Introduction: Jesuit Cartography

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Sometime between 1618 and 1621, the Sicilian Jesuit Girolamo de Angelis (1567–1623) created a small map of the northern island of Japan, Ezo (what is now called Hokkaido), as part of his residency there.¹ Four decades earlier, on his map of the world, a Jesuit from Macerata named Matteo Ricci (1552–1610) had shown a large island above the main Japanese island of Honshu, but his Ming sources most likely described Sakhalin Island at the mouth of the Amur River. Perhaps to compensate for the gap between Sakhalin and Hokkaido, De Angelis represented the island he depicted as four to five times the size of the rest of Japan. Most of Ezo was inhabited by the Ainu, who lived and traded as far away as Sakhalin and the Amur Delta, and de Angelis was trying to engage with Japanese and Ainu conventions of mapping, names for places, and understandings of hydrographic space. He also made a written report (*relação*), describing the large fleets of Ainu boats that brought dried fish from northern seas, sea otter pelts from the Kurils, Chinese silk from the Amur River, as well as live hawks and cranes, popular as domesticated animals in Japan. The map captures a moment that might even be thought of as ethnogenic in this trading

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- 1 See the report with the map Jap. Sin. 34, f. 49–54^v, ARSI, Rome (1621) and his earlier report (1618) British Museum, Add MS. 9860. The map was first reported jointly during World War II in Japan by the most famous historian of cartography and the father of Ainu studies respectively, Koreto Ashida and Shinichiro Takakura, “Waga kuni ni okeru Hokkaidō hondō chizu no henssen,” *Hoppō bunka kenkyū hōkoku* 7 (Sapporo: University of Hokkaido, 1942); and then in three articles by Kay Kitagawa, “Map of Hokkaido of G. de Angelis, ca. 1621,” *Imago mundi* 7 (1950): 110–14; Joseph Schütte, “Map of Japan by Father Girolamo de Angelis,” *Imago mundi* 9 (1952): 73–78; and Chohei Kudo, “A Summary of My Studies of Girolamo de Angelis’s Yezo Map,” *Imago mundi* 10 (1953): 81–86. The documents are collected in Hubert Cieslik, ed., *Hoppo tankenki: Genna nenkan ni okeru gaikokujin no Ezo hokokusho* (Tokyo: Yoshikawa Kobunkan, 1963).

space, imagining a community through the map.² In an essay for the landmark *History of Cartography*, Kazutaka Unno (1921–2006) wrote that such activity could be overestimated in terms of its cultural impact on Japan itself, suggesting that the Jesuit cartography is of “tangential interest” while at the same time recognizing “the role the Jesuits played in diffusion.”³ That breadth of dissemination, and the multiplicity of contexts in which Jesuit maps were read, creates a challenge in approaching Jesuit cartography. De Angelis’s enlarged map of Hokkaido, the first of its kind, reveals a tension that reappears frequently and somewhat uniquely in Jesuit cartography. Abstract and global representations become intertwined with highly localized efforts to comprehend particular regions of missionary activity.

The great historian of cartography John Brian Harley (1932–1991), one of the few people who have tried to define “Jesuit cartography” comprehensively, noted that more than any other religious order, Jesuits produced maps.⁴ Some Jesuit maps were large and complex productions like the famous world maps of Ricci, but many were what de Angelis called a *mappa pequeno* made in the field during missionary activities. An evolving database of Jesuit cartographers, created in the context of the publication of this issue, identifies over 150 individual Jesuit cartographers working before 1800.⁵ But it is frequently difficult to say precisely who was mapping and what mapping meant. Harley indeed cautioned that Jesuit cartography presented many challenges in generalizing from one particular period or place to another.

