Bleuler's Views on Inheritance of Acquired Characteristics and on Psi Phenomena

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From the late 1920s on, the famous Swiss psychiatrist Eugen Bleuler (1857-1939) staunchly propagated the reality of the inheritance of acquired characteristics and the existence of parapsychological phenomena. As Bleuler was considered an outstanding scholar, his views could not be ignored. He was a popular speaker, attracting large audiences; the Swiss newspaper *Neue Zürcher Zeitung* reported that on January 19, 1927, when Bleuler spoke on "The Problems of Occultism," the university auditorium was so overfilled that there was apprehension that the audience's safety was in jeopardy.

Bleuler was then the foremost authority on schizophrenias, and, as his writings in psychiatry show, he was a rational scientist. What factors, therefore, inclined him toward pseudoscience? It seems that when Bleuler read materials that failed to support his notions, his sound judgment was suspended, and he spent considerable time and effort to refute such views; the somber, rational scientist transformed himself into a bitter, sarcastic critic. Bleuler thus joins the long list of prominent scientists, such as William Crookes, Alfred Russel Wallace, J. C. F. Zoellner, and Sir Oliver Lodge, who risked their reputations by investigating and endorsing the reality of various psychical phenomena (Hyman 1989).

I will attempt to explain the reasons for Bleuler's insistence on the reality of the inheritance of acquired characteristics and of the

The famous Swiss psychiatrist Eugen Bleuler advocated pseudoscientific views during the last years of his life. The apparent reason was to continue to contribute to science after his retirement, when he lost access to schizophrenic subjects he had studied during his professional career.

occult. The explanations are only the initial step in hypothesis formation and must be considered tentative. But first let us consider Bleuler's record as scholar and psychiatrist.

From 1898 to 1927, Bleuler was the director of Burghölzli, the psychiatric clinic of the University of Zürich. The directorship carried with it the professorship in psychiatry at the university. Bleuler's *Lehrbuch der Psychiatrie* (Textbook of psychiatry) was popular; it appeared from 1916 to 1937 in six German- and four English-language editions. Bleuler was rigorous in scientific matters; early in his career, in the 1870s, he performed physiological experiments at the University of Zürich (Gaupp 1940; Minkowski 1941). In a 1919 monograph, titled *Das Autistisch-Undisziplinierte Denken in der Medizin und seine Überwindung*, he exhorted physicians and researchers to beware of *autistic* thinking that "does not seek truth, but the fulfillment of wishes" (Bleuler 1919:1).

Bleuler's seminal contribution to psychiatry—the concept of *schizophrenias*—was derived from observing the behavior of institutionalized patients. He proposed that schizophrenias may emerge at any period in an individual's life and does not have to end in dementia. This meant that some schizophrenic patients may recover—an optimistic conclusion that was at variance with the commonly held view that there was no remission in schizophrenias (Gaupp 1940).

After Bleuler retired in 1927, he worked on a project that had claimed his attention for many years: the construction of a theory of psychology that he called "mnemistic biopsychology" and described in numerous books and articles published in the 1920s and 1930s. I will describe here only the most salient aspects of Bleuler's (1932) theory.

Life depends on the organism's adaptation; to survive, it must deal with the environment. Adaptation to the changing external environment is the function of the central nervous system, primarily the brain. According to Bleuler, one fundamental process of the brain is the *mneme*, which is both the conscious and unconscious memory.

The individual's mneme has a function, he said; it furthers survival. To survive, the organism adapts. The adaptive responses modify the mneme. The mneme is thus a repository of information. This information makes it easier for the organism to adapt to similar environmental situations in the future.

The mneme receives information by the associative process, he said, but this information forms integrated totalities or configurations—the engrams. *Engrams* were said to be configurations of specific incidents that were experienced by the organism in the past and serve as guides in similar present or future situations. Everything that an individual experiences is fixated in terms of engrams. The mneme consists of many different engrams (Bleuler 1932).

In contrast to the mneme, *instincts* are not acquired by the individual but are the innate characteristics of a species. Instincts, however, further the individual's adaptation. How can it be that instincts have adaptive properties? The answer is that adaptation acquired by the individual's mneme becomes the property of the instincts, or, in Bleuler's words: "the acquisition by the mneme can be transferred to the next generations" (Bleuler 1933:102). With this argument, Bleuler ventured that acquired characteristics are inherited.

