In all the cases, the last sensation to which expression was given was one of flying, of moving upwards. In some cases death was peaceful, in others painful. In one case a girl died clasping the iron bars of the bed, in horror of being borne upwards.

What is the cause of this sensation? Piéron, no doubt rightly, associates it with the similar sensation of rising and floating commonly experienced in dreams, and with that feeling of moving upwards and resting on the air which is sometimes experienced by persons in the ecstatic state, and which in the lives of St. Ida of Louvain, and many other saints, is treated as a real phenomenon.

The explanation is evidently quite simple. In an ecstatic person in whom this sensation occurred, Janet found anæsthesia of the sole of the foot. Bergson has suggested that in dreams of flying there is numbness and arrest of circulation due to pressure on the parts supporting the weight of the body. We must, Piéron argues, apply the same explanation to the sensations of flying experienced at the moment of death.

HAVELOCK ELLIS.

Right-handedness and Left-handedness. (*Journ. Anth. Inst., July—Dec.*, 1902.) *Cunningham, D. J.*

This subject was chosen by Professor Cunningham for the third Huxley Memorial Lecture of the Anthropological Institute. He deals with it in a thorough manner and with wide knowledge of the extensive literature. He regards right-handedness as an organic acquirement of early man, due to natural selection. There is no good reason to show that monkeys are right-handed, and evidence obtained from Dr. Taylor, at the Darenth Asylum, showed that microcephalic idiots tend to be ambidextrous (five right-handed, four ambidextrous, one left-handed) The functional pre-eminence of the brain is the cause, and not the result, of right-handedness. Left-handedness may be regarded as due "probably to a transposition of the two cerebral hemispheres in the same way that transposition, either partial or complete, of the thoracic and abdominal viscera occurs." It is noteworthy that there is a large proportion of left-handedness in those showing transposition of the viscera.

Professor Cunningham rejects the explanation resting on the supposed better blood-supply of the left hemisphere, finding that facts are against it. Nor is it true that the left hemisphere is either heavier or more convoluted than the right. Professor Cunningham himself hoped to find an explanation in a comparison of the motor centres for the arm in the two hemispheres, but finds that in man, and even to some extent in the ape, this area is more exuberant on the *right* side. He concludes that the attempt to discover a structural basis for the functional superiority of the left cerebrum is at present baffled, but that one must still believe that such structural basis exists. HAVELOCK ELLIS.

Internal Autoscopy [*L'Autoscopie Interne*]. (*Rev. Phil., Jan.*, 1903.) *Sollier, P.*

Autoscopy is an abnormal power of observing and representing the anatomical and functional state of the subject's own internal organs. If

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the representation is external, in a hallucinatory form, it is termed external autoscopy; if the observation is direct, it is termed internal autoscopy. The phenomenon, which occurs most clearly in the hypnotic state, is analogous, Sollier suggests, to the power shown in premonitory dreams, by which the disturbance of internal organs becomes definitely clear to sleeping consciousness before it is perceived by waking consciousness. Autoscopy was vaguely known to the ancient magnetisers; more recently attention was called to it by Féré; it has been most thoroughly studied by Sollier and Comar.

Sollier considers that the phenomenon is most definitely observed in hysterical patients, who in the hypnotic state attain a conscious knowledge of organs which in the subject's ordinary state are anæsthetic. Sollier's own theory on hysteria is well known; he looks upon it as a fundamental disturbance of the cerebral cortex which may be regarded as a sort of sleep, varying from a simple diminution of the cortical centres to their complete arrest; this state is translated into varying conditions of the body and viscera—vaso-motor, trophic, sensorial, motor, etc. Partial or complete recovery from this somatic sleep is attained in various ways, and notably in the hypnotic state. This is the theory which Sollier seeks to apply to the explanation of the phenomena of autoscopy.

