

work of its kind in the English language), over one hundred and twenty thousand copies of the Lomb Prize essays, besides numerous reprints. The influence of this great work upon the public-health interests of the country can scarcely be estimated.

ICE-WATER.—In the opinion of the editor of *The Sanitary Volunteer*, the official organ of the New Hampshire Board of Health, there is a great deal of sentiment and many opinions, regarding the use of ice-water, that vanish when the light of reason and experience is turned upon them. The fact is, that ice-water, drank slowly and in moderate quantities, constitutes a healthful and invigorating drink. There is no doubt that ice is a great sanitary agent, and every family ought to be provided with it during the warmer months of the year. It is true that the inordinate use of ice-water, or its use under some special conditions and circumstances, is attended with great danger: so is the improper use of any other drink or food. The assumption that iced water is dangerous, and that iced tea, or iced coffee, or iced lemonade is a harmless substitute, is simply a delusion. As the source of danger feared by some is the degree of cold, we fail to see clearly how flavor modifies the effect of temperature. There are some individuals, undoubtedly, who cannot drink ice-water without injury, and who ought never to use it, but to a great majority of persons it is refreshing and healthful. Its use, temperate and discreet, is in no way to be condemned, which cannot be said of some of its substitutes.

THE MORTALITY AMONG NURSES.—The advocates of the non-bacillary origin of tuberculosis have sought support for their position in the immunity often enjoyed by nurses and attendants on the phthisical. That this immunity is the exception, and not the rule, seems indicated by recent studies by Cornet. In the *Zeitschrift für Hygiene*, Cornet publishes the tabulated results of his comparison of the mortality rates in the population of towns and cities and in nurses. These results are summarized in *The Medical News*. A large proportion of German nurses are members of religious orders, who, by reason of their secluded, regular lives, are removed from many causes of acute disease. Such nurses are in the best mental and moral condition to insure health, for which and other reasons the infective diseases ought not to be especially prevalent among them. Care was taken to select orders whose members serve for life and remain celibate. The material collected was from 38 cloisters, embracing an average yearly service of 4,028 women, whose aggregate service in years was 87,450. An examination of this material during twenty-five years revealed 2,099 deaths, 62.88 per cent of which were from tuberculosis, or nearly two-thirds. The usual proportion of deaths from tuberculosis is from one-seventh to one-fifth. Next to tuberculosis comes typhoid, while cancer shows a slightly increased rate of mortality. Death occurred among these nurses at an average age of 36.27 years, an average shorter life than that of workmen exposed to the inhalation of injurious dust, by eight or ten years. The death-rate from tuberculosis among nurses attains its maximum between the thirtieth and fortieth years, and then steadily declines. When a comparison of the death-rate of nurses and the population of a town is made, it is found that between the ages of 15 and 20 the mortality among nurses is four times that of other population; from 20 to 30, three times; from 30 to 40, twice as great; afterward becoming about equal. The explanation of these facts is found in the prevalence of tuberculosis among nurses, it being nine times more frequent than among other classes. All infectious diseases are more frequent among nurses until the fortieth year of life, after which their death-rate is lower than that of other classes. It is further shown that during the first six months of service the nurse enjoys comparative immunity from infection. After that, the mortality and morbidity rate steadily rises for three years, during which the greatest number of deaths occur. The life chances of nurses do not compare favorably with others. A nurse beginning her profession at seventeen has twenty-one and a half years of life less than a woman of the same age not exposed to infective diseases. So far as relative age is concerned, a nurse at twenty-five has the chance for life commonly enjoyed at fifty-eight; at thirty-three years, the outlook of a person aged sixty-two.

UNDERGROUND WATER AND BACTERIA.—Underground water and bacteria were the theme of a recent lecture delivered by Dr. C. Fraenkel, assistant to the famous bacteriologist, Dr. Robert Koch, in the Hygienic Institute at Berlin. The gist of the lecture was that the underground water of Berlin is free from bacteria, that this surprising fact is due to the great filtering-power of the ground, and that consequently the water drawn from the artesian wells is perfectly wholesome. These results do not correspond with those obtained in New York, where the water from artesian wells has in many, if not all, cases proved to be impure.

