

three forms of appearance of the same thing in relation to us, analytically abstracted by us and in no way differing from each other. Subjectivism, power and matter are in essence the same and appear on earth in their most perfect and complicated form as cerebrum and the soul of man." Without entering fully into these questions, I may remark respecting the theory of consciousness and the psychological deductions of the work that, holding other fundamental views, I cannot agree in all particulars with the explanations and consequences either of Forel or of Vogt, notwithstanding that to the latter I owe personal thanks for some enlightenment as to the nature of hypnotism. In conclusion I refer the reader to Wundt's 'Hypnotismus and Suggestion,' a work, I may here add, described by Dr. O. Vogt also in his latest publication (*Zeitschrift für Hypnotismus*, etc., III, Juli-Sept.-Heft.) as of the highest importance.

LEIPZIG.

FRIEDR. KIESOW.

## VISION.

*Die Arten des Sehpurpurs in der Wirbelthierreihe.* ELSE KÖTTGEN und DR. GEORG ABELSDORFF. Sitzungsber. der Akad. d. Wissensch. zu Berlin, 25. Juli, 1895.

It is known that there is more than one form of the visual purple, but Kühne was not able to determine whether the different forms consist of two definite types or whether there are intermediate stages. Miss Köttgen and Dr. Abelsdorff now show that the former is the case. They examined specimens of all the classes of vertebrates—sixteen species in all—and they find very close coincidence in the absorption curve of the fishes, on the one hand (of which eight different kinds were examined), and of all the other vertebrates, including man, on the other hand; for the other vertebrates the maximum absorption is at 500  $\mu\mu$ , and for the fishes at 540  $\mu\mu$ , more in the yellow green, corresponding to the fact that is more bluish in appearance. The fact that there is no visual purple in the rodless retinas of most reptiles they confirmed in the case of the turtle—even a concentrated solution of sixteen retinas, extracted with the greatest care in red light, gave no trace of it. The reptiles which have rods, the chameleon, the crocodile and the boa, they did not examine on account of the costliness of the material. [The reviewer does not find that the absorption spectrum of sea water has been determined. It would be interesting if it should turn out that the agent for absorption in the eye of fishes is adapted to the light to be absorbed in deep water, which is the fish's darkness.]