

distance varying by 10 millimetres, from 10 to 200 millimetres. and the attempt is then made to set another pair of squares at an equal distance apart under the most varying conditions, the average constant error and the average variable errors being carefully calculated in each case. Of the very many points arising from the 20,000 observations thus made, only a few can be here noticed. A striking result is, that no difference, however slight, in the method of viewing the lengths, is without its effect upon the accuracy with which a distance can be reproduced. All the variations above noticed were tried, and showed a difference in the accuracy of reproduction, though of course some of the variations have much less effect than others. Quite a constant result with Dr. Münsterberg is an overestimation of distances on the left, and an underestimation of distances on the right. This he explains as due to the constant practice, in reading and writing, of moving the eyes from left to right. This results in making this movement easier, and, according to the general law, the movement made with more effort will seem the longer. If, then, the eye is forced to start at the middle of the length, and move towards each side, the space on the left will seem larger than that on the right. When the distances are reproduced by each eye separately, distances on the right are overestimated by the right eye, and on the left by the left eye. This is probably due to the greater ease of each eye to direct the gaze towards the common field of vision. If an interval elapses between the sight of the standard length and its reproduction, the accuracy is much diminished, and the lengths are generally overestimated, especially the smaller ones. If the original and the reproduced lines occupy the same positions, the error is least. Broken lines seem too long, as is the usual illusion. Vertical distances are overestimated as compared with horizontal ones; but this only when the vertical is above the horizontal, and the eye is free to move. All this refers to the constant error. Regarding the variable error, which measures the uniformity of the reproductions, it is very much larger when the eyes are fixed than when they move freely. This is due to the increased accuracy of the muscle-sense over the retinal sense of space, as well as to other causes. The law holding in many other kinds of sensations, that the error depends for its absolute size upon the length reproduced, seems to hold of space-sensations, but is probably a law of the motor adjustments rather than of the retinal sensibility. These selected points must suffice to indicate the scope of this very extended and critical research.

HEALTH MATTERS.

Insanity in Australian Aborigines.

In a paper read before the Intercolonial Medical Congress of Australasia, Dr. Morton Manning, the inspector-general of the insane in New South Wales, gave a most interesting account of the cases of insanity found to have occurred among the aborigines of Australia. Mental disease would appear to have been a very rare affection while they were in their primitive and uncivilized condition, and the manner in which they dealt with the few cases which did arise was of the most drastic nature. "If the lunatic was violent or aggressive, he was promptly slaughtered; if melancholy, he was allowed, if so disposed, to commit suicide; if demented and helpless, he was allowed to die; and only when quiet and peaceable, and when his erroneous ideas did not result in offensive acts, was he allowed to continue in the tribe." In the course of time, as the aborigines were brought more into contact with civilization and its attendant vices, insanity increased rapidly in proportion to the number of the population; and Dr. Manning states that since 1868, 18 aborigines had been admitted into the asylums of New South Wales, from a population which has never during that time exceeded 2,500, and is now less than half that number. In the census year 1881 the proportion of the aboriginal insane to the aboriginal population of New South Wales was 2.83 per thousand, a proportion in excess of that for the general population; and at the close of 1887 it was upwards of 5 per thousand. The causes of insanity in the 32 cases of aborigines admitted into the asylums of Queensland and New South

Wales were in a considerable proportion of the cases due to drink. The prevailing type of the malady was mania, passing rapidly into dementia. All the melancholic cases originated in jail. Three were epileptics. No case of general paralysis, or any thing like it, was seen. There were 20 deaths; and in several cases the only cause which could be assigned was marasmus,—a gradual wasting without tubercular or other manifest ailment. The average duration of life was much shorter than in Europeans; the confinement, though tempered by many unaccustomed comforts, being apparently the great factor in shortening life.

Dietary for the Nervous System.

The nervous tissue requires for its constitution, says the *Dietetic Gazette* for January, the chemical constituents of the albuminoids and fats, together with phosphorus: hence the chief alimentary substance is the albuminoids (provisional formula $C_{72}H_{112}O_{22}N_{18}S$) contained in milk, eggs, cereals, the juices of vegetables, and the muscular substance of meat. Water should be freely indulged in by neurotic types of constitution almost *ad libitum*. Among the meats most suitable are, in their order, beef, mutton, lamb, and pork, and the brains of animals. Fish is not so valuable as reputed, but may be employed to vary the diet. Oysters, on the other hand, are extremely useful as nerve reconstructives. Among vegetables, wheat stands at the head of the list, containing, as it does, fatty matters and phosphoric acid. Rice, corn, oat-meal, barley, and sweet-potatoes are better than onions, carrots, beets, turnips, etc. Fruits are useful as adjuvants because of the sugars they contain.

