

The Evolution of Psychiatry and Neurology

Two Disciplines Divided by a Common Goal?

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INTRODUCTION

This chapter traces the evolution of psychiatry and neurology with special emphasis placed on the European scene. For a long time, there was hardly any distinction between these two disciplines that are now considered quite separate. They started together and they may well be in the process of reuniting, particularly in certain domains. We may see, and as the Germans say, *Zukunft in der Vergangenheit* (translation: the past is probably holding the key to the future.)

It is nearly impossible to state when neurology and psychiatry were “born,” but most historians hypothesize that scientific interest in the brain and mind—which had always existed—developed and reached a critical mass in Europe in the late 18th and early 19th centuries. As pointed out elsewhere (1), for much of the 19th and even parts of the 20th century, many persons practiced not only neurology and psychiatry including, in some cases, psychoanalysis—but also neuropathology. One could go even farther and extend the “boundaries” of the disciplines. For instance, the founders of neurosurgery in France, Thierry de Martel and Clovis Vincent—who was first trained as a neurologist and gained a special fame of sort for having operated on Ravel (2)—first developed their neurosurgical practice within the context of the Neurology service of the Salpêtrière, then directed by Joseph Babinski (3). As for neuroradiology, some of its pioneers like Arthur Schueller in Vienna and Egas Moniz in Lisbon were neuropsychiatrists (4). Many of the founders of psychiatry and neurology practiced both disciplines. Among some of those who come to mind is Jean-Martin Charcot, whom Sigmund Freud visited for a few months because of his interest in neuroanatomy and neurophysiology. Charcot is often considered one of the founding fathers of neurology, but a considerable portion of his activity related to conditions that are considered “typically” psychiatric such as hysteria. The famous painting representing the Master during one of his lectures (5), shows a female patient, known by her first name (Blanche) and her nickname *Reine des hystériques* (Fig. 1). As stated by Wechsler (6), Charcot’s studies of hysteria laid much of the groundwork for Janet and Freud, both his pupils.

Alois Alzheimer, now best known for the clinical and neuropathological description of the disease that bears his name, was also a very versatile person with considerable achievements in both neurology and psychiatry (7). Much of his work was dedicated to cerebrovascular diseases and neurosyphilis. Figure 2 shows Alzheimer and, next to him Emil Kraepelin, the then head of the laboratory. Kraepelin authored nine editions of a textbook, of psychiatry that was for many years the leading reference for the discipline. In addition to Alzheimer and Kraepelin, one also finds people who became famous in the fields of neurology and neuropathology, such as Gaetano Perusini and Friedrich Lewy (of Lewy



Fig. 1. Painting by André Brouillet: Une leçon de Charcot à La Salpêtrière. Contrary to what is sometimes stated, Freund does not appear in the painting.

bodies fame) (Fig. 2). There is also Ugo Cerletti, who was later to introduce, together with Luciano Bini, electroshock therapy. Much of Alzheimer's career developed in psychiatric institutions. In the early years of the *Zeitschrift für Neurologie und Psychiatrie* (now the *Journal of Neurology*), the person in charge of the psychiatric section was Alois Alzheimer, whereas the neurology section was edited by M. Lewandowsky.

Henry Charlton Bastian, one of the founders of neurology in the United Kingdom, was a professor of pathologic anatomy and dedicated much of his work toward neuroanatomy and to finding ways of improving neurological diagnosis. He also worked on hysteria (which he called a "neurosis") and considered his book "the brain as an organ of mind" as his greatest work (8). Throughout the years, many persons who considered themselves "alienists" sought an accommodation with neurology. Berrios (9) includes Wernicke, von Monakow, and Liepmann among these major figures. A very important step for both psychiatry and neurology took place when Julius Wagner von Jauregg introduced a physical treatment (malarial fever) for the treatment of "general paresis of the insane," a condition long thought to be psychiatric in nature. For that discovery he was awarded the Nobel Prize for Physiology and Medicine in 1927, the first of an extremely short list of psychiatrists to have received such distinction (10).

There is a distinct difference in the historical relations between psychiatry and neurology in different parts of the world. In eastern and central Europe, the two were merged for a long time with often a predominance of psychiatry. For instance, in the mid-1970s, the head of the Neuropsychiatry Department of the famous Charité Hospital in Berlin was a psychiatrist. The young Sigmund Freud, before and even after his stay in Charcot's department had long been interested in basic neurosciences, in clinical neu-



Fig. 2. Alois Alzheimer and his co-workers. Top row from left, F. Lotmar; N.N.; S. Rosenthal; Allers?; N.N.; A. Alzheimer; N. Achucarro; F.H. Lewy. Front row from left: Mrs. Grombach; U. Cerletti; N.N.; F. Bonfiglio; G. Perusini. This photograph was taken in Alois Alzheimer's laboratory on the second floor of the Nervenlinik Nussbaumstraße in Munich during 1909 or 1910, and not, as erroneously stated on the original legend, at the Deutsche Forschungsanstalt für Psychiatric which was founded only years later. It is often stated (even in this text) that the person in the center holding a cigar is Kraepelin. There is, however, no evidence that this is the case. (Courtesy of B. Lucci, MD and F. Vinci, MD.)

