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What Saint Francis Xavier and Giovanni Battista Sidoti Brought to Japan

AIKO OKAMOTO-MACPHAIL

“Go into all the world and spread the gospel to the whole creation” (Mark 16:15). The fourth vow of the Society of Jesus sent the Jesuits around the world and inspired the creation of the Sacred Congregation for the Propagation of Faith (*Sacra Congregazione de Propaganda Fide*).¹ This paper explores what two Christian missions brought to Japan. The first is the Renaissance Jesuit mission starting with Saint Francis Xavier (1506–52); the other is the mission of Giovanni Battista Sidoti (1667–1714), who was sent by Pope Clement XI (r.1700–21) through the Propagation of Faith.² I propose studying an echo of Renaissance humanism with its Christianized Aristotelian notion of the *anima rationalis* (rational soul) and the paradox of the Japanese modernization slogan “Japanese mind and Western science.” As we will see, by the dawn of the Meiji period (1868–1912), the Japanese mind already embraced a Christian influence, and Christianity in Europe was intricately one with Renaissance science.

I divide my argument into three parts. The first is on the nature of the two missions conducted by the Society of Jesus and by Sidoti and their impact on the Japanese mind. In the second part, we will see how the European Renaissance science of cosmography and Aristotelian hylomorphic philosophy were used in the Japan missions. The third part of the paper looks at the combined impact of the two Christian missions on Japanese modernization.

In his book on Jesuit astronomy and its legacy, Ebisawa Arimichi traces a long genealogy of Western science, starting with what he calls “natural theology” from the Christian century of Japan (1549–1639) up to the end of the Edo period (1603–1868), when the Netherlands, via the Dutch East India Company (hereafter VOC), was the only Western nation allowed to enter the Japanese port of Nagasaki. In this genealogy, in 1708, at the mid-point of the Edo period, Sidoti landed at Yakushima and revived the legacy of Christianity, which had been forgotten after the Warring States period (1467–1568) and the proscription of Christianity during the Edo period.³ As we can see from this chronology, the Society of Jesus, starting with Saint Francis Xavier, who came

1. Ebisawa Arimichi, *Nanban gakutō no kenkyū* [Study of the Portuguese school of learning], 2nd augmented ed., (Tokyo: Sōbunsha, 1978), 4; *The Constitutions of the Society of Jesus and their Complementary Norms* (St. Louis, MO: Institute of Jesuit Sources, 1996), “Formulas of Paul II and Julius III,” 3–4, and part 7, chapter 1, 271.

2. On the correct spelling of Sidoti’s name, ecclesiastical title, and his birth and death year, see Mario Torcivia, *Giovanni Battista Sidoti: Missionario et martire in Giappone* (Soveria Mannelli: Rubbettino, 2017), trans. Kōso Toshiaki, Kitadai Miwako, and Tsutsui Suna (Tokyo: Kyōbunkan, 2019), 20, 22, 24, 48–49, 282–84. This book was written for the postulation of Sidoti’s beatification. His birth year is corrected by Mario Torcivia based on the Italian document, and his death year is corrected by Kōso Toshiaki based on the Japanese documents.

3. Ebisawa, *Nanban gakutō no kenkyū*, 131.

to Kagoshima in 1549, was first active toward the end of the unstable Warring States period, when the country was being torn to pieces by battling warlords. Sidoti, on the other hand, came to a totally transformed Japan where the centralized government around the shogun in Edo (Tokyo) held tight control throughout the country. These two entirely different historical times cast a deep shadow on the two missions.

Ebisawa's chapter on the Western science which the Society of Jesus brought to Japan, entitled "Natural Theological Astronomy," describes the collaborative relationship between Renaissance theology and science professed by the Society of Jesus. For, although he does not use the term cosmography, the content of what Ebisawa is designating "natural theological astronomy" corresponds to cosmography.⁴ The Renaissance science of cosmography combines aspects of astronomy, astrology, mathematics, geometry, the art of navigation, geography, cartography, the construction of measuring instruments, as well as a branch of Aristotelian physics inclusive of the *De anima* (On the soul) and the *De caelo* (On the heavens), through their Christian interpretations of the heavens and the *anima rationalis*. The *anima rationalis* or *anima intellectiva* is the key term used by Fukansai Habian in a book seeking to demonstrate the superiority of Christianity over Buddhism, Shintō, and Confucianism. This book, entitled *Myōtei mondō* (The Myōtei dialogues), explains the *anima rationalis* along with two other terms, *anima sensitiva* and *anima vegetativa*, that characterize living beings in Aristotle's (384 BCE–322 BCE) *Physics*.⁵

Today's scholarship emphasizes that cosmography was the precursor of modern science, yet the other side of cosmography, namely Christian cosmology as a branch of theology, is often neglected.⁶ In science, a theoretical hypothesis, for example the theory of relativity, is demonstrated by empirical observation. In cosmography, what should be proven is not theoretical hypotheses but God's existence. Cosmographers believed that by describing Earth and the heavens, they were demonstrating the mathematical precision of the divine creation.

As for Xavier's mission, his decision to come to Japan was to prove ground-breaking both for Portugal and Japan. From the time of Alfonso de Albuquerque (c.1460–1515), the Portuguese commander who conquered Goa in 1510 and Malacca in 1511, the Christian education of Portuguese children in what was then called the *Estado da Índia* (State of India) was a pressing preoccupation of the king of Portugal. When Xavier decided to come to Japan, he expanded his mission to a country without Portuguese settlers, and whose population at large did not know Christianity. Xavier's decision was also ground-breaking for Japan in that he brought a new religion that would compete with an indigenous form of animism called Shintō, as well as Buddhism from India.

4. Ebisawa, *Nanban gakutō no kenkyū*, 30–37, especially 36–37

5. I use Fukansai Habian, "Myōtei mondō," *Kirishitan-sho, haiyasho*, ed. Ebisawa Arimichi et al. (Tokyo: Iwanami Shoten, 1970), 113–80, here 155–56; for English translation: Fukansai Habian, *The Myōtei Dialogues: A Japanese Christian Critique of Native Tradition*, ed. James Baskind and Richard Bowring (Leiden: Brill, 2016), 173–74. I follow Baskind and Bowring for the transcription of the name Habian.

6. Some examples are: María M. Portuondo, *Secret Science, Spanish Cosmography and the New World* (Chicago: University of Chicago Press, 2009); Daniel Bleichmar et al., *Science in the Spanish and Portuguese Empires, 1500–1800* (Stanford: Stanford University Press, 2009). See also the articles and books by Hiraoka Ryūji.

Xavier, who thus started his mission from zero, observed that Japanese people were open to reason⁷ and belonged to an intelligent race, although the difficulties of his mission turned his hair gray.⁸ In a letter to Ignatius of Loyola (1491–1556), he wrote that the Jesuits sent to Japan should know about “the celestial sphere,” “the movements of the heavens, the eclipses of the sun, the waxing and waning of the moon,” as well as meteorology—“how rain, snow and hail, thunder, lightning, comets, and other natural phenomena” occur.⁹ In all, Xavier observed that the people in Japan were interested in the natural phenomena of planets and weather, the topics covered, as we shall see, by cosmography.

As for Sidoti, his mission departed with another, more famous one. On July 4, 1702, 150 years after Xavier, when Cardinal Charles Thomas Maillard de Tournon (1668–1710) left Rome, this papal envoy sent by Pope Clement XI had two destinations. One was Tournon’s own mission to China to solve the Rites Controversy. The other was a mission to Japan undertaken by Sidoti, a papal emissary sent from the Sacred Congregation for the Propagation of the Faith.¹⁰ Sidoti landed at Yakushima on October 10, 1708, a step away from Kagoshima, where Xavier had landed on August 15, 1549, with Pope Clement XI hoping that Sidoti would become the second Xavier.¹¹ In fact, Sidoti became the last European missionary to enter Japan before the 1850s. There, he encountered one of the sharpest minds of his time, Arai Hakuseki (1657–1725), a Confucian scholar who tutored Tokugawa Ienobu (1662–1712, r.1709–12) and became his private counselor when Ienobu became shogun. Hakuseki also worked for Ienobu’s son and young shogun Tokugawa Ietsugu (1709–16, r.1713–16).

When Ienobu ordered Hakuseki to interview Sidoti, Hakuseki and Sidoti had difficulties understanding each other’s metaphysics, with each calling the other’s metaphysics, physics. Hakuseki wrote the following famous sentence after his interview with Sidoti: “The study such as theirs is strong only in details of forms and tools. They know only about physics [*keijika*], and they have never heard about metaphysics [*keiji-jō*]. No wonder that they think that heaven and earth have a maker.”¹² Hakuseki heard Sidoti’s explanation that God created this physical world and struggled with this most unfamiliar notion. By Hakuseki’s time, the VOC was the only European middleman able to conduct overseas trade with Japan. Instruments like the telescope and optical machines were imported by the VOC. On the other hand, medical science, the legacy of the Renaissance Jesuits, was continuously practiced in Japan. Sidoti’s account of the splendor of art and architecture in Renaissance Rome resonated in Hakuseki’s mind

7. Francis Xavier, *Letters and Instructions of Francis Xavier*, trans. M. Joseph Costelloe, S.J. (St. Louis, MO: Institute of Jesuit Sources, 2009), 320.