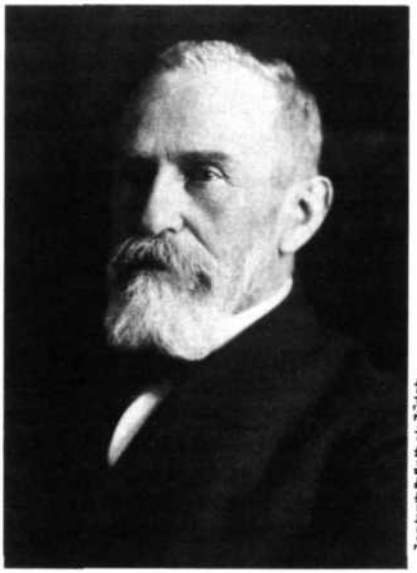
Bleuler defended his thesis of the inheritance of acquired characteristics in a 1925 book titled *Die Psychoide als Prinzip der organischen Entwicklung* and

in a paper published in 1934. In the book, Bleuler declared his support of Charles Darwin's theory of evolution, yet he asserted that it required modification. Bleuler maintained that Darwin's random variations and natural selection are valid concepts but alone could not explain evolution. Darwin himself thought the concept of struggle for existence insufficient in explaining evolutionary change and therefore proposed the inheritance of acquired characteristics through "gemmules" (cf. Ruse 1979). Bleuler discarded Darwin's gemmules, proposing instead the concept of mneme in explaining the inheritance of acquired characteristics.

Bleuler (1925) stated that random variations cannot account for the entire mechanism of evolution because the probability of adaptation as the product of chance alone is minimal. For instance, consider the formation of the animal eye. As the functioning eye consists of six parameters (retina, transparent skin, lid, etc.), Bleuler figured out that the probability of simultaneous occurrence of three parameters was at least:

$$1/131072 \times 10^{-40}$$

He said this probability is far too low to be accepted as likely in the formation of the eye. Nor was Bleuler willing to consider experiments in which some body part was damaged in successive generations and no change was observed in the subsequent ones. Bleuler referred to Weismann's experiment where the tails of more than 20 generations of mice were cut off, with no diminution in the length of the tails in subsequent generations. Anyway, he argued, it was a poor experiment for we should not have expected any experimental results; it is known that after cutting grapes for thousands of years, grapes still continue to sprout.



Eugen Bleuler, one of the leading psychiatrists of his time.

Evolution occurs, according to Bleuler (1925), because ontogenic changes become an aspect of the mneme, or, more specifically, of engrams. The engram is not modified alone; the adaptive processes provide relevant information to the entire organism. This can be seen in biological regeneration; as soon as the organism's body is damaged, the organism's nervous system receives the information and reacts to restore the damaged part. The restorative work is not random; it is directed according to the principle of psychoide. *Psychoide* is the organizing principle of the mneme; it provides the "blueprint" that makes the functioning of the organism possible.

Information resulting from some adaptive action, in his view, is received by the engram. He said the gene is itself an engram. The gene becomes modified and organized by psychoide. The adaptive, ontogenic experiences that affect the gene in a series of generations are passed on phylogen-

ically, furthering the evolutionary process (Bleuler 1925).

Bleuler found evidence for the inheritance of acquired characteristics in the St. Bernard dog's complex behavior. According to Bleuler, the St. Bernard displays special attachment to the rescued individual. If two St. Bernards work together, one stays with the victim and provides warmth and the other runs toward human habitation to summon help. Helping humans is not a natural instinct of St. Bernards; this highly complex behavior serves the survival of humans rather than that of the dogs. Rescue behavior cannot be the consequence of selection. It is also unlikely, Bleuler said, that the St. Bernard's action is the consequence of mutation or spontaneous variation; the probability that such complex behavior emerged by chance is minimal. The training of St. Bernards began, asserts Bleuler, only 250 years ago. About 100 years ago the training ceased because this acquired activity was inherited by its offspring. Additional training that a dog gets now only perfects its innate tendency to rescue people. However, there are cases where St. Bernards, without any training or observation, rescued people. Chance might bring about an arrangement of letters to form a poem, but it is difficult to envision a chance emergence of a group of atoms so arranged as to produce a rescue instinct. The emergence of an instinct requires guidance, and this can be provided by the mneme that fixates experiences that subsequently become inherited (Bleuler 1934).

In the 1930s, Bleuler advocated the reality of parapsychological, or occult, phenomena. Bleuler (1930) described parapsychological phenomena as events that cannot yet be explained naturalistically because our knowledge is inadequate. Parapsychological phenomena, he said, are characterized by a specific kind of relationship between the environment and the psyche; the environment impinges upon the psyche but not through the medium's senses, and the psyche influences the environment but not through the medium's muscles. Attempts were made by critics to declare such phenomena fraudulent, and Bleuler said some are, but not all. He said those that are genuine demand explanation.

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Bleuler used two strategies in support of his thesis: first, he provided stories that could not be explained naturalistically; and, second, he relied on séances.

As an example of the first approach, Bleuler (1930) told a story of a man who was robbed and murdered. His friend had a vision of this event and told it to the victim's wife. She had the friend arrested, and he spent six weeks in jail, but was released after the real murderer was convicted of the crime.

