

SCIENCE:

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Attention is called to the "Wants" column. All are invited to use it in soliciting information or seeking new positions. The name and address of applicants should be given in full, so that answers will go direct to them. The "Exchange" column is likewise open.

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RECENT STUDIES IN HYPNOTISM.¹

Hypnotization against the Will of the Subject.

WHILE it has been generally admitted that subjects who have been frequently hypnotized lose the power of resisting the customary manipulations of the operator, or, in other words, that the natural suggestion of going to sleep at the sight of the operator and his proceedings is stronger than the auto-suggestion not to yield (just as we may fall asleep, in spite of all effort, at a lecture or social gathering), yet great stress has been laid upon the original consent of the subject to submit to the operation, as well as upon a considerable power of resistance by sheer determination. Dr. Herrero, a Spanish writer on the subject, has recently announced a means of hypnotizing any body and every body, *volens volens*.

A great number of those classed as non-hypnotizable will succumb, says this authority, if the process be maintained for a sufficient length of time. As this is very trying to the operator, a device may be resorted to by which the subject is forced to gaze continuously at a bright object, the operator re-enforcing the suggestion to sleep. If, however, the subject resist the proceedings, one may bind him, and force him to assume the position necessary for hypnotization. But this drastic process may be dispensed with; for in those cases in which it is necessary, for therapeutic or correctional purposes,

¹ Mainly from current numbers of the Revue de l'Hypnotisme.

to hypnotize a person, Dr. Herrero has another method. It is based upon the discovery that in light chloroformization there is a stage in which the subject obeys suggestions as readily as in hypnotism. This period may at first be brief, but may be prolonged by care and practice. While in this "chloroformic somnambulism," the suggestion is given that in future no such agency will be necessary to hypnotize the subject, in some the suggestion is made gradually that they will resist less and less; and so on. While this disposes of those unconsciously resisting hypnotization, does it apply to those opposing it voluntarily? Here is a case in point. A patient showed a morbid fear of hypnotism, regarding it as a satanic art, and absolutely refusing to be hypnotized. It had been attempted over and over again, but in vain. Chloroformization was proposed, to which she consented. The first day it required fifteen grams to bring on the susceptible period, then thirteen, and so on until the patient went to sleep by merely staring at the doctor's fingers, and became a good hypnotic subject. By this means, then, it is proposed to induce a state by the action of drugs from which the transition is easy and certain to ordinary hypnotism. It seems probable that there will be much discussion and experimentation in this novel mode of extending the powers of hypnotism.

Auto-Hypnotism.

By this is meant the power to put one's self to sleep. We do this every night, and persons differ very markedly in the ease and rapidity with which they fall asleep both at night and at other times. Dr. Coste de Lagrave has developed this power to a considerable extent, making himself at once operator and subject in an hypnotic experiment. The best time to experiment is just after awakening. One then attempts to go to sleep again for a short time only. One may wake and go to sleep again three or even five times in an hour. The sleep is light, may be accompanied by dreams, and the sleeper be sub-consciously aware of his condition. When the sleep is still lighter, and self-consciousness is largely present, the auto-hypnotic state has appeared. Dreams may occur, though the dreamer is perfectly conscious that he is dreaming, and may even attempt to direct these dreams. This amounts to auto-suggestion. To enter this state, the author lies down, closes his eyes, tries to sleep, keeping his thoughts fixed on the desired auto-suggestion. Here are a few instances of his success. As the result of a dysentery contracted in Tonkin, he could not walk a mile without extreme fatigue. One evening he gave himself the suggestion not to become tired, and the following day he was able to take a long walk. He suggests good appetite, and suggests away dyspepsia and cold feet, even under the most trying circumstances, such as in the open air on a cold day, and finds that his feet are really warm to the touch. Hallucinations are thus excited. He writes, talks interestingly, all by auto-suggestion. But the process is not without its disadvantages. Fatigue, depression, and sometimes severe headache, are the results. Like all phases of hypnotism, it has its uses and abuses. While this power is thus unusually developed in the cases cited, it undoubtedly exists to a lesser degree in many; and it would not be difficult to find in the habits of all a close analogy to what is here termed "auto-suggestion."

