is as follows :—Past events—307 returns ; good, 253; moderate, 34; bad, 20. Recent events—260 returns ; good, 166; moderate, 56; bad, 38 (p. 159).

Under the returns of males from 90 to 100 we find that of the 92 reported the condition of the intellect was ascertained in 72 instances, and was high in 12, average in 51, and low in 9. Memory: Past events—70 returns; good, 58; moderate, 5; bad, 7. Recent events—60 returns; good, 34; moderate, 14; bad, 12 (p. 177). Passing on to the female sex we find that in the returns of their present conditions (from 80 to 90) information was obtained as to intellect in 266 cases, and that it was high in 33, low in 36, and average in 197. Memory: Past events—258 returns; good, 186; moderate, 41; bad, 31. Recent events—221 returns; good, 120; moderate, 58; bad, 43 (p. 186). Taking the past history of this decennium in females, one case of insanity is reported.

Of the present condition of women during the decade of 90 to 100 there were 110 returns, of which 102 reported the state of the intellect, viz., high, 18; average, 71; low, 13. Memory: Past events—105 returns; good, 80; moderate, 11; bad, 14. Memory: Recent events—93 returns; good, 55; moderate, 17; bad, 21 (p. 198).

From the foregoing it will be seen how important to the student of mental science is the information contained in this painstaking work, which is a model of what such an undertaking ought to be. It forms an admirable guide to those who may engage in similar investigations. We must express our great sense of indebtedness to Professor Humphry for devoting so much of his time to so useful an inquiry.

An Experimental Study in the Domain of Hypnotism. By Dr. R. von Krafft-Ebing. Translated from the German by Charles G. Chaddock, M.D. New York and London: G. P. Putnam's Sons, 1889.

When men like Prof. Krafft-Ebing study the phenomena of hypnotism, we feel that we have a guarantee for careful observation and cautious inference. It has taken a long time to induce leading psychologists to follow in the steps of Professor Laycock and Dr. Carpenter, who so many years ago recognized the importance of this study. "At first," writes the author, "I was not without doubt, but daily

observations for several months removed them, and facts have compelled me to acknowledge that hypnotism is of the greatest importance as a means of enriching our knowledge of the physiology of the human mind, and of the relation existing between the psychical and the corporeal world."

This book of 130 pages contains a series of experiments on a highly interesting case, but it would occupy too much space to detail them here. We can only give a *résumé* of the conclusions arrived at.

Ilma S., Hungarian, aged 29, labouring under hysteria gravis, is in a high degree capable of transfer hypnotic states. As such, a state of catalepto-somnambulism and one of auto-hypnosis may be produced experimentally at any time.

In the relatively normal and lucid state the patient presents the condition of hysteria, with its usual neurotic and psychical functional disturbances.

By means of certain procedures it is very easy to transfer the patient to a state of catalepto-somnambulism. These procedures must depend upon the suggestion (sensory, auditory), and primarily, for their effect, upon a purely psychical impression. This is only possible when she is in accord with the experimenter's will.

The purely mental and suggestive mode of origin of catalepto-somnambulism, is shown by the fact that its intensity, and the experimenter's control over the subject, depend entirely on the intimate accord between the two.

Hence imperfect results are obtained by stroking with a brush instead of the hand, by failing to gaze at the experimenter, or by employing other than the usual experimenter. The patient's cortex in catalepto-somnambulism is inhibited, to the exclusion of spontaneous apperception. However, perceptions are possible in the domain of hearing and cutaneous sensibility, although there are no proofs of their elaboration to apperceptions. Simple reflexes are induced by the above auditory and painful impressions.

