Whether temper is hereditary is a question not easily answered; but when asked of couples in which both parents are good-tempered, or both parents bad-tempered, the answer is emphatically in the affirmative. 30 per cent of the children of the former are spoken of as good-tempered, and only 10 per cent as bad; while, with regard to the children of the bad-tempered, only 4 per cent are good-tempered, and 52 per cent bad. Similarly, by a method necessarily somewhat arbitrary and not easily described, Mr. Galton concludes that in the ancestry of good-tempered persons, three persons of good temper will occur to two of bad temper, and *vice versa* in the ancestry of a bad-tempered person. Apart from direct heredity, education and circumstances evidently affect temper. A large class of such influences are about as favorable to good as to bad temper, and so tend to produce a variety of tempers. Another class of influences, typically illustrated in the case of a not unusually docile woman becoming very docile as the wife of a masterful husband, tends to divide persons (and this applies particularly to the offspring) into distinct groups; while the effect of a prepotent ancestor may be working to continue one kind of temper through many members of the family. Mr. Galton finds, that, in 14 cases of 49, these domestic and social influences are too weak to overcome the secondary influences in course of heredity, either by the prepotent temper of one member or the general concurrence of temper in several. Finally, it may be noted, that, though so important and readily observed a trait, temper is not a prime consideration in marriage, men of each kind of temper about as frequently choosing a wife of one temper as of another.

This research, though necessarily not very definite, is well calculated to bring out the great variety of this important trait, and to show, amidst this diversity, its tendency to continue its kind.

IS GENIUS UNIVERSAL? — The question, when asked with a due appreciation of the kind of evidence upon which it is to be answered, is by no means an idle one. To know whether the activity for which the world reserves its highest prizes is dependent upon an unusual strength of mental capacity in all directions, or upon the acute specialization of one faculty of mind to the exclusion of any thing like equal development of other faculties, is certainly an important piece of knowledge. Carlyle had no respect for a genius that could not be any kind of genius, and his view is quite generally repeated with approval by persons with less right to an opinion. This is a mistake of all hero-worshippers. They exaggerate the abilities of their hero in all directions in which he had a somewhat more than average gift, and also exaggerate the share due to circumstances in his development. It is easy to cite quite a long list of men eminent in more than one direction; but, as Mr. Sully, whose train of thought (*Gentleman's Magazine*, July, 1887) we are now repeating, well points out, if we are careful to count only such kinds of eminence as imply markedly different modes of mental power, and demand first-rate ability in each, the number of 'double-firsts' is enormously diminished. We find that polynathy has been mistaken for universal genius; that the poet-scientist, for example, was a great poet, but only an average scientist; and that the few eminent names that shine in several departments are decidedly exceptional. "True genius very rarely shows itself in more than one well-defined region of human activity." That this is due to a more or less innate fitness for that kind of activity in which greatness is won, is shown not only by the fact that it is a marked characteristic of genius to show a decided bent that overcomes all obstacles in the direction of future greatness, but also that often tentative excursions in various directions result in failure, until the right activity is found, and success follows. This conception of genius is in harmony with the little we know of its physical substratum. "Universal genius is a biological absurdity," says Mr. Sully. Genius depends upon the abnormal development of a certain group of brain-centres. Widely versatile talent is the outcome of a splendid, generally excellent brain; and perhaps this is the clew to the tendency of genius to go over to abnormal one-sidedness, while talent keeps healthy as an "exalted common sense."

THE editor of *Petermann's Mittheilungen* is in receipt of a letter containing the news that Lupton Bey is safe in Khartum, although still a prisoner of Osman Digma.

BOOK-REVIEWS.

The Pleasures of Life. By Sir JOHN LUBBOCK. London and New York, Macmillan. 16°.

THERE are in every age certain leaders of thought, who, by their successes already won, have gained for themselves the right to speak on topics important to the general culture of the age which they represent. In an age in whose culture science occupies a place exalted far beyond what was ever allotted it before, it is natural to find in the eminent scientist the spokesman of culture. Amongst those entitled to such a distinction, Sir John Lubbock stands amongst the first. The versatility of his talents, the success with which he has utilized them in so many directions, the practical interest he has always taken in the doings of the nation to which he belongs, — all have contributed to his well-merited fame. The author of the 'Origin of Civilization' and of 'Prehistoric Times' does not think it a whit less worthy to minutely record the doings of 'ants, bees, and wasps;' and that, too, in the leisure hours of a busy parliamentary career. In educational and all scientific movements his name has always been prominent. Such a man is naturally often called upon to make short addresses of welcome or of congratulation on the many occasions on which such are customary. These addresses are here collected, and make a very pleasing volume. "Being myself naturally rather prone to suffer from low spirits," says the author, "I have at several of these gatherings taken the opportunity of dwelling on the privileges and blessings we enjoy," etc.