8. Xavier, *Letters and Instructions*, 342.

9. Xavier, *Letters and Instructions*, 385.

10. The Sacred Congregation for the Propagation of the Faith was created in 1599 by Clement VIII (r.1592–1605) and promoted to a permanent branch of the Vatican in 1622 by Gregory XV (r.1621–23). See Torcivia, *Giovanni Battista Sidoti*, 21–22n9.

11. Ikeda Etsuko “Rōma e tsutaerareta Sidoti Nihon nyūgoku no fūbun” [The news of Sidoti after he entered in Japan reported to Rome], *Nihon rekishi* [Japanese history] 30 (November 1950): 42–47, here 45.

12. Arai Hakuseki, *Seiyō kibun*, in *Shintei Seiyō kibun*, ed. Miyazaki Michio (Tokyo: Heibonsha, 1968), 16–17.

with the presence of the West in Japan, where Europe was known mainly through material culture imported through commercial routes.

In his turn, Sidoti did not understand Hakuseki's metaphysics. After the era of medieval Buddhism, the Edo shogunate adopted neo-Confucianism as Japan's official political doctrine, and Hakuseki refuted Sidoti's story of the Christian creation by quoting the neo-Confucian axiom that describes the beginning of the world: "Great Ultimate equals the principle of heaven."¹³ In the following quotation, Sidoti's words as transcribed by Hakuseki are in bold while the parentheses are from Hakuseki. My supplementary additions are placed between brackets:

Sidoti said that what people believe in China is synthetically called Confucianism (he [Sidoti] explains that Confucianism is a study of nature. In his religion [Christianity], heaven and earth and all things did not spontaneously sprout by themselves, because Deus created them all. Confucianism teaches that all things are spontaneously generated in the movement between the two poles of the Great Ultimate, and this Great Ultimate equals the Principle of Heaven, but Sidoti denied it) **and the adherents of Confucianism are called atheists** (which means Confucians).¹⁴

Sidoti is arguing that the axiom of neo-Confucian metaphysics belongs to the natural science of physics. For Sidoti and Hakuseki, each other's metaphysics, which constitutes the invisible realm of thoughts above the physical phenomena, were mutually incomprehensible. Hakuseki concludes that European civilization is strong in physics and the invention of new technological instruments.

Shogun Tokugawa Yoshimune (1684–1751, r.1716–45) dismissed Hakuseki from the government but nevertheless retained some of his policies. In 1720, during the Kyōhō Reform, Yoshimune lifted the ban placed on scientific books from Europe as well as books written by the Jesuits active in China. In so doing, the shogun was effectively announcing that Western science could be separated and studied independently from Christianity.

Although Western science was permitted as far as it stayed independent from Christianity, Christianity and science were historically not such a cleanly separate issue in Europe itself. The Renaissance Jesuits who adhered to Aristotle and Thomas Aquinas (1224/25–74) thought that all those who are endowed with an *anima rationalis* are equals. For us who know Aristotle, the *anima rationalis* is a rational function of the mind. But Christianity twisted this Aristotelian *anima rationalis* by interpreting it as the divine fingerprint left in the human soul as a token of creation. And this Christian understanding of *anima rationalis* then underwent a further twist in Japan. A Japanese thinker of the Shingaku (Study of mind/heart) school, Kumazawa Banzan (1619–91), summarizes the Renaissance Jesuit legacy in one short sentence, "Christianity is an

13. About the translation of the Great Ultimate (Jp. *taikyoku*, Ch. *taiji*) and the *ri* (Ch. *li*), see Richard Bowring, "Searching for God in neo-Confucianism," in *The Myōtei Dialogues* (Leiden: Brill, 2015), 31–35, here 32, 33. The term *ri* can be pattern or design, as well as reason, in neo-Confucianism.

14. Hakuseki, *Seiyō kibun*, 93.

internal issue, therefore hard to govern,”¹⁵ in a passage that appears in a book entitled *Shūgi washo* (Collected writings on morality in Japanese [1st ed. 1672, 2nd ed. c.1675–76]).¹⁶ The meaning of “an internal issue” can be read in two mutually related ways: first, Christianity became a domestic issue, not an issue brought from abroad to cause social disquiet inside Japan; and, second, Christians internalized their faith in their mind to support their opposition to the political authorities. Effectively, Christians who believed in God above human monarchs were rebelling against the authority of the central government.

Japan is one of the rare mission grounds where a large number of local Christians volunteered to die for their faith. The Christian century ended with the Shimabara Rebellion of 1637 to 1638 that cost twenty to thirty thousand Christian lives. The Christians hidden from the authorities maintained their faith, often in isolation from other villages, by bonding among members belonging to a community, developing their own style of prayer, calculating Christian calendars, and respecting Lent. More than 150 years after the Shimabara Rebellion, leagues of latent Christians secretly maintaining their faith were still being discovered, as for example in Urakami, the Renaissance stronghold of Christianity under the tutelage of the Society of Jesus.¹⁷ Throughout the Edo period, there were sporadic denunciations of latent Christians, called “collapses [*kuzure*],” when the communal solidarity of Christians collapsed.¹⁸ The most famous ones toward the end of the Edo period in Urakami were numbered from the first collapse or *Urakami ichiban kuzure* in 1790, the second in 1842, the third in 1856, and the fourth and last of the Edo period in 1865.¹⁹ Many Christians died in the aftermath of these “collapses.”

Banzan’s sentence explains why the Japanese Christians persisted despite the persecution. Banzan saw that Christianity was an issue of the “Japanese mind.” Banzan’s argument was also Hakuseki’s argument when he interviewed Sidoti in 1709 and claimed that convinced Christians posed a domestic threat to the stability of the political regime because they put obedience to God above their duty to the shogun and the emperor.²⁰ Both Banzan and Hakuseki thought that the individual mind was a sphere where no political power could reach, however strict the proscription against

15. Kumazawa Banza, “Shūgi washo,” in *Kumazawa Banzan*, *Nihon shisō taikai* [Great collection of Japanese thoughts] (hereafter NST followed by number), 67 vols. (Tokyo: Iwanami Shoten, 1971), 30:8–356, here 222 and note on the same page. The Shimabara Rebellion (1637–38), in which twenty to thirty-seven thousand Christians revolted against the shogunal government, made this worry real. See Yokota Fuyuhiko, *Tenka taihei* [Great and peaceful reign] (Tokyo: Kōdansha, 2002), 131.

16. About the years of publication, see Kumazawa Banzan, “Shūgi washo,” 3, 525–26, 587.

17. About the term “latent Christians” (*senpuku kirishitan*), see Miyazaki Kentarō, *Kakure Kirishitan no jitsuzō* [Real figures of hidden Christians] (Tokyo: Yoshikawa Kōbunkan, 2014), 42–44.

18. See the list of collapses in Miyazaki, *Kakure Kirishitan*, 44–45.

19. *Kadokawa Nihonshi jiten* [Kadokawa dictionary of Japanese history], 2nd ed. (Tokyo: Kadokawa Shoten, 1995), 109. As the last collapse or discovery of Christians, then still illegal, occurred in the French Catholic church under the tutelage of Bishop Bernard Thaddée Petitjean (1829–84) in Urakami, the Japanese proscription of Christianity caused diplomatic tension between France and Japan.

20. Hakuseki, *Seiyō kibun*, 79.

Christianity.²¹ The stark impact of the Shimabara Rebellion, which exemplified this internalized foreign threat to Japan, can still be seen in an essay called *Sangan yokō* (Marginal thoughts about the perspective seen by three eyes) written by Aizawa Seishisai (1782–1863) of the Mito domain. By citing the Shimabara Rebellion, Aizawa justifies both Banzan’s view of Christianity as an internal issue and Hakuseki’s fear of Christianity as a domestic threat in the *Seiyō kibun*, which Hakuseki wrote after his interviews with Sidoti.²²

Ebisawa claims that one factor that formed this Japanese mind was what he calls natural theological astronomy, which was strategically used to persuade Japanese people to accept Christianity.²³ The Christian influence on the thought of Hirata Atsutane (1776–1843) and his disciple Nanri Arichika (1812–1864), thinkers in the discipline called national studies (*kokugaku*) and adherents of the native religion Shintō, was studied by Muraoka Tsunetsugu in his seminal work on Japanese thought.²⁴ Subsequently, the Christian influence on Hirata Atsutane’s Shintō, the fort of the Japanese national mind, was introduced to English readers by Donald Keene in his doctoral dissertation.²⁵ Koyasu Nobukuni studied the Catholic influence in Hirata Atsutane,²⁶ and Maeda Tsutomu studied Nanri Arichika (1812–64), who translated the work of an American Presbyterian missionary in China, William Martin (1827–1916), from Chinese into Japanese.²⁷ Both are recent trends that pursue the Christian influence on Japanese intellectual history. As we saw earlier, in Japan Western science started to flourish when it became independent from Christianity at the beginning of the eighteenth century, whereas the Christian influence persisted paradoxically in the stronghold of the Japanese mind, Shintō, and transformed its doctrine. On the other hand, in Renaissance Europe, Christianity and science were not so neatly separated. To understand this situation, we need to go back to the discipline called cosmography, in which science was not independent from Christianity.

