History of Mathematical Sciences: Portugal and East Asia V

Visual and Textual Representations in Exchanges Between Europe and East Asia 16th – 18th Centuries

Conference on History of Mathematical Sciences: Portugal and East Asia V
National Tsing Hua University, Hsinchu, Taiwan, 7 – 9 November 2014

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https://www.worldscientific.com/doi/abs/10.1142/9789813233256_0010

JESUITS, COSMOLOGY AND CREATION IN JAPAN'S "CHRISTIAN CENTURY" (1549–1650)

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It was during its "Christian Century" (1549–1650) that Japan first encountered Western cosmology via the Jesuit missionaries. This paper explores how and why these missionaries used cosmology in their evangelical activities. My central argument is that the Jesuits considered cosmological knowledge a very effective "spiritual tool" in the first stage of their conversion plan:

1) to convince the catechumens on logical and rational grounds that God exists, then
2) to instill other Christian doctrines, and finally
3) to accept baptism.

Much textual evidence shows that cosmological ideas were closely tied to references to "divine design", which are found in treatises on catechism. This was a distinguishing characteristic of the early Jesuit mission in Japan.

1. Introduction

It was during its "Christian Century" (1549–1650) that Japan first encountered Western natural philosophy via the Jesuit missionaries. Cosmology was one of the most detailed and comprehensive among all branches of Western learning transmitted at that time. Historians have shown that most of the basic ideas of sixteenth-century cosmology were taught in the Jesuit colleges of Japan, such as the geocentric system of the universe, the Aristotelian four-elements theory and the explanation of meteorological phenomena.[1]

On the other hand, previous studies have not been able to fully explore how cosmology related to their evangelical activity, nor have they clarified its specific role in the overall mission program. Since the Jesuits' principal goal was to propagate Christianity, it would be natural to assume that there was a clear policy to conduct a systematic campaign. When we think of such a policy, particularly important is the series of texts concerning the "demonstration of the existence of God", which are present in their treatises on catechism but have received limited

* This paper is an abridged and revised translation from my Japanese book, Hiraoka 2013, Chapter 1, especially Section 2 (pp.19–42).

[1] See Obara 1965; Nakayama 1969, 79–115; Ebisawa 1978, 27–113; Hiraoka 2005; Hiraoka 2008; Hiraoka 2009. Other important publications are mentioned in later footnotes.

attention.[2] The aim of this paper is to identify the place of Western cosmology in the overall mission plan of the Jesuits during the century, especially in terms of the so-called "design argument".

2. Cosmology in the service of evangelization

From the outset of the Japan mission, Jesuit missionaries put Western cosmology in the service of evangelization in two ways:

1) to earn people's respect by showing the superiority of European learning;
2) to denounce the Buddhist worldview and discredit the religion itself.

Francis Xavier, the founder of the Japan mission, was also the first missionary to notice the ardent curiosity of Japanese people towards natural phenomena. In his letter to Ignatius of Loyola (1491–1556), he emphasized that priests coming to Japan must possess a basic understanding of cosmology.

> "It is also necessary that [our men who come to Japan] be learned in order to answer the many questions that the Japanese pose. It would be good that they [...] know something about the sphere, because the Japanese like very much to know about the movements of the heavens, the solar eclipses, the waxing and waning of the moon, what causes rain water, snow and hail, thunder, lightning, comets and other natural phenomena like these. Explanations on these matters are very effective in winning the favor of the [Japanese] people. I thought it was necessary to write this information about the character of the Japanese people so that you are aware of the qualities that the priests going to Japan must have (From Goa, dated 9 April 1552)." [3]

As an example from later generations, we can cite Italian Jesuit Carlo Spinola (1564–1622) who put Xavier's thought into practice in the most conspicuous way. In his letter from Nagasaki, dated 25 May 1612, Spinola says:

> "I have baptized more than two thousand of them [Gentiles] by my hands. Among them include not a few of the aristocracy. They visited us repeatedly, as others did, out of curiosity to see and hear our activities. I began my talk from astronomy, by showing them various [astronomical] instruments. It is by no means easy to describe how much curiosity they show about these things and how much it helps them accept that all we have said of our holy doctrine is true, for all we explain about the movements of the heavens and meteorological

[2] On the demonstration of God's existence by the Jesuits in Japan, see the pioneering discussion of Ebisawa 1978, 30–41. However, in this book Ebisawa promoted aggressively the historical view that the introduction of Western astronomy via the Jesuits during the century was the starting point of Japan's modernization. Consequently, the natural theological arguments which he put forward were virtually driven away from the spotlight.

[3] Schurhammer and Wicki 1996, 373.

> beings are fitting to reason and completely different from the utter nonsense that the *Bonzos*, the priests [of Buddhism], teach them. Therefore, they are already arguing in a loud voice that what the *Bonzos* claim about the afterlife is nothing but a lie; neither can it be seen because what they say about the heavens and elements is far from reason."[4]

For Spinola, cosmological knowledge and instrumentation were by all means the most important tools to convert the Japanese.

It should be noted here that such strategic use of cosmology in evangelization was not limited to Xavier and Spinola, but was common among the Jesuits during the century. In fact, it was believed to be so effective that those who converted through this method were described, in the Annual Report of 1605, as being "caught in the net of Christ".

