I have no doubt that Prof. Goodrich is familiar with recent advances in psychotherapy, and I cannot imagine how he reconciles them with the above statements. The treatise on "Suggestion and Autosuggestion," by Prof. Badouin, which describes the practice of the new Nancy school, gives plenty of examples of curative processes, which necessarily involve metabolism, set in motion by purely mental processes. A good example is furnished by the article of Prof. J. Stanley Gardiner in NATURE of December 15, p. 505. If autosuggestion can initiate metabolism in the individual, why is it to be ruled out as a possible factor in evolution? Prof. Goodrich is not an advocate of the view that only congenital characteristics can affect the progeny of the individual. If the requisite "environmental stimulus" persists I gather that in his opinion an acquired modification may also persist. In this connection it is surely a loss to his theory to rule out the effect which environment may produce primarily on the mind, and through the mind on metabolic processes. Why is the student of biology to regard all this as "outside the sphere of natural science"? W. R. BOUSFIELD.

IN answer to Mr. W. R. Bousfield's question I may say that he is mistaken if he thinks that I would deny the possibility of curative processes being set going by "suggestion." But I would maintain that suggestion is not a mental process. There is a popular error, widespread, that thought can be directly transferred, whereas, as a matter of fact, we know that one organism communicates with another by physical means through the organs of sense—by touch, smell, taste, sight, and hearing. Suggestion consists in bringing to bear appropriate stimuli which directly or indirectly set going certain metabolic processes; or, to put it in another way, the stimuli excite in the organism responses which from one aspect appear as a series of metabolic processes, and from another aspect as a series of mental processes. The one series cannot be altered without also altering the other.

In NATURE of November 17 Dr. J. T. Cunningham complains that I have ignored "the greater part of all the new conceptions and new results obtained by recent research on heredity and genetics." Now it is difficult within the limits of a short address to guard against all possible misunderstanding, yet I think Dr. Cunningham might have gathered that my object was to concentrate on certain fundamental problems, avoiding all unnecessary detail. Although yielding to none in my admiration for the triumphs of Mendelism, I purposely set aside (as stated in a footnote) complications due to hybridisation, the formation of heterozygotes, segregation, etc., because they did not seem to me to bear directly on the questions discussed. My innocent statement "that the newest characters may be inherited as constantly as the most ancient, provided they are possessed by both parents," in no way contradicts Dr. Cunningham's own statement "that a character may be inherited when it is apparent only in one parent or in neither," a fact which, by the way, was known before Mendelism was invented. I still hope that nothing said in the address is inconsistent with even the newest sound conceptions and newest results of experimental genetics.

In the third paragraph of his letter, while seeming to agree that a change of character must be due either to an alteration of the germinal factors or of the environmental conditions, Dr. Cunningham confuses the issue by failing to distinguish consistently between the variation and the resulting character. This is just one of the important distinctions which, as I endeavoured to show in the address, must be realised if we are not to waste time in endless and futile controversy.

Great as is our debt to Weismann, it must be acknowledged that not a little of the confusion in discussions on "acquired characters" is traceable to obscurities and inconsistencies in his writings. In this matter I gladly acknowledge my indebtedness to the works of Sir Archdall Reid. No one, I think, has so clearly shown that, as some others saw before him, there are two kinds of variation, but only one kind of character. E. S. GOODRICH.

Oxford, December 9.

## World List of Scientific Periodicals.

THE Conjoint Board of Scientific Societies proposes, if sufficient support is obtained, to arrange for the issue of a world list of periodical publications which contain the results of original scientific research, and has entrusted preliminary arrangements to a committee, of which the following are members:—Sir Sidney F. Harmer (chairman), Mr. F. W. Clifford, Sir Richard Gregory, Dr. P. Chalmers Mitchell, Mr. A. W. Pollard, and Prof. W. W. Watts, secretary.

The list will be an octavo volume containing, in alphabetical order, the titles and places of publication of all such periodicals in existence on January 1, 1900, and of all issued after that date.

Libraries in London, Oxford, Cambridge, Edinburgh, Dublin, and Aberystwyth which take in these periodicals will be indicated in the list, and, wherever possible, at least one library in the United Kingdom will be indicated for each title.

The copies will be printed on one side only to facilitate alterations and additions.

The objects of the proposed volume are: (1) To supply as nearly as possible a complete list of current scientific periodicals; (2) to indicate, where possible, at least one library where each periodical is taken; (3) to form a basis for co-operation between libraries, so that both the number of duplicates and the list of periodicals not taken in may be reduced; and (4) to enable each library to use the list for its own purposes, by placing a mark against the title of each periodical it possesses, by cutting up for a card index, etc.

The trustees of the British Museum, recognising the importance of this work to scientific research and bibliography, have consented to allow the compilation to be undertaken by the staff of the Museum. They are unable, however, to defray the cost of printing and publication.

Although the value of a list of this kind to libraries and scientific societies would be very great, it is scarcely possible that the production of so costly a work would be entertained by a publishing firm as an ordinary commercial enterprise. If, however, a sufficient number of libraries and institutions agree in advance to purchase one or more copies, when issued, the compilation of the list will be put in hand at once. Already a large bulk of material has been collected in the British Museum by various societies and by the Conjoint Board.

I shall be glad to receive by January 31, if possible, the names and addresses of institutions or individuals who will support this proposal by undertaking to subscribe for one or more copies of the list. The price per copy will be 2*l.* 2*s.* net. W. W. WATTS.

Conjoint Board of Scientific Societies,
Burlington House, London, W.1.

See also p. 562.

## Old Observations Bearing on the Duration of Sunrise.

IN 1769 the French academician Le Gentil went on a journey to Mauritius, Pondichéry, and Manila to