Retro-active Hallucinations.

This name has been given by Dr. Bernheim to hallucinations suggested back into the experience of the hypnotized subject. He is told that so many days or weeks ago he was a witness of such and such an act. The suggestion is accepted, perhaps additional details are added, and the fictitious event is embodied with the ordinary experiences of life. The case to be here noted is interesting, on account of influencing several at once, some without direct personal suggestion, and on account of being accepted by a person who happened to be sleeping normally. In one of the wards of the hospital, Dr. Bernheim hypnotized eleven patients while one was sleeping normally. He tells one of his subjects, "You see No. 3 seated on a chair. Yesterday he came back intoxicated, sang and shouted through

the halls, struck the keeper, making his nose bleed. You were there." The illusion soon developed; and the subject repeated the whole story, adding that a nurse came with a basin of water to wash off the blood. A neighboring subject was then aroused, and asked what happened yesterday to No. 3. After some hesitation, he repeated the story. And so on with all the others, including one who was sleeping naturally. No. 3 himself admitted that he struck the keeper, but he did not begin the quarrel. None of these patients had ever assisted at such an experiment before. The experiment may not succeed at all times and with all subjects; but it shows, that, when the sleeper has his attention fixed upon the person who is speaking, he hears and accepts every thing. On awakening, he does not recall this of his own accord; but, as soon as a hint is given, he recalls it all, and accepts it as a reality. As a practical outcome of the observation, Dr. Bernheim gives the warning not to tell secrets in the presence of a sleeper.

Statistics of Cures by Hypnotism.

The methods and purposes of the clinic for the treatment of diseases by hypnotism, founded at Amsterdam by Drs. van Reuterghem and van Eeden, have been noticed before in these columns (*Science*, May 24, 1889). On the occasion of completing the first two years of their experience, they have put together an account of the kind and number of diseases treated, and the amount of success achieved; and these statistics, being comparatively extensive and carefully collected, have good claims to general consideration. There were treated, in all, 414 patients (219 men and 195 women). Of these, only 15 (less than 4 per cent) could not be hypnotized; 217 (53 per cent) entered a light stage of sleep; 135 (32 per cent) entered a deeper stage; and 47 (11 per cent) entered the somnambulant stage, characteristic of the best hypnotic subjects. The ages of the patients were distributed as follows: from 1 to 10 years, 9; from 11 to 20 years, 46; from 21 to 40 years, 203; from 41 to 60 years, 131; from 61 to 80 years, 25. There were 361 of the 414 afflicted with various kinds of nervous troubles, 168 were classed as general neuropathic disorders, 68 as neuralgias and pains, 60 as mental diseases, 40 as hysterical affections, and 29 as organic affections. In general, the effects of the treatment are indicated by the following figures: no effect in 71 cases (20 per cent), a slight or passing improvement in 92 cases (26 per cent), a distinct and permanent improvement in 98 cases (27 per cent), and a cure in 100 cases (28 per cent). The disproportion in the number of nervous and non-nervous cases makes a fair comparison of the results in the two classes impossible. Among the nervous diseases, those classed as neuropathic show a very favorable result, 33 per cent being cured, and 26 per cent permanently benefited. Hysterical and neuralgic affections show nearly as high a percentage, though the absolute numbers are here much smaller. Diseases classed as organic naturally show the very minimum of success in treatment. We have thus no announcement of hypnotism as a panacea curing all diseases, but a fair proportion of success and failure distributed among various disorders in a way that accords with our knowledge of the nature of such diseases. It is only by such impartial and scientifically collected results that the movement can make progress.

AMONG THE PUBLISHERS.

