

tage of giving a very real interest to the facts, of being in harmony with current psychophysical and neurological conceptions, and of suggesting further experimental inquiry by the results of which it can be substantiated or refuted.

A point unnoticed in the original essay may be here appended. If we compare the gradual increase in the motor times from I. to VII., we find the greatest difference (.169 of a second) in passing from I. to II.; that is, when, instead of re-acting by one certain motion, we re-act according to circumstances by any one of five, — an evident increase of motor complexity. Next, in passing from II. to III., we find a smaller increase of .066 of a second easily explicable by reflecting that we have already had practice in considering the fingers as "one," "two," "three," "four," "five;" and so the connections are easier, while the associations with *lupus*, etc., are new. In passing from III. to IV. we have an additional motor complexity in the fact that each of the association tracts is subdivided into three sub-tracts, and the expectation of the intended movement is accordingly less definite. The time increases by .075 of a second. When these tracts become divisible into an indefinite number of strands, it does not seem to complicate matters, and from here on the motor times are the same. A similar comparison of the increase of sensory times and of the percentage of error will be equally instructive.

An account of further experiments by Dr. Münsterberg will be given in a future number of *Science*.

HEALTH MATTERS.

THE EFFECTS OF ALCOHOL UPON LONGEVITY. — The British Medical Association appointed a commission to inquire and ascertain the average age of three classes of drinkers; to wit, total abstainers from alcoholic beverages, moderate drinkers, and sots. The commission reported its observations upon 4,234 deaths, divided into five categories: 1. Total abstainers; 2. Habitual, temperate drinkers, — those who consume a moderate amount of alcoholic liquors; 3. Careless drinkers, — those who do not mean to get drunk, but are simply imprudent drinkers; 4. Free and habitual drinkers; 5. Decidedly intemperate drinkers, — sots. According to this classification, the average age reached by each of these categories is as follows: first class, 51 years 22 days; second, 63 years 13 days; third, 59 years 67 days; fourth, 57 years 59 days; fifth, 53 years 3 days. From this the curious fact is brought out that the teetotalers are the shortest lived, the sots having but a slight advantage over them in the average duration of life. The moderate drinkers reach the most advanced age.

THE FOOD TREATMENT FOR INSOMNIA. — Dr. Eggleston says, in the *Journal of the American Medical Association*, that most students and women who are troubled with insomnia are dyspeptic, and he has found it easy to successfully treat such cases without medicine. They are instructed to eat before going to bed, having put aside work entirely at least an hour before. If they are not hungry, they should simply be instructed to eat; and if they are hungry, they should eat whatever they want. A glass of milk and a biscuit is sometimes all that can be taken at first, or a mashed potato buttered. In a short time the night appetite will grow, and the appetite will then need no particular directions. If possible, the night meal should be taken in another room than the sleeping-apartment, and for men in the city it will be found advantageous to go out to a restaurant. The idea of going out for something to eat, and having to wait a short time for it, will excite the appetite. Before eating, however, a bath should be taken, preferably cold or cool, which should be given with a sponge or stiff brush, and the body thoroughly rubbed off with a coarse towel afterward. The bath need not be more than five minutes in duration. After the bathing and rubbing, or after eating, a moderate amount of exercise should be taken. For this a few minutes with Indian clubs or dumb-bells is sufficient. Further than this, the patient should go to bed at the same hour every night, and arise at the same hour every morning. There is a popular superstition that grown people should not eat immediately before going to sleep; that it will give them indigestion or nightmare, or both. Dr. Eggleston cannot see why adults should be so very different in this respect from babies. It may be true that digestion is carried on slowly during sleep, and

that the digestive function is less active, but here one need not be in a hurry for the completion of the operation. The average person should be in bed seven or eight hours, which is time enough for the digestion of almost any thing edible. In our American life he thinks, the digestion carried on through sleep probably has the better chance for thoroughness.

PARASITES OF THE BLOOD. — A Russian scientific observer some years since discovered in the blood of birds animate bodies of the nature of parasites, to which he has given the name of *Polimitus*, presenting a striking resemblance to the organisms described by M. Laveran as existing in the blood of persons attacked by malarial fever. Subsequent researches have shown that the presence of microbial parasites of animal origin in the blood is much more common than had been suspected, more especially in cold-blooded animals. Of warm-blooded animals, carnivora are more liable to be invaded by these intruders than others; but it is comforting to learn, that, for the most part, their presence does not appear to entail any particular inconvenience. According to *The Medical Press*, only four or five out of three hundred birds examined died in consequence of lesions caused by the parasites, and the pathological appearances were then identical with those observed in the subjects of malarial fever.