Now we come to the second part of the paper: how the Society of Jesus used cosmography and Aristotelian hylomorphic philosophy in their mission. Cosmography in Xavier’s time was inspired by a vertical aspiration toward an unattainable height

21. Hakuseki, *Seiyō kibun*, 79. The “internal issue” is the translation of “naibyō,” literally the internal sickness.

22. Aizawa Seishisai, “Sangan yokō” (n.p: Seiransha, 1957); reprint in Arai Hakuseki, *Seiyō kibun*, in *Shin-tei Seiyō kibun*, ed. Miyazaki Michio (Tokyo: Heibonsha, 1968), 406–10, here 408.

23. Ebisawa, *Nanban gakutō no kenkyū*, 30–37. The term natural theology also appears on page 35 to qualify Luis de Granada’s works translated and published in Japan by the Jesuit Mission Press. See also 34n20 in which Ebisawa explains, with Xavier’s letter dated January 29, 1552 and co-translated by Pedro Arrupe, S.J. and Inoue Ikuji, that Saint Francis Xavier instructed his companions in Europe prove the existence of the creator by astronomical demonstration to explain the Christian doctrine in Japan.

24. Muraoka Tsunetsugu, *Nihon shisōshi kenkyū* [Study of Japanese thoughts] (Tokyo: Iwanami Shoten, 1940), 321–36 on Hirata and 337–65 on Nanri. I follow the National Diet Library for the reading of Nanri’s given name Arichika.

25. Donald Keene, *The Japanese Discovery of Europe: Honda Toshiaki and Other Discoverers, 1720–1830*, revised ed. (Stanford: Stanford University Press, 1969), 156–72, especially 165, 169.

26. Koyasu Nobukuni, *Hirata Atsutane no sekai* [The world of Hirata Atsutane] (Tokyo: Perikansha, 2001), 270–91.

27. Maeda Tsutomu, *Edo kōki no shisō kūkan* [Intellectual spaces in the late Edo period] (Tokyo: Perikansha, 2009), 386–429.

above the immobile Earth. In Sidoti's time, the vertical axis of cosmography that was horizontally expanded by the great age of navigation ended with geography and heliocentric astronomy. The acknowledgment of heliocentrism gave rise to the egalitarian view of the planets expressed by Christiaan Huygens (1629–95) in his *Cosmotheoros* (1698), to which we will turn shortly. The Catholic Church in Sidoti's lifetime officially adhered to Tycho Brahe's (1546–1601) geo-heliocentrism, which is a compromise between the heliocentric universe and the cosmographers' geo-centrism. To understand this transition and its moral implications, we will look first at Renaissance cosmography and then at Sidoti's contemporary, Huygens, not because Sidoti was influenced by Huygens, but because Huygens is an exemplary case of how Renaissance humanism as expressed in the Jesuit interpretation of the *anima rationalis* evolved through the Enlightenment.

The Spanish cosmographer and contemporary of Saint Ignatius, Pedro de Medina (c.1493–c.1567), who dedicated his *Libro de cosmographía* (Book of cosmography [1538]) to Holy Roman Emperor Charles V (1500–58, r.1519–56),²⁸ published his most popular book, the *Arte de navegar* (Art of navigation), in Valladolid in 1545, and it would soon be translated into many languages and published in France, Italy, the United Provinces, and England.²⁹ The *Arte de navegar*, translated into French under the title *L'art de naviguer*, starts with a large map of the Atlantic Ocean with the east coast of the Americas on the left stretching from Labrador in Canada in the north to the southern tip of Brazil in the south. On the right side of the Atlantic, Ireland, or "Hibernia," on the northwest coast of Europe, and "Gvineia" in West Africa, are mapped with Spain (the point of departure for many navigators in the Renaissance) at the center between northern Europe and Africa. One large wind rose is placed at the center of the Atlantic Ocean, which is also the center of this map, surrounded by sixteen more wind roses from which emanate the rhumb lines. This map is a nautical chart, also called a portolano, featuring the Atlantic Ocean at the center, and it is destined for navigators crossing the Atlantic to reach the New World from Europe.

L'art de naviguer is divided into eight books preceded by a detailed table of contents. Book 1 is about the geocentric system of the universe. Book 2 starts with a history of navigation beginning with Noah's ark and explains marine conditions with tides and weather, concentrating on how to foresee tempests in the sea. Book 3 is about winds for sailing ships, and Medina added many diagrams to explain how to follow rhumb lines with winds in an open ocean where no land can be seen. Book 4 explains how to calculate the position of the ship according to the altitude of the sun; Medina added a declination table of the sun. In this book, Medina explains the mechanism of a sundial by using a person's shadow. Sidoti showed Hakuseki how to calculate time with

28. Pedro de Medina, *A Navigator's Universe: The Libro de cosmographía of 1538 by Pedro de Medina*, trans. Ursula Lamb (Chicago: University of Chicago Press, 1972).

29. See Carla Rahn Phillips's introduction to Pedro de Medina, *L'art de naviguer de maistre Pierre de Medine, Espagnol: Contenant toutes les reigles [sic], secrets, & enseignemens [sic] à la bonne navigation / traduit [sic] de Castillan en François [sic], avec augmentation & illustration de plusieurs figures & annotations, par Nicolas de Nicolai [translator, 1517–83] du Dauphiné, Geographe du tres-Chretien Roy [sic no accents] Henri II* (New York: Scholars' Facsimiles & Reprints, 1992 [Lyon: Gvillavme Roville, 1554]), 7, 10.

his own shadow.³⁰ He was probably instructed in the same art of measuring time that Medina describes in his book. In a government hearing, Giuseppe Chiara (1602–85) counts cosmography or the art of making maps and *pilotagem* or the science of piloting a ship among the subjects of Jesuit learning.³¹ Book 5 is about how to determine the direction of the North Pole by Polaris, explained with diagrams. Book 6 describes how to use a magnetic compass. Book 7 is about the monthly phases of the waxing and waning of the moon. Book 8 is about the changing length of the day according to the seasons. While Medina's book is full of useful knowledge for navigators, as the translator of Medina's *L'art de navigver* reminds us, his art of navigation is embedded in "the total system defined by God."³²

On the first page of his art of navigation, Medina shows eleven concentric circles that describe the cosmographer's universe, the center of which is the Earth. As it is represented in this diagram, cosmography divides the universe between the celestial region and Earth. Earth, at the center and immobile, is composed of the four Aristotelian elements of earth, water, air, and fire. The celestial region consists of eleven bodies turning around the Earth in a perfect spherical orbit. From the closest to the Earth to the farthest away, they are the moon, Mercury, Venus, the sun, Mars, Jupiter, Saturn, and the eighth region, called the firmament, is the region of fixed stars. The ninth region is the luminous crystalline sphere. The tenth region is called the *primum mobile* because it moves from east to west. The last is called empyrean, which is the pure light that envelops the entire solar system. Nothing exists outside this pure light.³³ The cosmographers' universe is a closed universe enveloped by the divine light. God as the first mover who is not moved by any other entity is the absolute start that initiates the movement of this universe in the *primum mobile*. Within this God-driven system, mathematics is a privileged science, as it can prove the perfection of the creation by calculating its precision. Roger Bacon (1214–94) pioneered the association of mathematics with theology, as well as with the empirical sciences of optics, meteorology, and cartography. With his range of interests and methods, Bacon, along with Aquinas who was interested in meteorology, is one of the earliest precursors of cosmography

Medina shows in an exemplary way how Christianity is the foundation of cosmography in his *Libro de cosmographia*. In it, he explains that the discipline, composed of two Greek words, *cosmos* and *grapho*, means the description of the universe, and that cosmography is "engaged in describing heaven and the elements of which the world is made"; the world is called *mundo* because the universe of men is always in constant motion.³⁴ Among the concentric spheres, the lesser spheres move only if some of their properties are activated by the *primum mobile*. If some movement does not comply with the regularity stipulated by natural law, for example when a heavy body rises as if

30. Hakuseki, *Seiyō kibun*, 1–182, here 14.

31. "Okamoto San'emon hikki," *Shintei Seiyō kibun*, 322–49, here 346. The list of subject matters taught in the Jesuit institutions in Europe is also published in Ebisawa, *Nanban gakutō no kenkyū*, 18–24.

32. Phillips, "Introduction" (note 26 above), 13.

33. About this structure of the universe, see Medina, *Libro de cosmographia of 1538*, 165–66.

34. Medina, *Libro de Cosmographia of 1538*, 165.

it were lighter than fire, such movement is miraculous.³⁵ The cosmographer's universe is a perfect spherical universe wrapped by a divine light in which miracles have their place.