2 For a similar argument about ethnogenesis among the Manchus in this period see Pamela Crossley, *The Manchus* (Oxford: Blackwell, 1997). Mark Hudson argues that Ainu ethnogenesis began during the Yuan Dynasty (1279–1368) with trading contacts with the Mongols, the period in which Sakhalin and the Amur became important trading regions. See his *Ruins of Identity: Ethnogenesis in the Japanese Islands* (Honolulu: University of Hawaii Press, 1999), esp. 206–32. In relation to the Japanese, however, Brett Walker makes this a phenomenon linked with the emergence of the Tokugawa state from the 1590s. Walker, *The Conquest of Ainu Lands: Ecology and Culture in Japanese Expansion, 1590–1800* (Berkeley: University of California Press, 2001).

3 Kazutaka Unno, “Cartography in Japan,” in *History of Cartography: 2:2, Cartography in the Traditional East and Southeast Asian Societies*, ed. John Brian Harley and David Woodward (Chicago: University of Chicago Press, 1994), 376.

4 J. B. Harley, “The Map as Mission: Jesuit Cartography as an Art of Persuasion,” in Jane ten Brink Goldsmith et al., *Jesuit Art in North American Collections* (Milwaukee: Patrick and Beatrice Haggerty Museum of Art, 1991), 28–30.

5 See Robert Batchelor, “Jesuit Cartography.” <https://georgiasouthern.libguides.com/digital-humanities/projects/jesuitcartography/home>, accessed March 14, 2018.

Only in the early years of the twentieth century did Jesuit cartography become a field of study, in part because of a renewed interest in Matteo Ricci. The most important conceptual work was done by Jesuit and historian Joseph Brucker (1845–1926), who argued that Ricci designed his 1584 world map (*Daying Quantu*, 大瀛全圖, Complete map of the great ocean) to challenge Chinese confidence in a Sino-centric conceptualization of the world. It thus made a more effective sign for encouraging Catholic conversion than images of the Virgin Mary with her resemblance to the Guanyin Bodhisattva.⁶ The seventeenth-century Dominican Domingo Navarrete (1610–89) put this strategy of switching signs in more blunt terms, saying he would rather be punished for wearing a cross in China than going about like the Jesuits, “with Maps and Clocks in their Hands.”⁷ As artifacts of the first efforts to establish intellectual and diplomatic relations with China, Ricci’s world maps also fascinated members of London’s Royal Geographical Society, the Russianist John Baddeley (1854–1940) and its librarian Edward Heawood.⁸ In China, scholarly interest

6 Joseph Brucker, “Ricci, Matteo,” *The Catholic Encyclopedia* (New York: Encyclopedia Press, 1912), 13:34–40; “Le Père Matthieu Ricci,” *Etudes* 124 (1910): 5–27; 185–208. Brucker’s work had begun not on the Ricci map but with the eighteenth century maps made by Jesuits at the Qing court, “Communication sur l’exécution des cartes de la Chine par les missionnaires du XVIII^e siècle d’après des documents inédits,” *Ive Congrès International des Sciences Géographiques tenu à Paris en 1889* (Paris: Société d’Editions Scientifiques, 1890–1), 1:378–96; *La Mission de Chine de 1722 à 1735* (Paris: V. Palmé, 1881). See also the Italian scholars Giulio Natali, *Il secondo Confucio* (Rome: Tribuna, 1900); Pietro Tacchi Venturi, *L’apostolato del P. M. Ricci d. C. d. G. in Cina secondo i suoi scritti inediti* (Rome: Civiltà Cattolica, 1910) and *Opere storiche del P. Matteo Ricci, S.J.* (Macerata: F. Giorgetti, 1911, 1913); who were largely interested in biography and the history of Catholic missionaries on the three-hundredth anniversary of his death. Tacchi Venturi was later a close confidant of Benito Mussolini (1883–1945), and his error-ridden work was supplanted by Pasquale d’Elia, *Fonti Ricciane: Documenti originali concernenti Matteo Ricci e la storia delle prime relazioni tra l’Europa e la Cina (1579–1615)* (Rome: La Libreria dello Stato, 1942), and *Il mappamondo cinese del P. Matteo Ricci S.J.* (Vatican City: Biblioteca Apostolica Vaticana, 1938), which included a complete translation of the Latin inscriptions on the 1602 map, both done with the support of Tacchi Venturi and Mussolini. D’Elia was the first to argue that Zhang Huang’s *Tushu Bian* (1613) contained a copy of Ricci’s 1584 map.

