

BOOK REVIEW

## James Hannam, *The Globe: How the Earth Became Round*

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In *The Globe: How the Earth Became Round*, James Hannam, historian of premodern and early modern science at the Faraday Institute for Science and Religion, argues that seeing Earth as a globe is a significant and counterintuitive intellectual achievement attributable to Aristotle (384–322 BCE). Hannam aims his book at a broad audience, setting it up as an engaging corrective to the popular myth that medieval and Renaissance Europeans ‘thought the world was shaped like a dinner plate’ (p. 12). This recalls Hannam’s previous work, *God’s Philosophers: How the Medieval World Laid the Foundations of Modern Science* (2009). His more explosive claim is that the theory of the spherical Earth should be seen as ‘humanity’s first successful scientific theory’ (p. 11). Historians of science might balk at his use of the term ‘science’ to describe forms of knowledge production that far pre-date the professional processes we think of today, but it is this anachronism that allows Hannam to link together cosmologies from Sumeria to the present to tell a story accessible beyond the academy.

Starting in Mesopotamia, each chapter introduces a different civilization’s understanding of the shape of the world, reading between the lines of primary sources like the *Epic of Gilgamesh*, the Vedas and Old Testament exegesis. Many civilizations share what Hannam calls a ‘traditional’ view of the Earth: flat, roofed by a domed or tented firmament above which usually reside the gods. Differences between views were rooted in local geography and religious and political interests. Though Mesopotamian and Egyptian Earths were surrounded by water, for example, ancient Persians ringed the world in mountains, reflecting the fact that for nomadic steppe-dwellers ‘the boundary between land and sky was a line of low hills ... in all directions’ (p. 31). Hannam emphasizes that differing cosmologies both generated and were generated by strong intellectual traditions in each period and place, like Mesopotamian and Chinese imperial astronomies. As becomes clear, people based their perspectives of the world in physical experience and political needs.

*The Globe* cleaves closely to Europe and the Mediterranean, with brief ventures into Persia, South Asia, the New World and China. Because Hannam’s diffusionist argument centres on Aristotle, he limits his geography accordingly. Indeed, he spends six chapters on ancient Greek thought, chapters that serve as a narrative hinge. *The Globe*’s first half on ancient Mediterranean cosmologies helps explain what enabled and informed Aristotle’s thinking. After the Greece chapters, *The Globe*’s second half is devoted to when, how and why people accepted Aristotle’s theory.

Hannam is careful to show that Aristotle’s claims did not emerge from a vacuum – scholars had long observed that visible constellations shift depending on the viewers’

location, and Plato had already suggested that Earth might be a globe (p. 95). What Aristotle did was to generate a theory that explained the empirics. According to Hannam, Aristotle placed Earth at the centre of the universe. Then he redefined the nature of 'down' to mean aiming for that centre. If objects fall downwards all over the world, and if we consider Earth to be the centre of the universe, then Earth must be spherical (p. 89).

According to Hannam, Aristotle is the scientific 'discoverer' of the globe because he was the first person to 'know' the truth and back it up with empirical and logical evidence. Referring to the philosophical correspondence theory of truth, Hannam explains that 'The Earth is spherical. That statement is true ... because it corresponds to reality' (p. 311). For Hannam, distinguishing between knowledge (as reflecting truth) and belief (as requiring no proof) is crucial (p. 93). Aristotle justified his claim theoretically and empirically, and later experiments and photographs have proven the globe to be 'true'. Therefore, Hannam's logic goes, Aristotle is the scientific discoverer of our globe, a claim likewise enabled by his broad use of 'scientific' (p. 94).

As Hannam gets closer to the present day and his primary sources are more ascribable to individuals, he points out the difficulty of getting at the perspectives of people who were not members of an educated elite. But by the Middle Ages, Hannam claims, most Europeans had accepted Aristotle's view because, in the eighth century, the Venerable Bede, the 'greatest scholar of the era,' unequivocally supported it (pp. 211–12). In other words, centuries before the globe could be proven with sixteenth-century circumnavigations, it needed to be supported by someone authoritative to be fully believed. Hannam identifies this with the coherence theory of truth, whereby people accept an idea when it fits other known information and is endorsed by a trusted authority (p. 311). After his discussion of the Middle Ages, Hannam moves swiftly, taking only three chapters to go from Columbus and Copernicus to nineteenth-century cosmological debates between Christians and Buddhists in Asia (p. 295). The last few chapters describe varied flat Earth subgroups – from nineteenth-century zetetics to denizens of the flat Earth Internet – to show how a traditional perspective can remain convincing despite overwhelming evidence for a universalizing theory.

Hannam's story is shaped by an essentially teleological question – how *did* it become reasonable to view planet Earth as a sphere? Because his book tracks an idea across millennia, it is a general one, though Hannam takes pains to root each chapter in recent academic literature on the specific culture or context he is focusing on. In many ways Hannam's is not just a book about the discovery of an idea so much as a narrative about how ideas about the shape of Earth have reflected and confirmed different cultural values, histories and norms. For Hannam, Aristotle's spherical Earth was groundbreaking because it put individual experiences of flatness in a new framework and enabled new ways of perceiving humankind's place in (and on) the world. That it has since been confirmed by photographs from space is merely the cherry on top.