Claudius Ptolemy (c.100–68 CE) is often cited as the source of cosmography, and Medina himself mentions “Ptolemy and all the philosophers.”³⁶ Among the philosophers, we can certainly count Aristotle's *De caelo* and *De anima*.³⁷ Only human beings have *anima rationalis*, which distinguishes humans from animals because animals do not have the rational ability of mind. R. W. Southern dates the introduction of Aristotle into Christian theology to an approximately forty-year transition period between the archbishop of Canterbury Lanfranc's (c.1005–89) debate on the Eucharist with Berengar of Tours (d.1088), in which Lanfranc uses the Aristotelian notion of substance without naming Aristotle, and the first explicit mention of Aristotle by Saint Anselm (1033–1109) in his *Cur Deus homo* (Why God became man [1095–98]). Southern comments that in the eleventh century it was a risk to refer to a pagan author like Aristotle when talking about the Eucharist.³⁸ Yet by the Renaissance, Aristotle was fully embraced in Christian theology, and the Aristotelianism and Thomism of the Society of Jesus feature this trend.

This integration of Aristotle into Christian theology is based on the Greek theology built into the Aristotelian system. Aristotle acknowledges the necessity of theology beyond metaphysics, and he postulates the divine space in the actual sky dominated by the eternal movement of planets. Book 2 of *De caelo* starts with an acknowledgment of the eternity and immortality of the heavens, which are incorruptible, self-generating, and contain infinite time within themselves,³⁹ because the circular movement is without beginning and end, therefore eternal, and only the divine movement can be eternal.⁴⁰ Such super-human movement is spherical because the circle is without beginning and end, and the mathematical precision of spherical motion by which the universe is governed is not human work.⁴¹ For Aristotle, what cosmographers call the *primum mobile* is named the first heaven, and this is the same as the immortal and eternal heaven that is the first mover, without extension thus without any divisible parts and animated by endless movement in the infinity of time.⁴² Nothing precedes the *primum mobile* to initiate movement.⁴³ Thus the first mover is the absolute source of movement of stars and planets, although Aristotle experiences some difficulties in positioning the superposing spherical orbit of each planet in his geo-centric universe.⁴⁴

35. Medina, *Libro de Cosmographía of 1538*, 166.

36. Medina, *Libro de Cosmographía of 1538*, 9, 23, 201; Phillips, “Introduction,” 12–13.

37. I use: Aristotle, *Œuvre complètes*, ed. Pierre Pellegrin (Paris: Flammarion, 2022) (hereafter Aristotle 2002).

38. R. W. [Richard William] Southern, *Saint Anselm* (Cambridge: Cambridge University Press, 1990), 48–50.

39. Aristotle 2022, 737: *Traité du ciel*, 283b20–30 to 284a–284a10–15.

40. Aristotle 2022, 737: *Traité du ciel*, 286a10.

41. Aristotle 2022, 737: *Traité du ciel*, 257b15; *Physique*, livre 8, 267b15–25.

42. Aristotle 2022, 748: *Traité du ciel*, 289a10.

43. Aristotle 2022, 678: *Physique*, 258a–5.

44. Aristotle 2022, 754–58: *Traité du ciel*, 291b–293a10.

In the textbook written by Pedro Gómez (1533–1600) for the Japanese Jesuit seminary and entitled the *Compendium* (1593–94), we see an example of how this Aristotelian theology is Christianized. The *Compendium* is divided into three parts: it starts with astronomy, then advances to Aristotle’s *De anima*, and ends with theology. In this tripartite structure of the *Compendium*, astronomy is taught first, and then the Jesuit students advance to Aristotle’s *De anima*, which teaches the immortality of the soul, before starting the final part of theology. M. Antoni J. Üçerler, S.J. writes that “Gómez was well aware of the special interest of the Japanese in nature.”⁴⁵ Shintō is a form of animism that readily acknowledges spirits in natural phenomena like plants and topologies of mountains, and the sun goddess is its central deity. The Renaissance Jesuits somewhat underestimated the importance of Shintō, the indigenous religion hidden by the apparent prosperity of Buddhism, and mainly disputed with Buddhist monks. The Jesuits also used Buddhist, not Shintō, vocabulary when translating and explaining Christianity in the Japanese language. Shintō, however, made a forceful come-back in the Meiji period. More than Buddhism, Shintō actively restructured its doctrine under Christian influence during the Christian century of Japan from 1549 to 1639 and beyond. Hirata Atsutane, mentioned earlier, is an example of this Christian influence on Shintō in the eighteenth to the nineteenth century. The *Compendium* holds some clue about this bridge from Christianity to Shintō.

Now we come back to Gómez. Gómez wrote a Christian treatise of philosophy and theology for Japan, entitled *Compendium catholicae veritatis* (Compendium of Catholic truth), and divided it into three parts: *Breve compendium eorum, quae ab Aristotele in tribus libris de anima* (Abridged compendium about the soul by Aristotle in three books).⁴⁶ The first part is on the planets, the second on the soul, and the third on theology. Gómez based the second part on Aristotle’s *De anima* but abridged the description of the plants and animals and focused his argument on the immortal soul, the *anima rationalis* (rational soul). This rhetorical simplification paradoxically encouraged an emotive, not rational, connection between the heavens and the *anima rationalis*. In the following part, we will see how the heavens and the *anima rationalis* are connected in the Jesuit preaching in their Japan mission.

Hiraoka Ryuji points out that in this Jesuit textbook written for Japanese seminaries by Gómez, the third part of theology entitled *Compendium catholicae veritatis* contains detailed mathematical calculations about the size of planets derived from Christopher Clavius’s (1538–1612) commentary on Johannes de Sacrobosco’s (c.1195–c.1256) *Tractatus de sphaera* (Treatise on the globe [1230]).⁴⁷ Hiraoka adds the translation of this

45. Antoni Üçerler, *The Samurai and the Cross* (Oxford: Oxford University Press, 2022), 43.

46. Obara Satoru, SJ (1929–2016) *Iezusukai Nihon Collegio no Kōgi yōkō* [Compendium for the Japanese college of the Society of Jesus], 3 vols. (Tokyo: Kyōbunkan, 1999), 3:279.

47. Hiraoka Ryuji, “Nanban uchūron ni okeru Clavius: Gómez ‘Shingaku yōkō’ chū no tenmongaku teki sūchi o megutte” [Clavius in Nanban cosmology: Astronomical data in Pedro Gómez’s *Compendium catholicae veritatis* and its sources], *Kagakushi kenkyū* [Study on the history of science] 47, no. 246 (Summer 2008): 95–111, here 95. About the influence of Sacrobosco and Clavius on Gómez’s *Compendium*, see also Üçerler, *The Samurai and the Cross*, 42–43.

passage on astronomy in the appendix of his article.⁴⁸ The text translated by Hiraoka corresponds to the cosmographers' universe, very similar to the one we just saw in Medina. The Renaissance cosmographers kept compiling more details and new information derived from the new data coming from the great age of navigation. The Society of Jesus added to this modern feature the basic view of the universe taken from Aristotle and developed by Ptolemy and Aquinas.⁴⁹ Before the Jesuits, cosmographers were already describing the super-human precision and perfection of the divine creation by using mathematics and the observation of planets. Aristotle himself complains that after Socrates, philosophy started to deal only with abstract moral notions. In many places of his writings, Aristotle agrees with Anaxagoras (c.500–480 BCE), the pre-Socratic natural philosopher, but one point on which Aristotle disagrees with Anaxagoras is his premise that non-being (which does not have any material existence) engenders nothing.⁵⁰ To overturn Anaxagoras's premise, Aristotle insisted that non-being could engender something. This logic that Aristotle demonstrated in *Physics* allowed the Christian theologians to argue that the greatest form of non-being, namely God, could engender something that is this world.

There are three types of substances, says Aristotle, of which two are mobile and the third is immobile; and that which is immobile is derived from the eternal substance.⁵¹ Aristotle defines physics as the study of that which moves.⁵² Therefore, the study of that which is immobile is beyond the domain of physics. To define the first mover that stays immobile, Aristotle touches on the domain of metaphysics contiguous to Greek gods: the first mover remains a pure possibility whose inherent power is to actualize the first movement without itself moving, thus its substance is an act, and as such without material being, and thus eternal.⁵³ All that which is a pure possibility has two ways to go: it can actualize itself, or it actualizes the other but itself stays possible without actualizing its potential, which is to say that there is a possibility of being that stays a pure possibility.⁵⁴ This last category of non-substance is the first and ultimate goal of what is desirable and intelligible; and the first desirable is that which is beautiful,⁵⁵ and the first intelligible is the intellection of good in its highest point, in other words at the point when the intellect touches upon what is divine.⁵⁶ Since the first mover has no extent in space, is not composed of any divisible parts, and persists in infinity of time, and since nothing finite can possess infinite power, the first mover is infinite, impassible, and inalterable.⁵⁷ This first mover is therefore the pure power of possibility, and the

48. Hiraoka, "Nanban uchūron ni okeru Clavius," 108–10. This passage corresponds to: Obara Satoru, SJ., *Iezusukai Nihon Collegio no Kōgi yōkō* II (Tokyo: Kyōbunkan, 1998), 2: 217–223.