Removal of Warts by Electrolysis.

Dr. Patrzek of Oppeln describes, according to the *Weekly Medical Review*, his method for removing warts by electricity. The wart is first thoroughly moistened with a warm solution of salt. Both needles are then thrust through it just above the surface of the skin, and the current turned on, one element after another being added until pain is felt. Five cells are sufficient. With most cases two sittings of five minutes each are sufficient to destroy the growth, which gradually dries up and falls away, leaving a surface at first slightly reddened, but which later assumes the appearance of normal skin.

The Dangers of Hypnotism.

At Nuremberg a case of some public interest was tried in the police court, says the London *Lancet*. A commercial traveller while in a restaurant told the waitress to look steadily at the white of his eye, and hypnotized her. On a second occasion he repeated the experiment; but this time the sleep was so profound that a medical man had to be called, who had the utmost difficulty in rousing the girl. The commercial traveller was accordingly summoned to appear before the magistrates, and the severe sentence of eight days' imprisonment was passed on him, which will probably be efficient in checking similar performances in that region. In France the practice of hypnotizing people for amusement seems to be very common, and unpleasant consequences are frequently reported. At a supper-party in Paris one of the company hypnotized a girl, and was unable to rouse her. She was consequently taken to the house of a medical man, and after a time she recovered consciousness. The whole party were taken into custody by the police, and were not released until next day. Even when hypnotism has been practised by competent medical men for remedial purposes, unpleasant accidents and ulterior consequences have again and again occurred; so much so, that an order has been issued by the French Government, prohibiting surgeons in the army and navy from practising it. It ought to be distinctly understood, both by the profession and the public, that hypnotism is not devoid of danger at the time, and not infrequently has permanently impaired the moral and emotional control of patients. A medical man is bound, before recommending hypnotism for a patient, to weigh the question as carefully as he would that of the advisability of administering an anæsthetic.

Yellow-Fever at Key West.

The history of yellow-fever in Key West (being the most exposed point in the United States) dates from a very early period. The frequent occurrence of epidemics of this disease, the recurrence of isolated cases between epidemic periods, its recent re-appearance in October, 1889, and during the month of January, 1890, point, in the opinion of Dr. J. L. Posey of the United States Marine Hospital Service, to but one rational conclusion,—that the disease has finally become endemic in Key West.

BOOK-REVIEWS.

Physiognomy and Expression. By PAOLO MANTEGAZZA. (Contemporary Science Series.) New York, Scribner. 12°. \$1.25.

THE author of this work, who has published others on related topics, remarks in his preface that he "takes up the study of expression at the point where Darwin left it, and modestly claims to have gone a step further." He begins by sketching the history of the study, giving, as it seems to us, altogether too much prominence to the astrologists and other fanciful writers, but assigning the highest place to Darwin. His own work is divided into two parts, the first treating briefly of the anatomy of the face and the various features, while the second and much larger part deals with expression strictly so called. In this second part we find a great wealth of facts relating to the outward signs of various emotions, evidently collected with great care, and showing great keenness of observation; and, so far as our own experience and knowledge enables us to judge, these statements of fact are for the most part correct. They are also well classified and arranged; and, as a description of expression in its various phases, the work can be well recommended. We look in vain, however, for any attempt at explaining the modes of expression. The author quotes Darwin's theories, which, with some modifications, he accepts; but he makes almost no application of them. He also announces what he calls a law of expression, "according to which expression is the clearer and more characteristic in proportion as it is provoked by a more powerful, by a better defined emotion," which would seem to be a truism. But in the main Signor Mantegazza's work is purely descriptive, and lacking in those philosophical qualities that we find in Sir Charles Bell and in Darwin. As a storehouse of facts it will be useful; but for further light on the theory of expression we shall have to wait for some deeper thinker.

AMONG THE PUBLISHERS.

AMONG the more important articles in *Harper's Magazine* for April are "A Suit of Clothes," being one of a series of papers on great American industries, by R. R. Bowker; and "Three Indian Campaigns," by Gen. Wesley Merritt, U. S. A. These articles are handsomely illustrated. There is also a well-written and interesting article, by Richard Wheatley, descriptive of the New York Maritime Exchange.