7 Domingo Navarrete, *The Travels and Controversies of Friar Domingo Navarrete, 1616–1686*, ed. James S. Cummins (London: Hakluyt Society, 1962), 1:150.

8 John F. Baddeley, “Matteo Ricci’s Chinese World-Maps, 1584–1608,” and Edward Heawood, “The Relationships of the Ricci Maps,” *Geographical Journal* 50, no. 4 (October 1917): 271–76; Lionel Giles, “Translations from the Chinese World Map of Father Ricci,” *Geographical Journal* 52, no. 6 (December 1918): 367–85; and 53, no. 1 (January 1919): 19–30. Mention should also be made of Otto Hartig, “Geography and the Church,” in *The Catholic Encyclopedia*, ed. Charles George Herbermann (New York: Encyclopedia Press, 1913), 6:447–53.

only began in the 1930s, when Hong Weilian (William Hung, 1893–1980) at the Protestant Yenching University investigated the connection between Ricci and the literatus and military officer Li Yingshi (fl. 1602). Hong, however, found the Jesuit strategy of map production to be of limited effect either in terms of Christian conversion or changing conceptions of geography.

One of the long legacies of Brucker's work on Ricci's biography was an emphasis on the overt Christian iconography of Jesuit missionaries as a remedy for their covert entry into China itself, implying an awareness of the ideological dimension of cartography. "European things"—ranging from pictures of the Virgin Mary to clocks, astronomical instruments, and maps—were visual tools for conversion through "curiosity."⁹ When Harley came to look at Jesuit cartography, like many before him he took Brucker as well as later sinologists like Jacques Gernet (1921–2018) and Jonathan Spence (b.1936) at their words. Jesuit maps, and not just those made in China, were "tools in the Jesuit art of persuasion, or what Jacques Gernet has described as an 'enterprise of seduction.'"¹⁰ This fit with Harley's broader methodology of critical cartography aimed at challenging traditional "positivist" or "scientific" histories of cartography by trying to reveal maps as iconic objects embedded in semiotic processes.

Harley's approach dovetailed with the work of the French Jesuit and polymath Michel de Certeau (1925–86), who understood the early modern map as a distancing technique, away from the rhythms and itineraries of everyday life. De Certeau also saw the Jesuits as spatially split between an effort to engage in modernizing the "civil practices" of states and empires and their work within actual localized places of Christian social life.¹¹ As the historian Sumathi Ramaswamy has written recently about Jesuit cartography in India, the Jesuits could shift between fields of knowledge as agents, "not just for the dissemination of Christian theological knowledge and Catholic images, but also of

9 Brucker, "Ricci, Matteo," 35.

10 Harley, "The Map as Mission," 21. For a concise view of Harley's approach to cartography more generally see Harley, "Deconstructing the Map," *Cartographica* 26, no. 2 (Summer 1989): 1–20.

11 For Michel de Certeau on mapping and spatial practice see, *The Practice of Everyday Life*, trans. Steven Rendall (Berkeley: University of California Press, 1984), 115–21 [originally *L'invention du quotidien. Vol. 1, Arts de faire* (Paris: Union générale d'éditions, 1980)]; and on the Jesuits, "The Formality of Practices: From Religious Systems to the Ethics of the Enlightenment (Seventeenth and Eighteenth Centuries)," *The Writing of History* (New York: Columbia, 1988), 163 [originally "La formalité des pratiques du système religieux à l'éthique des Lumières (XVII–XVIII)," in *L'écriture de l'histoire* (Paris: 1975), 153–212]. Unlike Harley's brief intervention at the end of his life, de Certeau somewhat tellingly never tried to bring these two strands of his work—cartography and Jesuits—together.

