Impotent Numbers: Korean Confucian Reactions to Jesuit Mathematics*

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Two recent publications in Korea have driven more nails into the coffin of an assumption long academically discredited, though it unfortunately is still widely accepted among the general population in Korea. It is not unusual to read or hear in Korea that most Confucians during the latter half of the Joseon dynasty were so narrow-minded and hidebound that they were both unwilling and unable to entertain ideas and practices that were not sanctioned by centuries of Chinese Confucian tradition. Jang Hyewon and Koo Mhan-ock have shown conclusively, particularly in the case of mathematics, that that was not true.¹ Books by European missionaries that appeared in China after 1600 and introduced Western mathematical techniques were eagerly read by a wide range of Korean Confucian scholars, and most of their Confucian readers recognized the superiority of the techniques suggested in those books. Moreover, another Korean scholar has recently confirmed what has long been known by historians of science in Korea, that the official calendar for the last two centuries of the Joseon dynasty was based on European methods of calendrical calculation, and, moreover, that Koreans knew that those methods were European in origin.² There is therefore no justification for the assertion that Korean Confucians rejected “Western Learning” (Seohak) in its entirety because of its non-Confucian European origins.

But, when we look at the long list of names of Joseon dynasty Koreans who studied Western mathematics, we find very little overlap with a list of names of Joseon dynasty Koreans who were attracted to another side of “Western Learning,” the Catholicism that those who wrote those mathematics texts came to China to preach. None of the famous mathematicians discussed by Jang Hyewon, such as

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¹ Jang Hyewon, Sanhakseoro poneun Joseon suhak [Mathematics in Joseon Korea, as seen in mathematical publications] (Seoul: Gyeongmunsa, 2006); Koo Mhan-ock, “Mat’aeo Lich’i ihu Seoyang suhak-e daehan Joseon jisgin ui paneung” [The response of the educated class to the Western mathematics of Matteo Ricci], Han’guk sirhak yeon’gu 20 (2010), 301–55.

² Gang Yeongsim, “17-seigi Seoyang Cheonmun yeokbeop seojek uui suip gwa cheonmun yeokbeop insik ui byeonhwa: Seoyang yeokbeobin siheollyeok suyongeul jungsimeuro” [The introduction of Western books on astronomy and calendrical calculation in the seventeenth century, and changes in the understanding of astronomy and calendrical calculation: focusing on the acceptance of the Shixian li calendar, which was based on Western methods of calendrical calculation], in Hong Seonpyo et al., 17,18 seigi Joseon ui waeguk seojek suyong gwa dokseo munhwa [The acceptance of Western-authored books in Korea in the seventeenth and eighteenth centuries, and the culture of reading] (Seoul: Hyean Publishing, 2006), 221–63.
Hong Jeongha (1684–?), Choe Seokjeong (1646–1725), and Hwang Yunseok (1719–1791), played any role in the emergence of a Catholic community on the Korean peninsula. Koo Mhan-ock discusses a broader group, including those who were not primarily mathematicians but included mathematics among the many subjects they deemed worthy of scholarly attention. A few of those whom Koo discusses, such as Yi Byeok (1754–1786), Jeong Yakjeon (1758–1816), Jeong Yagyong (1762–1836), Yi Seunghun (1742–1801), and Yi Gahwan (1742–1801), are associated with the founding of a Korean Catholic Church. However, most of those Koo discusses, such as Hong Daeyong (1731–1783), Pak Jiwon (1737–1805), Seo Hosu (1736–1799) and Hong Yanghae (?–1778), focused on mathematics only and were not the least bit interested in the religious beliefs of the Jesuit mathematicians in China.\(^3\)

At first glance, this is somewhat puzzling, since recent scholarship published on the other side of the Pacific Ocean, in North America, has confirmed what both academics and the general public have long known, that the Jesuit missionaries who traveled to China in the seventeenth and eighteenth centuries and wrote books introducing Western science, technology, and philosophy to the Confucian world did so for one reason only—to convert Confucians to Christianity. Both Florence Hsia and Liam Brockey,\(^4\) drawing solely on European-language sources, have little to say about how people in China, Korea, and Japan responded to the Jesuit missionary drive. They both make clear, however, from their reading of what the Jesuits themselves were saying about their reasons for traveling to East Asia, that mathematics, science, and technology were nothing more than tools to be utilized in their proselytizing project.

Hsia highlights the Jesuit subordination of mathematics to religion in some of the subheadings in her chapters. Phrases such as “the missionary mathematician” (p. 21), “the mathematician as saint” (p. 26), “the mathematician as martyr” (p. 30), and “mathematical magic” (p. 45) are used to draw her readers’ attention to the relationship the Jesuits themselves saw between their mathematical skills and their proselytizing goals. She also points out, however, that the vast majority of Jesuit missionaries in late Ming and Qing China focused almost exclusively on either converting Chinese to Catholicism or ministering to those already converted. “As for the more than four hundred individuals who bore the burden of the old Society’s evangelical efforts in the Middle Kingdom … only a bare handful—perhaps fifteen in all—ever held positions in the imperial Astronomical Bureau.” She notes that a few more may have spent some of the time “casting astronomical instruments, surveying landscapes, or rendering texts in natural philosophy, pure and mixed mathematics, and medicine,” but they still didn’t amount to more than 20% of the total number of those who toiled in the Jesuits’ China mission.\(^5\)

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3 Koo Mhan-ock, op. cit.
5 Hsia, op. cit., 5.