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Jo Marchant, *Decoding the Heavens: Solving the Mystery of the World's First Computer* (London: Heinemann, 2008) ISBN 978 0 434 01835 2, £12.99.

In 1900, off the shores of Crete, Dimitrios Kontos and his crew on two sponge-fishing vessels discovered the remnants of an ancient shipwreck. Among the impressive statues and furniture was a strange device, made of elaborate gears and etched with inscriptions, nearly indecipherable as the result of centuries of corrosion. Since its discovery, this artifact, now called the Antikythera Mechanism, has been the subject of intense inquiries into its provenance and functioning. *Decoding the Heavens*, by Jo Marchant, provides a highly readable narrative over these investigations, which have been replete with scholarly obsessions, contentious priority claims, and territorial protectiveness. The book should appeal to a broad popular audience. The diverse cast of characters, comprising ship captains, sponge divers, deep-sea explorers, archeologists, historians of science, museum curators, horologists, and entrepreneurs of x-ray technology, amplifies the intrigue of what might be called a positivistic detective story. In addition to crafting the book's entertaining narrative, Marchant is at her best while sating the reader's curiosity by explaining all sorts of tangential matters, such as carbon dating, nitrogen narcosis, bronze production, and the relative underwater capabilities of fin-de-siècle sponge divers and twentieth-century scuba-equipped ichthyologists.

The Antikythera Mechanism is both a remarkable and unique device. It is the only extant geared mechanism that calculated time or astronomical positions from antiquity, although there are textual attestations to others. The most recent studies date the device to around the first century BC and conclude that the device's various dials and gears were designed to calculate the positions of the planets and track the lunar and solar calendars. While no one doubts the complexity and sophistication of this mechanism, because it is the only one of its kind that has survived antiquity and was not discovered until relatively recently, what it signifies about ancient thought and its influence is unclear. Marchant, somewhat problematically, takes the heroic approach.

Marchant uses the term "heroic" explicitly for Derek de Solla Price, one of the protagonists of the book, and the author of an authoritative, but now superseded, study on the Antikythera Mechanism. Heroism, however, could also be considered defining for much of her historical outlook. Accordingly, Marchant seems to follow Price's view that there is an inexorable growth of scientific knowledge, characterized by mathematical laws, as well as to adopt his position that the recognition that the device is a geared calculating mechanism must "entail a complete reestimation of ancient technology" (p. 108). Thus Marchant, following Price, believes that the geared technology of this device shows that ancient Greek astronomers and technical workers had far greater know-how than previously. Moreover, she contends that this knowledge was transferred from ancient Greece to the Byzantine world to the medieval Islamic world to medieval Christian Europe, where later it led to the development of technology that started the industrial revolution. While much philosophical, medical, and scientific knowledge took the same path, this analysis is speculative, based on the possibility that "there could have been hundreds and thousands" of similar devices (p. 168). To "rewrite history" (p. 152) on such evidence is incautious, to say the least. Moreover, it implicitly dismisses the abilities of medieval Islamic and Christian civilizations to develop independently geared clocks and sophisticated astronomical devices. Must everything present-day society values, inclusive of computers, start with the Greeks?

Marchant is intent on seeing the present in her version of antiquity that emphasizes this machine, as is made clear by the repeated references to it as a computer and her ahistorical invocations of heliocentric cosmology. While the mechanism computed the positions of heavenly bodies, it is hardly a computer in the present-day sense. But the equation between this ancient geared calculating mechanism and modern devices leads Marchant to conclude that their existence demonstrates that the Greeks were “people who thought like us, solved problems like us, built machines like us.” A cursory survey of Greek attitudes toward pederasty, slavery, and animal sacrifice will disabuse anyone of the notion that we think like the Greeks. But other errors arise in this book as a result of the idea that ancient views were homogenous. For example, a number of ancient philosophers did not believe that there was a creator or designer of the universe contrary to what Marchant suggests (p. 274-275).

This book offers a compelling story about inter-disciplinary research into a curious object, but misses the opportunity to explore why so much intellectual energy has been directed toward this one artifact and why so many people from the Renaissance onward have felt the need to discover correspondences and historical links between themselves and the classical world.

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