The changed conditions of modern life form the subject of many an essay. That these changes cause a variation in the order and importance of the pleasures of life, goes without saying. This change Sir John Lubbock fully appreciates, and the liveliness of his little book is beyond question. That much of what he says is not new, will be foreseen: such a volume must be judged by lenient standards. If what is said is well and pleasantly said, if it appeals to the good sense of cultured people by the liberality and nobility of the thought, it answers its purpose. It must certainly have been a privilege to have heard these addresses: in the reading of them many will find a 'pleasure of life.'

Under the two titles 'The Duty of Happiness' and 'The Happiness of Duty' is advocated a scientifically justifiable optimism the practical realization of which will be a universal blessing. The importance of literature in the lives of the people at large is represented in 'A Song of Books,' and in the much-disputed 'The Choice of Books.' The social virtues find their praises recorded in 'The Blessings of Friends' and 'The Pleasures of Home.' The practical problems of modern life are touched upon in the essays on the value of time, on science, and on education. The plea for science is a just one: it aims to dispel the notion that science is all drudgery, or all grossly and immediately practical; the scientist a bug-hunter, and nothing more. The culture-worth of science, the educational value of its instructions, are amongst the most precious treasures of our civilization. The office of these in widening the mental horizon, in checking a narrowing dogmatism, in keeping alive a healthy communion with nature, can hardly be exaggerated. In the education of the future, science is destined to play a still more important part than it does now. One may well join the author in the wish for a glimpse of a science-primer of the twentieth century.

Home Sanitation: A Manual for Housekeepers. By the SANITARY SCIENCE CLUB of the Association of Collegiate Alumnæ. Boston, Ticknor. 16°.

THE Sanitary Science Club of the Association of Collegiate Alumnæ was organized in 1883, for the study of home sanitation. Two years were devoted to general study and research before any attempt was made to extend the work beyond the limits of the club. Since that time the material presented in this little book of eighty pages has gradually taken form. It consists of a series of short essays on the different subjects connected with home sanitation, each of which is followed by a series of questions formulated with reference to the topics discussed, and so framed that an affirmative answer implies a satisfactory arrangement of that part of the home, while, if the answer is negative, a remedy for the defect is suggested. These questions have been practically tested by the

members of the club in their own homes, and by other housekeepers, and have also been adopted as the basis of a course in sanitary science offered by the Society to Encourage Studies at Home. The editors of the manual are Ellen H. Richards and Marion Talbot.

In the introductory chapter the editors call attention to the fact that the hygiene of the home is a subject of growing interest and importance. As one of the problems of social and economic science, it is beginning to receive the attention it may rightly claim. The women of our country are advised not only to follow the discussions which are carried on by sanitary congresses, boards of health, and other authorities, but by combining theory with practice, as few others can, to aid in solving the great questions which seriously affect the interests of the home and the family.

The object of this manual is to arouse the interest of housekeepers in the sanitary condition of their homes; not to alarm or discourage them, but to urge intelligent oversight, and to indicate the points requiring investigation, the methods of examination, and the practical remedies. One of the most dangerous qualities of the unsanitary house is that it does not always and at once produce a definite and virulent disease, such as typhoid-fever or diphtheria, but without doubt it slowly and insidiously causes ill health and general langour, which incapacitate for sustained effort, and to which women are especially subject from their greater confinement to the house.

Householders are reminded that it is not enough to secure right sanitary conditions: these must be maintained. This can best be done through the eternal vigilance of the housekeeper, who can thus, in a large measure, secure the two essentials of a happy home, — good health, and its attendant, good nature. The following motto should be the basis of her efforts: "Any invention intended to be a substitute for watchfulness will prove a delusion and a snare."

The following are the subjects discussed in the succeeding chapters: situation of the house, and care of the cellar; drainage and plumbing; ventilation; heating; lighting; furnishing; clothing; food and drink. The essays themselves are excellent, and the questions on them are very practical and suggestive. The manual also contains a paper read before the Association of Collegiate Alumnæ, on sanitary work for women, by Annie E. Allen, in which some excellent advice is given to housekeepers on various subjects; such as their relations to their servants, the dangers connected with boarding-schools, and their duties to themselves.

The concluding paragraph of this paper is as follows: "The day is past when sickness was held to be a direct interference of Providence, as retributive punishment. Pestilence, fevers, and weakness are, indeed, penalties for sin, but it is the sin of ignorance. In this age of scientific enlightenment, and invention, and wide-spread information, ignorance of the primary conditions of health and vigor is unpardonable. A knowledge of sanitary principles should be regarded as an essential part of every woman's education, and obedience to sanitary laws should be ranked, as it was in the Mosaic code, as a religious duty."

