

Unfortunately, this book only partly interrogates the underlying principles that drove Willis within medical practice. The author cites Willis' preface of his *Treatise on Fevers* (1659) with the 'aim to adapt general Notions from particular events'. But Willis' aim was far bolder. A 2002 *Lancet* paper by this reviewer is cited but not fully appreciated (as well as having a misspelt co-author).⁴ This explains how a mother lost four infants through seizures and after a post mortem and interpretation, Willis' devised treatment led to three surviving healthy children. Any currently practicing paediatrician knows that this is still highly unlikely within present twenty-first-century clinical practice. The diagnosis does not matter here, only that Willis' intervention, at least in this case series, apparently worked. It is thus the first full realisation of the idea within clinical neuroscience that drives all medicine to this day ie. an intervention, based upon state-of-the-art medical knowledge, clinical observation and investigation up to and including post mortem (when being put all together) led to prevention of suffering, progressive disability and death. One particular curiosity of this intervention, a Fontanelle, is a now obsolete French term being defined in the Oxford English Dictionary as 'An artificially created or naturally occurring opening in the skin through which pus or other body fluids can drain'⁵ (It is not to be confused with the term 'fontanelle' currently used to describe an anatomical feature of the infant human skull). Why this term is significant is because the English Civil War denied Willis the opportunity to train abroad and there has always been a question mark about how much Willis' practice may have been adversely affected by this, but the author does not discuss this. Yet here Willis is using a continental practice. Is this possibly due to the influence of his friend Sir William Petty (1623–87) or indicative of a deeper personal understanding by Willis of contemporary continental practice? This is just one case, as an illustrative example. What other examples of continental practice are buried within the original Latin text? We do not know. Why did the author not take this approach, taking the defining short segments of the original Latin texts, one for each speciality? There is surely much more to discover from within here.

Thomas Willis' works are foundational within clinical neuroscience, psychology, psychiatry, epidemiology and endocrinology. Books beget books. This reviewer believes this could have been a golden opportunity for a more definitive book based upon completely new translations by Latinists, with interpretation from medical historians and input from appropriate current medical specialists and others. These foundational texts deserve nothing less. Nevertheless, this impressive book clears ground for a future challenge.

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Aro Velmet, *Pasteur's Empire: Bacteriology & Politics in France, Its Colonies, & the World* (New York: Oxford University Press, 2020), pp. xiv + 306, \$78.00, hardback, ISBN: 9780190072827.

Aro Velmet's *Pasteur's Empire: Bacteriology & Politics in France, Its Colonies, & the World* is as broad in its conceptual reach as its title suggests. Velmet covers specific activities of Pastorian scientists working all over the French Empire, and discusses those Pasteur Institutes outside the Empire, such as the one in Athens, and the relationships, both competitive and collaborative, between the Pasteur Institutes as a body and other international scientific organisations such as the Rockefeller Foundation. The author convincingly demonstrates that Pastorian scientific responses to plague, tuberculosis, yellow fever and the production of intoxicants, specifically rice wine, were shaped by 'interimperial and international networks'. Velmet further contends that said networks were in turn, and increasingly as time went on, shaped by an 'interplay between microbial and global politics' (p. 16). This book is informative, thought

⁴A.N. Williams and L.B. Birmingham, 'The Art of Making the Ineffective Effective', *The Lancet*, 359 (2002), 1937–9.

⁵Oxford English Dictionary. 2021. <https://www.oed.com/>. Accessed 22 February 2021.

provoking and timely in pointing out that public health models that are intended to be universal often obscure local context and local concerns with results that are unpredictable and often unfortunate.

The author draws his information from an impressive array of primary sources found in archives located in five countries on four continents. As for the published sources Velmet uses, they are likewise extensive, wide ranging and appropriate. Velmet has a significant number of illustrations, primarily archival, which are well chosen, well presented and which add to the readability of the text. It is somewhat unfortunate that the author could not consult sources in even one of the indigenous languages of the countries of the French Colonial Empire that he covers. However, I think that it would be virtually impossible for any one scholar to possess the linguistic skill set to be able to use all of those languages, and after all, there are sources in at least five just from French Colonial Indochina. It is also possible that if this book had been written by a scholar specialising in one, or another, of the colonial territories held by France that the book would be somewhat skewed in the direction of that one place instead of being as international as the French Empire itself was during the period under examination. It is to be hoped that Velmet's very thorough exploration of the French language sources for this impressive analysis of the global and local effects of the work, and the attitudes, of Pastorian scientists will inspire scholars who do have reading knowledge of said indigenous language materials to delve into the more localised history of the Pasteur Institutes.

This book should not only inspire further scholarship, but also scholarly discussion. The author writes in a clear and engaging style and were this book available in a more cost-friendly, for students, paperback copy *Pasteur's Empire* would work well in upper division undergraduate seminars and certainly in graduate classes. Unfortunately, there are some relatively minor flaws that must be mentioned, in large part, because they detract from the user-friendliness of this book for both students and senior scholars. These problems all fall under the category of production values, and they should have been thoroughly addressed at the copy-editing stage.

There are numerous places with a word, or words, clearly missing. There are also many places where a word is repeated. It is admirable that this author decided to use diacritics with Vietnamese names and terms, but there are places where diacritics are missing and one instance, in the bibliography, where one author, Trương Bửu Lâm, has two entries – both of them incorrect. As for the index, it is woefully inadequate and weirdly composed for a book with the richness of material that *Pasteur's Empire* has. A good example of the problems with the index came to light while trying to look up Clayton machine. Clayton machine, which is mentioned several times in the text, was neither defined nor described on first mention. A look at the index, in case this writer had missed the first mention and thus the description, found 'Clayton machine. See disinfection'. As one can imagine, for a book with this subject matter, there are quite a lot of entries under disinfection – most of them have nothing to do with Clayton machines. Monkeys, which are rather extensively discussed as lab animals, are not in the index at all. I could go on, but I will not. As noted above, all of the flaws just discussed are relatively minor. However, a monograph that is truly remarkable in the intellectual construction of the health patterns shaped by Pastorian enterprises and those patterns which in turn shaped them should not be marred by this many problems of production.

Aro Velmet's *Pasteur's Empire* is an important and groundbreaking monograph. This book should be read by any scholar working on the French Empire of the nineteenth and twentieth centuries and by all those working on nineteenth- and/or twentieth-century medical history. Aro Velmet's thoughtful analysis and presentation of his wide range of information has implications well beyond even the broad geographic and thematic scope covered in *Pasteur's Empire*.

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