> "Some other people come, out of curiosity, to listen to novel things, especially mathematics, astrology [i.e. astronomy], and the secrets of nature that our fathers tell them. Once they listen to them, they marvel and recognize the ignorance of their Buddhist monks so much that they begin to deride the lies and nonsense these had claimed on similar subjects. As they are sharp in thought, fascinated by the demonstrations and by the clarity with which [our] fathers explain these things, they infer that the fathers cannot fail to tell the truth about both God and salvation because [our] fathers can make clear what they neither knew nor understood and tell them such truth about natural phenomena. Thus, in this way, many people are caught in the net of Christ."[5]

One treatise played a pivotal role in establishing the position of cosmology in mission activity. The cosmology book *De sphaera* was composed by Spanish Jesuit Pedro Gomez (1533/35–1600) as a part of his tripartite *Compendia* (1593) to be used as a textbook at the Jesuit college of Japan, together with *De anima*, in which Aristotelian philosophy on the soul is explained, and *Compendium of the Catholic Faith*, which discusses post-Tridentine Roman Catholic theology.[6] Gomez must have been the best person for the job, as he had previously taught philosophy and theology at the Jesuit college in Coimbra before arriving in East India.[7] The completion of *De sphaera* marks the beginning of the formal and systematic introduction of Western cosmology into the college curriculum to nurture local priests who would shoulder the future of the church in Japan.

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[4] Archivum Romanum Societatis Jesu, *Jap. Sin.* 36, f.156r. I am particularly grateful to Mr. Mauro Brunello of the ARSI for providing me with the image of the manuscript.

[5] Guerreiro 1931, 280.

[6] See Schütte 1939; Üçerler 1997. Obara 1965 includes a critical Latin text and modern Japanese translation of *De sphaera*. For the new critical Latin edition and English translation, see Hiraoka 2005 and Hiraoka and Watanabe 2015.

[7] For Gomez's biography, see Schütte 1939; Sakuma 1996.

3. Demonstration of God's existence

However, the Jesuits' decision to compose a cosmological textbook had one clear intention: to demonstrate the existence of God on logical and rational grounds. In the preface of *De sphaera*, Gomez says:

> "As the Apostle says, these visible things, namely, the machine of the world and the perpetual and immutable order of the heavens, demonstrate invisible attributes of God very clearly [*Romans* 1:20]. Therefore, after having pursued that knowledge of God, which can be acquired by faith, now we shall also give a brief account of the knowledge which can be attained through creation: that is, nature, motion and influence of the heavens, the [four] elements and this inferior world. For with regard to them, the Prophet specifically says, "The heavens declare the glory of God" [*Psalms* 18:2] etc." [8]

As is shown here, his aim was to make Japanese students reach the notion of an invisible God through knowledge of visible things in the world.

Gomez's intention became clearer when we see that the Jesuits in Japan also produced numerous texts concerning the so-called "design argument". This classical argument in European intellectual history infers from the intelligent order and the created beauty of the world that there is an intelligent Designer or Creator of the universe.[9]

The first example to be considered is the *Catechism of the Catholic faith* (Lisbon, 1586), a concise manual of Christian doctrine composed especially for Japan mission by the *Visitador* Alessandro Valignano (1539–1606), who supervised the entire Jesuit mission in East India from 1573 on.[10] At the very opening of the treatise, in Book 1 Discourse 1, Valignano demonstrates in detail the existence of God from seven reasons, four of which (i.e. second, third, fourth and seventh) adduce the ordered aspect of the visible world, like the regular movements of stars and routine changing of seasons, as proof of why God the Creator must exist. These detailed and elaborate descriptions by the *Visitador* himself deserve full quotation.

> "[Second reason]
>
> The second reason is that it can by no means be understood that one produces or gives birth to oneself, for otherwise it must have existed before it exists. Therefore, we admit first that any thing is made. ["**craftsman**" **metaphor**]

[8] Hiraoka 2005, 108.

[9] On the Jesuit transmission of the "design argument" to early modern Japan, see Kanzaki 2008, 144–212; Orii 2010, 87–104.

[10] For Valignano's activities from his appointment as Visitor until his first departure from Japan (1573–1582), see Schütte 1980–1985.

For example, we immediately understand that a house, ship, picture, portrait or any similar thing have not been made by themselves, but by a certain author or craftsman, by whose hand such a thing was produced. We also know that the more a craftsman is skilled, experienced, excelled and qualified, the more artistic, beautiful, accurate and qualified a product would be. Therefore, if we see that the whole structure of this world is huge, vast, beautifully ornamented and well composed in every part, we cannot do other than, or are duly obliged to, accept that the craftsman or founder of such work must be the greatest, highest, most intelligent and perfect.

[Third reason]

The third reason is that we inherently acknowledge that there exists a master when we see things are well ordered and prudently disposed. ["**tidy house**" **metaphor**] Therefore, when we enter a house and see each item arranged in an orderly fashion — a carpet laid out on the ground, a tapestry depicted, a bed properly made, a garden beautifully constructed, an armoire set in its own place, and other utensils well distinguished and placed in proper order — we accept that there is someone who arranged all these things neatly. But on the other hand, we see in this world the surprising order and harmony of all things. For the sun, moon and other constellations hold their movements and revolutions invariably, and the earth, water, air and all other things stay in their proper place with one another. Therefore, it is evident that there exists the one who created all these things in good order, and who not only recognizes all this but also surpasses all in soul and intelligence.

