

a constant natural motion (pulsation) and naturally containing only pneuma. The last two properties prompted Praxagoras to make a physiological distinction by reference to function, because for him the arteries and their pulsation guarantee the supply of pneuma throughout the body. First, Lewis refutes the common opinion that Praxagoras held that arteries actually *become neura* (sinews) in their extremities, insisting that Praxagoras, like Aristotle, focuses on the arteries' *appearance*.

But more interesting (and new) is Lewis' attempt at explaining the possible origins of Praxagoras' ideas. In the face of a critical common view according to which Praxagoras arrived at his doctrine purely on the basis of a 'theoretical demand' (i.e. to separate the streams of pneuma and blood), this chapter argues plausibly that observation of a different appearance and motion of the vessels led him to the conclusion that there are two types of vessel, and this in its turn led him to seek the reason for the difference he perceived. So, empirical evidence and a teleological frame of mind (and perhaps an analogy with the respiratory motion of lungs and heart) have contributed to the formation of Praxagoras' solution. Lewis focuses very properly on the similarities with Aristotle's description of the distinctive morphology of the aorta and its branches and of the pulse as a natural phenomenon, which may have been part of Praxagoras' anatomical and physiological epistemology.

An extensive debate with Steckerl's opinions (and those of other scholars, such as Solmsen) runs through the following chapter: Lewis refutes the idea that Praxagoras thought that the origin of arterial pneuma was not only the heart but also provided by the perspiration of the body, and she subsequently claims that for Praxagoras the only source of pneuma is air inhaled through respiration (possibly perspiration as a secondary source), rendered dense and moist by encountering the flesh of the body, *not* air as a byproduct of digestion.

In the last section (4) of the chapter, Lewis argues vigorously that Praxagoras considered the *neura*-like extremities of the arteries the final conductors of pneuma (even if they are not hollow) and transmitted the motor function to the different parts; she also argues that the pneuma is only the transmitter of sensory activities, which are directed by the heart. Finally, she refutes Steckerl's opinion that for Praxagoras the soul is pneuma, through a strict interpretation of the rhetoric in Galen's text of frg. 16 (*Usu resp.*), and she even casts doubt on whether Praxagoras actually asked himself questions such as 'what is the soul?'

Lewis' method is always sound in offering a thorough and precise reinterpretation of all the ancient sources and in positioning Praxagoras' arguments against the background of the epistemological framework of his time: the very last pages of the book offer a precious synthesis just of the cultural context ('Praxagoras in Context: the Place of his Doctrines in the History of Greco-Roman Medicine and Philosophy', pp. 303–9). Lewis' will be the reference book on Praxagoras from now on.

**Daniela Manetti**

University of Florence, Italy

doi:10.1017/mdh.2019.22

**Amy S. Patterson**, *Africa and Global Health Governance: Domestic Politics and International Structures* (Baltimore, MD: John Hopkins University Press, 2018), pp. x + 240, \$29.50, paperback, ISBN: 9781421424507.

Since the onset of globally-driven health interventions in Africa, the continent's nations and people seem to have historically and culturally been reduced to mere recipients. Its

vast public health mechanisms, systems and the personnel who dominated the precolonial health governance have been forced to forge new underground roles, disappear or become mere spectators in times of major health crises, particularly when the continent is faced by such epidemics as cholera, AIDS and Ebola, or by endemic diseases such as malaria. Prior to 1945, the role of precolonial public health practitioners and systems were replaced by colonial agents and systems. After the Second World War, the WHO and other international agencies took over. This replacement has not gone without contradictions and repercussions. Amy S. Patterson's *Africa and Global Health Governance* is an attempt to capture such replacement and its consequences, which has resulted in challenging global health governance locally and continentally. It does so by providing 'a perspective from sub-Saharan African states that are entrenched in the international system through aid, debt, migration, and representation in (IGOs) but are often portrayed as controlled by that very system' (p. 2).