We commend this little book to housekeepers, and hope that it will have wide circulation, and prove of as much benefit to those without the membership of the Sanitary Science Club as it evidently has to those upon its rolls.

The New Education. By GEORGE H. PALMER. Boston, Little, Brown, & Co. 16°.

THOSE who are studying the many problems attending the development of our colleges and universities will be grateful to Professor Palmer of Harvard for preserving in permanent form the three articles which make up this book. On the appearance of the first of them in the *Andover Review*, some eighteen or twenty months ago, attention was directed to it as the strongest and fairest plea for the system of free electives in the college course, that had been published. It was immediately subjected to criticism and attack; and in the two other articles which form part of the volume before us, Professor Palmer replied to his critics.

Professor Palmer takes pains to keep one fact, fundamental to the fair discussion of the Harvard system, before his readers; namely, that the particular modes of choice now in use at Harvard are not finalities. They are a stage, merely, in the development, and it is to be expected that other and better systems will eventually be found, both at Harvard and elsewhere. This consideration has been largely overlooked in the many discussions which have taken place, and omission to give it proper weight has prejudiced the Harvard case very much.

The peculiar strength of Professor Palmer's argument arises from the fact that it rests on a philosophical and ethical basis. It is not an appeal for conformity to a changing environment, although that feature is recognized; nor is it an *ex parte* argument for some preconceived system. It starts from the individuality of the pupil, and demands that his will and character be trained, and that by the exercise of his own free will, — the only character-building that amounts to any thing. Professor Palmer has no difficulty in making out a theoretical case from this standpoint, nor does he find any but cumulative evidence for his system in such facts as he cites from college-history. It must be admitted, too, that he has little trouble in offsetting the objections raised against his ideal plan by most of his critics. He does not allude, however, to Professor West's analysis of President Eliot's report for 1884–85, which many persons regard as the most damaging criticism on the Harvard system that has appeared. We regret this, for Professor West's paper has had a wide influence; and if Professor Palmer could successfully refute its conclusions, he should have done so.

We can heartily agree with the present author in holding that character-building is the main object of education, and that character-building is not mechanical, but organic. It depends, therefore, upon the pupil himself; and habitual wisdom of choice can only be attained through freedom of choice. We agree also in holding that the elective principle has come to stay, and that it will never again be wholly absent from any successful college. But we cannot conclude so rapidly as does Professor Palmer, that unlimited election is the wisest system. It may in time be proved to be so, but we cannot agree that it is proven to be so now. The danger of abuse and the tendency to over-specialization are so great, that we must ask for some provision to be made against them. Moreover, wiser heads than those of eighteen-year old boys know far better than the latter what sorts of knowledge are essential, and what non-essential. We would never urge a return to the old-fashioned inelastic course of study; but we do believe that the group system, modified in certain details, is superior to a system of unlimited election. We believe that under it there is found the freedom of choice which Professor Palmer insists on, as well as the necessary limitations to the abuse of that freedom by untrained minds. We would have it more elastic than it is found at present; we would have a greatly increased number of groups provided, but we would retain its fundamental principle. As the free man must exercise his freedom with due regard to the rights of his fellows, so the freedom of a student's choice must be limited by the teachings of experience. Professor Palmer himself seems to see the force of this position, for he says (p. 105), "Whenever I can hear of a group system, which like the old college has a place for the indistinct young man, and like the new elective college matures him annually by suggesting that he take part in shaping his own career, I will accept the group system." We have confidence that such a system of groups will be forthcoming in due season.

The remarks of the author toward the close of his volume (pp. 142–144, 149, 150, *et ff.*) as to the form of instruction and the character of the studies during the two final years of the college course, are intensely practical, and we trust that they will be heeded. As to methods of collegiate teaching, Professor Palmer says, "Recitations pure and simple have serious drawbacks. They presuppose a text-book, which, while it brings definiteness, brings also narrowness of view. The learner masters a book, not a subject. After-life possesses nothing analogous to the text-book. A struggling man wins what he wants from many books, from his own thoughts, from frequent consultations. Why should not a student be disciplined in the ways he must afterwards employ?" "A pure lecture system is a broad road to ignorance. Students are entertained or bored, but at the end of a month they know little more than at the beginning. . . . Personal sanction is wanted for every step. One who will grow wise must perform processes himself, not sit at ease and behold another's performance."

He again strikes a telling blow at the crude courses of study