II. DISCUSSIONS ON UNCONSCIOUSNESS

THOUGH unconsciousness is, strictly speaking, a business of professional psychologists, it is so closely connected with my main subject that I cannot help dealing scantily with it.

That those sudden enlightenments which can be called inspirations cannot be produced by chance alone is already evident by what we have said: there can be no doubt of the necessary intervention of some previous mental process unknown to the inventor, in other terms, of an unconscious one. Indeed, after having seen, as we shall at many places in the following, the unconscious at work, any doubt as to its existence can hardly arise.

Although observations in everyday life show us this existence, and although it has been recognized since the time of St. Augustine and by masters such as Leibniz, the unconscious has by no means remained unquestioned. The very fact that it is unknown to the usual self gives to it such an appearance of mystery that it has experienced, at the hands of various authors, equally excessive disgraces and favors. Several authors have been stubbornly opposed to admitting any unconscious phenomenon. To speak of a case directly connected with invention, it is difficult to understand how, as late as 1852, after centuries of psychological studies, one could read in a work on invention,[1] such a statement as the following: "These seeming divinations, these almost immediate conclusions are to be explained most naturally by known laws[?]: mind thinks either by analogy or by habit; thus, mind jumps over intermedi-

[1] Desdouits, *Theorie de l'Invention.*

aries," as though the fact of jumping over intermediaries which one cannot but know of were not, by definition, an unconscious mental process! One cannot help remembering Pierre Janet's patients, who, obeying his suggestion, "did not see" the cards which were marked with a cross . . . which, however, they must necessarily have seen in order to eliminate them. But, of course, Pierre Janet's conclusion was not to deny unconsciousness, whose intervention is, in such cases, grossly evident.

In order to ignore unconscious ideas by any means, the philosopher Alfred Fouillée uses two contrary attitudes: either he will contend that, under any conditions, there must be consciousness, only very feeble and indistinct; or, if this hypothesis does not give him a means to avoid the one he seems to be afraid of, he withdraws in the opposite direction by invoking reflex actions, i.e., such actions the existence of which has been undoubtedly recognized by physiologists operating, for instance, on beheaded frogs, and which do not imply the intervention of mental centers but only of more or less peripheral and inferior nervous elements.

There are many well-known acts of mind which do not admit of either one or the other of these opposite explanations. Let us only mention the so-called "automatic writing," which has been thoroughly studied in the case of some psychical patients, but which is by no means an exclusive feature of such abnormal people. Many of us, if not all of us, have experienced automatic writing; at least I have very often in my life. Once, when I was in the high school and had before me a task which did not interest me very much, I suddenly perceived that I had written at the top of my sheet of paper "Mathématiques." Could that be con-

sidered as a reflex motion? Can such reflex motions imply the rather complicated gestures of handwriting; and are the corresponding inferior centers aware that "Mathématiques" wants an "h" after the "t"? On the other hand, if I had given one instant's thought, however short, to what I was writing, I should never have written that word, as the paper was devoted to a quite different subject.

The Manifold Character of Unconsciousness. Today, the existence of the unconsciousness seems to be rather generally admitted, although some philosophical schools still wish to exclude it.

Indeed, very ordinary facts illustrate with full evidence not only the intervention of unconscious phenomena, but one of their important properties: I allude to the familiar —which does not mean simple—fact of recognizing a human face. Identifying a person you know requires the help of hundreds of features, not a single one of which you could explicitly mention (if not especially gifted or trained for drawing). Nevertheless, all these characters of the face of your friend must be present in your mind—in your unconscious mind, of course—and all of them must be present at the same instant. Therefore, we see that the unconscious has the important property of being manifold; several and probably many things can and do occur in it simultaneously. This contrasts with the conscious ego which is unique.

We also see that this multiplicity of the unconscious enables it to carry out a work of synthesis. In the above case, the numerous details of a physiognomy result, for our consciousness, in only one sensation, viz., recognition.[2]

[2] I understand that, in the contemporary Gestalt psychology, there is a unique sensation of physiognomy, independent of the ideas of the various

Fringe-Consciousness. Not only is it impossible to doubt the reality of the unconscious, but we must emphasize that there is hardly any operation of our mind which does not imply it. At a first glance, ideas are never in a more positively conscious state than when we express them in speaking. However, when I pronounce one sentence, where is the following one? Certainly not in the field of my consciousness, which is occupied by sentence number one; and nevertheless, I do think of it, and it is ready to appear the next instant, which cannot occur if I do not think of it unconsciously. But, in that case, we have to deal with an unconscious which is very superficial, quite near to consciousness and at its immediate disposal.

It seems that we can identify this with what Francis Galton[3] calls the "ante-chamber" of consciousness, beautifully describing it as follows:

details. I am not qualified to discuss that important conception; however, as the question is closely connected with what we are going to say later on (especially in Section VI), I must state precisely that whether we admit it or not, there is certainly something corresponding to the individual effect of light on each point of our retina (at least at the very first moment when this effect is transmitted to the brain) and that these individual sensations are unconscious. Is that unconsciousness—generally a very remote one, probably because the corresponding mechanism has been acquired in earliest childhood—analogous to those which will interest us in the following sections? This would be another question; but I must add that this identity of nature is hardly doubtful for me: there is a chain of intermediaries, some of which are even described by the Gestaltists themselves (as I see by Paul Guillaume's *Psychologie de la Forme*) and above all, such cases as learning to ride a bicycle (as has been noticed by several authors). Personally, having learned that when an adult, I did not master it until everything, from having been conscious in the beginning, became fully unconscious—so fully unconscious that I hardly knew why my motions had a better success finally than originally.

