PIONEERS IN NEUROLOGY

Hartwig Kuhlenbeck (1897–1984)

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Received: 23 April 2016/Revised: 27 April 2016/Accepted: 28 April 2016/Published online: 9 May 2016 © Springer-Verlag Berlin Heidelberg 2016

It is often held that the distribution of knowledge within scientific communities is related to a deep acquaintance of professors with the most advanced research methods of their field. This is particularly true for the expulsion of German-speaking neuroscientists during the Nazi period, when certain areas of neurology were rejected as instances of "Jewish science" [3]. The attacks of party officials on progressive neuroscientists eventually led to the expulsion of up to one-third of the field's leading researchers [7]. The scientific exodus from the German-speaking countries allows for a prosopographical approach that goes beyond accessing a plenitude of biographies, institutional, and clinical histories, yet allows insights into the knowledge transfer occurring after the reintegration of differing communities into the growing neuroscientific culture across the Atlantic [8].

Hartwig Kuhlenbeck (1897–1984) was an exceptional case in this respect, since he belonged to a small group of 2-5% of forced migrants [9], who left Germany not because they were persecuted—as up to 30\% of the Jewish neurologists or approximately 10\% of all physicians were, who belonged to the Communist Party and the Socialist Physicians League [1] (Fig. 1).

Kuhlenbeck was born in Jena on May 2, 1897 and attended elementary school in Lausanne, Switzerland, where his father Ludwig Kuhlenbeck (1857–1920) was a law professor. Through his father, he was introduced to a wealth of philosophical thinking, including the works of Giordano Bruno (1548–1600) and Arthur Schopenhauer (1788–1860). When Kuhlenbeck's family relocated to Jena, he first joined the humanistic high school and was then sent to the Catholic boarding school in Naumburg. Having completed his high school degree in a shorter time due to the onset of the war, he soon joined the army as an artillery technician from 1914 to 1918. The casualties he witnessed during World War One drew him to study medicine—as a double major with philosophy. In 1921, Kuhlenbeck graduated with a thesis on Schopenhauer's philosophy under supervision from 1908 Nobel laureate Rudolph Eucken (1846–1928).

He also received his M.D. during the interwar period, based on neurodevelopmental work on vertebrate telencephalons—under the guidance from Heinrich Eggeling (1849–1954). Kuhlenbeck quickly left for some *Wanderjahre* as a ship-surgeon on an Atlantic cruiser, before staying in Mexico for 1.5 years. It was in the German immigrant community of Mexico City, where he met his eventual wife Ozelia Proteau (b. 1895). Yet rather than returning to Germany in 1927, Kuhlenbeck took up one of the rare guest professorships in anatomy at Tokyo University. During these 3 years in Japan, he also learned elementary Sanskrit and Cantonese [2].

When Kuhlenbeck and his wife returned to Germany in 1930, he became profoundly troubled by the social changes that had taken place. In Breslau, for example, he noted the street fights between communist and Nazi crowds, and sensed that right-wing groups were on the rise. Having completed his *Habilitation* with Eggeling in 1931 (*On the Basic Elements of the Prosencephalon in the Light of* 'Bauplanlehre'), Kuhlenbeck followed his mentor to Jena in early 1933. It nevertheless took only a few weeks to discover that faculty colleagues were appearing in brown



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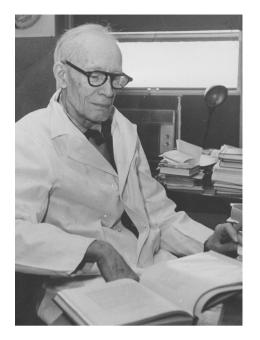


Fig. 1 Photograph of Hartwig Kuhlenbeck (ca. 1980). Courtesy of Drexel University, College of Medicine, Archives and Special Collections—Hartwig Kuhlenbeck papers. Series I: personal papers, journals (DUCOM.323), box 2, Philadelphia, PA, USA

uniforms. He became "so disgusted by the whole situation" and "deeply concerned with the future of academic learning in Germany," as he noted in his journal, that he handed in his resignation; he was unable to "work as a professor and intellectual in these dark times" [4].

