

to her long and prodigious career. We can only hope that retirement brings not an end to Rawcliffe's contributions, but just a new phase.

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doi:10.1017/mdh.2018.28

Howard I. Kushner, *On the Other Hand: Left Hand, Right Brain, Mental Disorder, and History* (Baltimore, MD: Johns Hopkins University Press, 2017), pp. xiii + 200, \$20.25, hardback, ISBN: 9781421423340.

Howard Kushner is a historian of science and a left-hander. Both of these influences are evident in his book. His personal experiences as a left-hander and the experiences of his mother, also a left-hander, inform his long-standing interest in the topic of left-handedness and its scientific history. His background as a historian of science is evident in his detailed analysis of the science influencing the study of left-handedness from the nineteenth to the twenty-first century.

Kushner states in the preface that his book is organised around three theses. The first is that '... the history of left-handedness parallels that of disabilities... left-handedness was understood as a sign of abnormality...'. Using many examples, he explains how left-handedness has been associated with numerous disabilities and disorders. He argues that both handedness type and disability category can be defined in various ways. For example, when asking the question, 'Are individuals with schizophrenia more likely to be left-handed than those who are not schizophrenic?' one is comparing a handedness type and a disorder where both have several alternative definitions. Kushner is critical of the tendency to use the catch-all classification of non-right-handedness, rather than left-handedness, when examining handedness incidence rates within a class of disability. Many handedness types along with left-handers are included in the global category of non-right-handed. Left-handers get lost in the classification shuffle leaving them associated with a clinical condition based on a categorisation anomaly and not on a physiological risk factor inherent in being left-handed. Kushner successfully unravels these research flaws that place left-handedness and disabilities on parallel tracks. These sections of the book are a valuable read for researchers and students interested in the historical background of handedness research.

Kushner is less successful when discussing his second thesis, 'that the damage produced by discrimination against left-handers is much greater than the putative pathology resulting from left-handedness... forced switching... continues to be widely practiced...'. Rightward conversions of left-handers continue in many parts of the world. However, Kushner's position that rightward switch attempts are always discriminatory, unpleasant and forced on left-handers is incorrect. Here Kushner falls into the same trap he decries when examining the error-prone vagueness of the category, non-right-handedness. The idea of forced switching is as broad and overly inclusive as the non-right-handedness typology. My research into the characteristics of rightward conversion attempts among left-handers finds that some left-handers succumb to the pressures to switch to the right hand while others do not and continue as left-handed. In contrast to the anecdotes in Kushner's book, most left-handers, regardless of the success of the switch attempt, do not report that the experience was particularly painful, unpleasant or had any lasting negative effects. Most left-handers switch only a subset of one-handed activities

(writing and/or eating are the most likely targets of change) while other behaviours remain as left-handed. Some switch attempts are self-initiated and can be left-to-right as well as right-to-left. Kushner cites Facebook posts by left-handers as ongoing evidence of discrimination against left-handers living in a right-sided world. Such negative posts exist but they are balanced by an equal number of Facebook comments celebrating the unique experience of being a member of the left-handed minority. Not all handedness switching is forced and most left-handers do not regard themselves as victims of sidedness discrimination.

Kushner's third thesis is 'that toleration of left-handedness serves as a barometer of wider cultural toleration and permissiveness'. Although Kushner does not mention this research in his book, there have been attempts to look at the relationship between broad societal norms and rates of left-handedness. Research on the Power Distance Index (PDI) maintains that countries valuing conformity to authority and the majority norm should have lower rates of left-handedness than countries that value individuality and independence. Countries are rated on a number of dimensions and given a PDI numerical score. Low PDI scoring countries value individuality while countries with high PDI scores value conformity. Rates of left-handedness across countries show a rough inverse relationship with PDI scores. This result confirms Kushner's notion that fluctuations in rates of left-handedness can be affected by broader societal values within a country.

As a final comment, Kushner asserts that handedness side should no longer be used as a marker for language lateralisation. Neural imaging techniques can determine whether the right or the left hemisphere is the primary site of language processing. Surprisingly, given this position, Kushner devotes an entire chapter attempting to form a causal link between rightward conversions of left-handedness and stuttering. If handedness is independent of language lateralisation, handedness switching should also be a process independent of language disruptions. Kushner's inconsistent reasoning in this section of the book stands in contrast to his otherwise meticulous methodological and historical analysis. Despite this minor flaw, Kushner's book is a valuable addition to the research literature on left-handedness. His historical perspective is particularly valuable as is his dissection of the methodological flaws that have plagued research into left-handedness for close on 200 years.

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doi:10.1017/mdh.2018.29

Fabio Zampieri, *Il metodo anatomico-clinico fra meccanicismo ed empirismo: Marcello Malpighi, Antonio Maria Valsalva e Giovanni Battista Morgagni* (Roma: 'L'Erma' di Bretschneider, 2016), pp. 434, €150, hardback, ISBN: 9788891311733.

This consistent book has several strengths. The first is Zampieri's effort to reunite three prominent scholars of the early modern period, Marcello Malpighi (1628–94), Antonio Maria Valsalva (1666–1723), and Giovanni Battista Morgagni (1682–1771), who greatly contributed to the birth of modern anatomy and clinical pathology. The second is Zampieri's encyclopaedic knowledge of Italian and European early modern medicine, as he also explores lesser-known medical areas and topics. The third is Zampieri's synthesis of two centuries' worth of discoveries, debates and scientific transformations, connecting medical knowledge to diverse disciplines, including natural history and