[Fourth reason]

The fourth reason is that, among the inanimate or those without life during their existence, there is nothing that can move by itself while staying in its natural place; rather, it is set in motion by external impulse whenever it moves to and fro. Meanwhile, motion from outside by another could not occur in fixed and regular order, unless from someone who is endowed with intelligence. ["**ship and pilot**" **metaphor**] As we observe a ship in the vast sea, spreading out its sail very high, holds the correct and stable course without being moved to any rock and crags, we come to know that there is an experienced pilot in the ship who steers and controls it, though we see nobody sailing in there. On the other hand, we see that the sun, moon and remaining stars of the heavens determine continuous circulation at its proper place and seat in fixed and stable order, exerting such influence on this inferior part of the world. Therefore, we are duly obliged to think, and forced to confess, that there is a commander as well as governor in the heavens who moves them in such a firm, fixed and invariable order, although our eyes do not see Him, and that this principal governor of the world excels in soul and intelligence.

[Seventh reason]

The seventh reason is that what is told is better demonstrated by example. ["**artificial sphere**" **metaphor**] Let us imagine we see a globe and sphere, in which the sun, moon and remaining stars are depicted as fastened to the heavens with such artistic diligence, constructed so that the system would move around by itself. Also, the planets and wandering stars in it would have the same rising, opposite meeting [opposition] and setting as maintained now in the heavens, and the days, months, hours, years and the remaining times would be described just as they appear in the heavens. As much literature reveals, it was once upon a time contrived in the city of Rome by a remarkable and distinguished master called Posidonius. Obviously, having observed a sphere of such craftsmanship, no one is more foolish and barbarous than the one who would not immediately admit that the master possesses outstanding intelligence. Therefore, when we see that this huge and almost infinite sphere of the world appears with such order and harmony, who could doubt the existence of the master who bestowed such order and harmony in this sphere? When we see it furnished in such an admirable, beautiful, intelligent and artistic way, who could doubt that this sphere was created by someone who holds the highest soul and intelligence. You might as well be foolish with no reason and intelligence as doubt if there is a master of this sphere and if He possesses intelligence." [11]

If we focus on the logical structure of these reasons, Valignano's arguments can be divided into four steps:

1) propose a "craftsman", "tidy house", "ship and pilot" and "artificial sphere" metaphor, each of which
2) indicates that every artificial thing has its maker who is invisible but by whose hands the visible order has been produced and kept, then
3) direct the reader's attention to the highest order and harmony shown in the natural world, such as heavenly movement and changes of seasons, and finally
4) conclude that it is the best evidence of the existence of God the Creator, who is invisible but has the highest and perfect intelligence.

Here Valignano gives only a brief mention of the world's order and never addresses its details, but we can hardly suppose that this has nothing to do with the systematic introduction of Western cosmology, especially given that Gomez quoted, in the preface of *De sphaera*, a biblical passage of Romans 1:20, "Ever since the creation of the world His eternal power and divine nature, invisible though they are, have been understood and seen through the things He has made."

[11] Valignano 1586, lib.I, f.9v–11v. For the Japanese version of this text, which was based on Valignano's lecture delivered at the Usuki Novitiate in 1581 and found in the manuscripts used as lining for a Japanese folding screen in Evora, see Ebisawa and Matsuda 1963, 133–135.

We must also bear in mind that behind Valignano and Gomez there was more than 30 years experience of the Society, whose missionaries had answered Japanese enquiries about natural phenomena by "reason" and had succeeded in persuading them.

Of particular note here is the influence of classical humanism on Valignano's argument.[12] The *Visitador* was undoubtedly well-versed in Cicero, whose works exerted overwhelming influence on Renaissance Europe, for his metaphors of "ship and pilot" and "artificial sphere" in the fourth and seventh reasons as quoted above, are apparently modeled on the following texts from *On the Nature of the Gods*:

> "If then the products of nature are better than those of art, and if art produces nothing without reason, neither can nature be deemed to be without reason. When you see a statue or a painting, you recognize the exercise of art. When you observe from a distance the course of a ship, you do not hesitate to assume that its motion is guided by reason and by art. When you look at a sundial or a water clock, you infer that it tells the time by art and not by chance. How then can it be consistent to suppose that the world, which includes both the works of art in question, the craftsmen who made them, and everything else besides, can be devoid of purpose and of reason? Suppose a traveller were to carry into Scythia or Britain the sphere recently constructed by our friend Posidonius, which at each revolution reproduces the same motions of the sun, the moon and the five planets that take place in the heavens every 24 hours, would any single native doubt that this sphere was the work of a rational being?" [13] (author's emphasis)

Valignano has thus put the text of an ancient Roman pagan to use in demonstrating the Christian God towards the recently found Japanese pagans.

It is to be noted, moreover, that the above metaphors were also utilized by Pedro Gomez when he demonstrated God's existence from eight "reasons of *natura*" (*natuura no dori* ナツウラノ道理)[14] in his theological textbook *Compendium of the Catholic Faith*. Quoted below is the Japanese version, which was

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[12] On the influence of Renaissance humanism on Jesuit treatises in early seventeenth-century China and Japan, see Kanzaki 2004. It has already been pointed out that Valignano's method of discussion is basically scholastic and his demonstration of God's existence includes the same analogy of Arrow and Archer as that of Thomas Aquinas. López Gay 1962, 326; Mühlberger 2001; Hiraoka 2013, 25–26.

