

## BOOK REVIEWS

**Chinese Astrology and Astronomy: An Outside History**, by Jiang Xiaoyuan. Trans. Chen Wenan. (Singapore, World Scientific, 2021). Pp. xx+312. ISBN 978-981-122-345-7 (hardback), 160 × 235 mm, US \$128. First published as *Tianxue waishi* 天學外史 (Shanghai: Shanghai Jiaotong Daxue, 2015).

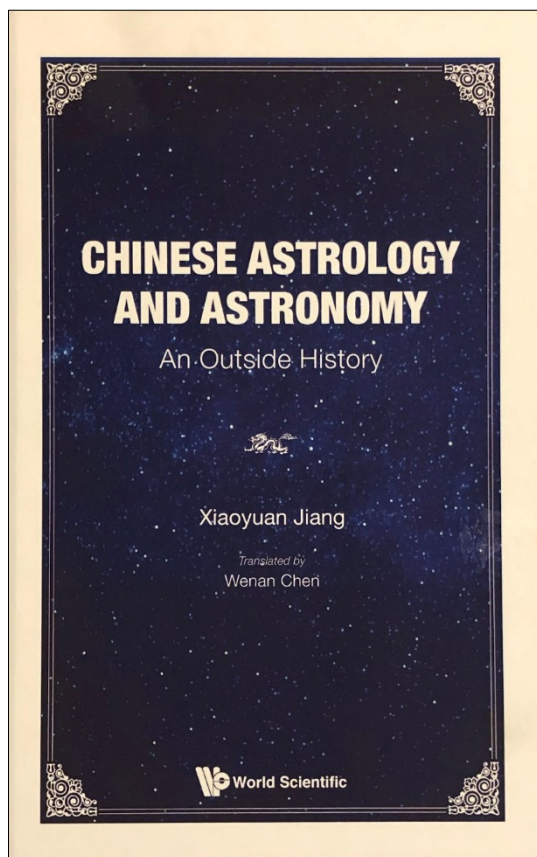
Jiang Xiaoyuan is one of China's foremost scholars of the history of astronomy and astrology. He has published extensively not only on ancient China but also comparative studies of the astrological and astronomical traditions of Western classical civilization, Mesopotamia, India, and Islam. Jiang distinguishes what he prefers to call *tianxue* 天學 'the study of the heavens' from 'astronomy' to underscore the difference between traditional Chinese approaches and modern West-

about the history of science education in China during the 1980s–1990s. Then the 'watchword' was to 'invigorate the country through science, technology and education', with an attendant concern about Eurocentrism in the educational curriculum, in response to which a nationalistic effort was mounted by some to qualify some traditional Chinese disciplines as scientific.

The book was written in the late 1990's and was clearly intended for a Chinese readership, presumably in secondary and tertiary education. As the author states, while covering essentially the same ground as his magisterial *The True Origin of the Study of the Heavens* (Jiang, 1991) which won a national book award, *An Outside History* was intended as a less specialized, more accessible treatment. Given the targeted readership, there are sections replete with names of prominent figures and works that will be opaque to readers who do not have a grounding in the history of ideas and chronology of China.

Nevertheless, non-Chinese readers will find much of interest in the book, such as Chapter 3, on what kind of people were engaged in *tianxue* in Ancient China?; Chapters 5–6, astronomical phenomena and *tianxue* literature (including examples of medieval observatory logs, the earliest star charts and stellar nomenclature, discussion of the most influential prognostication manuals, etc.); Chapters 7–8, competing cosmological theories and Sino-foreign influences (principally India and Buddhism); Chapters 10–11, the introduction of Western astronomy by Jesuits and its early reception; Chapter 12, collisions between East and West and reactions to foreign influences by scholars who asserted that Western learning originated from China; Chapter 13, the legacy of Chinese *tianxue* and the importance of its accumulated knowledge base in modern astronomical research.