The book commences the discussion by putting into perspective and theorising global health governance. Global health governance refers to 'the formal and informal institutions, rules, and processes by which states, intergovernmental organisations (IGOs), nongovernmental organisations (NGOs), foundations, the private sector and other non-state actors collectively act on health issues that cross borders' (p. 2). Patterson contends that global health governance is an interdisciplinary field of study with "'weak theorizing" and a highly normative agenda' that stresses on 'a post-Westphalian international system, or one in which state sovereignty has been undermined by globalization' (p. 5). She identifies three dominant lines of thought that cause scholarship of global health governance to have a weak theorisation. The lines of thought, or 'paths' in her words, are: security and disease; cultural realities and constructions; and the place of international health institutions and policies. These paths have 'done little to explore how African states are agentic actors in these governance processes' (p. 9). This is a gap that should have been addressed earlier by scholars who research and write about Africa, from within and without the continent. The gap is aptly filled by Patterson in this pertinent monograph.

In theorising disease experiences in Africa, Patterson challenges the 'conventional view that infectious diseases cause most mortality, morbidity, and disability in Africa' by advancing that 'the continent faces both the presence of communicable diseases and a rise in non-communicable diseases (NCDs)'. The view has been embraced by the international agencies for a long time. Thematically, Patterson responds to two essential and related questions. The first question is why Africa has become a 'target of global health governance'. Second is how African states have attempted to navigate their own paths where possible, and how they have asserted their agency in health governance. In partial response to the first question, she postulates that by default Africa faces multiple health challenges – the "'brain drain" of health professionals', deficits in health budgets and unpreparedness to deal with rising cases of NCDs – which collectively have made the continent inevitably the 'target of global health governance'.

Patterson acknowledges the narrative of 'weak dependency' in scholarship of global health governance as she addresses the first question stated above. She contends that the narrative is no longer tenable. Instead, scholars should underscore the complexity of health governance in Africa brought about by multiplicity of actors from nations to IGOs, NGOs, civil society organisations and epistemic communities. In her view, 'weaker' nations bring unique perspectives and experiences in health governance (p. 164). Such experiences and perspectives are one of the avenues through which African agency manifests. Institutions of global health governance, such as the WHO, had long failed to

elaborate proactive policies and to put in place the requisite actors in order to quickly respond to the outbreak of epidemic diseases. In as much as global interventions have been reactive, African epidemics have offered room for co-evolution of responses in such areas as policy intervention design and the development of action plans. The recent past outbreaks of African epidemics have also expanded the scope of scientific research on the diseases themselves. Patterson proffers the example of the 2014–2015 Ebola outbreaks in Liberia, Guinea and Sierra Leone. She says, ‘Ebola created opportunities for crisis-oriented extraversion, while newness of the crisis in NCDs means that international policy and civil society groups are underdeveloped’. Moreover, the ‘WHO’s own Global Outbreak Alert and Response was woefully understaffed and underfinanced’ while its regional offices created a ‘few incentives for early action’ (p. 166). As such, Ebola-affected and non-affected African nations developed their independent reactive policies and actions.

Finally, Patterson associates resistance and acceptance of global health governance in Africa with democracies and autocracies. As evinced in the book, some democratic states affected by infectious disease epidemics have tended to resist international interventions or to contrive a different course of action. Liberia, for instance, sought to affirm her democracy during the Ebola outbreak when she schemed an independent Ebola control programme. An opposite scenario is not uncommon in autocratic states: most accept global policies on health problems, especially on NCDs – an area ignored by most African states despite their recent sharp rise.

It is commendable that Patterson understands the persistence of the view that ‘highly contagious diseases that endanger the West often originate in Africa’ (p. 167). It is partly due to this view that the West and the WHO have developed the global health governance in its current form. Unfortunately, Patterson takes for granted such an established view. Nowhere does she corroborate the view with contextual and historical facts. Historically, for instance, epidemics of highly infectious diseases such as cholera, bubonic plague, global influenza, syphilis and SARS originated in other parts of the world, but not in Africa. Not until recently have the worst epidemic-stricken areas been settings within Africa. The events preceding the introduction of modern sanitation and water supply systems in the Global North before their circulation in Africa could be the second point in denying such fallacious views. And, finally, some of the major epidemics found their ways to Africa through international trade, transportation and world wars. Perhaps this is the weakest part of a book that affirms African agency in global health governance. Nonetheless, this book is an impressive addition in the literature on African public health. With its simple but cogent language, tables and charts for illustration, and enormous data from primary research, the book should find its way to the library shelves of the continent’s health policy makers, medical schools, universities and governments.

**Frank Edward**

University of Dar es Salaam, Tanzania