[13] Cicero, *De natura deorum*, II, 34. See also Kanzaki 2008, 155–156. On Jesuit Ciceronianism, see Maryks 2008, 88–97.

[14] In this and the following translations from the Japanese texts, I use Latin, Portuguese and Spanish terms in Italic when the original text uses Japanese phonetic renderings of those languages, such as *natura, Deus* and *filosofo*, while the insertions of the original European term or sentence are enclosed in quotation marks, such as "a casu" and "ars imitator naturam".

translated from the original Latin in 1594 for Japanese students by Spanish Jesuit Pedro Ramon (1550–1611).

> "Fourth, when we see a ship that sails before the wind for the harbor in the far distance of the sea, even if we do not see any sailor or steersman, we recognize that this cannot occur without the one who rules in the ship. [Likewise] when we see the sun, moon and stars (*sanko* 三光) in the heavens revolve without violating its law, it is obvious that there exists the source that conducts all this. That is nothing but *Deus*.
>
> Fifth, according to the ancient records, there was in Rome a skillful artificer, who made from crystal the sphere of the heavens, in which the sun, moon, five planets and remaining stars are fixed in their places, being devised to rotate by themselves, so that it would reveal the revolutions of the sun, the moon and the five planets as well as the transitions of the four seasons as they now appear in the heavens. Having observed such machinery, even the most stupid would not fail to admit that it was made by one who knows a masterpiece. Likewise, when we see the sun, moon and stars which are furnished in the heavens revolve without violating its law, it is obvious that these would be impossible without the existence of the Creator (*gosakusha* 御作者)." [15]

Furthermore, Gomez tried to reinforce his reasoning not only by arguing that such an order of the world cannot be established "a casu" (by chance) as Cicero did.[16] but by referring to a motto attributed to Aristotle "ars imitatur naturam" (art imitates nature), as follows:

> "If there is someone who insists that everything in and out of heaven and earth was produced without the Creator but "a casu", that is, by chance, you should respond as follows. As *filosofo* [the Philosopher, i.e. Aristotle] and others claim, there are not many things that are produced "a casu". It is very unusual. [On the other hand,] the sun, moon and constellations revolve; the seasons change from spring, summer, autumn and winter; humans give birth to humans; trees bloom and fruit from time to time. Since this is a perpetual thing, it cannot be "a casu". Moreover, things which are produced in the course of *natura* are far better than those which are made by the hand of humans. Because of this, the proverb of *filosofo* says "ars imitatur naturam", that is, products of humans imitate *natura*. Even a water clock (*rokoku* 漏刻), that reveals the course of the sun and moon, makes you recognize that it was not produced by chance, but by art, how much more should heaven, earth and all beings in the world! Therefore, it is obvious by reason of *natura* that there exists a creator."

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[15] Obara 1998, 176. A near duplicate of the "ship and pilot" metaphor of Valignano and Gomez is found in *Buppo no shidai ryaku nukigaki hoka* (仏法之次第略抜書他 Abbreviated extracts from Buddhist doctrine etc., *ca*. early seventeenth century). See Ebisawa *et al*. 1993, 421.

[16] Cicero, *De natura deorum*, II, 34–35, 37, 38.

Gomez's discussion here deserves attention because it not only shows that he was a faithful successor of Valignano's design argument but also explains the background of *De sphaera*, which does not directly deal with God the Creator, but limits itself to describing the visible order and harmony in all creation.

When we turn our eyes to *Kirishitan-ban*, a series of books published by the Jesuit mission press in Japan during the century, we also find frequent references to "divine design", especially in *Fides no dŏxi* (ヒイデスの導師 Master of the Faith, 1592) and *Fides no quio* (ひですの経 Guide to the Faith, 1611), both of which are the adapted and partial Japanese translations of *Introducción del símbolo de la Fe* (first printed in 1583) by Dominican Friar Luis de Granada (1505–1588).[17] In some passages from *Fides no dŏxi*, for example, we again see the quotations from Cicero and Seneca.

> "[*Fides no dŏxi*]
>
> *Tulio* wrote that "it is crucial to recognize the existence of the Creator who governs and arranges that which is furnished in heaven and appears on earth as well as the changing of the four seasons. It is this Creator who keeps the lives of men by governing the heavens and the earth." *Seneca*, discussing the *Providencia* of *Deus*, said as follows: "It is unnecessary to show that there exists the Creator in the world. Because it is evidently because of the eternal law enacted by *Deus* that the heavens, moon, sun and stars revolve. You do understand that things born at the bottom of the sea and on land every year and every month, all come from the Creator. Where do you think the light of the sun, moon and stars comes from? It comes from the Creator. All this is like this by the rule of the supreme intelligence." [18]
>
> [Cicero, *De natura deorum*, I. 20]
>
> If on the other hand some god resides within the world as its governor and pilot, maintaining the courses of the stars, the changes of the seasons and all the ordered processes of creation, and keeping watch on land and sea to guard the interests and lives of men, why, what a bondage of irksome and laborious business is his!
>
> [Seneca, *De providentia*, 1. 2]
>
> For the present purpose it is unnecessary to show that this mighty structure of the world does not endure without someone to guard it, and that the assembly and the separate flight of the stars above are not due to the workings of chance;

[17] For a recent English-language publication on Luis de Granada and Japan, see Orii 2015.

