

could be attempted, which should serve as a foundation for further detailed investigations of the important questions connected with these plant parasites.

*The Dissociation of a Personality, a Biographical Study in Abnormal Psychology.* By Dr. Morton Prince. Pp. x+569. (London: Longmans, Green and Co., 1906.) Price 10s. 6d. net.

OF all the problems raised by the investigations of that section of modern psychology which deals with the abnormal and neurasthenic, those concerned with what is called multiple personality are perhaps the most interesting for psychology and philosophy as a whole. Cases of multiple personality are comparatively rare, and this book is of great value as being a very full and careful account of quite the most remarkable of such cases known to us. Dr. Prince had "Miss Beauchamp" under his care from the time when a second personality first manifested itself until "the real Miss Beauchamp" was at length discovered and restored. It is the great merit of the book that the author abstains almost altogether from theories. These he promises us in a further volume. In this he contents himself with a careful history of the details of the extraordinary case. Extraordinary it certainly is. There were three distinct and entirely different personalities. Of these, two known as B I and B IV, were alternating, and only knew of each other by inference. Dr. Prince evidently considers that they were caused by "the splitting up the original personality" and loss of memory due to an intense mental shock. Not the least interesting part of the book is an account of the striking oppositions in what we should be inclined to call bodily characteristics, manifested by those two personalities. But the personality known as B II, or "Sally," is most interesting of all. Not only did she exist as an alternating personality with B I and B IV, but she went on being conscious all the time, while B I and B IV were in possession of the body, with the difference that in the one case she was conscious, not only of outside events, but of B I's thoughts, while in the other she was aware always of what B IV said and did, but not of what she thought. The consequence is that the study of Sally throws light on many questions concerning subconscious personality, and such phenomena as dreams, hallucinations, &c. The questions raised by the whole story in regard to how a personality is constituted, and what either an associated or a dissociated personality can mean, are many and important, but a discussion of the philosophical importance of the facts recorded here had better be postponed until the appearance of Dr. Prince's promised second volume. Meanwhile, the book can be recommended to all interested in questions of abnormal psychology. The facts of the case are told in a very direct and interesting way.

A. D. L.

*The "Lloyd" Guide to Australasia.* Edited by A. G. Plate for the Norddeutscher Lloyd, Bremen. Pp. 469+ix. (London: Edward Stanford, 1906.) Price 6s.

THIS compact handbook on Australia should prove of great service to tourists visiting the Antipodes. The volume is profusely illustrated, and generously provided with maps and plans. Great care appears to have been taken in making the information up to date. The volume may not only be commended to travellers, but also to teachers of geography in secondary schools, who will find it useful as a supplement to their class-books.

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### LETTERS TO THE EDITOR.

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#### Presence of Neon in Radio-active Minerals.

I HAVE for some time been engaged in a search for the rare gases, along with helium, in the radio-active minerals. The earlier results were negative, but I have just found a trace of neon in two minerals—zircon and cyrtolite. I cannot give definite quantities, but should guess that the neon is not so much as 1/300th part of the helium.

The separations have been made by Sir James Dewar's charcoal method. He suggested this application of the method in his original publication of it.

I cannot yet state positively whether or not the presence of neon with helium is general. The manipulation has been progressively improved, and it may be that on repeating the earlier experiments on other helium-bearing minerals neon will be detected. On the other hand, it may be that the presence of neon is connected with zirconia, for both of the above minerals contain it.

R. J. STRUTT.

Sunnyside, Cambridge.

#### Radium and Helium.

IN NATURE of October 25 Prof. E. Rutherford has briefly restated the arguments for considering that radio-active phenomena are probably associated with atomic degradation, and that, as a rule, the loss of an atom of helium accompanies such changes, the atomic weight of the substance undergoing transformation being diminished by 4, the atomic weight of helium.

With this assumption, the transformation of the uranium atom (238.5) into radium (225) occurs owing to the loss of three helium atoms, whilst the change of radium into lead (206.5) is due to the loss of five such atoms. The numbers are not, however, in strict agreement with this view, for  $238.5 - 3 \times 4 = 226.5$  instead of 225, and  $225 - 5 \times 4 = 205$  instead of 206.5.

This objection can, however, be removed by assuming that the atomic weight of radium is not 225, but 226.5, for we then have

$$238.5 - 3 \times 4 = 226.5$$

and

$$226.5 - 5 \times 4 = 206.5.$$

The above assumption, that the atomic weight of radium is slightly higher than that obtained by Madame Curie in her latest determination, does not, indeed, appear improbable when it is remembered that the first determination of the atomic weight of radium by Madame Curie gave a value of 146, and that the atomic weight has become greater and greater as the material used has been more and more purified. Madame Curie now considers that her latest value is correct to within a single unit, but she states that the material she employed contained a minute quantity of barium.

B. WALTER.

Hamburg, physikalisches Staatslaboratorium,

November 6.

#### Magnetostriction.

IN your issue of March 24, 1904, Mr. Nagaoka gives an account of a lecture experiment on magnetostriction; a few weeks later Prof. W. S. Franklin describes an experiment of the same kind. Both experimenters use a vertical solenoid, along the axis of which is fixed at its upper extremity an iron wire. When a current is sent through wire and solenoid, the wire is twisted. The explanation given is that the wire is magnetised helically, the expansion along the lines of magnetisation resulting in a twist of the free lower extremity.

May not the result of the experiment be accounted for in the following way? When a current enters at a pole and passes out at the centre of a freely suspended magnet, the magnet rotates about its axis. If, then, the current enters at one pole and passes out at the other—as both halves tend to rotate in opposite directions—one end of the magnet should be twisted relatively to the other.

D. O. S. DAVIES.

138 Earham Road, Norwich, November 16.