Bleuler participated in telekinetic séances held by the well-known mediums Rudi and Willy Schneider. Bleuler saw Rudi Schneider move a curtain, start and stop a record player, and replace one record with another, by what he thought to be parapsychological means. Some accusations were made that the curtain was manipulated by the medium's legs.

Bleuler replied that Rudi could not have used his legs because they were resting on Bleuler's knees.

The manifestations of occult phenomena Bleuler felt, testify to their authenticity. Ectoplasm produced by the mediums had been observed. He felt that ordinary laws of physics were suspended during the séance; objects moved through space in the pattern of a horizontal curve; material objects penetrated closed doors and windows. Bleuler (1930:663) writes that "heavy objects fall slowly . . . light objects show the opposite action." He regretted that he had never had the opportunity to see such phenomena, but maintained that these were observed by thousands of people, many of them as critical and clever as we are.

Bleuler was saddened that many outstanding scientists refused to acknowledge the veracity of parapsychological phenomena. For instance, in a séance with Willy Schneider, Rudi's brother, the curtain and a handkerchief moved. One scientist said that the movement of the curtain was caused by the medium's manipulation of the carpet. Yet Willy's legs were said to have been held firmly by a controller, who insisted that he had not noticed them move. Besides, there were eight chairs standing on the carpet, yet none was seen moving. When the carpet was later nailed to the floor, the curtain did not move during the séance, making this scientist say that his hypothesis was confirmed. But, wrote Bleuler, this is not so; the noise made by the nailing of the carpet may have destroyed the medium's power, or the medium, facing distrust, may have been in a bad mood and thus failed to produce the parapsychological phenomena.

Bleuler maintained that even if some parapsychological feats involve fraud, that does not permit the conclusion that all feats by mediums are achieved through trickery. He rationalized that mediums are requested to demonstrate parapsychological powers at times when they are unable to do so because parapsychological phenomena are the products of the unconscious and do not respond to the medium's will. Unwilling to disappoint the audience, they, in an emergency, may resort to trickery, which, considering the conditions, Bleuler felt was understandable.

He felt that the occult deserved to be studied, but with methods that differed from those used in physics and chemistry. Chemistry, maintained Bleuler, can be studied in the laboratory whenever the scientist wants, but parapsychological phenomena as manifestations of the unconscious cannot be produced by the medium on demand. The reaction of the physical and chemical substances is always the same, but the sensitive human mind may react differently to identical stimulus. It is unlikely that Goethe would have been able to write *Faust* in the laboratory if he were ordered to do so and were treated with hostility and suspicion, as were many mediums. He said one should institute rigorous controls only after treating the mediums warmly and expressing confidence in their abilities. They are very sensitive, he said, and when people come to the séance and do not even greet them, the manifestation of parapsychological phenomena cannot be expected.

A complete explanation of beliefs in pseudoscientific phenomena awaits future systematic psychological studies. The case of Bleuler, however, is interesting in that it shows the expression of irrationality in an individual who had been active for decades in the pursuit of what Thomas Kuhn (1970) calls "normal science." The motives behind Bleuler's embrace

of pseudoscientific claims may now, at best, be hypothesized.

Bleuler's preoccupation with parapsychological phenomena occurred when he was in advanced age and confronting the inevitability of death. It may be that by accepting the occult he found evidence for the existence of another world and of immortality. However, Bleuler denies this hypothesis:

> The spiritualists see . . . evidence that there is life after death and reward or punishment for our deeds during our life span. I have up to now not found any evidence in support of this hypothesis. (Bleuler 1930:678)

Another hypothesis is that Bleuler's training as a physician did not provide him with an understanding of the scientific method. However, Bleuler performed sensory experiments at the Physiological Laboratory at the University of Zürich in the 1870s (Gaupp 1940). This means that Bleuler must have known the rudiments of the scientific method. Moreover, in his 1919 book, Bleuler warned his colleagues to beware of reaching conclusions based upon wishful thinking rather than facts. Therefore, this hypothesis has to be rejected.

The third hypothesis is that Bleuler's belief in pseudoscientific concepts was derived from his mnemistic biopsychology theory. It is true that the concept of the inheritance of acquired characteristics has a place within the theory, but its absence would not break the theory. As the theory had to include the concept of instincts, the neo-Darwinian explanation would do as well. However, the acceptance of parapsychology had nothing to do with mnemistic biopsychology theory, as Bleuler (1930: 678-679) himself admitted. Consequently, this hypothesis is rejected too.