—The Forest and Stream Publishing Company have in press "Trout and Salmon Fishing," by one of New England's best-known anglers; also a new edition of Grinnell's "Pawnee Hero Stories and Folk-Tales."

—Messrs. D. Appleton & Co. published last week "Studies in Hegel's Philosophy of Religion," with an appendix on "Christian Unity in America," by Dr. J. M. Sterrett; and "The Spiritual Sense of Dante's 'Divina Commedia,'" by W. T. Harris, LL.D.

—Messrs. Ginn & Co. announce to be ready in May "Wentworth's School Algebra." The necessity of having new plates for the author's "Elements of Algebra" has given him an opportunity to write a new book, with fresh and interesting problems, and with definitions, illustrations, and arrangements of the subject-matter like those in his "College Algebra." The work is written for high schools and academies, and is a thorough and practical treatment of the principles of algebra up to and including the binomial theorem.

—Porter & Coates have published "Life and Works of the Earl of Beaconsfield," by Judge F. Carroll Brewster. Every work of Disraeli has been sketched so as to afford condensation of plots, characters, and noteworthy passages. They have also ready, by the same author, "Molière in Outline," being a translation of all important parts of Molière's works, with notes, abridged from Van Laun and others, to which are added the arguments of the play.

—The prospect is that the exploration and conquest of Africa will be the problem of the twentieth century. Already nearly every nation has its Stanley. France has hers in the person of M. Trivier, whom she prefers, however, to call her Livingstone. An article on this "French Livingstone" by Henry Fouquier has the post of honor in *The Transatlantic* of April 1. The peaceful method employed by Trivier in his recent two years' journey across Africa is contrasted by the writer with the warlike and bloody methods of Baker, Emin Pacha, and Stanley. Following this article Caliban (Emile Bergerat) ridicules the anti-Jewish crusade, Enrico Panzacchi critically sketches the decadent school of writers, and there are extracts from the new volume of Edmond de Goncourt's "Memoirs," accounts of new novels by Zola and Tolstoi, and an interview with Louise Michel regarding her operetta, "In the Moon."

—Dr. Martineau's forthcoming book, "The Seat of Authority in Religion," will be published almost immediately by Longmans, Green, & Co. The work is addressed, not to philosophers or scholars, but to educated persons interested in the results of modern knowledge.

—"Old Friends," Mr. Andrew Lang's new book, to be issued here at once by the Longmans, is not unlike his "Letters to Dead Authors." It describes the meetings of the characters of one novelist with those of another. For example, Dugald Dalgetty tells of his duel with one of the "Three Musketeers," Barry Lyndon describes his playing cards with Allan Stuart Breck (from "Kidnapped"), and Trollope's Mrs. Proudieu sets forth Becky Sharp's assault on the bishop.

—The April number of *College and School* (Utica, N. Y.) is a "Gen. Spinner number," containing two portraits of the ex-treasurer, with his famous signature appended. The general himself contributes the last article from his pen to appear in print,—an interesting reminiscence of his school-days in the Mohawk valley, where, as he says, he was "educated to ignorance." Three pages of the manuscript are reproduced in facsimile. Another facsimile reproduction is a translation, by the general, of a German poem, "*Ich bin nicht einsam wen allein.*" In his article, "The Watch Dog of the Treasury," A. G. Richmond relates an incident of the Breckenridge attack upon Washington, which strikingly illustrates the foresight of the man who was the guardian of the country's treasure. "Spinner, the Student," is an account of the formation of the general's lifelong habit of reading. L. L. Merry, in his "Recollections of Gen. Spinner," narrates in a familiar way some things which only an old friend would be likely to know. L. R. Tuttle, ex-assistant treasurer of the United States, tells how he tried to persuade the general to let Mr. L. D. Ingersoll write a memoir of his life, while Louis Lombard has a word to say about the general's remarkable memory and his garretful of note-books. The number is eight pages larger than usual, and contains, besides the Spinner papers, Mr. William H. Hayne's "Editor's Library Table," and the usual departments of college news, literary notes, and book-reviews.

—Messrs. Ginn & Co. announce as published last month "Sidney's Defence of Poesy," edited by Albert S. Cook, professor in Yale University. Sir Philip Sidney's "Defence of Poesy," in which, says Taine, "we meet with genuine imagination, a sincere and serious tone, a grand commanding style, all the passion and elevation which he carries in his heart and puts into his verse," has not hitherto been accessible to the school and college student in a handy and readable edition, notwithstanding the existence of one or two literal reprints of the earliest copies. The attempt is here made, by modernizing the spelling and punctua-