a discord of jarring notes. No educational enthusiast has ever yet exaggerated the impressionability of the child, his capacity for the emotions which lie at the basis of all our moral life. Love, tenderness, sympathy, the approbation of others, veneration, nay, even the spirit of sacrifice, and even a certain dim imagination of the harmonious play of all the finer feelings, are all ready, nay, anxious, to be stirred into activity. Response is eager. It even anticipates appeals. What, after all, do our greatest heroes show to the admiring crowd but simply these primary sentiments gathered into a unity of life in them, directed to some great purpose, furnishing the motive forces of their greatest deeds? You have in these primary feelings the well-spring of all life. Do not distrust them. Believe in them. The child before you is not an incarnation of depravity. That is an old-world fable. He is nearer God than you are. Heaven lies about him. Christ did not say 'Of such is the kingdom of heaven' to furnish a text for the glosses and distortions of theologians in their bilious moments. Depend upon it, he meant it. It is by the watchful guidance and gentle admonition of the child that you lead him to the right and good. You do not *supply* motives for his daily acts, you evoke them out of himself. They are there waiting to be turned to use. It is your privilege to touch him to fine issues. Your business is to be watchful, but not suspicious. The loving hand pointing the right way, the warning finger (with perchance a smile behind it) blocking the wrong path, the supporting of the weak will with your strength, — these are your methods. To preach is futile. Food so offered will be rejected. It is by the presentation to the open mind of individual instances, the direction and encouragement of individual acts, that you give the sustenance the child needs; above all, by making *yourself* a particular instance, always present to him, of kindliness, of justice, of mercy, though not without the occasional anger that 'sins not.' In such teaching, severity and harshness are surely out of place. I often smile in schools at the solemn exaggeration of children's offences when I compare their young untried souls with the tarnished conscience of their teacher, the aggregation of iniquities which are incarnated in the dominating and indignant master. He, forsooth, is virtue: the child is vice. Look on this picture and on that! Does it not ever occur to him how gladly even he — magister, dominus, scholasticus — would change places with those young souls?

> "Not poppy, nor mandragora,
> Nor all the drowsy sirups of the world,
> Shall ever medicine *us* to that sweet sleep
> Which we owed yesterday."

But enough of this: the aim of the primary school, I repeat, is nutrition of inner feeling, of the emotions and sentiments through particular instances. The soil is thereby enriched and prepared for the harvest virtue.

But nutrition of inner feeling is not all: there must be nutrition of outer feeling. The real of nature, as well as the real of emotion, is the material of primary education. It is life that educates. Outside the school-room the child lives in an ever-changing atmosphere of emotion chaotic and perplexing: inside the school-room the same life is to be found, but regulated, controlled, explained, enriched, by the teacher. So with the real of outer sense. Outside the school-room the child lives his life under sense conditions. He is feeling his way to the understanding of the objects around him. Nature, and the products of the hand of man working on the crude stuff of nature, press on him. He has to establish relations with all these, that he may use them for life and work and enjoyment. They are, in truth, the raw material which he has to shape to moral and spiritual ends. This outside life is also to be the inside life of the school. The teacher has to help the child to see, and understand, and to organize his impressions. Thus, when he goes out of the school, he goes out, not to a novel world, but to a world already experienced and now par-

[1] Paper read at the Educational congress, Edinburgh, Dec. 31, 1886.

tially explained by the teacher's better knowledge, and with an increase of the power of seeing and knowing and correlating.

Such, I think, is the function of the primary school as the nurse of feeling and the home of training, but not, as I have said, wholly without discipline. The voice of authority must always be heard. The child must learn that he lives and must live under law. The merely intellectual discipline is sufficiently insured by the acquisition of the subsidiary attainments of reading, writing, drawing, arithmetic, etc.

II. At the age of approaching puberty (about fourteen) we pass into a new sphere. At this age the boy tends to become boisterous, and the girl skittish. Our work now is mainly governed by the purpose of discipline. Law now meets and controls the turbulence of the phase through which the human spirit is passing. Nutrition, it is true, is never to be absent — nutrition which is possible alone through the real of inner feeling, and the real of outer nature; but if the foundations of the real have not been laid in the primary period, I doubt our success now. Opportunity is offered once to all. It may never be offered a second time. The teacher, at least, must assume this. The nutrition to be given now is the nutrition of law and duty.