49. Thomas Aquinas, *In Aristotelis libros de Caelo et mundo, De generatione et corruptione, Meteorologicorum expositio*. See Ebisawa, *Nanban gakutō no kenkyū*, 31, 38n5. See also Üçerler, *The Samurai and the Cross*, chapter 1, 42–50, especially 39–49.

50. Aristotle, *Physique*, 187a28–188a19.

51. Aristotle, *Métaphysique*, 1071b.

52. Aristotle, *Métaphysique*, 1061b5.

53. Aristotle, *Métaphysique*, 1061b20.

54. Aristotle, *Métaphysique*, 1061b25–30.

55. Aristotle, *Métaphysique*, 1072a25–30.

56. Aristotle, *Métaphysique*, 1072b15–25.

57. Aristotle, *Métaphysique*, 1073a5–10.

first movement caused by the first mover is circular,⁵⁸ because the circular movement is infinite, continuous, and one.⁵⁹ With this chain of logic, Aristotle connects theology to the circular movement of the heavens. He thus proved that the non-being without any material presence can engender something in the material world.

This argument of the first mover in his *Metaphysics* is directly connected to the last part of his *Physics*, in which Aristotle proves with a series of demonstrations on movements that the first mover does not have any spatial extent and is therefore indivisible and infinite in time, because without extent in space it is incorruptible and endowed with an infinite potential to act upon and move others without itself moving.⁶⁰ His metaphysics is so closely woven with physics that it is not possible to separate them, and, more importantly, the meeting point between physics and metaphysics, when played out in astronomy, turns into theology through the notion of the first heaven that is immobile and eternal.⁶¹ Astronomy is the study of the substance of planets touched by an eternal motion.⁶² This Aristotelianism to which the Society of Jesus adhered worked to the Jesuits' advantage because they could stay concrete with the diagram of planets, and while showing stars that are visible to the naked eye, the Jesuits could keep expounding theology beyond metaphysics with concrete examples in the sky. The eleven concentric spheres with planets turning around the immobile Earth is the first diagram in Medina's *L'art de naviger*. This cosmographer's diagram representing the divine order is explained, as Hiraoka's translation shows, in the part devoted to theology in the tripartite structure of Gómez's *Compendium*. It is no wonder that Gómez included it in theology.

Besides the heavens, which is the outermost material existence that touches upon the divine, Aristotle has another immortality, this time in the innermost human mind, which also touches upon the divine. In his *De anima*, the argument on *anima rationalis* comes from the description of a part of the soul called intellective, destined for knowing and thinking, and therefore this part of the soul is of the reason.⁶³ The intellective soul has no spatial extension and is therefore an entity independent from the body, and it has no reality before it starts thinking, and yet when it grasps an intelligible of a higher level, it allows the mind to understand things better.⁶⁴ The intellective soul can think about itself,⁶⁵ because the subject who is understanding is the same as the object understood by the thinking subject.⁶⁶ As the intelligence is producing its own subject that is intelligible, once this intellective soul is separated and identified, it is immediately reduced to its essence, which is immortal and eternal.⁶⁷ It is so because no material substance is involved, and therefore not only is it free from any extension in space but also from any temporal corruptibility; therefore it is immortal.

58. Aristotle, *Métaphysique*, 1072b5–10.

59. Aristotle, *Métaphysique*, 1073a30–35; *Physique*, 261b25–30.

60. Aristotle, *Métaphysique*, 267b15–25.

61. Aristotle, *Métaphysique*, 1072a20–25, 1073a30–35.

62. Aristotle, *Métaphysique*, 1073b5.

63. Aristotle 2022, *De l'âme*, 429a5–15.

64. Aristotle 2022, *De l'âme*, 429a20–25, 429b.

65. Aristotle 2022, *De l'âme*, 429b5.

66. Aristotle 2022, *De l'âme*, 430a1–4.

67. Aristotle 2022, *De l'âme*, 430a20.

The second book of the *Compendium* about *De anima* is divided into thirteen chapters. The first two are about the passivity of the soul to exercise its power of intellect and will.⁶⁸ Aristotle distinguishes the executive intelligence and the speculative intelligence,⁶⁹ and people who are their own masters obey the former in action, guided by wishes that are the form of appetite that makes movement conform to reason.⁷⁰ When the intellectual soul moves people to real action, it is the domain of practical philosophy, which is best represented by the analysis of good and beautiful in the *Nicomachean Ethics*. It is not particularly Aristotelian to start the introduction of *anima rationalis* with passivity, but Gómez Christianizes it, and he does so as the *anima rationalis* is a tool of communication with the divine will. In Gómez's *Compendium*, two immortals, the macro-cosmos of the analysis of the heavens and the micro-cosmos of *anima rationalis*, meet, and he achieves this meeting in the passivity of the human mind. Gómez makes this correspondence of macro-cosmos and micro-cosmos easier to understand in his *Compendium* by short-cutting Aristotle's demonstrations in the *Physics*.

The visitor of India Alessandro Valignano (1539–1606) decided not to teach Aristotle in Japan.⁷¹ But even before Valignano's educational reforms of 1580, Francisco Cabral (1533–1609), the superior of the Japanese Society of Jesus, reported in his letter of September 8, 1573 that, in 1571, when he was writing his refutation of Buddhism, he noticed that Buddhist cosmogony resembles Aristotle's *Physics*, book 1, and to refute Buddhism he needed books on Aristotelian philosophy in Japan.⁷² This shows that Aristotle's *Physics* was introduced first and foremost for the rhetorical purpose of defeating Buddhists in theological debates. The practical nature of the last part on theology in the tripartite structure of Gómez's *Compendium* is also observed by Asami Masakazu, who concludes, in his book about idol worship during the Christian century of Japan, that Gómez integrated cases of conscience in the domain of ethical theology in the third part of the *Compendium* devoted to theology. For Asami, by structuring a new theological order in Japan, Gómez tried to generalize it to all non-Western mission grounds.⁷³ We may be able to conclude that Gómez's short-cut connection between the macro-cosmos of the heavens and the micro-cosmos of *anima rationalis* in theology in the *Compendium* was meant to be useful in convincing the Japanese public through preaching.

We can see how the Aristotelian macro- and micro-cosmos connected by Gómez was applied to the act of preaching in *Myōtei mondō* (The Myōtei dialogues), whose authorship is attributed to the Japanese Jesuit Fukansai Habian and dated to 1605. *The Myōtei Dialogues* are a fictive conversation between two women, Myōshū and Yūtei; the latter is Christian and tries to persuade the former by refuting Buddhism, Confu-

68. Üçerler, *The Samurai and the Cross*, 46.

69. Aristotle 2022, *De l'âme*, 433a15.

70. Aristotle 2022, *De l'âme*, 433a5, 20–25

71. Alessandro Valignano, *Les jésuites au Japon, Relation missionnaire* (1583), trans. and ed. J. [Jacques] Bésineau, S.J. (Paris: Desclée de Brouwer, 1990), 147.

72. Kamei Takashi, H. Cieslik, S.J., and Kojima Yukie, *Nihon Iezusu-kai ban Kirishitan yōri* [*Doctrina christiana*, edition of Japanese Society of Jesus] (Tokyo: Iwanami Shoten, 1983), 25.

73. Asami Masakazu, *Kirishitan jidai no gūzōsūhai* [Idol worship in the Christian century] (Tokyo: Tokyo Daigaku Shuppankai, 2009), 338.

cianism, and Shintō and by illustrating Christianity at the end. Among the three refutations, the refutation of Buddhism is the longest and the most important. Yūtei starts her refutation of Buddhism with astronomy and cartography, both of which are the domains of cosmography, and she ends it by demonstrating the superiority of the European geography of the Buddhist lands that include the Taklamakan Desert between India and China, a corridor of Buddhist transmission to East Asia about which Buddhist maps stay silent.⁷⁴ Then by taking up a recurring theme of the Jesuit refutation of Buddhism that man's inner life is a void,⁷⁵ the Christian Yūtei presents Aristotelian *materia prima*⁷⁶ and argues that God, who created *materia prima*, is superior to all material beings.⁷⁷ Having thus argued the anteriority and therefore the superiority of the divine creation, Yūtei advances to present Aristotelian *anima rationalis*, the immortal soul,⁷⁸ and concludes that Christians alone have an afterlife, whereas Buddhists have only void.⁷⁹ This logical path guides a listener, according to the rhetorical structure of the argument, to baptism.