THE FLY AS A DISEASE-CARRIER.—With the bacteriologists, another domestic animal, the fly, is coming in for his share of incrimination for spreading infectious diseases. It has long been known that, if not the house-fly, at least some kinds which are near relations of his, have sometimes been guilty of causing malignant pustule by carrying the contagion of anthrax from diseased animals or animal substances to man. During the past year Dr. Alessi has been experimenting with flies to determine their liability to spread the infection of tuberculosis. The bacillus of this disease was found in the intestines and the excrement of flies which had feasted on tuberculous sputa; and their dried feces, in which, with the aid of the microscope, the bacillus was known to exist, was used for inoculating rabbits, and the animals became tuberculous. Thus it is found that the digestive tract of the fly is harmless to the germ. Spillmann and Haushalter have also made similar researches, with the same results; and lately, according to the *Annals d'Hygiène Publique*, a Mr. Howe, who has studied the subject in the Nile country, has found that the granular ophthalmia of that region can be spread by means of house-flies passing from the eyes of those who are affected with the disease to other persons.

BOOK-REVIEWS.

Principles of the History of Language. By HERMANN PAUL. Tr. by H. A. Strong. New York, Macmillan. 8°. \$3.

PROFESSOR STRONG has done a service to English readers by translating this work, which contains a more comprehensive survey of the principles of linguistic science and of the methods of studying it than can readily be found elsewhere. It may be said to consist of two parts, though they are not sharply separated. The earlier chapters deal mainly with the general principles of language and the chief determining causes of its development, while in the later ones these principles are followed out into their applications, and discussed with great fulness of detail, and wealth of illustration. Professor Paul has a very clear and correct conception of his favorite science, of its relation to the other sciences, and of the right mode of studying it. The science of language is not an exact science, much less a physical science, as Professor Max Müller maintains, but a department of history. Its principal basis is psychology, and the leading facts with which it deals are groups of ideas. The physical factor, however, must not be ignored; the language consists of spoken sounds, and it is only through the medium of the material world that we are able to communicate with our fellowmen. Nevertheless, the chief factor in its development is not the body, but the mind, and mind as it exists in society.

Having thus clearly indicated the scope and method of the science, Professor Paul goes on to state the leading causes of linguistic development. One of the chief of these is the tendency to sound-change; that is, to variability of pronunciation, which arise from slight changes in muscular action due to variations in the sensations attending such action. Another potent cause is change in the signification of words, which is perpetually going on, and which enriches the expressive power of language incalculably without adding any new words. This change in the signification of words is sometimes a restriction of the original meaning, sometimes an extension of it; while in other cases it takes the form of metaphor or some other figure of speech. Analogous to those developments are the numerous changes in syntax, while another and perhaps still more potent agent in the development of speech is composition, leading to inflection and word-formation. Professor

Paul also maintains, with many other scholars, that the power of original creation in language is by no means lost, but is as active to-day as ever; and he gives many examples of words of recent origin which he holds to be underived from any others. All original creations, both earlier and later, he believes to be imitative, so that on this point he is directly at issue with many other philologists. These are the fundamental causes of the development of language; but to these must be added analogy, which has a powerful influence by multiplying forms and usages that have arisen in some other way.

Having thus traced the outline of his subject, Professor Paul pursues it into all its ramifications through a series of chapters, which we have not space to analyze here, but which are sure to interest every student of philology. In these days, when there is so much superficial writing, it is pleasant to meet with a book at once so thoughtful and so scholarly as this by Professor Paul; and, though there are things in it that are sure to provoke criticism, it will be of great value to all students of the history of language.

Seraphita. By HONORÉ DE BALZAC. Tr. by Katharine P. Wormeley. Boston, Roberts. 12°. \$1.50.

THIS work is another of its author's studies in occultism. The leading character in the story, called sometimes Seraphita and sometimes Seraphitus, is intended as an example of the "twin soul" which we are told every one must have in order to attain to supreme felicity. Hence she is represented as acting in some cases like a woman, and in others as a man, though the reader may think that she doesn't act much like either. To make the bisexual quality still more prominent, this "strange being" is represented in her feminine character as inspiring love in a young man, and in his masculine character as awakening the same sentiment in a young woman. She talks grandiloquent nonsense about heaven, hell, prayer, and other themes of that sort, and at last is "translated" to the spiritual world; and so the story comes to an end. As for the story itself, it has very few incidents, and no interest at all except what attaches to its occult "philosophy," if any one can take an interest in that. For our part, we find it repulsive, like every thing else of the same sort; being neither philosophy nor religion, but a mere mass of fiction put forward as truth. Besides the principal story, the book contains two shorter ones of a similar character, which call for no special remark. There is also a long and wordy introduction by G. F. Parsons, which neither adds to nor elucidates the text, and has, so far as we can see, no reason to be.

