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Philosophy of Medicine represents the culmination of Alex Broadbent's work, following his previous book, the highly praised *Philosophy of Epidemiology* (2013). The present work comprises nine diverse essays and is divided into two parts. The essays in the first part (Chapters 1–4) are dedicated to answering the question 'What is medicine?' The essays in the second part (Chapters 5–9) set out to tackle the question 'What should we think about medicine?'

Chapter 1, 'Varieties of Medicine', starts with a fascinating survey of historical developments that have had a pronounced impact on medicine. Most of this chapter draws on the work of Roy Porter, an acclaimed historian of medicine known for his primary focus on patients (as opposed to doctors). Following Porter (1997), Broadbent recounts how medicine rapidly evolved shortly after the formation of early hunter-gatherer societies, and traces its development through agricultural, modern and contemporary events. The chapter should be seen as a good summary of and commentary on Porter's extensive work rather than as contributing something new.

Chapter 2, 'The Goal of Medicine', asks 'What is the goal of medicine?' In considering this question, Broadbent distinguishes between the presumed goal of medicine and medicine's core business. He emphasises that what medicine attempts to do is decidedly different from what medicine actually does: "Normally, one's core business is something one actually does, not something one merely tries to do" (p. 34). Accordingly, the 'competence' of doctors is taken to determine whether the goal of the profession is realised. If the explicit goal of the medical profession were to cure, Broadbent goes on to argue, it would not be enough to say that the medical profession's core business is merely attempting to cure. Clearly, he argues, the goal of a blacksmith goes beyond attempting to make horse-shoes, and likewise taxi drivers seemingly "do more than try to take you places" (p. 34).

Broadbent correctly observes that what the medical profession prescribes to the patient (if anything) determines whether the goal of curing is achieved. This characterisation, however, leaves out a pivotal aspect of medicine, namely, the intervention itself, which should be treated as distinct from the competency of the doctor. This is because whether the patient is cured is determined by the effectiveness of the medical intervention, and not the competence of the doctor. Clearly, the doctor is not the *de facto* intervention (in most cases). To be sure, the medical profession may use drugs and equipment in a 'competent'

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or regular fashion as part of an overall effort to cure, but whether that effort is ultimately successful is not primarily decided by their competency (unlike the competency of a blacksmith to make horseshoes).

Consider an example currently making the headlines: if a vaccine against COVID-19 is effective, it cannot be presumed to have anything to do with the competence of the doctor or nurse administering it. Similarly, if a vaccine is found to be useless or wanting, it will not be due to any lack of competence in the doctor. This is because a vaccine can be ineffective or wanting even if competently administered. What matters with regard to whether the goal of a cure is achieved therefore depends on the success or failure of the underlying scientific process aiming to produce an effective vaccine. Clearly, the core business of making an effective vaccine is not merely attempting to make an effective vaccine. So the issue overlooked in Broadbent's treatment is the extent to which, if any, the skill of a doctor, beyond basic competence, plays a direct role in the mechanism of a cure or effective treatment (as opposed to an indirect or external role in the mechanism, such as effective administration).

Chapter 3, 'The Business of Medicine', presents Broadbent's inquiry thesis, which holds that medicine has the character of an inquiry for a specific purpose, that purpose being to cure. Moreover, the thesis asserts that the core competency of medicine also consists in understanding and the ability to predict: "My hypothesis is that the core competency of medicine is understanding, and that this is demonstrated by prediction" (p. 65). Presumably, the understanding Broadbent has in mind here is different from scientific understanding, because on the proceeding page he states, without elaboration, that the purpose of medicine and the purpose of science are different: "[medicine's] purpose distinguishes it from science whose purpose I do not want [to] say more about than that it is different from medicine's" (p. 64).

However, at this juncture, it would clearly have been helpful to know how the inquiry thesis distinguishes medical from scientific understanding and, similarly, medical from scientific prediction. A related concern is how Broadbent's inquiry thesis means to distinguish medicine from other ostensibly medical 'inquiries', such as those relying on miracles, black magic or just plain nonsense (e.g., quantum healing) with the purported aim of curing. Expressing scepticism towards miracles or supernatural events arguably risks offending various 'medical traditions' that might consider these features indispensable to curing, but if eighteenth-century philosophers such as David Hume were able to express doubt about magical or miraculous thinking (Hume 1748), why should it today be considered taboo to discuss miraculous (as opposed to marvellous) cures?

