PIONEERS IN NEUROLOGY



Josef Breuer (1842–1925)

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In his book "When Nietzsche wept" Irvin D. Yalom portrays a fictitious relationship between Doctor Josef Breuer and the philosopher Friedrich Nietzsche, two men deeply tormented by a kind of love affair with two important women, "Anna O." (Bertha Pappenheim) and Lou Andreas-Salomé, respectively. At the height of this friendship, they find relief in a primitive form of psychotherapy, the result of the synergism and dialectic of both minds [1]. Although it seems unlikely that they had actually ever been in contact, and the novel is nothing more than an interesting imaginative retelling of their history, what is certain, is that Breuer would indeed be a pioneer in the development of the then nascent cure by speech (precursor of Psychoanalysis) during the culmination of nineteenth century.

Josef Breuer (Fig. 1) was born in 1842 in Vienna, the capital of the Austrian Empire. He was a student of emblematic figures such as Carl von Rokitansky and Ernst Wilhelm von Brücke, among others, during his training at the University of Vienna (where he would later also serve as a *Privatdozent*). He is described as a family doctor of great humanism, enormous culture, and brilliant diagnoses. This was the reason that characters of the stature of the philosophers Franz Brentano and Friedrich Jodl, other physicians such as Moritz Kaposi, Theodor Billroth and Rudolf Chrobak and even the composer Johannes Brahms, whom he cared for until the last days of his life, paraded by his office [2].

He had an early interest in nervous diseases, falling into the realm of Neurology, and mental illnesses, falling into the domain of Psychiatry, but always within a physiological framework with little room for speculation. His work can be roughly categorized into three subjects, the physiology of respiration, the study of the vestibular system, and the study of hysteria [2, 3].

After his graduation from medical school, Breuer worked as an assistant to Karl Ewald Hering and conducted experiments on the function of the vagus nerve in respiration. They described a phenomenon that responded to variations in respiratory volumes, whereby the distention of the lung parenchyma induced an expiratory movement and vice versa. They showed that the transmission was conducted by the vagus nerve to the respiratory center in the medulla oblongata, which regulated the response, and is to this day eponymously known as the Hering–Breuer reflex [4].

However, the bulk of his research in physiology was related to the vestibular apparatus and its functions. In parallel with, and independently of the physicist Ernst Mach, Breuer discovered the mechanisms of balance and the contribution of the vestibular system to muscle tone, the relation between the semicircular canals and the otoliths with oculomotor responses (nystagmus), and the perception of linear and angular acceleration; all these findings are valid to this day and continue to be part of the physiology texts [5, 6].

In 1877 Breuer met Sigmund Freud, one of his students, whom he encouraged to be more interested in Neurology than in Psychiatry. Freud collaborated constantly with him, and they discussed about his patients and the new theories related to the psychic treatment of their respective cases [2]. Breuer began treating Bertha Pappenheim (whom he called "Anna O." in his medical reports to protect her identity) in 1880, a young Viennese woman of Jewish origin, for what was then called "hysteria" (conversion disorder today), through the cathartic method, in which Breuer encouraged his patients to recount experiences and thoughts about their symptoms so that they would reach an emotional purge in which the symptoms gradually disappeared. He thus developed a new type of therapy for a mental illness, the "talking cure" [2, 7, 8].

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Fig. 1 Josef Breuer (1842–1925). Source: Hirschmüller [2]



Breuer, together with Freud, published the *Studies on Hysteria* in 1895, where they stated that hysteria is the product of repressed memories of traumatic events that cannot nonetheless be expressed consciously [7]. Breuer would leave the path of psychotherapy, which later and after several changes would become known as Psychoanalysis. The most commented reason for such a decision was the emphasis on sexual causes as the genesis of all neuroses proposed by Freud. A turning point would be marked between the two as Breuer was a defender of mental and physiological causality and not sexuality as the origin of hysteria [2, 8, 9].

Breuer not only has the merit of being a co-founder of Psychoanalysis, but also of laying the foundations on which other models of psychotherapy are still being developed today. He died in 1925 with great fame in his native Vienna, but his contributions to Medicine would have little resonation in the rest of the world, as they were overshadowed by the growing ideas of his younger disciple, Sigmund Freud [9].

Special mention, Nietzsche's work is full of aphorisms about man, his life, the will and the becoming. That in real life this had an influence on Breuer in the development of his "talking cure" is another story...

Declarations

Conflicts of interest The author states that there is no conflict of interest

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