

American Journal of Psychiatry Feb 2004

Alzheimer: The Life of a Physician and the Career of a Disease, by Konrad Maurer and Ulrike Maurer; translated by Neil Levi with Alastair Burns. New York, Columbia University Press, 2002, 270 pp., \$49.50.

Some eponyms flourish by losing their capital letters and passing into the vernacular, notably when they are used as verbs: Louis Pasteur; Captain Boycott; Rudolf Diesel; the fourth Earl of Sandwich; Dr. Guillotin. Most of them fade into obscurity. How is it that Alois Alzheimer now has a place in the pantheon of eponymous diseases equal to that of Parkinson? Why did this obscure histopathologist not go the way of Binswanger (vascular encephalopathy), von Economo (postinfluenzal encephalitis), Korsakov (alcoholic psychosis), Duchenne-Erb (muscular dystrophy), and Creutzfeldt-Jacob (lately eclipsed by mad cows) among numerous pioneers in the last two centuries?

Here is a remarkable history that gives answers. The second half of the 19th century saw explosive biomedical growth from discoveries in physics, chemistry, and geology. In England this was centered in field research, integrative biology, and the doctrine of evolution. In Germany the centerpieces were microscopy, the cellular doctrine of Rudolf Virchow, and its application in bacteriology under Robert Koch. Owing to bitter national rivalry that began with Leibniz and Newton, worsened with Jiri Prochaska and Marshall Hall (a nasty accusation of plagiarism concerning spinal reflexes that consigned both men to oblivion), and culminated in World War I, competing scientists practiced widespread biological surround inhibition: knowing and using each others' work but failing to cite names. This historical pattern came to light recently, after the effects of surgical section of the corpus callosum on cognition were discovered in the United States, when it became apparent that German neuropsychiatrists had recognized callosal agenesis and understood its effects more than half a century earlier. This book remediates that schism by summarizing the remarkable contributions of prewar German neuropsychiatry, which we now accept as matters of common knowledge without questioning where they came from.

Alzheimer initiated medical studies in Berlin in the research environment created by Virchow and Koch. He began medical research

in Würzburg by attending lectures in the basic sciences, learning histological techniques, and writing his thesis on the histological structure of the glands secreting earwax. Despite having experience in psychiatry that was limited to attending lectures, on graduation as an M.D. he applied for and won a position as intern in the Municipal Asylum for the Insane and Epileptic in Frankfurt. Psychiatrists, then known as *Irrenärzten* ("loony doctors"), were not well respected. At the asylum Alzheimer spent 15 years meticulously documenting the clinical histories and social epidemiology of patients with general paresis and describing with equal care and artistic rendering the histopathology in their brains at autopsy. By age 40 this was his major accomplishment in research and the basis for his Habilitation, the German credential required for teaching in a university that is somewhat equivalent to American tenure.

He was fortunate in his immediate superiors. In Frankfurt, Emil Sioli introduced him to the revolutionary practices of Phillipe Pinel and Jean-Marie Charcot in France and John Connolly in England, who replaced restraints and drugs with therapeutic baths and psychotherapy. In Munich, his superior was Emil Kraepelin, the leading biological psychiatrist of his era, who established in his textbooks the categories of mental illness largely as we know and use them today.

The authors dramatically describe the appallingly complex diagnostic decisions faced by neuropsychiatrists in Alzheimer's time, as now: dementia praecox (schizophrenias), dementia agitans (bipolar disorder), dementia paralytica (tertiary syphilis), dementia senilis (arteriosclerosis), and dementia presenilis (p. 81). Alzheimer objectively categorized the problem: which were organic, which functional? After he published his clinicopathological correlations in 1904, four discoveries were made in rapid fire through 1908: Spirochaeta pallidum by a zoologist (Fritz Schaudinn) and a serologist (Erich Hoffmann); the syphilitic origin of general paresis by a psychiatrist (Felix Plaut); a serological test for syphilis by a bacteriologist (August von Wasserman); and "606" (arsphenamine) for treatment by chemists (Paul Erlich and Sahatschiro Hata). These multidisciplinary efforts had a major social impact: a third to half of the patients in German mental hospitals and 70% of juveniles were put there by a treatable disease. The only psychiatric events of comparable impact were the discovery sponsored by the Rockefeller Foundation that

pellagra was a vitamin deficiency, which halved the population of mental hospitals in the southern United States, and the impact on the state hospital system and psychiatric practice of the discovery of neuroleptics, beginning in the 1950s with *Rauwolfia serpentina*.