Turning to discuss medical prediction (diagnosis and prognosis), Broadbent suggests that accurate prediction does not require the achievement of a cure to be considered a core medical competence. Again, in like manner to his take on cures, the success of the diagnostic or prognostic endeavour largely revolves around the skill of the physician. However, it might be noted that, for example, a successful diagnosis of a viral infection such as COVID-19 will often not be contingent on the competence of the doctor but on the accuracy of the diagnostic tests. How accurate the viral test is will not be determined or influenced in any significant sense by the physician's competence.

I found the discussion of prognosis to be insufficiently developed at times. For example, Broadbent asserts that "if you can demonstrate some predictive ability, you have *favorable evidence* that you understand, and if you altogether lack predictive ability, this is not *favorable* toward the claim that you understand" (p. 74, original emphasis). However, this claim is not self-evident and warrants more sustained argument. For example, it is unclear why someone's ability to predict (some of the time) should be taken as favourable evidence

that they understand. Arguably, if a farmer or sailor generally makes the correct prediction when uttering the ancient rhyme (at middle latitudes), ‘Pink sky at night, sailors’ delight. Pink sky in the morning, sailors take warning’, it does not mean that they understand why the red sky in the morning leads to a weather change.

Chapter 4, ‘Health and Disease’, presents a well-balanced overview of the debate between naturalist and normative theories of disease. Broadbent advances his own view of health as a secondary property, which is described as an extension of John Locke’s classical distinction between primary and secondary qualities (1706), as well as Peter Menzies and Huw Price’s treatment of causation as a secondary property (Menzies and Price 1993).

Chapter 5, ‘Evidence-Based Medicine’, considers the debate on evidence-based medicine (EBM), which has been ongoing for about three decades. Broadbent argues that the pyramid diagram often used to frame EBM (in short, a ranking system with ‘levels’ of evidence in which evidential quality is determined by the type of study design used) reveals that EBM is as much of a sociological movement as it is a methodological one. The pyramid has no basis in methodological research, Broadbent argues, drawing the following inference: “The pyramid draws its inspiration from a social structure, namely the professional hierarchy of medicine, and [...] its inclusion is meant to serve a social function, that of challenging the medical hierarchy” (p. 139).

Broadbent’s view of EBM as a movement attempting to change medicine by challenging the medical hierarchy is understandable given how the entire debate about EBM is often portrayed. Nevertheless, the battle over methodology and the priority of clinical trials was largely decided before the phrase ‘evidence-based medicine’ was coined. Beginning in the 1960s, new regulations proposed by the US Food & Drug Administration increasingly demanded that novel interventions be evaluated by clinical trials in order to receive market authorisation. At first, demands were placed on demonstrating safety, after which further regulations insisted on clinical trial evidence of efficacy as well (for a sustained discussion of pre-EBM reforms in pharmaceutical regulation, see Marks 1997). The regulators developed what they meant by a well-conducted trial, finding fault with previous trials and their own definition of adequate control (Junod 2008). Hence, EBM was less a matter of trying to ‘challenge medical authority’ and more about doctors having fewer and fewer opportunities to recommend treatments not evaluated in clinical trials. The medical profession was also increasingly prevented from prescribing treatments that were widely used at the time but found unsafe in trials and which had to be taken off the market.

Chapter 6 concerns ‘Medical Nihilism’ and Broadbent’s critique of it. Medical nihilism is the view that we should have little confidence in the effectiveness of medical treatments. The chapter focuses on two accounts of medical nihilism, those of David Wootton (2007) and Jacob Stegenga (2018), which are respectively characterised as historical and philosophical medical nihilism. What medical nihilism is and what it entails are neatly explained by Broadbent, even if some of the arguments against nihilism ultimately fail to stick, especially those levelled against Stegenga’s main thesis, but also against Wootton’s highly original historical account, which is referred to throughout as ‘Whiggish’ in a pejorative sense (lack of space prevents discussion of these views but readers interested in medical nihilism are strongly advised to consult both titles).