[3] *Inquiries into Human Faculty*, p. 203 of the first edition, 1883 (London, New York: Macmillan); p. 146 of the 1908 edition (London: J. M. Dent; New York: E. P. Dutton).

"When I am engaged in trying to think anything out, the process of doing so appears to me to be this: The ideas that lie at any moment within my full consciousness seem to attract of their own accord the most appropriate out of a number of other ideas that are lying close at hand, but imperfectly within the range of my consciousness. There seems to be a presence-chamber in my mind where full consciousness holds court, and where two or three ideas are at the same time in audience, and an ante-chamber full of more or less allied ideas, which is situated just beyond the full ken of consciousness. Out of this ante-chamber the ideas most nearly allied to those in the presence-chamber appear to be summoned in a mechanically logical way, and to have their turn of audience."

The word "subconsciousness" might be distinguished from "unconsciousness" in order to denote such superficial unconscious processes and there is, moreover, the word "fringe-consciousness," created by William James and then used by Wallas with that same meaning, as much as I understand, and which is even very expressive in that sense.[4] These subconscious states are valuable for psychology by being accessible to introspection, which, at least in general,[5] is not possible for more remote processes. Indeed, it is thanks to them that introspection is possible. To describe them, psychologists such as Wallas use a comparison drawn from the facts of eyesight. "The field of vision of our eyes consists of a small circle of full or 'focal'

[4] "Foreconscious," used by Varendonck and other writers of Freud's school for special psychic states, is doubtfully available for us.

[5] An exception is Poincaré's sleepless night: see p. 14. Another one possibly (though less certainly) occurred in the case of a technical inventor mentioned by Claparède in the meeting of the Centre de Synthèse.

vision, surrounded by an irregular area of peripheral vision, which is increasingly vague and imperfect as the limit of vision is neared. We are usually unaware of the existence of our peripheral vision, because as soon as anything interesting presents itself there we have a strong natural tendency to turn the focus of vision in its direction. Using these terms, we can say that one reason why we tend to ignore the mental events in our peripheral consciousness is that we have a strong tendency to bring them into focal consciousness as soon as they are interesting to us, but that we can sometimes, by a severe effort, keep them in the periphery of consciousness, and there observe them."

The observation of the distinction between consciousness and fringe-consciousness is generally difficult; but the difficulty happens to be much less in the case of invention, which interests us. The reason for that is that invention work by itself implies that thought be inflexibly directed toward the solution of the problem: when obtaining the latter, and only then, the mind can perceive what takes place in the "fringe-consciousness," a fact which will be of a great interest to us in this study.

Successive Layers in the Unconscious. We see that there are at least two kinds—more precisely, two degrees—of unconsciousness.

It can hardly be doubted, and we shall be able to confirm this later on, that there must even be, in the unconscious, several successive layers, the most superficial one being the one we just considered. More remote is the unconscious layer which acts in automatic writing; still more those which allow inspirations such as we reported in the preceding section. Even deeper ones will appear to us at the end of this study. There seems to be a kind of con-

tinuity between full consciousness and more and more hidden levels of the unconscious: a succession which seems to be especially well described in Taine's book *On Intelligence*, when he writes:[6]

"You may compare the mind of a man to the stage of a theatre, very narrow at the footlights but constantly broadening as it goes back. At the footlights, there is hardly room for more than one actor. . . . As one goes further and further away from the footlights, there are other figures less and less distinct as they are more distant from the lights. And beyond these groups, in the wings and altogether in the background, are innumerable obscure shapes that a sudden call may bring forward and even within direct range of the footlights. Undefined evolutions constantly take place throughout this seething mass of actors of all kinds, to furnish the chorus leaders who in turn, as in a magic lantern picture, pass before our eyes."[7]

That striking description is quite similar to the Book X of St. Augustine's *Confessions*. Only St. Augustine speaks of memory; but, as it seems to me, he fully realizes the—for me—undoubted fact that memory belongs to the domain of the unconscious.

Fringe-subconscious evidently offers some analogy with the very vaguely conscious ideas which Fouillée supposes, while, at the other end of the chain, the succession of un-

[6] Added by Taine for the first time in the edition of 1897 (Vol. I), p. 278.

[7] Some recent psychological schools, such as Freud's, would seem, at first, to disagree with the above point of view and to speak only of one kind of (proper) unconscious. As I am informed by a competent colleague and friend, this would be a misinterpretation of Freud's thought.

We already have seen (Note 2, p. 23) that ideas have a tendency to become more and more unconscious by influence of time: a circumstance we shall again meet with in Section VII (see p. 101).

conscious layers is more probably, as Spencer states (*The Principles of Psychology*, Vol. I, Chap. IV), in continuity with reflex phenomena. Thus, the two states which Fouillée wants to oppose to unconsciousness seem to be nothing else than the extreme cases of it: a double conclusion, which, however, Fouillée rejects (*L'Evolutionisme des Idées-Forces*, Introduction, p. xiv and end of p. xix) by arguments the discussion of which it is useless to inflict upon the reader.