

Seki Takakazu's Biography and "Kanjo-gata Wasan Era" (1674–1780)

Jochi Shigeru

National Kaohsiung First University of Science and Technology

The "Wasan", that is to say, Japanese mathematics had the system of license such as "Sado" 茶道 (Tea ceremony), "Kado" 華道 (Flower Art) and other Japanese traditional culture. Therefore historians of Japanese mathematics concluded that the Wasan was a kind of accomplishments, but not a science. This opinion applies to bourgeoisie in the end of the Edo era (1781–1867), but not to Samurai warriors and wealthy farmers. Especially, wealthy farmers in the end of Edo era had a power in Japan. We must consider the opinions of not only bourgeoisie but also of wealthy farmers because the population of bourgeoisie was only 10 percent and that of farmers was over 80 percent. The wealthy farmers must study surveying and calculations for taxation and so on, that is the Wasan. The wealthy farmers studied the Wasan and could become a village chief. If they had a chance, they became Samurai like Ino Tadataka 伊能忠敬 (1745–1818) who made an exact atlas of Japan. In this age, the Wasan was a tool for success in life for farmers. Therefore we call this age "Jikata 地方 Wasan era", that is from 1781 when Fujita Teishi 藤田貞資 (1734–1807) published the *Seiyo Sampo* 精要算法 to 1877 when the Mathematical Society of Japan was established.

Seki Takakazu 関孝和 (1642?–1708) lived, however, in the age of Samurai warriors, or Samurai technocrats. In the middle of 17th century, Samurai warriors had no job as warriors and Samurai technocrats controlled the Shogun government. Samurai technocrats surveyed their own lands. Uchiyama Nagaakira (–1646?/–1662?) who is father of Seki lost his job, and moreover, Seki was his second son. Thus it was quite difficult for Seki to take an appointment of Samurai's position. Seki, however, studied the Wasan and became an adopted son of Seki Gorozaemon 関五郎左衛門 (–1665), then took an appointment of the accountant of Kofu-han 甲府藩. Therefore, we can conclude that the Wasan was a tool for success in life for Samurai in this era. So we must call this era "Kanjo-gata 勘定方 Wasan era" starting from Seki's *Hatsubi Sampo* 発微算法 (1674). After Seki, there were Takebe Katahiro 建部賢弘 (1664–1739), Yamaji Nushizumi 山路主住 (1704–1773) and others who studied the Wasan for the success in their life of Samurai.

We must consider where Seki's residence was, because we can know the social position of Kanjo-gata from their residence area. In the *Kofu-sama Goninshu Bugencho* 甲府様御人衆中分限帳 (1695) it is written that Seki lived in Tenryu-ji 天龍寺前. The problem is, in which Tenryu-ji Seki lived, that is, Yotsuya's Teryu-ji or Ushigome's Tenryu-ji because the Tenryu-ji temple was in Ushigome before the big fire of Tenwa 天和の大火 in 1682. We can research the maps of *Gofunai Enkaku Zusho* 御府内沿革図書 (1808–1861). There was his brother Uchiyama Nagasada's residence in the former Tenryu-ji, where Ushigome police station is now. There was also the residence of Seki Gorozaemon, with the same name as Seki's adoptive father in the former Tenryu-ji. Moreover, there is the Jorin-ji 浄輪寺 temple of Seki's family and Uchiyama's family in Ushigome. Therefore, we can conclude that Seki lived in Ushigome. Kanjo-gata lived in Shinjuku now, that is to say, a new town in that age. We can know the life style of Kanjo-gata thorough Seki's former residence.

Key Words: Seki Takakazu (Kowa)'s Residence, Ushigome Jorin-ji, Kofu-han, Gofunai Enkaku Zusho