Orii Yoshimi highlights the importance of *anima rationalis* in the Jesuit mission in Japan by studying the *Fidesu no kyō* (Testament of faith), the Japanese translation of the original *Introducción del simbolo de la fe* (Introduction to the symbol of faith) by Luís de Granada (1504–88), published in Nagasaki in 1611.⁸⁰ Quoting Obara Satoru, Orii shows that a passage on the immortality of *anima rationalis*, not in the Latin original of Gómez's *Compendium*, has been added to the Japanese translation of this text; then by taking up another text of the *Introducción del simbolo de la fe*, Orii demonstrates that the Japanese translation omitted a large part of the Spanish original and replaced it with a new passage, amounting to twenty percent of the total book, that explains the immortality of *anima rationalis*.⁸¹

Especially in the small additional question-and-answer in the *Fidesu no kyō* quoted by Orii,⁸² we see that the three Aristotelian categories of *anima vegetativa*, *anima sensitiva*, and *anima intellectiva* (the same as *anima rationalis*) are presented in a shortened way. Then by entirely omitting the logical sequence of demonstration that encompasses the *Physics* and *Metaphysics*, in which Aristotle proves the timeless and substance-less nature of the first mover and the *anima intellectiva*, the Japanese demonstration jumps to the divine creation of the world and the timeless eternity of the planetary movement to justify the immortality of the human rational soul. The very expression “there is neither beginning nor end in the universe” in this passage is from the wording of Aristotle's demonstration that only an immaterial entity can be free of beginning and

74. Fukansai Habian, *Myōtei Dialogues*, 60–64.

75. Valignano, *Les jésuites au Japon*, 85n9.

76. Yūtei identifies the four European elements of earth, water, fire, and wind with the five Chinese phases of earth, water, fire, wood, and metal. See Fukansai Habian, *Myōtei Dialogues*, 135, 135n13.

77. Fukansai Habian, *Myōtei Dialogues*, 166.

78. Fukansai Habian, *Myōtei Dialogues*, 173.

79. Fukansai Habian, *Myōtei Dialogues*, 178, 181.

80. Orii Yoshimi, “Taikō shūkyō kaikaku to senpuku kirishitan o kirishitan-ban de tsunagu” [Connecting the Counter-Reformation and the hidden Christians through the publications of the Jesuit Mission Press], in *Kirishitan to shuppan* [Christians and publications] (Tokyo: Yagi Shoten, 2013), 169–91, here 175–81.

81. Orii, “Taikō shūkyō kaikaku,” 176. See also Üçerler, *Samurai and the Cross*, 45–46.

82. Orii “Taikō shūkyō kaikaku,” 179.

ending. In this logical sequence in the *Fidesu no kyō* as well as the one in *The Myōtei Dialogues*, we see the omission of Aristotelian physics from the theological sequence of persuasion arranged by the Society of Jesus for its Japan mission. This structure of persuasion must have been the collective work of the Jesuits from the time of Cabral. The *Myōtei Dialogues* are an example of its application. That Fukansai Habian's other book, *Hadaiusu* (Deus destroyed),⁸³ which was written after his apostasy, does not show the same orderly logical sequence of argument indicates that the *Myōtei Dialogues* were not written by him alone.

Furthermore, this short-cut association of all living things in the world ranging from plants, animals, and humans to the starry world of the heavens has a direct appeal to the Japanese indigenous sensitivity trained in Shintō. In the unprecedented syncretic correspondence of thoughts drawn from Shintō, Buddhism, Confucianism, and Christianity that took place in the middle of the sixteenth century, the school of thought called Shingaku, born at this precise time, takes as its fundamental logic the correspondence of heart/mind between the heavens and humans. The Japanese twist involved here is the transformation of *anima rationalis* to the emotive question of heart/mind as the connecting point of human beings with the heavens. Under the drastic proscription of Christianity throughout the Edo period, a method of history that relies on written documents faces a major challenge to prove any Christian influence during this time, and Shingaku is no exception.

Yet despite this documentary difficulty, the relationship between Shingaku and Christianity has been studied in the history of thoughts, a field relatively free from the written proofs of events in the sense that what is occurring in the human mind cannot always be pinpointed with dates like social events. I propose approaching the comparison of Shingaku and Christianity through the notion of *tentō* (the way of heaven) from the point of view of intellectual history. The first text of Shingaku is dated between 1600 and 1623, when Christianity was still alive in Japan, while the oldest existing book of Shingaku, entitled the *Shingaku gorinsho* (Five books of ethics in the study of heart/mind), was published in 1650 and then reprinted in 1656 and 1665,⁸⁴ when Christianity started disappearing under a severe proscription. The *Shingaku gorinsho* was reedited by changing the title up to the point when the *Honsaroku* (Records of Honda Masanobu the lord of Sado) was written between 1667 and 1677 without yet having this title.⁸⁵ When the *Honsaroku* was printed in 1677 with the post-face of Hayashi Gahō (1618–80) of the Hayashi family who succeeded the position of government Confucian scholar from father to son, Shingaku was officially accepted in

83. "Hadaiusu," *Kirishitansho, Haiyasho*, 423–47. Hucan's signature is on the last page; *Deus Destroyed*, trans. George Elison (Cambridge, MA: Harvard University Press, 1988).

84. Ishige Ryōichi, "Shingaku gorinsho no seiritsu to sono shisō teki tokushitsu" [Establishment of the *Shingaku gorinsho* and its characteristics of thoughts], in *Fujiwara Seika, Hayashi Razan*, ed. Ishige Ryōichi and Kanaya Osamu (Tokyo: Iwanami Shoten, 1975), 490–504, here 491.

85. Yamamoto Shinkō, *Gisho Honsaroku no seisei* [Evolution of the *Honsaroku* with the forged authorship] (Tokyo: Heibonsha, 2015), 125, 173. The *Kana seiri* (Principles of human nature written in phonetic alphabet *kana*) in 1691 and 1722 was based on the *Shingaku gorinsho*, and the *Chiyo motogusa* (Grasses that become the seed of one thousand generations) published in 1788 is based on the *Kana seiri*. See Yamamoto, *Gisho Honsaroku no seisei*, 101.

the mainstream of Edo officialdom. As well as printed books, there are also numerous manuscript copies,⁸⁶ of which at least some are dated 1762, 1777, and 1794.⁸⁷ None of the above books are signed, and some attributions, for example to Honda Masanobu, have been refuted.⁸⁸

One explanation for the lack of authors' signatures is the suspected Christian inspiration. To avoid punishment, no one claimed authorship. In 1714, Muro Kyūsō wrote a letter in which he reports a conversation with Hakuseki, where it is revealed that their common teacher Kinoshita Juan thinks that the notion of *tentō* in the *Honsaroku* implicitly refers to the Christian God.⁸⁹ This epistolary conversation proves that the mainstream Edo Confucians, namely Kinoshita Juan and his two disciples Muro Kyūsō and Arai Hakuseki, were aware of the suspected connection of the *Honsaroku* with Christianity. In modern times, Ebisawa Arimichi argues that under the appearance of Shintō and Confucianism, the *Singaku gorinsho* and the subsequent Shingaku books profess the notion of *tentō*, which resembles the Christian God, and this resemblance is provoked in contact with Christian warriors who spread the concept of a God like the one explained in the *Myōtei Dialogues*⁹⁰ during the time that Charles Ralph Boxer called the Christian century of Japan (1549–1650). Mitsuhashi Takeshi carefully examines the meaning of the term *tentō* in the books published by the Jesuit Mission Press and concludes that the Society used it to translate “God” at one point in their mission and that it then spread to a larger population, where it came to mean something vaguely similar to the personified god while also retaining differences from the Christian notion of God.⁹¹ Koyama Mako objects to Ebisawa and Ishige and argues that the Jesuit use of the term *tentō* to designate God was inspired by the Japanese religion Shintō, not the other way around.⁹² Whether Christianity influenced Shintō or other systems of thought in Japan, or Shintō influenced Christianity, the above researchers acknowledge the contact and exchange between Japanese thoughts and Christianity through the notion of *tentō*.

Shingaku, which promoted the concept of *tentō* (*tentō shisō*), emphasizes the correspondence between the heavenly and human heart/mind. For, in Shingaku, the

86. Ishige, “*Shingaku gorinsho* no seiritsu,” 490.

87. Willem J. Boot, “Tentō ou la voie du ciel” [The way of heaven or the voice of heavens], *Repenser l'ordre, repenser l'héritage, paysage intellectuel du Japon (XVIIe–XIXe siècles)* [Rethinking order, rethinking heritage: The intellectual landscape of Japan, seventeenth–nineteenth centuries], ed. Frédéric Girard, Annick Horiuchi, and Mieke Macé (Geneva: Droz, 2002), 87–123, here 93–96.

88. About the false attribution to Honda Masanobu, and its circumstance, see Yamamoto, *Gisho Honsaroku no seisei*, 252–60.

89. Ishige, “*Shingaku gorinsho* no seiritsu,” 491.

90. Ebisawa Arimichi, “Kirisutokyō to Nihon shūkyō tonō kōshō sōseitsu” [Synthetic analysis of exchanges between Christianity and Japanese religions], in *Nihon shisō* [Japanese thoughts], “Tokushū Kirisutokyō to shin, ju, futsu no shōtotsu to yūwa” [Special issue on collisions and harmonies among Christianity, Shintō, Confucianism, and Buddhism] 6 (1978): 2–23, here 19.

91. Mitsuhashi Takeshi, “Kirishitan shiryō ni miru ‘tentō’ ni tsuite” [The way of heaven seen in Christian documents], in *Dentō to kakushin* [Tradition and renewal], ed. Ishige Tadashi (Tokyo: Perikansha, 2004), 163–95.