[18] Obara 1995, 32–33. Other than Cicero and Seneca, *Fides no dŏxi* also mentions Plutarch (p.22), Pliny the Elder (p.26), Galen (p.31) etc. See also the index of names in *Fides no quio* in Orii 2011, (1)–(12).

> that while bodies which owe their motion to accident often fall into disorder and quickly collide, this swift revolution of the heavens, being ruled by eternal law, goes on unhindered, producing so many things on land and sea, so many brilliant lights in the sky all shining in fixed array; that this regularity does not belong to matter moving at random, and that whatever combinations result from chance do not adjust themselves with that artistry [...].”

The above text of *Fides no dŏxi* is included in Book 1, entitled “The first *artigo* (article) of *fides* is to believe there exists *Deus*”, which makes full use of the arguments from design by citing not only Greek and Roman philosophers but the Church Fathers and biblical passages. For the original author Luis de Granada, whose works were received with enthusiasm during the “Christian Century”, the marvelous beauty and complexity in the natural world were the best and most powerful evidence for God’s existence. Behind the Jesuits’ decision to translate and publish Granada’s works must have been the aim to appeal to not only reason but also emotion, particularly aesthetic emotion, of the Japanese audience towards nature.[19]

> “Now how beautiful are the scenery and birds in the hills and fields, where the appearance changes according to the seasons, as grass turns green in spring and is colored in red embroidery in autumn. Observing these things are truly surprising to the eyes. People of a nation who first see a peacock have nothing to do but praise its beauty, being highly astonished and stunned into silence. Incidentally, given even a glance at created beings in inferior world, we get astonished as this, then behold the night sky without any cloud! There is nothing in this world that can be compared to the beauty of twinkling stars of all sizes. These ornaments of heaven manifest the power and beauty of *Deus*.” [20]

Another characteristic of Granada’s arguments is that it includes not only technical terms of astronomy like “cristalino (the crystalline heaven)” and “primo movel (first moved)”, which are discussed in details in Gomez’s *De sphaera*,[21] but also such mathematical metaphor as the following:

> “One of the virtues that *Deus* manifested in the sun is its swift motion. For although it is around 166 times bigger than the earth, as astronomers say, the sun, when rising, shows itself to every corner in a small piece of time (*kohanji* 小半時) [that is, *circa* 7.5 minutes].[22] This means that it revolves a distance of

[19] Orii 2010, 77–108. On nature in the works of Granada, see also Brentano 1936.

[20] Obara 1995, 47. Granada also discusses in detail the four elements and terrestrial beings such as plants and animals. Obara 1995, 39–49; Orii 2011, 54–111.

[21] Obara 1995, 19; Orii 2011, 33, 37; Hiraoka 2005, 120–123. On the order and magnitude of the heavens during the ‘Christian Century’, see Hiraoka 2009.

[22] “Cofanji” is a quarter of “Iccocu (一刻)”, while “Iccocu” is a quarter of an hour, that is, around 120 minutes nowadays: therefore, 120÷4÷4 = 7.5 minutes. See *Vocabulario da lingoa de Iapam*

> 166 times as big as the earth during this small piece of time. This is truly an astonishing thing. *Deus* manifested his power by bestowing [on the sun] the virtue of such free revolution as this."[23]

Here the author tries to give a strong impression to readers how great the power of God is, by calling their attention to how astonishing it is that the sun makes such a long distance movement of 166 times the earth's diameter in such "a small piece of time". Since this sort of argument requires as a necessary condition an elementary knowledge of Western cosmology, it follows that textbooks such as Gomez's *De sphaera* were required, in which this sort of information is compactly summarized.[24]

It further should be noted that such demonstrations as above can also be found in the treatises of Fucan Fabian (不干斎ハビアン, 1565–1621), a Japanese *Irmão* (brother) of the Society.[25] This proves that they were put in the service of evangelization not only by European missionaries but also by their local assistants. The following passages from Fabian's *Myotei mondo* (妙貞問答 Myotei Dialogue, 1605), an elaborate Christian apologetic against Buddhism, Shintoism and Confucianism, apparently correspond to the second and fourth reasons of Valignano.

> "Yutei: [...] If we say what sort of Lord this *Ds* [*Deus*] is, he is the Creator of heaven and earth and myriad things. [...] Since every single thing possesses matter and form (*iro katachi* 色形チ), it cannot be without its beginning. If it has a beginning, it cannot begin by itself without recourse to other. ["**craftsman**" **metaphor**] This house, for example, has a color and shape but has not existed from eternity. It has a beginning to be a house. Since it could not have been begun by itself either, it is obviously by the hand of great craftsman. [...] In view of these considerations, how could the myriad beings in the world come out without the act of craftsman? If you say that heaven and earth came out of the void by themselves and all beings emerged by the spontaneous merging of Yin and Yang to be like this, it is far more ridiculous, than to say that, as I spoke above metaphorically, this house came out of the void by itself and that trees and bamboo get together spontaneously to be a fence or wall.[26]

1603–1604, f.54v, 128r. Apparently, this text from *Fides no dŏxi* confuses the proper motion of the sun with the daily motion of the *primum mobile*.

[23] Obara 1995, 44.

[24] The most detailed description on the order and magnitudes of each heaven is found, not in Gomez's *De sphaera*, but in his theological *Compendium*. Since Gomez had finished the latter before the former, he seemed to have avoided repetition. Hiraoka 2009, 216–217.

