



GUEST EDITORIAL

Psychiatric genetics and prejudice: can the science be separated from the scientist?

*One of the devil's best ruses is to persuade you that he does not exist.**

The legacy of Ernst Rudin (1874–1952), a German psychiatrist and geneticist implicated in eugenic compulsory sterilization and 'euthanasia' during the Nazi reign, received close scrutiny in a recent series of articles. Kendler and Zerbin-Rudin^{1–3} extolled Rudin's scientific contributions and lamented the fact that the continental tradition of psychiatric genetics is not fully appreciated in the anglophonic world. Two companion editorials^{4–5}—an apparent stab at evenhandedness—placed Rudin's work in the context of his political activism but did little to calm the disquiet caused by Kendler and Zerbin-Rudin, whose papers drew harsh criticism from several authors.^{6–8} Kendler and Zerbin-Rudin's critics considered their views a whitewash of Rudin's racism and the destructive effects of his scientific work, and a misguided attempt at his scientific rehabilitation. Responding to his critics, Kendler⁹ admitted to 'his modest familiarity with the later history of the Rudin school and their relationship with the Nazis,' and acknowledged that 'this relation... has cast a pale over Rudin's work.' He nevertheless painted the criticisms as unduly harsh and took issue with some of the key points raised by his critics, in particular the suggestion that Nazi-tainted data should be expunged from the scientific corpus or cited only if accompanied by discussions of historical context. An accompanying editorial¹⁰ acknowledged the past crimes of our discipline and encouraged confrontation with the facts to contend 'comfortable ignorance' and to enhance our field's resolve never to repeat its past transgressions.

Evidently, this topic has touched deep emotional currents. Just as importantly, it has raised questions vital to the integrity of our field, which were not fully addressed in the foregoing debate. In what follows, I consider these issues further. My arguments are informed both by the recent exchange of views on this topic as well as by other, more inclusive sources.^{11–14}

Kendler⁹ frames a key point of the debate by arguing

that the work of scientists 'whose political acts or opinions are abhorrent to us' does not require any 'special treatment,' presumably of the kind conveyed in the aforementioned editorials and letters to the editor. He holds that while 'a strong argument can be made for excluding from the scientific corpus, or for citing only with special reference, data which were collected in an illegal or egregiously unethical manner, even his critics do not argue that the data that serve as a basis for Rudin's work were collected in an unethical manner or that individual subjects in his studies were directly harmed through participation in his research.' In point of fact, Kendler's critics *do* argue exactly that, contrary to his claim. In his letter to the editor, Gejman⁶ states: 'in all probability chronically ill patients from the families that Rudin used in his epidemiological research were murdered in the T4 euthanasia program.' Indeed, there is abundant evidence that Rudin's legacy was far more sinister and egregious than mere 'political acts or opinions' that do not require any 'special treatment.'

Rudin played a central role in inspiring, condoning and promoting forcible sterilization and castration of schizophrenics, a direct consequence of his conclusion from his own research that schizophrenia stems from genetic impairment. He was one of the principal architects of The Law for the Prevention of Genetically Diseased Offspring (*Gesetz zur Verhütung Nachwuchses*), which required physicians, hospital administrators and other health care workers, to inform public authorities of those patients and inmates afflicted with schizophrenia, manic depression and other disorders with hereditary components, for review by the hereditary health courts (*Erbgesundheitsgericht*), with obvious consequences for sterilization or castration. There is little doubt that the sterilization program was a precursor to the notorious 'euthanasia' program, which the Nazis implemented with characteristic efficiency and brutality (Figures 1 and 2). Moreover, it breached a moral barrier that eventually led to the mass annihilation of other 'outcasts,' specifically Jews and other minorities. The statistics are chilling: about 400 000 persons were sterilized, some of them out of the same families, and one was murdered for psychiatric reasons in each of at least 100 000 families. Thus, The Law for the Prevention of Genetically Diseased Offspring, formulated and championed by Rudin and his colleagues, was nothing short of a euphemism for mass sterilization and a prelude to mass murder. Although Rudin was not directly involved in the planning or execution of murders in the T4 'euthanasia' program, he did not protest publicly. Surely, a public protest from a man in Rudin's position might have made a dent. His sil-

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*Charles Baudelaire, The Generous Gambler, Paris Spleen, 1869. Translated from the French by Louise Varese, New Directions Publishing Corp, 1970.

