SCIENCE.—SUPPLEMENT.

FRIDAY, DECEMBER 4, 1885.

ELECTIVE STUDIES AT HARVARD.[1]

A NEW departure has been made in Harvard college during the past year, in that, for the first time in its history, freshmen have been allowed to choose a majority of their studies. Under the new rules but seven-sixteenths of the work of the freshman year will be prescribed: the rest of the college course, excepting a few exercises in English composition, will be elective.

Let us examine on what facts the Harvard faculty build their confidence in the elective system; in what sense it can be called a system; whether, furthermore, its introduction, while making instruction more agreeable, does not tend to lower its standard; and, last, whether its tendency is to foster character, and to make vigorous and law-revering men.

A preliminary objection is that the so-called system is really no system at all, but a mere cutting of straps. This is a misconception. The student under it merely chooses the specific topic of his study: what the amount of it shall be, and what its grade of excellence, are decided for him. After completing his freshman year, the Harvard student must pass successfully four elective courses in each of the following three years; and in each course or single line of study 50 per cent of a maximum mark are required each year for a pass. After his first year, then, the Harvard B.A. must have prosecuted twelve courses of self-selected studies, and mastered them at least half perfectly.

The essence, then, of the elective system, is fixed quantity and quality of study, but variable topic. Every important New England college admits it, to a certain extent, in both senior and junior years, while some allow it in the sophomore. In Harvard its adoption has been very gradual. In 1825 options were first allowed in modern languages. Years of experiment followed, with the result that the old method was step by step abandoned. The time of transition has been one of great prosperity. During the past fifteen years the gifts to the university have averaged $250,000 a year, and the number of students has steadily increased; the average attendance of undergraduates during the five-year period 1861 to 1865 amounting to only 423, while that during 1881 to 1885 reached a total of 873.

Harvard, then, has become prosperous by taking the lead in a great educational movement, the necessity for which lay in the fact that of late years the field of knowledge has so greatly widened. A place on the college curriculum has had to be found for modern languages, political economy, and science in its various departments. To avoid the danger of superficiality, — which is opposed to thorough-going discipline and the acquirement of sound mental habits of thought, — a choice was necessary between so many different subjects. In making this, too, personal aptitudes had to be considered, and thus a new principle was introduced; viz., that of valuing studies less according to their subject-matter than according to their fitness for the mind of the student. The will came to be treated as of primary importance. The student is told at Harvard, 'Study what you will, but you must will to study something.' The boy is thus taught how to choose during the formative period of his life, that is, between the ages of eighteen and twenty-two.

A manlier type of character is actually observed as the elective principle extends. The students show an enthusiasm for their work that was lacking formerly. Their ideal of a 'gentleman' is now higher than it was; and hazing, window-smashing, and disturbing a lecture-room, are now things of the past. That a decent scholarship has now become reputable, may be seen from the fact that in the last senior year 91 out of 191 men received 'honorable mention;' i.e., took a high rank in three or more courses of a single department. The following table, which gives the average percentage of marks attained at examinations during the past ten years shows that the standard of good scholarship has been steadily rising.

Year.	1874–75	1875–76	1876–77	1877–78	1878–79	1879–80	1880–81	1881–82	1882–83	1883–84
Freshman.....	59	55	5	56	62	62	65	67	64	63
Sophomore....	5	64	63	65	67	68	70	69	69	68
Junior.....	67	65	66	67	70	68	72	75	72	72
Senior.....	67	70	70	73	76	73	77	75	79	81

Observe that the marks become higher on approaching the senior years, where the elective principle most prevails, and that while, in 1874, one-half of the freshmen who were doomed to

[1] Abstract of Professor Palmer's article on Elective studies at Harvard university, *Andover review.*

prescribed studies gained less than 60 per cent, ten years later one-half of the seniors obtained four-fifths of a perfect mark in four electives.

Two objections may here be raised; viz., that the selected courses will have but little connection with each other, and that the easiest ones will always be the favorites. An answer to the first objection is contained in the fact that nearly one-half of the last senior class chose at least three closely related courses. The charge of 'soft' courses is the stock objection to the elective system, and seems, *a priori*, a sound one. The subjoined list of the courses which in 1883–84 were most largely attended by seniors and juniors, shows that, when choice gets full play, the factor of interest may make a severe study popular.

The courses were: Mill's political economy, 125 seniors and juniors; later European history, 102; history of ancient art, 80; comparative zoölogy, 58; political and constitutional history of the United States, 56; psychology, 52; geology, 47; constitutional government of England and the United States, 45. Are not these studies just those which should be the most popular?

It may be asked how such wise selections are secured, and we answer, simply by making them deliberate. In June the students must choose their studies for the next year, and notify the dean of their choice. Until Sept. 21, any elective may be changed, on notice sent to the dean. During the first ten days of the term no changes are allowed, but afterwards for a short time they are easily effected. For the remainder of the year no change is possible, except for urgent reasons.

By these means the faculty tries to avoid waste of time over unprofitable studies. Of course, not seldom unwise choices are made; but is not that true to an even greater extent in the case of prescribed studies? Moreover, the wastes of prescription affect chiefly the energetic and original students, while under the elective system it is especially the shiftless and dull who suffer, that is, men who cannot be much harmed by any system.

Then, how much the instruction under the two systems differs! When studies are prescribed, the teaching becomes often a secondary affair, and the pupils have to be urged to work. Under the elective system the student feels that he has something at stake, and a higher style of teaching becomes possible. Theses are read, and original works consulted. During 1860–61 only 56 per cent of the Harvard undergraduates consulted the college library; during 1883–84, 85 per cent.

Then, again, under the new system at Harvard, attendance at lectures is not compulsory; though, of course, a lengthened absence would not be permitted. The results obtained from trusting the students have been satisfactory. In the last senior class the total absences, whether from sickness, misdeeds, or other causes, amounted to but 16 per cent of the total number of recitations. Colleges requiring attendance seldom show better results.

But when studies are elective, professors are benefited equally with students. Teacher and taught are brought closer together, a common sympathy animating both alike. The professor, too, gets to see himself as others see him, and, if inefficient, his class soon dwindles away. Both professors and students are, in fact, put on their good behavior.

But why introduce the elective system so early as the freshman year? First, because the youth of eighteen needs just such a happy influence on his character as the system gives; second, because the loss of time incident to learning to choose can best be borne in the earlier, that is, least valuable, college years; while, last, the change from school to character methods is too important to be marked by the mere passage from one class to another. A change of residence should mark it. A character-college, then, while no place for the indolent rich, is best suited for the democratic many, to whom the elective system gives an opportunity for mental and moral expansion which no compulsory system can afford.

We must, however, remind the reader that the system is not yet perfected, and has still many imperfections. Convinced, as we are, of the soundness of its method, we invite criticism, which should now turn to the important work of bettering its details of operation.

ENSILAGE IN ENGLAND.

In a return to the house of commons, entitled 'Ensilage commission, evidence, part i., Preliminary report and minutes of evidence,' and in a 'Return of the replies to questions relating to silos and ensilage put by the agricultural department, privy council,' which have lately reached us, the latest information is contained in regard to the views held in Great Britain as to the value of silos and ensilage, and the practical successes and experiences with this still somewhat experimental method of preserving and feeding various kinds of green food to stock, in an undried condition.

The evidence obtained voluntarily by the parliamentary commission from thirty-eight witnesses, including Sir John B. Lawes, Viscount De Chezelles, and the owners and occupants of many large estates, their agents and tenants, and the inventors of different forms of silos, not excluding