Since it was originally written some 25 years ago, with the exception of Joseph Needham's highly influential early work (1959) and an off-hand mention of Nathan Sivin (page 272), there is no mention of important Western scholarship such as John Henderson's studies of the history of Chinese science and cosmology (1984; 1986) or Pankenier (1995). Since the Chinese version of this book first appeared in 2015 and the English version in 2021 there should also have been ample time to take account of more recent scholarship, e.g., Feng (2001) and Morgan (2013).



ern scientific astronomy (Chapters 1 & 2). Jiang has subtitled his study *An Outside History*, the objective being on the one hand to present an alternative historiographic approach and sidestep the unproductive question whether the ancients' pursuits qualify as 'science' in the modern sense. On the other hand, Jiang's framing of the subject was also a declaration of his position in the polemics

Generally speaking, the English translation is commendable for being the work of a non-native English speaker, despite a few lapses into Chinglish, the occasional howler, and haphazard proofreading. There are a few categorical statements that bring the reader up short, such as “Western medicine has not yet become an exact science, so it is not a science yet ...”, therefore it is on a par with Chinese traditional medicine (page 275). Despite minor flaws the highlighted chapters are highly informative and advance some original perspectives on the role of ‘the study of the heavens’ in pre-modern China, especially concerning potential Indian influence on cosmology by the early imperial period (ca. third century BCE). Jiang’s *Chinese Astrology and Astronomy: An Outside History* is an essential resource for English-speaking readers investigating the study of the heavens in imperial China.

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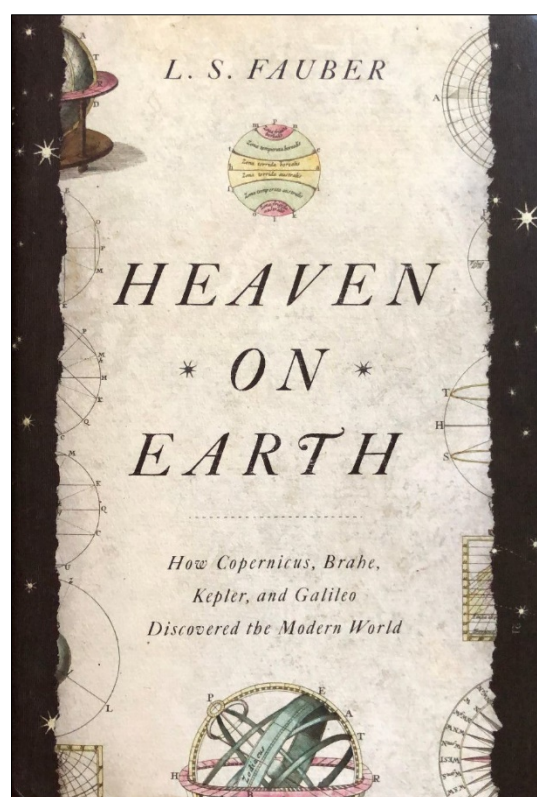
***Heaven On Earth: How Copernicus, Brahe, Kepler and Galileo Discovered the Modern World*, by L.S. Fauber. (New York, Pegasus Books, 2019). Pp. xii + 332. ISBN 978-1-64313-204-4 (hardback), 155 × 235 mm, US \$29.95.**

The four great astronomers in the Early Modern era—Copernicus, Brahe, Kepler and Galileo—are the subject of this unusual history

of astronomy book. The best way to describe it is simply by quoting a passage on the author’s description of Kepler’s book *The Harmony of the World*:

Planets were plucked out of the quintessence, which knew no time, and placed back, recalibrated to the pulse of the human heart. The welkin grew thick with beats off the drum of reason, the parliament of fixed stars announced their fires in anticipation, the cosmos let out the ethereal drone of orchestral tuning. The universe began to play, conducted by Kepler’s theory of harmony. (page 94).

Well, what can one say to that? Either the reader will be captivated by the prose, or reminded of the worst excesses of Victorian



literature. When I first read the author’s take on the ancient reaction to the study of retrograde planetary motion, I thought he or she was a bit daft: “The ancient Egyptians must have thought the planets drunk.” (page 6). But as I read further into the text I realised that while this is certainly not a scholarly history of astronomy book (which has a limited audience), the author has carefully digested most of the relevant material about those four great astronomers and presented it in a novel fashion. By novel I do mean there are novelistic approaches to some of the material, but it gets to heart of the matter that any reader can relate to. For example:

As a child, it had brought Kepler physical pain that he had been denied the gift of