A typical case is furnished by a country girl, a patient of Comar's, without any education, who had formerly been treated for coxalgia; in a state of hypnosis she gave a fairly accurate description of the joint, in homely language, as it would appear without organic lesion. The same patient said, on another occasion, feeling the lower part of her abdomen, "It is strange what I have there in the middle; I did not know I was made like that. I have a sort of pear there, with the point downwards, and with strings from the top on each side turning forwards; there are several of them in the folds of a veil, and in one of the folds there is something like a nut; it's funny." The same patient described the bladder, ureters, and urethra, the stomach with its mucous folds and glands, and also the heart. Another patient of Comar's described with much accuracy and precision her arteries and their bifurcations, indicating the positions with the point of her finger; and even discovered by autoscopy, if one may trust the observation, the whole course of the circulation back to the heart.

Sollier describes in considerable detail three cases of hysteria in which autoscopy existed. The most important was a girl æt. 22, who, as he had been able to assure himself, was quite ignorant concerning the structure of the body. This subject could under certain conditions represent, or, rather, *see*, her vessels, heart, blood, lungs with bronchi and pulmonary vesicles, intestines, ovaries (described as like almonds), tubes, uterus, vagina, muscles, tendons, skeleton, and brain. She could not only describe the macroscopic appearance, but even (as regards ovary and brain) the microscopic constitution.

Sollier considers that the cases of hysteria which show autoscopy in the hypnotic state are comparatively rare; it occurs mainly in very severe and old-standing cases with visceral disturbances, and appears, usually quite unexpectedly, when the function of an anæsthetic or disturbed organ is being re-established. Surprising as the phenomenon

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may be, Sollier thinks it is possibly merely a question of degree between autoscopy and our usual confused perceptions of internal functions. Although the subjects frequently use the word "see" there is of course no actual vision; autoscopy would appear to be a representation founded on cœnæsthesic sensations originating in the organs. Sollier admits, however, that the subjects often rightly describe the colours of organs, and cannot explain this.

Sollier fully discusses the whole question, and meets the obvious criticisms that may be made. He gives his reasons for believing that unconscious reminiscence, suggestion, and trickery may be absolutely excluded. The sincerity of the subjects is also suggested by the method of description; neither the scientific nor the common names of organs are used, and it is only after describing what she sees that the subject adds, "That must be such and such an organ."

Sollier is no great believer in the explanatory force of the word "suggestion" in hypnotic phenomena, and he considers that in autoscopy we may learn to see more clearly what it is that happens in hypnosis. The hypnotic subject is able to obey an order referring to the unconscious and involuntary system, not because it is "suggested," but because for the time the unconscious and involuntary part of the organism has become comparatively conscious and voluntary, and therefore responds in the same way as under ordinary circumstances the organs ruled by striated muscle respond. HAVELOCK ELLIS.

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3. Clinical Psychiatry.

On the Utility of Lumbar Puncture in the Diagnosis of General Paralysis. (*Journ. of Ment. Path., Oct.—Nov.*, 1902.) *Joffroy and Mercier.*

In this paper, originally communicated to the Congress of French Alienists held at Grenoble in 1902, the authors record the result of an inquiry into the value of cytological examination of the cerebro-spinal fluid in general paralysis.

A series of punctures in healthy persons and in ordinary insane subjects showed the number of leucocytes per c.mm. in that fluid to be usually not more than two. In the general paralytic, on the contrary, it almost invariably exceeded five. Seventy punctures were made on 48 different patients suffering from that disease; in 17 instances, though no exact count was made, the number of leucocytes was seen to be excessive; in the remaining 53 instances the corpuscles were counted, and found to be as follows:—In four cases they varied between 0 and 5 per c.mm.; in eight cases they numbered between 5 and 10; in thirteen cases they varied between 10 and 20; in eighteen they varied between 20 and 50; in eight they numbered between 50 and 100; in one they numbered between 100 and 200; and finally, in one case they numbered 204.

Thus 66 out of 70 punctures showed a notable increase of the white corpuscles. Of the four instances in which the number was under 5 per

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