[25] For the life and works of Fabian, see Elison 1988, 142–284; Ide 1995, 186–225.

[26] Ebisawa *et al*. 1993, 386–387.

> Yutei: The sacred body of *Ds* [*Deus*] is called, in the Scriptures of this sect [Christianity], s*piritual sustancia*, that is, a substance separated from matter and form.
>
> Myoshu: Then you mean that it is a thing that can neither be seen by eyes, nor be touched by hands?
>
> Yutei: Even if it can neither be seen by eyes nor be touched by hands, it is unreasonable to think that it never existed. Even if it can neither be seen nor touched, it is the way of the world that the fundamental essence (*konpon no tai* 根本ノ体) of a thing can be known by its function (*yo* 用). ["**ship and pilot**" **metaphor**] For example, you find a boat in the far distance of the sea. If you see the boat, which cannot cruise by itself, heading for the intended port, even if you do not see a pilot or steersman in there, nobody fails to understand there exist a steersman and mariner who row and paddle in the boat. It is the ultimate stupidity to say that the boat is rowing by itself because you do not see any mariner in there. [...] Now look up at the sky. From the prograde and retrograde motions of the heavens, which are far more unlikely to move by themselves than the boat, it is impossible that there never existed a lord who governs these revolutions." [27]

Since Fabian had studied Latin and theology in the Japan college and had been deeply involved with the publication of *Kirishitan-ban* as well, he was obviously well versed in the design arguments of Valignano and Luis de Granada and was in a position to put them into practice. He also implied the place of these arguments in the overall mission program by indicating that they are regarded, in the *Kirishitan* teachings, as "the law between heaven and earth".

> "Behold! Up in the sky glitter the three lights of the sun, moon and stars; the sun shines in the day, as does the moon at night. When it comes to the moon, its waxing and waning has not changed since ancient times. The light of the sun, which sets in the West and rises in the East, never fails to set the boundary of day and night and give us time; an accumulation of 30 days makes a month and twelve months a year, without failing to make the distinction of the four seasons. As the seasons change from spring to summer, autumn to winter, grasses and trees are colored, flowers fly, leaves fall, and comes dew, snow and frost. This has never changed from antiquity to the present. This is shown, in the *Kirishitan* teachings, as the law between heaven and earth (*tenchi no aida no nori* 天地ノ間ノ矩). Law never exists by itself. State affairs shall be done down on earth, because there exists an emperor up in heaven. The transition of four seasons and eight terms has never changed between heaven and earth, because there exists the Creator of heaven and earth, the true Lord." [28]

[27] Ebisawa *et al.* 1993, 391–392.
[28] Ebisawa *et al*. 1993, 388.

As is well known, however, Fabian later withdrew from the Society and apostatized. In the end, he clearly set himself against Christianity and published *Ha daiusu* (破提宇子 Deus Destroyed, 1620), a trenchant anti-Christian treatise. Particularly interesting for our discussion is the following text where Fabian refutes by example the demonstration of the existence of the Christian God by design arguments, which he himself once utilized aggressively.

> "There are seven teachings that school of *Deus* [i.e. Jesuit] offers to novices. The outline of the first of them is to recognize an almighty creator from heaven, earth and myriad things and perceive his regulating hand from invariable change of the seasons. For example, if you see a splendid palace, you will recognize the existence of the skillful craftsman who built it. If in a house you find writing on the wall by which the household is well managed, you will know the existence of the housemaster. This is the way the world goes. Therefore, without the existence of the almighty Creator, we cannot explain that, from the empty time without being, heaven and the earth emerged and that in heaven the sun, moon and stars shine brightly while never failing the time and direction of setting and rising and, on the earth, there are so many grasses and trees that never mistake the season of scattering flowers and falling leaves. We call the almighty Lord *Deus*." [29] (author's underline)

The above text, which corresponds to Valignano's third reason, is succeeded by a harsh criticism of the missionaries, who discuss triumphantly and tediously this well-known idea by referring to the concepts of God as creator from Chinese classics, Buddhism and Shintoism. But what should be noted is not the way he denounces them but that here he clearly says that "to recognize an almighty creator from heaven, earth and myriad things and perceive his regulating hand from invariable change of the seasons" was placed at "the first" of the "seven teachings that school of *Deus* offers to novices".

The first missionary to note the existence of this "seven teachings" was Luis Frois (1532–1597) in his letter, dated 6 March 1565, who said:

> "The way we have [to teach] catechism is to prove, first, that [#1] there exists a creator of the universe; and that the world had a beginning and is not from eternity, as they [Japanese] think; and the sun and moon are not their gods nor living beings; then prove [#2] how the soul separated from the body shall live forever. When this is understood, answering many doubts and inquiries about natural things that they propose [#3] the Japanese sects are discussed, especially the one they believe in, and, by clear reasoning they are confuted, show the falsehood of each sect. When this is understood, then [#4] the Creation of the world, the fall of Lucifer, and Adam's sin are presented; and consequently

[29] Ebisawa *et al*. 1970, 426.