Received 6 January 1998; accepted 7 January 1998

ence on this issue was deafening. Worse yet, Rudin stressed 'the value of eliminating young children of inferior quality,' and as late as 1943 declared 'euthanasia' as part of 'therapeutic reform' (!) for German psychiatry,⁵ thus actively condoning this murderous enterprise.

Given the scope of this hideous program and its focus on the genetically unfit, it is highly likely that Rudin's own research subjects—thousands of patients and family members were enrolled in his programs—were among those who fell prey to the evil he helped inculcate. The information he collected could readily be put to malevolent use: as director of the Genealogical-Demographic Department (*Genealogisch-Demographische Abteilung*) at the German Institute of Psychiatry or the Kraepelin Institute from 1917 to 1945—he was appointed director of the Institute in 1931, subsequently becoming a Nazi party member with generous grant support from Hitler's Reich Chancellery—he compiled a vast data bank (on the order of tens of thousands of families) in order to calculate Mendelian ratios, based on information obtained from hospitals, asylums and other institutions. The bottom line, then: Does it really matter if the harm visited upon countless psychiatric patients occurred not while they were actively enrolled in Rudin's *early* studies (those reviewed by Kendler and Zerbin-Rudin¹⁻³) but years later, and as a direct consequence of his ideology and actions? And what greater harm is there than maiming (sterilization or castration) or murder? Further, although Rudin may not have been an active researcher when he headed the Kraepelin Institute—he engaged primarily in science management—one cannot dispute his accountability as head of the Institute. Genetic studies remained the main thrust of his department in

the 1930s and 1940s, and the fate of research subjects who participated in these studies was clearly under his purview.

Rudin was not alone in advocating eugenics. Kendler⁹ points out that other prominent research workers such as Francis Galton, Karl Pearson, and Ronald Fisher also espoused eugenic principles, and that Germany was not alone in adopting laws of heredity health that partly used forced sterilization in the early years of this century. What of it? Does the fact that this hideous pseudoscience has gained some following soften in any way the impact of Rudin's actions? More importantly, unlike Rudin, not one of the scientists mentioned by Kendler was a Nazi party member whose work was funded by grants from the Nazi regime. Unlike Rudin, not one of them supported the Nuremberg Laws, the springboard for much of the Nazi horror. Unlike Rudin, not one of them played a leadership role in enabling the Nazi regime to put eugenic principles to practice, with horrendous consequences for its victims. And unlike other democratically governed countries, Nazi Germany hindered normal scientific and political discourse to curb the excesses of ill-conceived measures—all the more reason for prudent and considered viewpoints. An article by Dr Klaus Dorner in the German Doctors Newspaper (*Deutsches Arzteblatt*) of September 26 1986, discussed this pointedly: 'Only in the German Reich under the National Socialist rule the law of heredity health could become a means of mass extinction for the first time'. The inclusion of a compensation provision for sterilization victims and families of murdered psychiatric patients in the Federal Republic of Germany's Law of General War Effects attests to the strength of this argument.¹⁴



Figure 1 Individuals described as 'mentally ill'. This photo is from a filmstrip put out by the Reich Propaganda Office showing frightening images of mental patients that were intended to develop public sympathy for the T-4 Euthanasia program. (Photo credit: Marion Davy, courtesy of United States Holocaust Memorial Museum Photo Archives; date: 1939–1944; country: Germany; photographer: no photographer recorded.)



Figure 2 Mental patients in an unidentified asylum. The caption states that 'moral and religious concepts of life demand that the hereditarily ill not be allowed to reproduce'. This photo is from a filmstrip put out by the Reich Propaganda Office showing frightening images of mental patients that were intended to develop public sympathy for the T-4 Euthanasia program. (Photo credit: Marion Davy, courtesy of the United States Holocaust Memorial Museum Photo Archives; date: 1939–1944; country: Germany; photographer: no photographer recorded.)