La Société Française au Dix-septième Siècle. Ed., with notes, by Thomas F. Crane. London and New York, Putnam. 24°. \$1.50.

THIS book, which is intended primarily for students of French, consists of a large number of extracts giving an account of the new social life that arose in France in the early part of the seventeenth century. Every one knows that society and conversation have long been more important elements in French life than in that of other nations, and have had greater influence on French literature than

on any other. Students of literature and of social life are therefore alike interested in tracing the origin and growth of that society for which France has long been noted, and Professor Crane here offers them help in so doing. He has restricted himself to a portion only of seventeenth-century society, neglecting that of the court entirely, while even some elements of literary society are passed over. The extracts given treat successively of the Hôtel de Rambouillet and the persons who frequented it, of Mademoiselle de Scudéry and her rather pedantic companions, of the affected set who were nicknamed the *Précieuses*, and of the rules of politeness that prevailed in that age. As far as they go, they give a pretty clear view of the society of which they treat, of its follies and foibles, as well as its excellences; and they also show to some extent the growth of literature and the development of literary style. Some passages are almost repulsive from the self-admiration and mutual admiration they exhibit; but these were necessary to give a faithful picture of the times. Professor Crane's introduction gives useful information respecting the leading persons and topics dealt with, and other points of a more special character are treated in the notes. The book is convenient in form, and well printed.

AMONG THE PUBLISHERS.

THE July *Atlantic* opens with an article by Miss Preston, giving an account of the last days of Cicero, one of a series which she has been contributing to the *Atlantic*. Professor N. S. Shaler, who is a person to speak with authority, writes about "The Problem of Discipline in Higher Education," which will be read by student and teacher with equal interest. Mr. H. L. Nelson has an article on the "Speaker's Power," not a consideration of the power of oratory, but the power of the Speaker of the House of Representatives. Mr. W. H. Downes has an interesting paper on the "Old Masters" which may be seen in New York, and it is surprising to find how large a representation can be seen there. Another article is "Books that have Hindered Me," by Agnes Repplier. So much has been written about books that have helped various people, that Miss Repplier has decided to write about the books that did not help her. Among these she mentions "Sandford and Merton," Milton's "Areopagitica," and the "Heir of Redclyffe." The number closes with a knowing article on "Trotting Races," by H. C. Merwin.

— A. D. F. Randolph & Co. will publish at once the Duke of Argyll's work entitled "What is Truth?"

— J. S. Ogilvie has just ready, in his Fireside Series, "The History of the Great Flood at Johnstown, Penn."

— D. Appleton & Co. will publish immediately "Days Out of Doors," by Charles C. Abbott, author of "A Naturalist's Rambles;" "The History of a Slave," a startling picture of slavery in the Barbary States, by H. H. Johnston; and an interesting work on "Stellar Evolution and its Relations to Geological Time," by James Croll.

THE FORUM FOR JULY.

In the July number of The Forum, Prof. Geo. J. Romanes answers, in behalf of the Darwinians, the criticisms made of the Darwinian doctrine, by Prof. Mivart. It is an important summary of the present position of the best evolutionist thought.

Prof. W. J. McGee, of the U. S. Geological Survey, explains the supply of the different kinds of fuel, with especial reference to deposits in the United States. Other articles are:

The Scholar in American Life. Bishop Henry C. Potter. A Market for Books. Edward Everett Hale. Republican Party Prospects. Senator Justin S. Morrill. The Ethics of Journalism. W. S. Lilly. The Attitude of the French Canadians. Honoré Beaugrand. Late Theories Concerning Fever. Dr. Austin Flint. Organizations of the Discontented. Richard J. Hinton. Domestic Service. Jennie Cunningham Croly. The Better Side of Anglo-mania. Rev. H. Price Collier.

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