> [#5] the coming of the Son of God to the world, his sacred passion and death, Resurrection and Ascension, and the virtue of the mysteries of the cross; and [#6] the Last Judgment, punishments in hell, and the glory of the Blessed. When this is understood, [#7] the Commandments of the law of God and those of the Catholic church are presented to them before baptism; and they are persuaded to detest the pagan rites in which they have lived and to persevere in the law of the Lord while repenting of their past sins; then they are baptized, and it is explained [to them] the necessity of this sacrament and its mysteries." [30]

They can be summarized into these seven topics:

1. God's existence
2. Immortality of the soul
3. Refuting Japanese sects
4. Creation, Original Sin, etc.
5. Jesus Christ, Resurrection, etc.
6. The Last Judgment
7. Commandments[31]

Here Frois clearly says that the demonstration of God's existence was delivered in the first place to the candidates for baptism. One of the earliest Jesuits in Japan, Gaspar Vilera (1525?–1572) also proposed almost the same teaching steps, in which the existence of God the Creator was placed in the first, and immortality of the soul in the second.[32] Eventually, this working method was approved by Valignano as the general policy of the church in Japan. In his summary report of 1583 concerning the Japan mission, he provides the following description:

> "The way we take when converting [Japanese] people is to explain catechism to them very thoroughly, which we usually preach in seven sermons: that is, to show them [**#3**] the mistakes and falsehoods of their sects [of Japanese religions], and that [**#1**] there is only one God who gives reward and punishment to [human] souls, as well as to prove that [**#2**] the soul is immortal; then to explain [**#4–7**] the coming of our Lord and Savior, Jesus Christ, and other important matters of our holy law. [...] Those who became Christians after these early sermons give up completely the fondness for their idols, and conclude in their understanding that their sects are false." [33]

It is highly probable that this seven-phase scheme, which starts with the existence of God and the immortality of soul, eventually led Gomez to compose textbooks corresponding to each topic for his *Compendia*: *De sphaera* and *De anima*.

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[30] *Cartas* 1598, vol.1, f.179v–180r.

[31] López Gay implied that each teaching was delivered in one day, so that the whole stage was completed on Sunday by baptism. See López Gay 1962, 311–314; López Gay 1973, 36–51, 93–113.

[32] López Gay 1962, 313; Ebisawa 1978, 33–35.

[33] Alvarez-Taladriz 1954, 165.

Or at least, this method could not have been unrelated to the fact that God's existence is always put in advance of all the other doctrines in Valignano's *Catechism* and Japanese versions of Granada's work. In book one of his *Catechism of the Catholic faith*, Valignano first described the existence of God, immortality of the soul (Discourses 1 and 2) and the refutations of Japanese sects (Discourses 3 to 5), followed by the explanation of doctrines of Christianity: the order agrees well with the above noted seven-phase scheme. Also, the opening of Book 1 of *Fides no dŏxi* says:

> "The first thing to be believed in the *artigo* of *fides* is that *Deus* exists. [...] Since every goodness and virtue comes from this root, this is also called the first root of goodness. This is the foundation (*jiban* 地盤) of *fides*, to be believed in the first place. This is stated in the words of the Apostle as "Credere enim oportet accedentem ad Deum, quia est. Heb. 11", which means it is important for those who approach *Deus* to believe that the Lord exists. This passage is free from mistakes and can be recognized without any doubt by the light of reason."[34]

Since all Christian teachings are based on a "foundation" of God, it must have been natural to prove the existence on a firm ground before all else from the viewpoint of step-by-step instruction.

Figure 1 shows the overall conversion program, as reconstructed from the above materials. When viewed from this scheme, the aggressive employment of cosmology at the preliminary stage of propagation is understandable as a device to arouse the "spiritual demand" which is potentially hidden among the Japanese people, then to introduce people to the Christian God naturally. The combination of cosmology and the design argument, followed by the gradual doctrines, was to duly furnish the "spiritual supply" for that demand. Cosmology must have been a very powerful "spiritual tool" for the missionaries, as this method was already showcased in the Annual Report of 1605 as "the net of Christ".

Without the concept of cosmology as "spiritual tool", it is hard to grasp the real point of the reports from, and treatises of, the missionaries in Japan. Cosmology and the "design argument" constituted an inseparable pairing for the missionaries to demonstrate God's existence and this strategy can be marked as a distinguishing characteristic of the Jesuits' mission during Japan's "Christian Century".[35]

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[34] Obara 1995, 17.

[35] In addition, we may note that Matteo Ricci's *Tianzhu shiyi* 天主実義 (The True Meaning of the Lord of Heaven, first published in 1603) also includes several arguments from design that correspond, at least in part, to Valignano's metaphors of "craftsman", "tidy house", "ship and pilot" and "artificial sphere". See Ricci 1985, 70–79. It might prove worthwhile to investigate the relationship between Japan and the early China mission in this regard, both of which had the same supervisor, Valignano, and the same foothold, Macao, in common by the early seventeenth century.