EXECUTION BY ELECTRICITY. — At a recent meeting of the Paris Academy of Sciences a communication from Mr. Edison was read respecting the use of electricity as a means of inflicting capital punishment. He is of opinion that an alternative current will cause death without pain, but he adduces no experimental evidence in support of that contention. The matter was referred to the medical section of the Academy, which is to have the assistance of M. Marcel Desprez, the electrician, in drawing up a report on the subject.

BOOK-REVIEWS.

Strength: How to get Strong and keep Strong, with Chapters on Rowing and Swimming, Fat, Age, and the Waist. By RICHARD A. PROCTOR. London and New York, Longmans, Green, & Co. 12°. 75 cents.

HERE is a somewhat lengthy title, and one recalling those of a hundred years ago, when in the titlepage were generally revealed the author's tenets, be they in religion or the sciences. Mr. Proctor defines the strength to which he refers as that which it is well that all actively employed members of the human family should have. The average man or woman is so engrossed in his struggle for existence, that he has no time and energy to give to keeping his body in good working order in all its parts. It may be that it works well enough under ordinary circumstances, but after a few years of inattention any effort at unusual exertion reveals a softened muscle here, or a stiff joint there, that had not been suspected. How by a due but not excessive amount of exercise to find these weakening parts, and to bring them back to healthful vigor, is one of the author's objects.

But in the chapters on reducing fat, on nature's waist and fashion, on learning to swim, and on other cognate subjects, are to be found some good advice, and some suggestions likely to prove fruitful of discussion.

The Reconstruction of Europe. By HAROLD MURDOCK. New York, Houghton, Mifflin, & Co. 12°. \$2.

THIS work is an account of leading political events in Europe from the establishment of Louis Napoleon's empire in 1850 to the close of the Franco-German war in 1871. The introduction by John Fiske gives a general survey of the great political movements of the century, and Mr. Murdock then takes up his theme at the downfall of the French republic of 1848, and the defeat of the other revolutionary attempts of that time. Attention is given almost exclusively to international affairs, and both diplomatic and military manœuvres are described at length. The work is well written, though sometimes with little too keen an eye to dramatic effect, and with less philosophical insight than might have been wished. Too much space is given to unimportant military details to the exclusion of political events of much greater consequence, a fault that is specially noticeable in the earlier chapters. Moreover, we do

not see the propriety of including the Crimean war in the subjects treated; for, though it occurred after the time at which Mr. Murdock begins his narrative, it had nothing to do with the reconstruction of Europe, and its connection with the later events described is very remote. Of course, the greater part of the volume is devoted to the unification of Italy and Germany, and the author shows pretty clearly why the revolutionists of 1848 failed to reach these ends, and why and how they were afterwards attained. The diplomacy of Cavour and Bismarck is well described, while the obtuseness of the French Emperor and his ministers and marshals is strikingly shown. Some of the great battles of the epoch, especially that of Sadowa and the engagements around Metz, are very clearly delineated, and those who are fond of military history will find many interesting chapters in Mr. Murdock's book. He closes without alluding to the Russo-Turkish war of 1878, doubtless because the work of reconstruction in that quarter is not yet completed, and no one can tell how it will end. On the whole, and in spite of some drawbacks, Mr. Murdock has written an interesting work, and one that will be specially useful to those persons who wish to keep informed of the general course of European affairs without going into all the details.

AMONG THE PUBLISHERS.

ARNOLD & Co., Philadelphia, publish this week Mrs. S. T. Rorer's book on "Home Candy-Making."

— Among the scientific notes in the *Johns Hopkins University Circulars* for September are "Contributions to the Mineralogy of Maryland," by George H. Williams; "Note on some Minerals from the Chrome-Pits of Montgomery County, Md.," by A. C. Gill; "A Study of the Oyster-Beds of Long Island Sound with Reference to the Ravages of Starfish," by C. F. Hodge; and "Association in Substitution and Rotation," by Professor Morton W. Easton of the University of Pennsylvania.