92. Koyama Mako, “Kirishitan shūmon to Yoshida Shintō no setten: Tentō to iu go o megutte” [The contact point of Christianity with Yoshida Shintō: On the term *tentō*], *Kirishitan kenkyū* [Study of Christianity] 20 (1980): 225–58.

heavens also have a heart. A passage in the *Kana seiri* states that the human soul goes back to the heavens where it finds the true homeland.⁹³ To this passage, the annotator put the explanation that this notion shows an echo of Christian paradise.⁹⁴ This annotation is unusual in that the standard strategy for annotating Edo prose texts is to systematically attribute their sources, by annotations, to neo-Confucianism. In neo-Confucianism, the human being has two souls, not one. Hakuseki explains that man's soul is composed of a lighter soul called *kami* that goes up to heaven and of a heavier soul called *oni* that returns to earth, and when the two souls do not split well, they hover in the midair as ghosts.⁹⁵ Kumazawa Banzan also associates the god *kami* with the positive force that brings happiness, and *oni* as the negative force.⁹⁶ The notion that the human being has just one soul that needs to choose either to go to heaven or to hell is not neo-Confucian but Christian, and Shingaku proposes that the single soul endowed with heart/mind granted by heaven returns to its homeland in the heavens.

We now return to Sidoti's Europe, where cosmography underwent a dramatic change to modern astronomy. Nicolaus Copernicus (1473–1543) published *On the Revolution of the Heavenly Bodies* in 1543, the year of his death; Brahe, who worked in the observatory Castle of Uraniborg that had been granted to him by Frederic II of Denmark, published his results in 1609 and 1619; Galileo Galilei (1564–1642) published his discovery of Jupiter's satellites and the mountains on the moon's surface in 1610 and was tried in 1632 for his heliocentrism; and Isaac Newton (1642–1727) published the *Principia mathematica* in 1668. In Sidoti's time, Catholicism adopted Brahe's geo-heliocentrism, which maintained the centrality of the Earth (the sun turns around the immobile Earth with other planets of the solar system that are turning around the sun), but all the same it broke the perfection of the cosmographers' universe, which supported astronomy and theology at the same time.

Ebisawa argues that the Society of Jesus brought an unprecedented equality in feudal Japan, that the lowest in the society, women and children, or silent common people are equals.⁹⁷ As far as they have *anima rationalis*, which, by definition, all humans do, all people are equals. It may be that the egalitarian attitude applied by the Society of Jesus in Japan based on the *anima rationalis* was more radical than the Jesuit way of proceeding in Europe itself. This Renaissance Jesuit humanism changed form and became generalized in the Enlightenment. Take Huygens as an example. The humanist function of *anima rationalis* stayed the same in Sidoti's Europe at the beginning of the eighteenth century but was transferred into a form of astronomy that professed heliocentrism, although Sidoti himself did not adhere to heliocentrism since it was not yet approved by the Vatican. We can capture the atmosphere of his time as a proof of a new scientific humanism with the *Cosmotheoros* written by Sidoti's contemporary

93. "Kana seiri," *Fujiwara Seika, Hayashi Razan* (Tokyo: Iwanami Shoten, 1975), 243.

94. "Kana seiri," 388n17.

95. Hakuseki, *Kishinron, Arai Hakuseki* (Tokyo: Iwanami Shoten, 1975), 144–81, here 148, 152.

96. Banzan, *Shūgi washo*, 33, 368. As Banzan's source text, the annotation on page 368 sends us to *The Book of Rites*. Hakuseki must be referring to the same book that is one of the Five Books of Confucianism.

97. Ebisawa, "Kirisutokyō to Nihon shūkyō," 6, 10.

Christiaan Huygens and posthumously published in 1698 by his brother, the statesman Constantijn Huygens (1627–97).⁹⁸

Sidoti's contemporary, Huygens, was a Dutch scientist who worked on the theory of light and optics, and he improved the telescope and the marine clock to measure the longitude in the open sea. Due to the influence of his father, also named Constantijn Huygens (1596–1687), who was a friend of René Descartes (1596–1650), Christiaan Huygens was a Cartesian, except that he did not agree with Descartes's mechanistic analysis of the human body. The French title of his *Cosmotheoros*—*La pluralité des mondes* (The plurality of the worlds)—shows well the nature of his book. Quoting Copernicus, Brahe, and Johannes Kepler (1571–1630), Huygens states that in his time astronomers no longer doubted that the Earth turns around the sun.⁹⁹ From this observation of heliocentric planets, Huygens jumps to a sort of horizontal and geographical humanism based on the observation of people found in the New World. The solar system must also have living beings, Huygens argues, because people, plants, and animals in the Americas resemble those in Europe, which means that the Author of this nature did not make too many variations, which he could have done if he had liked.¹⁰⁰ So, he who created this world must have done the same on the other planets of the solar system.¹⁰¹ Huygens concludes that any supposed variations among interstellar creatures would be caused, as on Earth, where the people and civilizations vary according to the climate, by different distances from the sun.¹⁰² In Huygens, the egalitarian thought that all humans are equal is expanded to all planets in the solar system. As long as the creatures have a longing to know the truth that governs this universe, they are equals. This longing promotes science. Daniel Špelda points out that Huygens “was one of the first to begin to link the idea of scientific progress with cultural and civilizational history.”¹⁰³ Thus, Huygens's thought could potentially be used in the future to rank countries and terrestrial and interstellar people according to the advancement of sciences by expanding his humanism to the planets of the solar system.

Both the Society of Jesus and Sidoti reached the same conclusion, namely humanism on the matter of the equality of creatures based on the human faculty of reason. Huygens thinks that in sciences, people in Asia, the Americas, and Africa did not go “beyond the bounds of nature in their inquiries after knowledge.”¹⁰⁴ Huygens then thinks that, like Europeans, all people, including interstellar beings, must desire to

98. The first edition is: Christiaan Huygens, *Kosmotheōros sive De terris coelestibus, earumque ornatu, conjecturae* [Theory of the world or conjectures about the celestial earth-equivalent, and with their creatures] (The Hague: Adriaen Moetjens, 1698). I use the following English and French translations: Christiaan Huygens, *Cosmotheoros or, conjectures concerning the inhabitants of the planets*, a new edition, corrected (Glasgow: printed for Robert Urie, 1762); Huygens, *La pluralité des mondes*, trans. from Latin by M. Du Four (Paris: J. Moreau, 1702).

99. Huygens, *La pluralité des mondes*, 22–23.

100. Huygens, *La pluralité des mondes*, 40–41.

101. Huygens, *La pluralité des mondes*, 58–59.

102. Huygens, *La pluralité des mondes*, 41–42.

103. Daniel Špelda, “Huygens' Stargazing Scientists: The Idea of Science in *Cosmotheoros*,” *History of European Ideas* 44, no. 8 (2018): 1111–26, here 1122.

104. Huygens, *Kosmotheōros sive De terris*, 58. The quotation is from Huygens 1762, 53.

know the world better because this longing is given to us by nature.¹⁰⁵ In Christiaan Huygens, the vertical universe of cosmography detailed in Gómez's *Compendium* is turned into the horizontal universe built on the equality of all planets and peoples turning around the sun.

We come back to Japan to conclude. The switch from the vertical to horizontal axis also occurred during Japan's modernization. Among the Western science preserved and promoted throughout the Edo period, the seed of modern astronomy sown in Japan by the Renaissance Jesuits has been studied most recently by Hiraoka Ryuji. His study includes texts such as the *Kenkon bensetsu* (Explanation of the heaven and the earth) attributed to Cristovão Ferreira (c.1580–1650);¹⁰⁶ the *Nigi ryakusetsu* (Abridged explanation of the heaven and the earth) (An'ei¹⁰⁷ 5 eleventh month [1776]), which trimmed the Christian references, done probably by Kobayashi Kentei (1601–83), from the first part of Gómez's *Compendium* entitled *De sphaerae*;¹⁰⁸ the *Nichigetsu keiwa kai* (Explanation of the sun and the moon) (An'ei 5 eleventh month [1776]) by Motoki Ryōei (1735–94);¹⁰⁹ and the *Tenmon-kata kakitome* (Notes of the Office of Astronomy) (post-face, 1787).¹¹⁰ A totally new trend was added to this astronomy of the Society of Jesus preserved in Japan with the arrival of the *Traité d'astronomie* (Treatise of astronomy) written by Joseph-Jérôme de Lalande (1732–1807) and imported to Japan in Dutch translation and partially translated by Takahashi Yoshitoki (1764–1804) into Japanese.¹¹¹ His son Shibukawa Kagesuke (1787–1856), who was adopted by the hereditary family of Shintō priests who had held a monopoly over astronomy and the calendar since the medieval period in Japan, synthesized European astronomy including Lalande with Shintō astronomy. This example shows that in the tripolarity of knowledge standing on three geographical pillars of Japan, Europe, and China, European science as accepted in Japan has a complex geographical structure composed of Renaissance Japanese Jesuits, the Jesuits in the China mission, and Dutch and French sources of astronomy, which was added to Shintō's knowledge of the calendar by the beginning of the nineteenth century.

