

SCIENCE:

A WEEKLY NEWSPAPER OF ALL THE ARTS AND SCIENCES.

PUBLISHED BY

N. D. C. HODGES,

47 LAFAYETTE PLACE, NEW YORK.

SUBSCRIPTIONS.—United States and Canada..... \$3.50 a year.
Great Britain and Europe..... 4.50 a year.

Communications will be welcomed from any quarter. Abstracts of scientific papers are solicited, and twenty copies of the issue containing such will be mailed the author on request in advance. Rejected manuscripts will be returned to the authors only when the requisite amount of postage accompanies the manuscript. Whatever is intended for insertion must be authenticated by the name and address of the writer; not necessarily for publication, but as a guaranty of good faith. We do not hold ourselves responsible for any view or opinions expressed in the communications of our correspondents.

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.

VOL. XV. NEW YORK, FEBRUARY 23, 1890. No. 369.

CONTENTS:

A NEW SYSTEM OF FIRE-PROOF FLOOR-CONSTRUCTION..... 137	LETTERS TO THE EDITOR.
WAR-BALLOONS..... 138	Physical Fields
HEAT AND VENTILATION..... 138	<i>Nelson W. Perry</i> 147
AN ELECTRICAL DIAMOND-DRILL... 139	Supposed Aboriginal Fish-Weirs in Naaman's Creek, near Claymont, Del.
THE ELECTRIC-LIGHT CONVENTION 139	<i>H. W. Haynes; S. D. Peet</i> 151
THE FISHERIES OF NEW ZEALAND.. 140	The Fiske Range-Finder
BOOK-REVIEWS.	<i>J. F. Denison</i> 151
A Popular Treatise on the Winds	Soils and Alkali <i>D. O'Brine</i> 152
<i>W. M. D.</i> 142	INDUSTRIAL NOTES.
NOTES AND NEWS..... 144	The Electric Light in Japan..... 153
RECENT STUDIES IN HYPNOTISM.... 146	A Big Road goes in for Electricity..... 153
AMONG THE PUBLISHERS..... 147	Photography done Quickly..... 153

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

Science

ns-15 (369)

Science ns-15 (369), 137-153.

ARTICLE TOOLS

<http://science.sciencemag.org/content/ns-15/369.citation>

PERMISSIONS

<http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. 2017 © The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works. The title *Science* is a registered trademark of AAAS.