— *The Publishers' Weekly* notes the promotion of one of the most popular and promising members of the trade. Mr. Edward W. Bok last week resigned his position as manager of the advertising department of Charles Scribner's Sons, to assume the editorship of *The Ladies' Home Journal* of Philadelphia, under most favorable arrangements. Mr. Bok has been with the Scribners for five years, and in graduating to the editorial chair becomes, perhaps, the youngest chief editor in the country. He is twenty-five years of age. In this connection, the following extract from the New York *Star* possesses special interest at this time: "Only those on the 'inside' of New York literary and journalistic circles know any thing about 'The Bok Syndicate Press,' a bureau from which emanate many of the best and most striking literary articles by famous authors found in the modern newspaper. It is owned and managed by two brothers, Edward W. and William J. Bok. The combined ages of these two young publishers do not make the figure fifty, and yet within their control rests one of the most remarkable literary influences of to-day. They control the literary work of some forty-five of the most famous men and women of the day, which they supply to newspapers simultaneously all over this country and in Canada and England. Edward Bok holds a responsible position in one of the big New York publishing-houses, and his name is withheld from the enterprise. William devotes all his time to the work, and under his name the business is conducted. While Edward makes all the contracts with authors, William stands at the helm and carries out the ideas of his younger brother. A better matched couple of brothers it would be difficult to find. Edward has a wonderfully extensive acquaintance among famous people. He is well read, has good literary judgment, and knows precisely what the people want. William is of untiring energy, and a doubtful literary venture becomes a success in his hands. The brothers are very popular in society, and one is almost sure to meet them at any prominent literary or social event. Both are good talkers, have pleasant manners, and what the one lacks the other supplies. They have built up their business from nothing. Henry Ward Beecher started Edward by making him his literary manager, and in this way the bureau began. Now almost every author of note writes for the two brothers. They have no difficulty in securing writers, for they pay promptly and

manage excellently. Their principal writers include Grace Greenwood, Wilkie Collins, Marion Harland, Lew Wallace, Ella Wheeler, Will Carleton, Max O'Rell, and a score of others. They work quietly, the general public hears but little of them, yet it is doubtful whether any two young men in New York have so bright a future before them."

— Brentano's will publish shortly a collection of papers on technical and historical subjects under the title of "Military Miscellanies," by Gen. J. B. Fry, U.S.A.

— Roberts Brothers have just ready "Louisa M. Alcott: her Life, Letters, and Journals," edited by Ednah D. Cheney, illustrated with portraits and a view of the Alcott house in Concord.

— Houghton, Mifflin, & Co. published on the 5th "A Summer Journey to Alaska," by Maturin M. Ballou, who describes in a most interesting manner not only the resources and features of the country and people of Alaska, but also the wonders of the Yellowstone Park and the marvellous country along the Canadian Pacific Railway; "The Reconstruction of Europe," a sketch of the diplomatic and military history of continental Europe, from the rise to the fall of the second empire, by Harold Murdock, with an introduction by John Fiske; also the first two volumes of the scientific papers of Asa Gray, selected by Charles Sprague Sargent, comprising reviews of works on botany and related subjects, 1834-87, and essays and biographical sketches, 1841-86. They publish this week the pretty two-volume edition of the "Autocrat of the Breakfast-Table." It is promised in beautiful type, tasteful binding, and with steel-engraved titlepages. Miss Lucia T. Ames's novel, "Memoirs of a Millionaire," comes very opportunely, when the public is engaged as never before in thinking on social questions; and her story, which suggests some excellent uses for wealth, is likely to find eager readers. Rev. Julius H. Ward's little book, "The Church in Modern Society," is an attempt to show what influence the Church is entitled to exert, why it fails now to exert it, and how it may regain its lost prerogative. The new edition of the *Atlantic* index, affording ready access to the varied riches of the sixty-two volumes of the *Atlantic Monthly*, will be welcome to many.

— Count E. De V. Vermont, author of "America Heraldica," and a publisher at 744 Broadway, this city, is no relation to the man arrested under the name of W. C. Tenner, *alias* Terrail de Vermont, for having forged various checks in New York, Canada, etc.

— The friends of *Psyche*, a journal of entomology published by the Cambridge Entomological Club, have made an appeal to entomologists for support. The limited funds of the club are not sufficient to publish the journal with the present subscription list without falling into arrears, so that the journal has been a heavy drain upon its local supporters, though several friends at a distance have generously assisted. A slight increase of the subscription list would render it nearly self-supporting, which is all the club asks, and it is believed that the special circumstances of the present time, indicated in the form of a subscription, will find a response from those interested in its welfare. Sample copies will be sent to any one desiring to call the attention of others to its character. A friend of the Cambridge Entomological Club having assured the publication of *Psyche* to the end of 1893 on condition that fifty new subscriptions to the present volume (at five dollars the volume) are received before Nov. 1, 1889, Mr. George Dimmock of Cambridge has subscribed for five copies; Mr. Samuel H. Scudder of Cambridge, for five; Mr. Roland Hayward of Boston, for two; and Mr. Holmes Hinckley of Cambridge, for one copy. Subscriptions and payments may be made to Samuel Henshaw, treasurer, Cambridge, Mass.

— "The Butterflies of the Eastern United States and Canada, with Special Reference to New England," describes in detail all the butterflies known to occur in North America east of the Mississippi, excepting such as are found only in the unsettled parts of Canada or south of Kentucky and Virginia. It was originally issued in twelve monthly parts, each containing 8 plates (colored and plain) and about 150 pages of text. The first part was published Nov. 1, 1888; the last will be published Oct. 1, 1889. As now completed, it contains 17 plates of butterflies, 6 of eggs, 11 of