LAST week's issue of *Garden and Forest* contains an excellent illustration of the famous Waverly Oaks, near Boston, and a figure of *Gladiolus turicensis*, one of the noteworthy additions to garden-plants last year. Mr. Charles Eliot writes instructively of the coast of Maine; and among other contributors to the number are Professor J. B. Smith, Professor W. A. Buckhout, Professor E. S. Goff, Professor J. T. Rothrock, Dr. Udo Dammer, John Thorpe, and Mrs. Schuyler Van Rensselaer.

—The March number of the *New England Magazine* will contain many portraits. In the article on the "Supreme Court of the United States" there will be given likenesses of more than a dozen of the great justices. In an article on "Chautauqua"

will be found portraits of Bishop Vincent and Mr. Lewis Miller. "A Successful Woman's Club," "A Strange Dinner-Party," and "An Old New England Country Gentleman," are other illustrated articles in this number.

—To meet the demand for a much greater variety and number of illustrations in the *American Architect*, Messrs. Ticknor & Co. have arranged to more than double the extent of that department, and to add many new features. To give their subscribers a greater amount of illustration, it is necessary to increase the subscription price, but only to those who desire the increased illustration. They therefore continue their regular and imperial editions, but have issued, in addition, an enlarged and more expensive edition, called "the international edition." The international includes all that the imperial contains (that is, the equivalent of 384 pages of photo-lithographic illustration of all sorts, also 40 gelatine and 12 heliochrome plates, and the extra photogravure plate for the year), and adds (A) a large amount of foreign work, received regularly from England, France, and Germany. The apportionment of this new matter is not yet finally settled, but it will amount approximately to over 200 pages of photo-lithographs, and probably 150 gelatine plates, besides a large number of genuine copperplate etchings. To give still further value to this edition, there will be from time to time (B) additional colored prints and (C) real photogravures, — genuine copperplate prints, such as are issued by Messrs. Goupil in Paris by that name. But the feature perhaps the most interesting to the American profession will consist (D) in publishing in this international edition, as far as subscribers will aid, competitive designs submitted in limited, and in some cases in public, competitions. To do this — to provide a journal containing approximately 1,000 page illustrations (besides nearly as many smaller cuts in the text) and (E) an attendant increase in the text of four pages weekly, 200 pages per annum — has required a considerable increase in the subscription price, and it cannot be placed at less than \$25 per annum. At the same time, to place it within reach of many to whom so large a single payment might be an inconvenience, quarterly payments at a slightly increased rate may be made when preferred. No subscriptions will be received, however, for less than the full calendar year, as the plans involve contracts in at least three foreign countries, made upon a permanent basis by the year. There has just been issued in the *American Architect* a photogravure from Mr. Axel H. Haig's famous etching, "At the Fountain of St. George." This is commonly called "St. George at Lubeck;" but Mr. Haig writes, "The subject is not to be found at Lubeck at all or in any North German town. The work is a composition, partially founded on a scene in an old Bavarian town, but, being so very much an invention, I cannot give a locality to it."

—"The danger of an ignorant person in seizing an electric wire carrying a strong current is as great as that to which a person ignorant of the ways of snakes would be subjected if he undertook to take the place of the skilled observer . . . accustomed to put his arm into a tall jar containing rattlesnakes and take them out." This extract will show the general drift of an article on "Dangers from Electricity," by John Trowbridge, which appears in the *Atlantic* for March. There is a paper by Charles Worcester Clark on "Woman Suffrage, Pro and Con;" George Parsons Lathrop shows us "The Value of the Corner;" and there is a paper called "Loitering through the Paris Exposition," which tells, among many other things, of all the concerts given at the cafés of the exposition by the various nationalities, — Gypsies, Javanese, Hungarians, and many more. Dr. Holmes is particularly amusing in "Over the Teacups," and seems to wish that people would write less poetry. He closes with some odd verses on the rage for scribbling.

LETTERS TO THE EDITOR.

Physical Fields.

I THINK Professor Dolbear misunderstands the motive of my communication relative to physical fields, that appeared in *Science* Jan. 24. It was not so much what I conceived to be misuse of the term "stress," that I wished to call attention