Nature seems now to yearn for activity. The boy is no longer so ready to receive impressions as to make them. His will, or what he mistakes for his will, comes to the front, and in bodily and mental matters alike he loves to *do*. He cannot bear being talked *to* or talked *at*. He has opinions now. He judges with imbecile self-complacency things and men. He wants to show what *he* is, and what he can *do*. How are we to meet this? Really a difficult question. For we have, above all things, to let him grow, and growth is not possible with suppression: nay, suppression at this stage enslaves and converts the less bold into skulks and sneaks, and the more bold into evasive dodgers paltering with the truth, and both into contemners of the pure and good. Here the boy himself points the way to the teacher. Work is what he needs, and wants. Let him have it. Let him be brought to face difficulties in learning, and, though some of the subjects want the attraction of the real, let him learn to master them by sheer force. Formal studies, — languages and mathematics, — with the rudiments of which he has been conversant in the latter portion of his primary stage, must now occupy more than one-half of his time. His specific moral life, again, can now no longer be stimulated or fostered by sentiment, as when he was a child, but only indirectly, and that by intercourse with moral ideals in conduct. This is the age which can appreciate heroism, and understand the sterner and heroic virtues. So with ideals in the things of intellect and literary imagination. Art in literature will unconsciously impress him and mould him. We must not always improve upon the lessons: we must let him draw his own inferences. I believe much in literature at this stage as the chief real or nutritive element, in its silent influence on character, much more than I believe in the real of nature as presented in elementary science, because the concrete idea is not in it. This last too, however, must have its due and daily place. The order observable in the external world may possibly help to bring order into the internal chaos, which at present constitutes the boy, spite of all his pretentiousness and conceit.

But not only is his rampant will to be brought in contact with the hardships of intellectual work that it may face and overpower; his body also must be allowed its full activity. In gymnastic, and, above all, in organized games, he should find an outlet, and also a discipline, — the discipline of difficulties overcome and of law obeyed.

Thus between fourteen and eighteen we gradually subject the boy to law, and give him the priceless possession of concrete ideals in conduct — great personalities — and of art in literature. He is thus tamed, if not subjugated; and, when he approaches the gates of the university, his brave show of self-importance, were he dissected thoroughly, would be found to be hollow at the heart, and to mean little more than the walking-canes, neckties, and general masherdom by means of which he harmlessly works it off to the admiration of that other half of humanity, whom, formerly despised with all a boy's contempt, he now desires above all to attract. Desires to attract, I say; for it is not the fairer half of creation he is yet thinking of, but of himself alone as an irresistible object of admiration to that fairer half, — an excellent arrangement of nature, for thereby he forms an ideal of what he ought to be by seeing himself through the rapt eyes of imaginary admirers.

III. He is within the academic gates, and we have now to ask what is the function of the university in regard of him. I may be heretical, but I do not believe the university forms character. Character, in all its essential features, is already formed in the young matriculant. The home and the school have done this. The university may supplement their work: it cannot do it.

The function of the university has more close relation to that of the primary school than to that of the secondary school. Its aim is like that of the primary school, chiefly *nutrition*, but no

longer of feeling as in the primary, or of moral ideals and of law as in the secondary, but of ideas. Training and discipline are, it is true, involved in the true grasp of ideas, but they are not the university aim. The nutrition of ideas, — this is the great academic function, as I think. Nor are discipline and training to be given *by* the university, but by the student to himself. The youth has now escaped from the bondage of law. The university does its work when it unfolds the domain of knowledge to the opening adolescent mind, and invites it to enter in and take possession, and when it provides the material apparatus of self-instruction. The professor is only a guide and an example. The essence of university life is freedom for the student, and freedom for the professor. It is simply because the university has become a certifying and graduating body that even the calling of class-rolls is justifiable. Even as a graduating body, I doubt, after all, if it is justified in calling them. The professor offers to show the student the way to knowledge, and to teach him how to use the instruments of knowledge, whether they be books or microscopes; and there his function ends. If any parent is unwilling to send his son to the free life of a university, let him keep him at home and call in a trained nurse or a paternal tutor.

Self-discipline, *self*-training, through the pursuit of ideas which attract by their eternal and inherent charm all ingenuous spirits, — this is the purpose of a university. There can be no self-discipline without freedom. This is of the essence of mind: God has ordered it so. True, freedom may end in tasting of the tree that is forbidden, and in expulsion from Paradise. Be it so. Such is the universal condition of adolescent and adult life. By bringing to bear the schoolmaster — the law — on the student, we make the unworthy less worthy, and the worthy we irritate and repress in their upward and onward striving.

What follows from this general view? Certain very practical results. Boys in years and boys in mind, though they be physically grown up, have no business within academic walls. Their place is the secondary school, where they may receive the intellectual and moral discipline which fits them to breathe the pure air of freedom and the rare ether of ideas. Freedom of study also, not compulsory curricula, is alone in place now.

And what are ideas? Shall I venture on a definition where Plato failed and Aristotle stumbled? I would rather not. And yet I know what I mean. For is not 'the true' an idea? And is not the pursuit of science and philosophy the pursuit of the true? At these academic gates the student is to cast aside the idols of the den and of the market-place, and, unencumbered, to question and to investigate in loyal obedience to the divine summons to *know*. In philology, in philosophy, in the study of nature in its many forms, in art, he is called upon to look face to face with the true, the good, and the beautiful. Even when the student himself is all unconscious of the divine presence in his ardent pursuit of material science, it is yet there, for his aim is the true. Step by step he is putting himself in harmony with the scheme of the universe, and preparing for the final illumining. The truth of this and of that he seeks for; but these separate truths are but the fragments of the whole, and lead him to the whole. He is always on his way upward. The conception of the unity of the whole, as seen in the wisdom and working of the eternal Reason, teaching him by the things which He has made, awaits him. The student-spirit is thus brought into relation with the universal Spirit, which effects in him the fruits of the spirit; above all, harmony of soul and all the virtues.