Through the sensory and auditory avenues, the experimenter, and he alone, can overcome the inhibition of the cortex, and unlock any part of it at a time. The brain mechanism standing in relation with the suggestion, works with extreme exactitude, but only as long and as far as this influence continues. Left to herself, the patient in consequence of the cortical inhibition is devoid of all spontaneity. She resembles a statue, and nothing in her mien betokens that mental operations, even in the form of dreams are

occurring. When this statue is given life by suggestion, the absence of higher mental functions (judgment, criticism, will, etc.) is striking—she is a pure automaton.

If, however, this fully-developed state be not induced, the inhibition is incomplete, and will, apperception, etc., are not entirely held in check, and on passing into the lucid state, one finds the patient does not altogether forget the events which occur during somnambulism.

In this incomplete state contractures cannot be produced, and phonographic experiments fail.

The regions of the cerebral cortex set free by suggestion are very impressionable. Since the nervous paths and sense organs are not hyperæsthetic, this increased impressionability must be central (psychical.)

That any reflex action which is produced is through the channel of the sensory nerves of the skin, is shown by the fact that if there is hemi-anæsthesia the result on that side is *nil.*

It is evident, then, that the basis of the experiments in hypnotism is a psychical factor between patient and experimenter. In other words, everything results from suggestion, and the ways by which it is possible are the auditory and sensory paths.

After manipulations with the magnet, bodies not magnetic have the power in the hands of the experimenter to produce spasms.

More remarkable is the possibility of successful suggestion in centres and paths which in any case are not influenced by the conscious will in a normal psychical condition. Many of these suggestions as the production of goose skin by the suggestion of cold, the induction of sleep, etc., fall within the range of physiology.

The results of suggestion in the domain of the vaso-motor and trophic nerves, and the best regulating centres remain in the present state of science inexplicable. That these effects are not simply possible by means of the psychical influence of the experimenter, but may be a result of hallucinatory suggestion, is shown by experiments. They form a bridge to that auto-suggestive influence over the functions of the body, the occurrence of which in hysterical patients in the form of bloody sweat stigmata cannot be doubted. The distant effect of medicaments proved to be an error.

Experiments as to a possible transposition of sense were not made because it has been shown to be a self deception, and is opposed to the elementary laws of physiology.

Clairvoyance was for the same reason put aside. Only one experiment was tried in divining the experimenter's thoughts by the patient. It is concluded that in all cases where this is alleged to have succeeded, unintentional suggestions on the part of the experimenter explain the result.

Suggestions with reference to transformation of personality, the creation of hallucinations and false perceptions are interesting to mental science as experimental productions, and offer many analogies with the auto-suggestions of dreams and insanity.

Hypnotic suggestion is a valuable addition to the therapeutics of functional nervous diseases.

(To be continued.)

Die Rolle der Suggestion bei gewissen Erscheinungen der Hysterie und des Hypnotismus, Kritisches und Experimentelles. Von Dr. Armand Hueckel. Jena, 1888.

Along with the recent rapid growth of the practical use of hypnotism in France there has been constant polemic between two main groups of theorists. On the one hand are the supporters of the hypothesis that every effect of hypnotism is the result of suggestion which may be conscious or unconscious on the part of the agent and the subject, and on the other are the supporters of the doctrine of a rather earlier date, which has found special favour at the Salpêtrière, that there is a natural sequence of the conditions of the subject, when once the hypnotic state is entered upon, which starts with lethargy, passes on to catalepsy, and thence to somnambulism. This second course, it is naturally granted, is not quite invariable, or else there would be hardly room for argument, but it is defended as the normal and typical course towards the perfection of which all hypnotism inclines, but of which there are some incomplete and even distorted examples. In defence of this it was often argued that this course and sequence of phenomena could generally be observed in an unlearned person who had never heard of these matters beforehand when he was hypnotized for the first time. If this is so he cannot be doing what he was expecting to do; and that it should be in any way suggested by the operators by their acts, words, or gesture was not admitted. That it should have been transmitted by the fact that it was in the thoughts of those present, independently of signs perceptible to the senses, was held to be too extravagant a hypothesis to be discussed by either party. The