Kendler⁹ argues that the Nazis have no monopoly on genocide, that it would be difficult if not impossible to establish a rationale for censoring scientists involved in hideous acts—for example, those who develop destructive weapons, or who commit personal crimes—and that censorship is a 'dangerous thing: easy to establish . . . but then easy to abuse'. These arguments are not devoid of merit in principle, but they are clearly misplaced, and potentially misleading, in the context in which they are made. Gejman⁶ had it right: Rudin betrayed his Hippocratic Oath by inspiring and facilitating harm to patients whose welfare should have been first and foremost in his professional conscience. By so doing he subverted and undermined the foundation upon which our profession is built. Herein lies a fundamental difference between Rudin's acts and the other evil deeds cited by Kendler.⁹ Can censorship be a dangerous tool? Of course it can. But trivialization of, or oblivion to (or even the appearance thereof) circumstances that led to horrendous crimes perpetrated in the name of science, is arguably the worst kind of censorship.

Whether or not the product can be distinguished from its maker is a question not unique to science. There are celebrated cases in other disciplines that concern Nazi Germany, in particular the German composers Richard Wagner and Richard Strauss, and the German filmmaker Leni Riefenstahl. Wagner was a nineteenth century composer whose operatic tetralogy *The Ring of the Nibelungs* (*Der Ring der Nibelungen*) gained favor with the Nazis because of Germanic notions of fatalism and blind loyalty to the chief, together with powerful pagan motifs of purging through slaughter and holocaust. Strauss, a leading composer of romantic opera in the early twentieth century, served briefly as head of musical affairs (*Reichsmusikkammer president*) under the Nazis. Riefenstahl was Hitler's favorite filmmaker, charged with immortalizing on celluloid grand spectacles that served to glorify the Nazi regime, in particular the mass rallies of the 1930s and the 1936 Olympic Games. Although none of these individuals was implicated in Nazi atrocities—Wagner, of course, was not a contemporary; Strauss and Riefenstahl were exonerated after



the war—the mere fact that their artistic creation, whether intended or not, served as inspiration and moral booster for the Nazi leadership and (in the case of Riefenstahl) the masses at large, has created sufficient furor to ban their work for decades in some sectors of society. Even today, the music of Wagner and Strauss is viewed as a sensitive, possibly explosive, issue among victims of the Nazi holocaust and their descendants. Riefenstahl's films, though screened sporadically, remain, for the most part, 'blacklisted.' If these activities, which seem innocuous in comparison with Rudin's ideology and actions, have led to such reaction, is it any wonder that Rudin's work needs to be treated with appropriate caution? Science does not, and ought not, exist in a void. Proctor,¹⁵ whose words were aptly cited in Gottesman and Bertelsen's⁴ recent editorial, was quite right when he proclaimed, 'Science is, among other things, a social activity, and the politics of those who practice it is part of that science.'

Notwithstanding Rudin's infractions of medical ethics, his early scientific contributions can explain the temptation to view his legacy in a gentler, though clearly misguided, manner. The young Rudin was diligent, industrious and driven, an accomplished fund raiser and prolific author who quickly rose through the ranks to leadership positions, including the coveted chair of the Kraepelin Institute. He modernized the field of psychiatric genetics by introducing systematic studies and statistical procedures and by collecting comprehensive data on one of the largest samples of schizophrenia families, including a large set of twins. His research methods informed and influenced other leading investigators, and his growing reputation enticed young scientists to enroll in his program. But even his scientific work is not without blemish. His view of the evidence was strongly influenced by preconceived notions. For example, he overlooked or minimized the genetic complexities of schizophrenia—in particular, the failure to demonstrate that the disease is a Mendelian trait—in his eagerness to prove that the disease was primarily genetic in origin, with an underlying (and simplistic) mechanism that could justify eugenic measures.^{5,12} Although preconceptions are unavoidable in science, contrary viewpoints were already in evidence and no attempt was made to conduct an open, honest and pluralistic debate, before practical consequences were considered. There is also cause for concern that his reductionist views may have biased his results. Especially troubling in this regard is Rudin's correspondence with Hitler, an excerpt of which is cited by Weber,⁵ in which he assures his Führer that he (Rudin) would always structure his research in such a way that 'the results will contribute to providing an even firmer basis for the further expansion and realization of your [Hitler's] racial hygiene program.' Clearly, 'structuring' one's research to accommodate a particular viewpoint smacks of poor science.