It is philosophy, and history treated in a philosophical sense, that hold the key of the temple. And if philosophy should fail him, literature will be found to be a universal solvent; for in itself it is the creative thought of man on man cast in beautiful forms. It is a striving after the truest truth and a direct and informal penetration into the heart of things; it lives *in* the idea and *by* the ideal. Harmony of thought and life — a tie between all special knowledges — may be found here.

It is scarcely necessary to say, that, when I speak of science and philosophy, I speak of arts in the mediaeval sense, — the whole circle of rationalized knowledge. The merely professional studies which fit to be physician, theologian, lawyer, teacher, are mere dependences on the university properly conceived, mere accidents of the substance. The university itself was founded in arts, and still truly lives only by arts. An aggregate of professional colleges can never constitute a university. The idea is not there: it cannot live with the purely technical. Even in technical schools, at least if they are part of a university organization, no man is a fit professor who is not alive to the university idea in what he teaches, makes his students feel the intimate relations of all knowledge, the philosophy which permeates and gives significance to every subject. If the student does not attain to this, he has fallen short of the academic aim.

But how can the student breathe the purely scientific atmosphere if he does not come prepared? If he spends the years of his arts life in acquiring the mere instruments, linguistic and

mathematical, he can never enter the temple of science at all. At best he can take but a cursory peep. I am well aware that the world gets along by compromise, and I have no objection to a year or so being devoted to the mere instruments within the walls of a university; but let it be understood, that, even when we accept this, we must yet demand a much higher qualification in the matriculant than we do now. After a year spent among the instruments, the student, at the age of about nineteen, should be in a position to throw himself into real studies, — philology, philosophy, history, literature, art, physical science. To take the encyclopedic round would be impossible nowadays; but by the thorough investigation of a department he gains admission to the idea, and becomes a scientific thinker. Discipline in one department, properly understood and properly pursued, is discipline in all. He thereby attains to that reverence for all knowledge, and that large philosophical comprehension, which is the consummation of all true self-discipline. Thus it is that the mere intellect becomes permeated by the emotions which lie at the heart of all ideals, and becomes itself ideal and universal in its *personal* aims. This is what culture truly means.

Too briefly for the great subject, but not too briefly, I trust, for understanding, I have indicated the function of the university in education. Out of it the equipped man issues to encounter the buffets of life, and do the work which his hand findeth to do; but he can never forget that he has enrolled himself a citizen of the city of reason, and that he is a freeman of it by divine right.

All stages of educational progress you will, I trust, see gain their true significance, from their genuine ethical outcome, — their contribution to harmonious inner life, and harmonious outer living.

S. S. LAURIE.

COMPETITIVE EXAMINATIONS.[1]

THE subject which I have chosen for this evening's discussion you will probably regard as a well-worn one. But the working of examinations has now undergone the test of a lengthened trial; and much of the controversy respecting their educational value, which raged some ten years ago, has in a great measure subsided.

It therefore occurred to me that a retrospective view of what has been said or written by advocates on both sides of the question might be useful, if taken in the light of our accumulated experience.

It will be in the memory of most of us, that, between the years 1870 and 1880, our magazines teemed with articles on the subject; and there is so much that is suggestive and worth recording, that I must crave your indulgence for making frequent extracts from different papers. According as writers were interested in maintaining the old public-school system of education, or the system supported by the modern examination coach and so-called 'crammer,' they ranged themselves against or in favor of competitive examinations.

Some of the arguments hurled at the concoctors and upholders of the examination system were the following: —

Examinations led to cramming on the part of the candidates; i.e., preparation by pure memory-work, leading to a parrot-like acquaintance with facts and phrases, and even this knowledge quite transitory, learned for the purpose of the examination, and forgotten as soon as it was over.

The reasoning-powers were said to be stultified by disuse.

Imagination and originality were crushed.

The strain of competition would undermine the health of the young.

The artificial stimulus of competition would take the place of a healthy love of study for its own sake, and, when withdrawn, the genuine interest in work would never return.

In the Indian civil service the result would be that the worst candidates would be selected, and the best rejected.

On the other hand, the advocates of examinations contested these points one by one, and maintained the opposite conclusions. They affirmed that the competition and rivalry excited was a positive good in the training of the young; that, to make a great struggle for a place in an examination, even but once in a lifetime, was itself an education to a naturally indolent mind; that the system afforded the only method, free from chance or favoritism, of selecting candidates for innumerable appointments in life. They also maintained (and not without reason) that prizes for learning, and orders of merit, advanced the character of the teaching given to the whole of a school.

Amongst the opponents of the system, we find Dr. Birdwood, in an address before the Society of arts about the year 1873, — an address indorsed and eulogized by the *Standard* in a leading article at that time, — denounced the army and civil-service tutors as "a gang of examiners, and the directors of the new East India competitive examination Dodge company." But in this anathema it is clear that he ought to have included the civil-service commissioners, who are the real directors of those examinations.

[1] From the *Educational times*, April 1. A paper read before the College of preceptors.