

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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MENTAL SCIENCE.

Motor Expression of Ideas.¹

A GREAT deal of study has lately been given to the phenomena of automatism in their various and perplexing forms. There has been accumulated a large number of the extreme cases in which persons write down quite elaborate sentences and are unconscious of doing so, and the view has been advanced that we have here the minute beginnings out of which develop these peculiar cases of the separation of personality into two or more *egos*. It is, however, the study of the more normal cases, in which the psychological factors are more easily analyzed, that seems to be promising of interesting and practical results. The typical experiment consists in fixing the attention of the subject in one direction, placing in his hand a pencil, and observing what will result if the hand holding the pencil be tempted to move. With some subjects there results a very clearly written word or words reflecting what was uppermost in their thoughts. The subject is often as surprised as any one, having no consciousness of what he had done. M. Gley, who has tried the experiment with a number of persons, offers the suggestion that this motor automatism may be a part of a general mental tendency. It is well known that some persons do their mental representation by visual pictures, others mainly by sounds, and a third variety by motor images. The last class would be represented by those who gesticulate as they speak, who think aloud as it were, who talk to themselves, and, in short, to

¹ Bulletin de la Société de Psychologie Physiologique, 1889.

whom thinking is action. It is likely that with such persons thought expresses itself in action more easily than in others, and hence this automatic writing becomes related to a better understood class of phenomena. The suggestion is capable of an experimental verification, and well deserves it.

A New Use of Auto-Suggestion.¹

The acting-out of a suggestion imposed upon an hypnotic subject by the hypnotizer has been compared to the self-imposing of a task or a vow. In both cases there is more or less possibility of the suggestion failing to be enacted, depending largely on the opposition to the normal habits and powers of the individual that the suggestion arouses. This power is very different in different persons, and we have a good illustration of it in the relative difficulty different persons have of suggesting themselves to sleep at night. It is similarly possible to train a good hypnotic subject to put himself to sleep either by imagining that the operator were doing it or by observing a certain ceremony, and so on. A large part of the wonderful cures so constantly brought before the public may be viewed as instances of auto-suggestion. Dr. Burot has shown that this power may be utilized in cases of crime hypnotically suggested. A patient wishing to be hypnotized oftener than he could be attended to, was taught to hypnotize himself, and with good success. The suggestion was given to him to commit a theft, which he promptly did. Upon awakening, he forgot all about it, and it was impossible to get him to acknowledge the deed. He was then told to hypnotize himself for the purpose of recalling the circumstances of the case. He awoke, and voluntarily told the whole story just as it happened. The same experiment was successfully made upon other subjects; and the conclusion drawn by Dr. Burot is, that auto-suggestion offers a safe and useful method of discovering the hypnotic origin of a crime.

An Interesting Case of Brain Localization.¹

There is in Paris a mutual autopsy society, each member of which pledges his body to be dissected after his death by the rest. Special attention is given to the brain, and the society is composed of well known scientists. In this way M. Manouvrier made a careful study of the brain of M. Adolphe Bertillon, and in a supplementary note calls attention to a few peculiarities of special interest. It appears that M. Bertillon was deaf in the left ear, and had been so from infancy. The sense of hearing having been localized in the first temporal convolution, this part of the brain on both sides was examined to see whether there was any difference in the development of the two halves of the brain. It was found that while on the left side this convolution was well developed, with a number of slight ridges and furrows in it, on the right side it was smaller and without these characteristics (the centre for each ear is located in the opposite hemisphere of the brain). While, of course, a single observation of this kind is far from conclusive, yet the method is one promising to corroborate generalizations otherwise reached, and to suggest and explain peculiarities based upon the individual capabilities.

Visualized Sounds.

A correspondent of *Nature* sends an interesting account of association of visual images with the sounds of musical instruments. "The sound of an oboe brings before me a white pyramid or obelisk, running into a sharp point; the point becoming more acute if the note is acute, blunter if it is grave. The obelisk appears to be sharply defined and solid if the note is loud, and vague and vaporous if it is faint. All the notes of the 'cello, the high notes of the bassoon, trumpet, and trombone, and the low notes of the clarinet and viola, make me see a flat undulating ribbon of strong white fibres. The tone of the horn brings before me a succession of white circles of regularly gradated sizes, overlapping one another. These circles and the ribbon float past me horizontally, but the point of the obelisk seems to come to me." The writer adds, that, though she has been accustomed to hearing music all her life, these effects have been noticed only for five years, in which time they have become more frequent and clearer. If she is familiar with the score of a piece, these visualizations seem to slightly precede the actual sounds. The images are distinctly