The critique of medical nihilism prepares the way for the author’s own position in Chapter 7, ‘Medical Cosmopolitanism’, described as a stance loosely based on the philosophy of ‘cosmopolitanism’ advocated by Kwame Appiah (2007). While Appiah’s account is broadly focused on ethics, Broadbent presents an account specifically tied to medicine. This account is composed of several stances: moral, metaphysical, epistemic and practical. The first three stances are remarkably vague, and perhaps intentionally so. The epistemic

stance, for instance, urges the revision of beliefs in the face of superior contradictory evidence, making a case against dogmatism that few would readily object to. Left unanswered, however, are crucial questions about the justification for substituting one piece of evidence for another and the claim that one is epistemically superior to the other when they conflict. It is uncontroversial that stronger evidence is superior to weaker evidence; the controversy lies in deciding how the superiority of the stronger evidence is established in the first place. It goes without saying that ‘epistemic humility’ will not go a long way towards answering this question.

A related point of concern relates to Broadbent’s practical stance, which seems to advocate a rudimentary form of deciding on a specific course of action without the need for evidence to justify the choice as appropriate (again, the general vagueness opens up the possibility of this interpretation, which may not be what the author had in mind): “Practice is primary, meaning that we are more likely to be able to agree on the correct course of medical action than on the reasons for it, and further that we should focus on reaching an agreement in practical matters first when they arise” (p. 201).

The practical stance would appear to propose that whatever particular action happens to be agreed upon will be the correct course of action. However, if we happen to agree upon what to do, then we are not necessarily justified in doing it. Moreover, such agreement does not guarantee that we have chosen the most appropriate course of action given a set of alternatives. Clearly, people can agree and be wrong.

Consider an often-used example from the history of medicine: there was at a certain point agreement that hormonal injection was the best course of action for treating homosexuality, which was erroneously classified as a disease. In this case, agreement on medical action was of little relevance since homosexuality was not a disease and the course of action taken was certainly ill considered and misguided (not only in the practical sense but also, many would argue, in the moral, epistemic and metaphysical senses). Similar cases can be cited with regard to other diseases, such as drapetomania, purportedly a mental disorder that causes slaves to flee captivity. The problem with the practical stance is that it inevitably leads to epistemic relativism about the right course of action.

Chapter 8, ‘Alternative Medicine’, and Chapter 9, ‘Decolonizing Medicine’, propose to apply medical cosmopolitanism to resolve issues of serious disagreement about medicine. Lack of space prevents discussion of these chapters, but the general objection to medical cosmopolitanism made above—in respect to the vagueness of the account and the conceivably relativistic interpretations of the epistemic and practical standpoints—applies here as well.

Overall, Broadbent’s arguments can feel somewhat undeveloped at times and his cosmopolitanism and four stances on medicine are bound to be further refined. Apart from these and other issues highlighted in this review, *Philosophy of Medicine* presents for the most part a fascinating and compelling discussion that brings to light an exciting area in the philosophy of science. As such, the book is an excellent starting point for anyone wishing to explore the rapidly growing literature on this remarkable subject.

References

- Appiah, K. A. (2007). *Cosmopolitanism: Ethics in a world of strangers*. London: Penguin Random House.
- Broadbent, A. (2013). *Philosophy of epidemiology*. London: Palgrave Macmillian.
- Hume, D. (2008 [1748]). *An enquiry concerning human understanding*. New York: Oxford University Press.

- Junod, S. W. (2008). *FDA and clinical drug trials: A short history*. Food & Drug Administration. Available at: www.fda.gov/media/110437/download [Accessed 03 September 2020]
- Locke, J. (1706). *An essay concerning human understanding* (27th ed.). London: Tegg and Son.
- Marks, H. M. (1997). *The progress of experiment: Science and therapeutic reform in the United States, 1900–1990*. New York: Cambridge University Press.
- Menzies, P., & Price, H. (1993). Causation as a secondary quality. *British Journal for the Philosophy of Science*, 44(2), 187–203.
- Porter, R. (1997). *The greatest benefit to mankind: A medical history of humanity from antiquity to the present*. London: Harper Collins Publishers.
- Stegenga, J. (2018). *Medical nihilism*. Oxford: Oxford University Press.
- Wootton, D. (2007). *Bad medicine: Doctors doing harm since Hippocrates*. New York: Oxford University Press.

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