

more authoritative panorama of the social and religious landscape of Goa throughout the period studied (pp. 78, 129). Luís Filipe Thomaz's *A questão da pimenta* (1998) would have given political and intellectual context for the fascinating discussion of the qualities of pepper in the middle of the sixteenth century (p. 99). Jorge Santos Alves' new edition of Pinto's *Peregrinação* (2010) supersedes the *Hobson-Jobson* (1886) when it comes to identifying toponyms. The political and material framework in which scientific and medical discoveries took place appears brittle at times – Luanda was not a port approached by Portuguese vessels on their way to India (p. 216), and Dom João de Castro was not the 'illustrious conqueror of Diu' (p. 93). Spanish 'influence' in Portugal cannot be said to have 'brought [. . .] an aversion to trade [. . .] [and] merchant capitalism' (p. 247) without qualification – and the Cantino map is not an 'atlas' (p. 260).

But the latter remarks are the inevitable quibbles of a Lusitanist, and they do in no way diminish the value of this remarkable book, especially to historians of science and medicine. This book will further be of value to students of early modern history as it tells a neglected story with passion and intellectual verve. Last, but not least, Cagle avoids romanticising the history of knowledge exchanges, rightly asserting the bleakness of the outlook by the late 1700s: 'if the deadliest fevers were located in the tropics', the author asserts, 'expertise about them could no longer be' (p. 308). Europe increasingly fashioned itself as the epistemic centre of the world, and this book helps us understand how it came to that.

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Keith Andrew Stewart, *Galen's Theory of Black Bile: Hippocratic Tradition, Manipulation, Innovation*, Studies in Ancient Medicine, vol. 51 (Leiden: Brill, 2018), pp. x + 178, €94/US\$113, hardback, ISBN: 9789004382787.

The famous affection of melancholy derives its name to the Greek notion of black bile (μελαϊνή χολή), one of the bodily humours that was believed to determine health and disease. The Hippocratic treatise *On Human Nature* lists black bile alongside blood, phlegm and yellow bile, thus stating a quartet that was destined to have a long career in the history of medicine. But this would not have happened were it not for Galen of Pergamum (129–c.216 CE), who championed the authenticity of *On Human Nature* (or, to be more precise, its first eight chapters) and its theory of the four humours as innate components of our nature. It should therefore be taken into account by scientific, or philosophical, medicine in relation to the physical qualities and elements. The Hippocratic author associates black bile with two qualities in particular, the cold and the dry, and one of the four seasons in particular, *viz.* autumn as marked by the predominance of the same qualities. As Stewart points out in this book (a slightly revised Exeter dissertation), Galen has been and still is influential in presenting his particular view on black bile and related diseases, most notably melancholy, as the original Hippocratic one adopted by all the best doctors (e.g. Praxagoras, Diocles, Herophilus and, more recently, Rufus of Ephesus) and philosophers (Plato, Aristotle) after Hippocrates. This is of course just one example of Galen's general influence on the subsequent interpretation of the history of ancient medicine, his 'fatal embrace' as it has been called somewhat dramatically if not inappositely by Vivian Nutton, who also refers to the theory of the four humours as

having become the universal standard only after Galen ('The Fatal Embrace: Galen and the History of Ancient Medicine', *Science in Context*, 18 (2005)).

Taking his starting point from a 2009 article by Jacques Jouanna, 'Bile noire et mélancolie chez Galien,' in C. Brockmann *et al.* (eds), *Antike Medizin im Schnittpunkt von Geistes- und Naturwissenschaften* (2009), Stewart sets out to explore Galen's theory of black bile, which has so far suffered from relative neglect at the hands of scholars, who have referred to it mainly as part of the four humours schema or dismissed it as incoherent. Thus, Jouanna in the aforementioned article noted two different views on black bile in Galen: a morbid, acidic variety springing from yellow bile that is overcooked (as found in Rufus, whom Galen follows) and an innate humour belonging to our healthy state (in accordance with the Hippocratic Human Nature). Stewart too seems reluctant to speak of an articulated theory. His main contention is that the quest for a systematic theory is self-defeating because it disregards two guiding principles of Galen's approach: first, there is his bid to present his doctrine as originated by Hippocrates and accepted by a line of good physicians and philosophers leading up to himself. To keep Hippocrates and these other authorities on board, so to speak, Galen has to gloss over differences between them and himself and use loose language in doing so (thus he may speak of 'black bile' in cases where, strictly speaking, it is not black bile but what he calls 'melancholic humour' at issue).