rology and even in neuropsychology and his "Essay on Aphasia" (11) is still very much worth reading. In Japan, on the other hand, the two disciplines did not develop together because neurology was for a long time a branch of internal medicine. The situations in Italy and France are considered below. Joseph Martin recently examined the historical basis for the divergence of neurology and psychiatry over the past century (12). He states that neurology and psychiatry have, for much of the past century, been separated by "an artificial wall created by the divergence of their philosophical approaches and research and treatment methods." It can be argued, however, that this separation, in some cases, was also a result of opportunism and politics. In this respect, it is interesting to consider the way in which, in the United States, the *Archives of Neurology and Psychiatry* separated. In the first issue of the *Archives of Neurology*, editor Harold Wolff defined the aims of the journal without a word about the previous association. Roy Grinker Sr., editor of the *American Medical Association Archives of General Psychiatry* stated in the first issue (13) "that decision was based on realistic recognition that neuropsychiatry has become separated into neurology and psychiatry as distinct clinical specialties." He added, however, that the decision was also based on the need for both disciplines to be able to publish more papers.

It is certain that for a long time thereafter, in the Anglo-Saxon world, except for some exceptions reviewed by Goetz in the previous chapter, the two disciplines ignored each other, when they were not

in open conflict. It is interesting in this respect to read the words written as recently as 1975 by MacDonald Critchley. Critchley was a British neurologist, for many years head of the National Institute for Neurological Diseases (known as Queen Square), and the author of many books related to neurology and neuropsychology (14). In an essay in which he outlined the “training of a neurologist” (15) he wrote, among the recommendations to the proper neurologist (who of course could only be a male) that “if throughout his nine year apprenticeship, he could fit in a spell as a part-time clinical assistant in a psychiatric clinic, so much the better.” He added, “personally, I do not feel that neurology should be oriented towards psychiatry. A neuropsychologist is far less of an anomaly than a neuropsychiatrist.” In Italy, psychiatry and neurology were traditionally studied together and in some cases are still part of one department. When the chair of neurology position was created at the University of Padua in the early 1950s, it was attributed to Giovanni Battista Belloni who, up to that time, had mainly practiced psychiatry. Some of his assistants were encouraged to develop neurosurgery and one of them, Sergio Dalle Ore, was the co-author of Terzian in the first description of a human case of the Klüver-Bucy syndrome (16). Franco Basaglia who, together with some colleagues, revolutionized the practice of psychiatry in Italy by opening up all the closed wards, was initially trained as a neurologist. In France, until the “cultural revolution” of May 1968, psychiatry and neurology had strong ties, but on the whole the field was very much dominated by neurology. Not uncommonly, one of the departments of Sainte Anne, the major psychiatric hospital in Paris, was chaired by a neurologist for whom no other position had been found. As a result, all of the psychiatrists who trained there had experience in both clinical neurology and neuropathology. That is why an early description of progressive supranuclear palsy is co-signed by the then young Jacques Lacan (17). Psychiatry and neurology are now quite separate and autonomous disciplines, but their close ties remain. Pierre Pichot, who was president of the World Psychiatric Association in 1977, wrote several articles clearly related to neurology and neuropsychology, one of which (18) was intended to inspire further work (19). Henry Hécaen, one of the founders of modern neuropsychology (20), had initially been trained as a psychiatrist and worked at Sainte-Anne in close cooperation with psychiatrists, neurologists, and neurosurgeons. Similarly, Julian de Ajuriaguerra trained at Sainte-Anne and became an expert in both fields. Two international journals currently published out of Sainte-Anne show a clear distinction between the two disciplines. *L'Encéphale*, founded in 1906, was initially dedicated to both, but is now almost exclusively focused on psychiatry, as indicated by its subtitle—*Journal of Clinical, Biological, and Therapeutic Psychiatry*. The other journal, the *European Journal of Neurology* (21) has two psychiatrists on its editorial board, but the number of psychiatry-related articles submitted to the journal remains very small. A new journal, entitled *Psychologie & NeuroPsychiatrie du Vieillessement* (22), edited by Christian Derouesné, aims to bridge the gap between neurology and psychiatry.

There are at least three areas of research where psychiatry and neurology are clearly coming together. The first is pharmacology. Since the 1950s, progress in neurotransmitter research has contributed significantly to a true convergence of the two disciplines (23). Taking depression as an example, future research will require developing better animal models of mood disorders, identifying genetic determinants of normal and abnormal mood in humans and animals, discovering novel targets and biomarkers of mood disorders and treatments, and increasing the recruitment of investigators from diverse backgrounds to mood disorder research (24). The second is physiology. The startling mood effects that deep brain stimulation sometimes has on people with Parkinson's disease, as well as the dramatic success ablative surgery has had in otherwise intractable cases of obsessive-compulsive disorder clearly underscores the “organicity” of behavior. The third is the overlap in the study of the dementias where behavioral aspects are so prominent, in addition to the memory and cognitive aspects. We have already seen that Hécaen and Ajuriaguerra, who are among the founders of modern neuropsychology, were initially trained as psychiatrists. In North America, the field was led by Norman Geschwind and was, for a long time, essentially in the hands of neurologists who, in fact, re-baptized the discipline “behavioral neurology.” Now, however, people from different backgrounds are happily working together. The successes of societies such as the British Neuropsychiatry Association (25) and the Society of Child

Neuropsychiatry in Italy (26) are examples of that cooperation. One can predict that in years to come, there will be increasing collaboration and integration between the two fields and that other subdisciplines will join neuropsychology (behavioral neurology) and neuropharmacology as examples of this new entente.

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