It might also be argued that Rudin, though clearly a Nazi sympathizer, was not an accomplice in crime in the strict sense of the word, that he was caught up in

a diabolical political system and was primarily driven by ideological and personal ambitions, not by premeditated malevolent intents. Namely, to establish a society based on racial hygiene, and to promote and sustain his leadership position in German psychiatry by adherence to appropriate political views—by all accounts, academic stature and plush resources to support his sizable research enterprise were highly prized by Rudin, who was nicknamed by colleagues 'the beggar of millions'.^{5,12} But such considerations are dwarfed by the consequences of his actions, let alone the other damning evidence against him.

Can one have the last word on this thorny and painful issue? Gottesman and Bertelsen⁴ contend that 'perhaps 50 years is not yet enough time to render a final evaluation'. Nevertheless they are 'content to let Kallmann have the last word for now,' citing a letter he wrote to Rudin in 1947 concerning their personal and professional acquaintance. Franz J Kallmann (1897–1965) was a contemporary of Rudin and a member of his staff. In 1936 he was forced to emigrate to the USA because of his partly Jewish ancestry (his father converted from Judaism but the family, including Kallmann himself, considered themselves Christian). In his letter to Rudin, Kallmann points to some of Rudin's failings, specifically his 'unorthodox schemes of eugenic procedure' and his oversight of 'the miseries of those who were persecuted by a regime which aggrandized his [Rudin's] scientific work.' Kallmann's portrayal of Rudin is disturbingly tame. Especially troubling are his doubts as to Rudin's guilt: 'If he was guilty at all, his guilt was largely one of omission rather than commission . . . He is no criminal, of course . . .' Also disconcerting is the fact that Kallmann testified on behalf of Rudin at his denazification hearings and asserted that Rudin 'did solid, politically unbiased work even during the Nazi regime' (!)¹⁴ The fact that Kallmann himself was, for a while, a racial hygienist (he was not, however, pro-euthanasia), should not be lost on our peer readers. As recounted by Miller,¹⁴ as late as 1935, while still in Nazi Germany, Kallmann informed the International Congress of Population Problems that the families of schizophrenics should be sterilized too (forced sterilization, that is), because 'all [my emphasis] relatives of schizophrenics are *certain* [my emphasis] of carrying a latent factor for the diseased.' Although subsequently, while in the USA, Kallmann recanted his early position on this matter and proceeded with perseverance and dedication to develop one of the finest academic programs in modern psychiatric genetics,¹⁶ he is hardly a good choice for having 'the last word' on this complex issue, even 'for now.'

Societal attitudes are fickle. A fine, permeable line can separate censored notions deemed morally reprehensible from their acceptance—at least de facto—as rational and useful tools for the betterment of humankind. And both scientists and policy makers can be caught in the web, all the more reason to be wary. A case in point is the encroaching brave new world of human cloning and other genetic interventions. In the

aftermath of Dolly, the genetically duplicated lamb, numerous scientists, as well as the President's National Bioethics Advisory Commission, proclaimed human cloning an abhorrent prospect and called for a moratorium. But outside the limelight federally sponsored research and other studies with implications for human cloning are continuing—for example, research into cloning monkeys for use in AIDS vaccine. It may well be that in spite of declarations to the contrary, human cloning is inevitable and the moral and legal issues, which may range from the beneficial and benevolent to the plainly mercenary to the outright malicious, would have to be addressed post factum, with uncertain measure of success.

Intimations of reductionist determinism, a not-too-distant kin to Rudin's 'empirical genetic prognosis',⁵ have not spared contemporary neuropsychiatric genetics.¹⁷ Much of this criticism is groundless.¹⁸ But perceptions that certain genetic findings are overinterpreted and, more poignantly, that the moral laxness of the past is treated meekly, with some equivocation and without perfect unanimity, may imperil our field's future.

Psychiatric eugenics and its sorry legacy had their day in court. It was one day too many.

Acknowledgements

This work was supported by Research Scientist Award K05MH00176 from the NIMH.

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