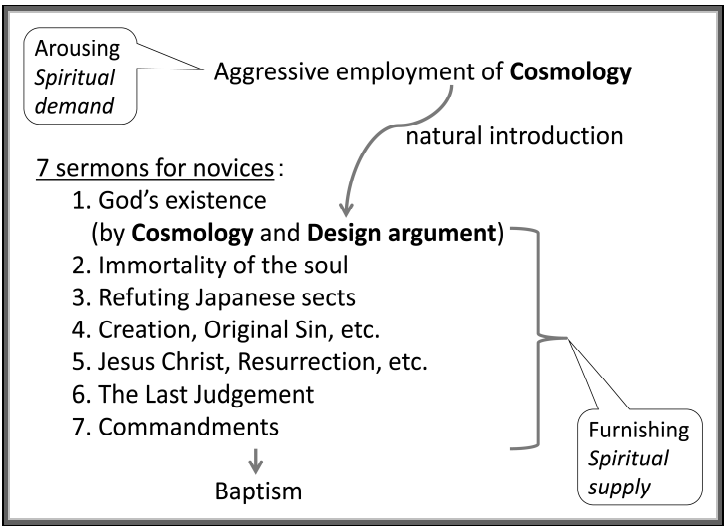

Figure 1. Jesuit conversion program in Japan.

4. Concluding remarks

The first task of this paper was to confirm that the Jesuit missionaries in Japan put Western cosmology in the service of evangelization in a very aggressive way. This method was eventually shaped into textbook form by Pedro Gomez and officially formulated in the college curriculum.

Such positive employment of cosmology, however, should be considered as the first and key stage of the overall conversion program:

1) to convince the initiates that God exists on a logical and rational ground, while introducing people to the discussion naturally, then
2) to instill other Christian doctrines, and finally
3) to accept baptism.

Cosmology was not simply a tool to urge Japanese people to recognize the superiority of European learning and the falsehood of their own religions, but, indeed, a "spiritual tool" to provoke their hidden internal demands for the Catholic faith and bring them towards the right path: conversion.

The introduction of this strategy was, in other words, an attempt to transplant the Christian concept of "Book of Nature" (*liber naturae*),[36] into the country.

[36] On the concept of Book of Nature during Renaissance Europe, see Curtius 1990, 319–326; Bono 1995.

Missionaries were by no means unaware of it, for Granada's *Fides no dŏxi* clearly states:

> "When we see these things by the eyes of intelligence, the world should be considered like a volume of a book, directly composed by *Deus*. Created beings are like [His] words. The purpose of these words is to propagate and honor God's glory according to each case. Alas, how ashamed and how disgraceful those humans are, who lose their way in such transient things as dreams and phantoms and never even try to read a single character of such scripture as this!" [37]

The idea that God gave humans two books — one is Holy Scripture as God's revealed word, and the other is nature, which reveals God's handiwork — certainly underlay the design arguments of Valignano and Luis de Granada as well as Gomez's biblical quotation of Romans 1:20, as if it were an undercurrent of the whole campaign.[38]

Although this first attempt of transplantation came to an end without yielding such a result as an investigation or treatise on natural philosophy by Japanese converts, it at least achieved a certain success in the eloquent and elaborate design arguments by Fabian. The Japanese *Irmão* also made full use of the knowledge he gained from Gomez's *De sphaera*, in the debate with Hayashi Razan (林羅山, 1583–1657), famous Neo-Confucian scholar in the service of the Shogun.[39] It was indeed an ironic tragedy for the Society that Fabian, a fruitful child of this mission, later apostatized and went so far as to publish an anti-Christian book like *Ha daiusu*.

Needless to say, it is hard to believe that the method remained as a sort of mission paradigm after 1614, when severe persecution by the Tokugawa Shogunate began. It seemed to come to an end through natural lapsing as the number of missionaries gradually diminished owing to expulsion or martyrdom by around 1650. The first Japanese book that appeared after the persecution was *Kenkon bensetsu* (乾坤弁説 *Discourse on Heaven and Earth*, prefaced around 1650) and its variants, which were attributed to Sawano Chuan 沢野忠庵, the apostate Jesuit Christovão Ferreira (1580–1650).[40] There is no doubt that this work was done by the order from Inoue Masashige (井上政重, 1585–1661), who governed and controlled Chuan's activities.[41] We may point out that the

[37] Obara 1995, 38.
[38] Valignano likened his mission method in Japan to that of St. Paul in ancient Greece. López Gay 1962, 307–308.
[39] Ebisawa *et al*. 1970, 414–417.
[40] Hiraoka 2008, 92–98; Pinto dos Santos 2011; Hiraoka 2013, 129–191.
[41] For Inoue, see Nagazumi 1975; Hasegawa 1979; Michel 1995.

structure of the *Kenkon bensetsu* has roots in Gomez's *De sphaera*,[42] but no longer finds in the former any word that directly represents or implies Christian doctrine. The extant manuscripts of *Nigi ryakusetsu* (二儀略説 Brief Discourse on Heaven and Earth), whose text followed very closely the content of *De sphaera*, also includes no Christian tenets in the Latin original.[43] The appearance of these Japanese treatises, which are deprived of the core of what the Jesuits originally intended, that is, the demonstration of God's existence, must be understood as a sign that the early introduction of Western cosmology as the "spiritual tool" had already been things of the past by around the middle of the seventeenth century and a new process of acceptance had begun, now under the initiative of Japanese intellectuals of a new generation.

Acknowledgements

I am deeply grateful to José Miguel Pinto dos Santos, Carla Tronu Montané and Ken'ichi Uchida for reviewing my translations of Portuguese, Spanish and Italian texts. My sincere thanks also go to Ken Nejime and Hiro Hirai for their continuous support, and to Clare Hirai for proofreading my English. The research that produced this work was funded by JSPS KAKENHI Grant Number 25284022, 26750095.

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[42] Ito 1976.
[43] Hiraoka 2008, 89–92.

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