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With the rejection of these hypotheses, a more psychological one may explain Bleuler's propagation of pseudoscientific ideas. Manfred Bleuler (1973), Eugen's son, stated that in the eighteenth century Swiss society was dominated by an aristocratic elite that did not allow the rural, peasant class members to enter universities. But in 1830, Switzerland adopted a democratic constitution, and the members of the lower classes rushed to universities. Among them was Eugen Bleuler, a peasant's ambitious son, who after finishing his studies at the University of Zürich in 1881 achieved the exalted position of professor at this prestigious university and was recognized as one of the world's leading psychiatrists (Gaupp 1940).

Bleuler's retirement ended his work on schizophrenias, as he was cut off from contact with schizophrenic patients. Yet he still craved to make a contribution to science. For years he developed his empirical theory of psychology, but found the doors barred by the rise of experimental psychology. Bleuler was in a quandary. He had none of the specialized skills to venture into, say, chemistry or physics, but may have thought that he could contribute to the study of the inheritance of acquired characteristics and of parapsychology.

Biologists were then greatly interested in resolving the problem of the inheritance of acquired characteristics (cf. Goldschmidt 1931; Haldane 1932). The reality of parapsychology was to be, supposedly, resolved in laboratory experiments (cf. Rhine 1934). Bleuler could hold his own in those controversies. Thus, Bleuler (1934:706) dismissed the fact that there was no experimental support for the inheritance of acquired characteristics by stating that "negative results do not prove anything." In a monumental study, Gulat-Wellenburg, Klinckowstroem, and Rosenbusch (1925) concluded, after studying such famous mediums as Eusapia Paladino and Willy Schneider, that there was no scientific evidence for so-called physical mediumship. Bleuler responded that as soon as proper methods were used, the reality of parapsychological phenomena would be confirmed.

Were Bleuler not the famous psychiatrist that he was, it is doubtful whether his pseudoscientific views would have been published in professional periodicals. Ironically, the tragedy of Bleuler's last years was his inability to follow the advice he gave to scientists—beware of autistic thinking that abandons realistic thought in favor of affective belief.

References

Bleuler, E. 1919. *Das Autistisch-Undisziplinierte Denken in der Medizin und seine Überwindung* (The autistic-undisciplined reasoning in medicine and its overcoming). Berlin: Julius Springer.

———. 1925. *Die Psychoide als Prinzip der organischen Entwicklung* (The psychoide as a principle of organic development). Berlin: Julius Springer.

———. 1930. Vom Okkultismus und seinen Kritiken (On occultism and its critics). *Zeitschrift für* Parapsychologie, 5:654-680.

———. 1932. Naturgeschichte der Seele, und ihres Bewusstwerdens: Mnemistische Biopsychologie (The natural history of the soul and its realization of consciousness: Mnemistic biopsychology), 2nd ed. Berlin: Julius Springer.

———. 1933. Die Mneme als Grundlage des Lebens und der Psyche (The mneme as basis of life and the psyche). *Die Naturwissenschaften*, 21:100-109.

———. 1934. Vererbung erworbener psychischer Eigenschaften? (The inheritance of acquired psychic characteristics?). *Wiener Medizinische Wochenschrift*, 84:705-707, 740-743.

Bleuler, M. 1973. Some aspects of the history of Swiss psychiatry. *American Journal of Psychiatry*, 130:991-994.

Gaupp, R. 1940. Eugen Bleuler: Die Persönlichkeit und ihr Werk (Eugen Bleuler: The personality and his achievements). *Zeitschrift für die gesamte Neurologie und Psychiatrie*, 168:1-35.

Goldschmidt, R. A. 1931. Gibt es eine Vererbung erworbener Eigenschaften? (Is there inheritance of acquired characteristics?). *Zuechtungskunde*, 6:161-170.

Gulat-Wellenburg, W. v., C. v. Klinckowstroem, and H. Rosenbusch. 1925. *Der physikalishe Mediumismus* (The physical mediumism). Berlin: Verlag Ullstein.

Haldane, J. B. S. 1932. The hereditary transmission of acquired characteristics. *Nature*, 129:817-819, 856-858.

Hyman, R. 1989. *The Elusive Quarry: A Scientific Appraisal of Psychical Research.* Buffalo, N.Y.: Prometheus Books.

Kuhn, T. 1970. *The Stucture of Scientific Revolutions*, 2nd ed. Chicago: Chicago University Press.

Minkowski, M. 1941. Zum Andenken an Eugen Bleuler, 30. April 1857-15. Juli 1939 (To the memory of Eugen Bleuler 30 April 1857-15 July 1939). *Schweizerischer Archiv für Neurologie und Psychiatrie*, 46:1-10.

Neue Zürcher Zeitung. 1927. "Probleme des Okkultismus" (The problems of occultism). January 25, 1927. No. 126, p. 148.

Rhine, J. B. 1934. Extra-sensory perception of the clairvoyant type. *Journal of Abnormal and Social Psychology*, 29:151-171.

Ruse, M. 1979. *The Darwinian Revolution.* Chicago: University of Chicago Press.

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