Disappointed that he could not land a continuing position in Britain-yet hopeful to see his beloved Japan again- he joined his wife Ozelia and commenced a voyage into an uncertain future. After half a year in Japan, they both migrated further to San Francisco, where Kuhlenbeck contacted émigré neuroanatomist Adolf Wallenberg (1862–1949). This contact introduced him to a wider network of comparative neuroanatomists, such as Richard Harris (1866-1944) at Clark University. Via a research fellowship at the Mount Sinai Hospital in New York, in 1942, he arrived in an adjunct professorship at the University of Philadelphia. However, this lasted only a brief period as the United States of America had entered the war and Kuhlenbeck enlisted with the Army Medical Corps (1944-1947). Following his demobilization, he returned to Philadelphia and received an anatomy position at the Women's Medical College-now part of Drexel University. Kuhlenbeck held this job for 35 years and added another 13 years as an emeritus professor, fully dedicated to the comparative study of the brain. His time at Drexel was altogether extraordinary; he continued his work as one of the few male instructors in an otherwise female college. Kuhlenbeck's philosophical interests were thereby deeply rooted in his neuroanatomical investigations of brain structures related to "consciousness" and were presented in his seminal English monograph *The Human Brain and its Universe* (1982) [5]. Together with a flanking article in *Confinia Neurologica* and other journal publications, he emerged discussing trends in intensive care and "brain death criteria," before these became widely considered through the Harvard School of Medicine's criteria for death (1968) [6].

Stemming from the fact that he was forced to conduct his work from and in the periphery, Kuhlenbeck shared the fate of many émigré neuroscientists, who arrived in North America at a time when academic positions were scarceas a consequence of the Great Depression-along the east and west coasts. Like other refugees-Martin Silberberg (1895-1969) in St. Louis, Karl Stern (1906-1975) in Ottawa, or Robert Weil (1909-2002) in Halifax, Kuhlenbeck made the best out of this situation [10]. In his calm Drexel anatomy laboratory, he wrote 95 of a total 150 publications. Kuhlenbeck became a member of the American Association of Neurology and American Association of Anatomists, while being held in high esteem as a respected teacher by the Philadelphia Women's Medical College. He trained every medical graduate between 1947 and 1971 in anatomy.

With a view to the cultural perspective on "bridging communities," it is possible to view Kuhlenbeck as an important example of those émigré neuroscientists, who were forced to leave Germany after 1933. Nonetheless, he was an exceptional individual who neither belonged to the group of Jewish refugees nor those of socialist instructors. Yet based on his liberal self-understanding, he had openly criticized the right-wing developments of the Weimar Republic since the early 1930s and kept his stern conviction that good science needed to be grounded in a free democratic society.

Acknowledgments I am grateful for support from the Mackie Family Collection in the History of Neuroscience, the Hotchkiss Brain Institute, the O'Brien Institute for Public Health (all: Calgary), and acknowledge the support of the Ethics Office of the Canadian Institutes of Health Research as well as an Open Operating Grant (no/ EOG-123690) from CIHR. I graciously thank Mr. Matt Herbison (Drexel University, College of Medicine, Archives and Special Collections) for his kind assistance, as well as Mr. Brenan Smith (Calgary) for the adjustment of the English language of this article.

Compliance with ethical standards

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

References

1. Baader G (1997) Politisch motivierte Emigration Deutscher Aerzte. Ber Wissgesch 7:67–84

- Gerlach J (1985) Hartwig Kuhlenbeck, 1897–1984. Appl Neurophysiol 48:vii–xi
- Kater M (1989) Doctors under Hitler. The University of North Carolina Press, Chapill Hill, pp 25–53
- Kuhlenbeck H (1933) Diary Entry—April 25, 1933. In: Drexel University, College of Medicine, Archives and Special Collections (ed.) Hartwig Kuhlenbeck papers. Series I: personal papers, journals (DUCOM.323), Philadelphia, PA, Drexel University, box 2, transl FWS, p 323
- 5. Kuhlenbeck H (1982) The human brain and its universe, vol 2. S Karger, Basle
- Kuhlenbeck H (1959) Further remarks on brain and consciousness: the brain-paradox and the meanings of consciousness. Confin Neurol 19:462–484

- Peters UH (1996) Emigration deutscher Psychiater nach England. (Teil 1:) England als Exilland fuer Psychiater. Fortschr Neurol Psychiatr 64:161–167
- 8. Soederqvist T (2002) Neurobiographies: writing lives in the history of neurology and the neurosciences. J Hist Neurosci 11:38–48
- Stahnisch FW (2016) Historical research database on émigré neuroscientists and psychiatrists in North America (Access[®] software). University of Calgary, Calgary
- Stahnisch FW (2016b) Learning soft skills the hard way: historiographical considerations on the cultural adjustment process of German-speaking émigré neuroscientists in Canada, 1933 to 1963. J Hist Neurosci 25:1–21. doi:10.1080/0964704X.2015. 1121697 (epub ahead of print on Jan 21, 2016)