This is no doubt correct. Far from commending his doctrine as original, Galen presents it as the most recent articulation of a venerable tradition deriving from Hippocrates. Stewart calls this Galen's 'doxographic explanation', a rather unilluminating expression (strictly speaking, 'doxography' and 'doxographic' refer to a particular genre of compilations of doctrines, *viz.* the *Placita* tradition reconstructed by Hermann Diels and, more recently, Jaap Mansfeld and David Runia on the basis of extant specimens; the term was coined by Hermann Diels by analogy with 'biography', which does have an ancient counterpart). The practice of grounding one's position in an authoritative tradition and so in the 'ancient account' (παλαιὸς λόγος) was typical of Galen and his age. It is often found in conjunction with the second point to which Stewart draws our attention: the fact that Galen's statements and arguments concerning black bile are determined by their particular, often polemical, context and so by the particular adversary or adversaries whom he takes as his butt. Against them he plays off the grand tradition of good medicine and philosophy. Galen, Stewart argues, is particularly concerned to refute the medical scientists Erasistratus of Keos (first half of third century BC) and Asclepiades of Bithynia (active in the first half of the first century BC) as having ignored the existence of black bile and its crucial role in health and disease. This polemical attitude may lead to apparent and sometimes real inconsistencies, at least if one tries to build a coherent doctrinal system out of Galen's disparate statements, even within one and the same treatise. This too is a salutary reminder: dialectical context does matter a lot in Galen, as in other ancient authors.

Stewart feels able to distinguish between three varieties of 'melancholic humour', starting from *On Affected Parts* III, 9 (pp. 75–92). Here, Galen subsumes under the generic heading of 'melancholic humour': (1) black bile in the strict sense, which arises naturally from our bodily mixture or the process of digestion – it is therefore beneficial, but may turn pathological under certain conditions such as combustion; (2) the sediment of blood, lees-like or mud-like, which he calls melancholic blood or 'melancholic humour' in a specific sense – it is natural too, but when altered or displaced can cause such diseases as melancholy; (3) an acidic, thinner form of black bile that results in the extreme heating

of the humours and of yellow bile in particular, unnatural and harmful and often fatal. What these three forms have in common is that they are defined by the pairing of the cold and dry qualities, as black bile is in ‘Hippocrates’. Stewart calls these three forms ‘ideal natural black bile’, ‘non-ideal natural black bile’ and ‘altered black bile’ respectively (see pp. 92–3). In these terms, Stewart goes on to discuss how harmful black bile arises, how it may be cleansed (with particular reference to the role of the liver and the spleen) and which diseases are attributed to black bile or ‘melancholic humour’ (chapters 5–7). Stewart persuasively argues that Galen needs the above distinction because he wants to dissociate the illness of melancholy from natural black bile. But, as we have noticed, he also argues that Galen does not always apply a strict nomenclature. This may certainly be explained as loose usage for reasons of a strategic kind. In another key passage, *Black Bile* 8, pp. 93.22–28 (quoted by Stewart on p. 78), Galen himself says as much with respect to the expression ‘melancholic humour’, in line with *On Affected Places* III, 9. Even so, a lot is made to depend on the passage from the latter work. Not everything falls into place by applying the trifold distinction drawn there, e.g. quartan fevers seem to be due to both types (2) and (3) (pp. 136–42). Given the importance of context, Stewart notes in the general conclusion, it remains difficult to summarise the analysis of Galen’s account of black bile on the basis of a single comprehensive framework (p. 149). But this makes it all the more useful to have this careful discussion focused on black bile and based on so many relevant passages from Galen’s vast corpus of writings.

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Jim Kristofic, *Medicine Women: The Story of the First Native American Nursing School* (Albuquerque, New Mexico: University of New Mexico Press, 2019), pp. xvi + 396, \$36.95, paperback, ISBN: 9780826360670.

Jim Kristofic opens *Medicine Women* with a hope that his book will ensure that the people in it – the doctors, nurses and patients of the Sage Memorial Hospital – will not be forgotten. In his foreword, he describes seeing the faded nameplates on the burial ground near the hospital, and being filled with ‘a reflex of compassion’ that made him want to tell their stories (p. xiv). The book succeeds in that mission. If a reader is looking for a clear and engaging description of the hospital, nursing school and medical missionaries of the Ganado mission on the Navajo Reservation, this is the right book. However, if the reader is looking for a scholarly analysis of the story of the mission, it might be best to look elsewhere.

The book presents a clear, readable narrative that is layered with detail. Overall, the story is told with engaging, fiction-like prose, and bolstered by extensive research in both primary and secondary sources as well as oral history interviews conducted by the author. The many photos that accompany the text are fascinating documents in and of themselves, and add significantly to the narrative.

While the title suggests that the book focuses on the nursing school, the story begins almost one hundred years before the school opened in its doors, with the arrival of the first Presbyterian missionary on Navajo land shortly after the end of the Civil War. Kristofic describes the complex history of the mission and the fraught relationships among the Navajo, the missionaries and the United States government, a story filled with mistrust and