His work with paresis done, Alzheimer turned his attention to the psychoses and senile dementias. He split from Kraepelin, who firmly believed in “the assignment of symptoms to regions of the brain, the so-called theory of localization,” in preference of an approach “via nosology, that is, through examination of the processes of a disease” (p. 141). Kraepelin, along with Korbinian Brodmann and the Vogts, struck out; they failed to find histological signatures in patients with schizophrenia, although the search is still on. Alzheimer struck gold in finding his plaques and fibrillary tangles in the brains of patients with presenile dementia like Auguste D., although Kraepelin had the last word in his brilliant clinical description (quoted extensively on pp. 177–180) of the course of the disease to which he attached Alzheimer’s name.

Here was unequivocal evidence of organic disease. Yet Alzheimer’s first public presentation in 1906 was followed by an embarrassing silence (p. 159): no questions or challenges arose even from the chair of the meeting, who moved with unseemly haste to the next presentation, a defense of Sigmund Freud that provoked spirited debate among the 90 psychiatrists attending. What use was this new information? The urgent priority, then as now, was treatment, and if mental dysfunctions like hysteria and other neuroses could result from traumatic experiences, for which no pathological residues would be found at autopsy, then the cure lay not in magic bullets but in talk. *Irrenärzten* called it “confession” (p. 167). Now it is called “emotional abreaction”; analysts seem less than pleased by the connotation of the relation between couch and confessional. Alzheimer knew clearly that most dementias had no material signatures observable with his techniques (pp. 77, 119, 141), but that did not diminish his conviction or his sustained overwork, which may have contributed to his untimely death of heart disease at the age of 51.

So why does the eponym endure? Kraepelin assigned it (to the surprise of Alzheimer) partly to express gratitude to his loyal and highly productive subordinate, but perhaps even more to bolster his campaign for biological psychiatry (p. 219). Alzheimer’s histopathological findings have prevailed, in

contrast to the failure of Binswanger’s hypothesis on microscopic vascular disease as a cause of senile dementia (p. 228). Another factor is aging in industrialized countries, with steady increases in socioeconomic costs and the misery of families comparable to those accruing formerly from syphilis and pellagra. Not to be neglected is Alzheimer’s disavowal of euthanasia (p. 148). The underlying theory of eugenics was widely entertained in the United States as well as prewar Germany, where it led 20 years later to the despicable practice among some of Alzheimer’s younger colleagues of exterminating their own patients to improve the race. Most important was Alzheimer’s remarkable clinical skill and deep personal concern for his patients, particularly his first case, Auguste D., in whom he found his thread of Ariadne. Alzheimer’s plaques and fibrillary tangles still provide our best available clues to the cause and cure of this now major cause of mental decline in seniors.

The authors close with the celebrity factor by including photographs of Rita Hayworth and Ronald Reagan, who did for Alzheimer’s disease what Rock Hudson did for AIDS: relieving the disease of the burdens of shame and ridicule and bringing it into the living room as a topic not unsuitable to be overheard by children, even humanizing the patients suffering from the illness as “old-timers.” Alzheimer will be with us for many years, so it is fitting that this book, charmingly written and well documented with only minor lapses (Carleton, not “Daniel” Gajdusek), be translated and made widely available to tell us what he did, the milieu of his work, and how relevant it was and is to our predicament today. In an era dominated by molecular biology we need the reminder that psychiatrists must diagnose disordered patients, not diseased brains.

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