105. Huygens, *La pluralité des mondes*, 40–41.

106. Hiraoka Ryuji, "'Kenkon bensetsu' sho shahon no kenkyū" [Discourse on the heavens and the earth, study of the first edition], *Nagasaki Reikishi Bunka Hakubutsukan kiyō* [Bulletin of research published by the Museum of History and Culture in Nagasaki] 1 (2006): 51–63.

107. Japanese calendric years are counted by "eras," and each "era" has its own proper name, here An'ei (c.1772–c.1780 in Gregorian calendar). The change of an era is marked either by the enthronement of a new emperor or by a natural disaster, after which event a new era starts with year one.

108. Hiraoka Ryuji, "Gomez 'tenkyūron' no seiritsu to kōsei: Iezusu-kai Nihon Collegio no uchūron kyōkasho to sono ōbun genten" [The genesis and structure of Gómez's *On the Globe*: The textbook about the universe in the Jesuit colleges and their European originals], *Nagasaki Reikishi Bunka Hakubutsukan kenkyū kiyō*, 4 (2009): 43–64; Hirose Hideo, "Kobayashi Kentei to Nigi ryakusetsu" [Kobayashi Kentei and the *Abridged Explanation of the Heaven and the Earth*], in *Kinsei Kagaku shisō, ge* [Scientific thoughts in the premodern era, volume 2] (Tokyo: Iwanami Shoten, 1971), 465–70.

109. Hirose Hideo, "Yōgaku to shitenō tenmon gaku" [Astronomy as Western science], in *Yōgaku, ge* [Western science, volume 2] (Tokyo: Iwanami Shoten, 1972), 419–40, here 426.

110. Hiraoka Ryuji, "Shahon 'Tenmon-kata kakitome' ni miru Nanban-Rangaku-kei tenmongaku no konzai" [Mixture of Portuguese and Dutch astronomy in the manuscript of "Tenmon-kata kakitome" in the memo of the Office of Astronomy], in *Kagakushi kenkyū* [Study of the history of science] 46 (2007): 65–77.

111. Nakayama Shigeru, "Takahashi Yoshitoki to 'Lalande rekisho kanken'" [Takahashi Yoshitoki and *An Abridged Treatise on the Book of Calendar* by Lalande], in *Yōgaku, ge*, 473–78, here 474–75.

Despite the proscription, the administrative report detailing Sidoti's arrival in Japan, entitled the *Nagasaki chūshin Rōmajin no koto* (Report from Nagasaki about the Roman [i.e., Sidoti])¹¹² was leaked to the public. The abridged versions of this administrative document of Hakuseki's interview of Sidoti, locked-up by the government as proscribed records, clandestinely went out to the public with the *Rōmajin kanjō* (Record of interrogation of the Roman).¹¹³ Its spread gives us some idea of its diffusion. According to the signature, the *Rōmajin kanjō* was copied by Sakuma Koreaki (1744–99) in 1778.¹¹⁴ One copy preserved in the family of Ōtsuki Fumihiko (1847–1926),¹¹⁵ the grandson of the Rangaku scholar Ōtsuki Gentaku (1757–1827) (“Rangaku” or Dutch studies refers to all studies of European sciences),¹¹⁶ is bound with the *Kai hentai* (Occupation of China by the Manchu), which reports the information gathered from Chinese sailors and edited by Hayashi Gahō in 1674. The *Kai hentai* reported the dynastic transfer in China from the Mings (*ka* means Chinese) to the Qings (*i* means Manchu in this context) in 1644. The *Rōmajin kanjō* and the *Kai hentai*, bound together in one volume, cover Christianity, Europe, and the world geography reported by Sidoti and the political situation in China. At the end of this co-bound book preserved in the Ōtsuki family, a note explains that there are two manuscripts copied by hand about Sidoti in the Ōtsuki family library: one is Hakuseki's *Seiyō kibun*, and the other is the *Rōmajin kanjō*. The former comes with an epilogue signed by Kyōkaen, dated Kansei 7 (1795).¹¹⁷ Kyōkaen is a penname of Edo essayist and poet Ōta Nanpo (1749–1823).¹¹⁸ His signature proves that Sidoti's account spread in literary circles at the end of the eighteenth century.

We come back to the essay *Sangan yokō* written by Aizawa Seishisai in the margin of his copy of Arai Hakuseki's *Seiyō kibun*. Aizawa states that Hakuseki has a tripolar

112. The document published by Miyazaki is the official report copied by Arai Hakuseki and preserved by Arai Kiyoshi, the tenth descendant of Arai Hakuseki.

113. Sakuma Koreaki “*Rōmajin kanjō*,” MS 1778, National Diet Library call no. 131-123, printed in Miyazaki, *Kakure Kirishitan*, 278–301.

114. Sakuma, “*Rōmajin kanjō*,” 278, 300. The National Diet Library of Tokyo owns one manuscript copy entitled the *Rōma kanjō*, which was copied and edited by Sakuma Koreaki; call no. 131-123. See <https://ndlonline.ndl.go.jp/#!/detail/R300000001-I000007327892-00> (accessed November 30, 2023).

115. Sakuma, “*Rōmajin kanjō*,” 300–1.

116. Ōtsuki Fumihiko is the second son of Ōtsuki Bankei (1801–78), who is the son of Ōtsuki Gentaku (1757–1827). Ōtsuki Bankei was a Confucian scholar, and Ōtsuki Fumihiko was a linguist of the Japanese language. Ōtsuki Gentaku was a Dutch-language scholar and doctor who participated in the translation of the *Kaitai shinsho* (The new book of anatomy) published in 1774. The *Kaitai shinsho* is the first book of anatomy translated into Japanese from the Dutch translation entitled the *Ontleedkundige Tafelen* of the German book the *Anatomische Tabellen*. About Ōtsuki Fumihiko, see Takayanagi Mitsutoshi, *Nihonshi jiten* [Dictionary of Japanese history] (Tokyo: Kadowaka Shoten, 1995), 143; about *Kaitai shinsho*, see Sugita Genpaku, “*Kaitai shinsho*,” in *Yōgaku* [Western studies] (Tokyo: Iwanami Shoten, 1972), 2:207–359, here 212–16. About Ōtsuki Bankei, see the author's page in the National Diet Library online: <https://id.ndl.go.jp/auth/ndlna/00271457>. About the three-generations of the Ōtsukis, see the homepage of their hometown Ichinoseki City: <https://www.city.ichinoseki.iwate.jp/index.cfm/6,1615,75,html> (both accessed February 21, 2024).

117. Ōtsuki Fumihiko in Miyazaki, *Kakure Kirishitan*, 300–1.

118. National Diet Library, author's page: <https://id.ndl.go.jp/auth/ndlna/00271427> (accessed November 30, 2023).

worldview of Europe, China, and Japan.¹¹⁹ Aizawa experienced the turmoil that ended the Edo period and, despite being an adherent of the nationalistic ideology of the Mito School, worked for the opening of Japan. Aizawa is not the only one who read Hakuseki's account of Sidoti. Sakuma's abridged government report, the *Rōmajin kanjō*, was owned by Katsu Kaishū (1823–99), a civil servant first in the shogunate and then as a politician in the Meiji government, who crossed the Pacific Ocean as the head of the shogun's embassy to the United States in 1860.¹²⁰ If the first eye is Japan, the second eye is China as a model of civilization. To this binary model, Europe became the third eye with the Renaissance Portuguese sailors and the Society of Jesus, then relayed by the Dutch VOC. Meiji Japan, which produced the modernization slogan of “Japanese mind and Western science,” compared China with Europe, as two possible models of civilization, and opted for Europe to build the modern Japan. With this slogan, “Japanese mind and Western science,” the Meiji statesmen and intellectuals meant to separate Western science from the Japanese mind and to preserve the national purity of the latter. However, by the Meiji period, the *anima rationalis* was already ingrained in the Japanese mind, filtered through the Renaissance Jesuits, Hirata Atsutane, and other Shintō thinkers. By the same token, this rational faculty, filtered through Sidoti and Hakuseki, supported the adoption of Western science. With the lifting of the proscription of Christianity in 1873, Japan truly stood at the downstream of humanism brought by the Renaissance Jesuits and Giovanni Battista Sidoti, who came to Japan in 1708.

119. Aizawa Seishisai, “Sangan yokō” (n.p.: Seiransha, 1957); reprint in Miyazaki, *Kakure Kirishitan*, 406–10.

120. The National Diet Library of Tokyo preserves the *Rōmajin kanjō* previously owned by Katsu Kaishū (1823–99) with the call number Katsu Kaishū kankei bunsho 73 that attests his ownership. See <https://ndlonline.ndl.go.jp/#!/detail/R300000003-I11222529-00> (accessed November 30, 2023). Three more copies based on the *Rōmajin kanjō* by Sakuma Koreaki are in the collection of Waseda University with call numbers: Bunko 08 D0409, Bunko 08 D0408 attributed to Muyūdōjin copied in 1789, and Bunko 08 B0124 with the title *Rōma kanjō*. See online catalog: <https://www.wul.waseda.ac.jp/kotenseki/search.php?cnidb-n=%e4%bd%90%e4%b9%85%e9%96%93+%e7%b6%ad%e7%ab%a0> (accessed November 30, 2023).