

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 teetotallers 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