

STEPHEN T. CASPER and DELIA GAVRUS, *The History of the Brain and Mind Sciences*. Rochester, NY: University of Rochester Press, 2017. Pp. 310. ISBN 978-1-5800-46595-3. £95.00 (hardcover). doi:10.1017/S0007087418000675

Naturally enough, the enormous expansion and power of the neurosciences (in the plural) is beginning to shape a group of concerned historians. They perceive the historical background to the emergence of the neurosciences to be enormously broad. Whatever the neuroscientists themselves may feel about the 'real' lines of development of modern knowledge, historians are busy dismantling the boundaries around what is thought relevant. This edited collection, originating in a 2012 workshop, intends firmly to establish and illustrate this breadth, and the scientists' practice of distancing themselves from it in order to create a linear narrative, by publishing studies focused on marginality and on technique. Reference to marginality connotes the way science develops with interests, personnel, topics and theories which scientists later feel have little to do with 'the mainstream'. It emphasizes contingency. Reference to technique is the vehicle for a turn to science as forms of practice mediated by the material means employed in its production. In fact, the authors use 'technique' to mean everything from major technological innovations (for example 'taming' alternating current, very important for recording and measuring nerve action) to rhetoric, the means to persuade. There is a danger that 'technique' is simply the fashionable word for 'practice': everything is 'technique'.

The book successfully presents studies which both add to our knowledge of historical detail and push out the borders of what any claim to write about the history of the brain sciences must take on board. The authors agree that large claims are best advanced through studies focused on particulars. As one contributor writes, 'the point ... is to defamiliarize us from a neuroscientific past that always already has revolved, however unsophisticatedly, around a coherent object: the mind/brain' (p. 108). (More about 'the mind sciences' in a minute, and the judgement that mind/brain has been the coherent object of thought seems very odd.)

There are nine essays in addition to the introductory chapter and a brief coda (Katja Guenther) which moves to deepen reflexivity about technique. There are studies of the technique of comparing animal with human intelligence made possible by the French menagerie of the early nineteenth century (L. Stephen Jacyna), and of the struggle to create a nosological technique which would bring sense to epidemic encephalitis in the post-First World War period (Kenton Kroker). The latter makes admirable rhetorical use of its sources for questioning once again whether it is possible to state what a disease 'really is'; different interests and institutions constructed the disease in different ways, using different techniques, and physicians looking back have done the same. There is a study of surgery as technique: of the shift from 'radical surgery', the extirpation of organs and tissues, to surgery to restore function based on the results of animal experimentation in the laboratory (Thomas Schlich); and a study of the 'invisible' place of the technician, here recorded in the fictional writing of a technician himself, an unknown actor in Wilder Penfield's famous operations (Delia Gavrus). The authors are sensitive to the problematic relations of the demand to fix patients' problems and the goal of contributing to 'pure' science. There are studies of technique in the more direct sense of technique understood as material technology: clear and informative accounts of the possibilities for biophysics of nerve opened up by alternating current and by new objects, the giant squid axon and the unicellular *Nitella* (Max Stadler), and by what refugees from Hitler were literally able to carry with them in their forced migration (Frank W. Stahnisch). Then there are two chapters on the large-scale shift of American psychiatry away from dominance by psychodynamic theories to dominance by the biological model of illness. The first paper discusses the proposal, the criticism and then the renewed success of amphetamine psychosis as a model, or technique, for conceptualizing schizophrenia (Justin Carson); the second is an admirable overview of the written self-presentation, the rhetoric, of the National Institute of Mental Health, and of the shift generally to the biological view of mental illness (Brian P. Casey).

Whatever the authors write about intelligence, or mental functions of the brain, or symptoms of mental disorder, these papers give every appearance of being about the shaping of the *brain* sciences. There is a very evident self-consciousness about the practices of history. What, then, about the *mind* sciences in the book's title – indeed, what are they? It is not an easy question for these studies to get a grip on, since it is a question about the place of the brain sciences, *a fortiori* the modern neurosciences, in the whole spectrum of knowledge. The present collection of essays says nothing about literature on the history of psychology, a literature which, for example, has long pushed 'beyond a monolithic notion of the self' (p. 8). The exception is Stephen T. Casper's chapter, on science at the 1951 Festival of Britain. Casper observes a reductionist, materialist direction in the presentation of relevant exhibits at the festival. (One might wonder how far this, too, is a function of technique, as it is in the public presentation of the neurosciences, the technique imposed by museum collection and modern media.) But Casper also discerns the presence of 'the mind' in what the performers 'intend' to show and in the 'expectations' spectators bring to the performance. (These are my scare quotes.) Here is where mind enters the story: not in scientific theories of mind but in common language. 'There was a ghost in this machine; in the absence of the Divine, human agency played the role admirably' (p. 196). This is surely still a feature of language about the neurosciences. It raises very large challenges in the choice of what kind of history of the brain sciences to write. I think these studies, by pushing at the margins, make a distinctive contribution to seeing what those challenges are. As the editors hope, they will indeed serve as resources for teaching and research, as 'technique' with which to discuss historical practices and ways forward.

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PAUL WEINDLING (ed.), **From Clinic to Concentration Camp: Reassessing Nazi Medical and Racial Research, 1933–1945**. London: Routledge, 2017. Pp. 376. ISBN 978-1-4724-8461-1. £105.00 (hardcover).

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At the dawn of the age of genetics Alexander Katan's (1899–1943) only son managed to have live and skeletonized images of his father, illustrating German notions of 'Jewish degeneracy' and coerced human experimentation, taken down at Mauthausen and the US Holocaust Memorial Museum. Economist and linguist Katan was a Dutch Jew of short stature who was experimented upon at Mauthausen (Gusen) and killed to order for inclusion in a Nazi skeleton collection (Hedda van Gennep, *Dood spoor?*, 2001). His son never succeeded in officially locating his remains in order to provide him with a proper burial. In 2015 Paul Weindling criticized the Max Planck Institutes (successors of the Kaiser Wilhelm Institutes) for the absence of documentation of its Nazi brain and wet specimens in the public domain and the neglect to clarify the identities of the victims which had been given a partial official interment as late as 1990. A mere two years later Weindling and his Oxford working group managed to present a victim database covering over 28,000 victims of National Socialist coerced human experimentation and research funded by the very same institution (Max-Planck-Gesellschaft, 'Max Planck Society to carry out complete review of its specimens collection', 14 March 2016).

Whilst the impressive compilation under review further establishes this exciting new area of study within the crucial field of Nazi medicine it fails to give voice to the voiceless historical actors, throughout and consistently. First, because the disparate groups of victims and/or their descendants have, apparently, not all been invited to sit at the table of power guiding this project and predominantly known groups are included. It remains unclear if and how attempts were undertaken to obtain survivors' and/or descendants' permission for inclusion, nor are the important legal and moral-ethical pitfalls involved in such a project explained and analysed fully. Second, the overall picture is one of slight imbalance because some authors give the victims and (witness) perpetrators