European science, including geographical and cartographic knowledge, itself going through a tremendous period of change under pressure of the so-called Copernican revolution.”¹² In his study of Spanish imperial cartography, Ricardo Padrón writes of Vicente de Memije’s 1761 allegorical map published in Manila, produced while Memije was a student in a Jesuit college, as a “reorientation of Spain’s imperial imaginary” in terms of “militant religious orthodoxy,” through what had become a “hegemonic form of geographical representation in the West.”¹³ The trouble with the kinds of semiotic approaches pioneered by Harley and de Certeau is that they have a tendency in understanding cartography as a distancing project to reify the very categories under criticism, even when “deconstructing” their roles as “Christian,” “European,” and “modern” things.

Since Harley’s work, a second phase of historical writing has suggested that rather than putting forward a clear ideology or coherent vision of Christianity linked to the past with their maps, Jesuits were trying to rebuild a modern Christian cosmology or *scientia* after the languages of an older universalism had been shattered by Christopher Columbus (1451–1506), Martin Luther (1483–1546), and Nicolaus Copernicus (1473–1543). Philosopher Peter Sloterdijk argues that the terrestrial cartography and even the celestial maps of the missionaries attempted to come to terms with the collapse of the Aristotelian cosmology of spheres. Created by “the first subjects of the Modern Age in the precise sense of the word,” Jesuit maps represented a kind of network or even “plastic” phenomenon of displaying terrestrial connections, one perhaps connected with the effort to develop new forms of subjectivity in the context of the Counter-Reformation.¹⁴ The guiding influence for Sloterdijk in this regard

12 Sumathi Ramaswamy, *Terrestrial Lessons: The Conquest of the World as Globe* (Chicago: University of Chicago Press, 2017), 20. She cites the articles of Cordell Yee (China), Gari Ledyard (Korea), and Kazutaka Unno (Japan) from Harley and Woodward, eds., *The History of Cartography: 2:2* in support of this interpretation, identifying the profound influence of Harley (d.1991) in interpreting Jesuit cartography (302n60).

13 Ricardo Padrón, *The Spacious Word* (Chicago: University of Chicago Press, 2004), 232.

14 Peter Sloterdijk, *In the World Interior of Capital* (Cambridge: Polity Press, 2013), 59 [*In Weltinnenraum des Kapitals* (Frankfurt: Suhrkamp, 2005)], and more generally Sloterdijk, *Sphären II, Globen, Makrosphärologie* (Frankfurt: Suhrkamp, 1999). For recent studies along these lines see Luke Clossey, *Savation and Globalization in the Early Jesuit Missions* (Cambridge: Cambridge University Press, 2008), esp. 68–113, “Imagining the Global Mission” and “Space, Time, and Truth in the Jesuit Psychology.” Clossey notes that “The ending of time and the filling of space coloured the Jesuit mentality” (113). See also, Florence C. Hsia, *Sojourners in a Strange Land: Jesuits and Their Scientific Missions in Late Imperial China* (Chicago: University of Chicago Press, 2011); and Miguel de Asúa, *Science in the Vanished Arcadia: Knowledge of Nature in the Jesuit Missions of Paraguay and Río de*

has been the Jesuit theologian Karl Rahner (1904–84), framing the shift in terms of “categorical self-manipulation” as opposed to the propaganda-like manipulation of others.¹⁵ As historians Roger Hart and Qiong Zhang have suggested in the case of China, this kind of categorical self-manipulation could be adopted by non-Jesuits as a strategy as well, an important part of its appeal among Chinese “converts.”¹⁶

Most recently, a third wave of scholarship has embedded Jesuit cartographers among the institutions of empire building, pointing to the particularly early modern problem of complex and layered sovereignties. If self-manipulation and autopoiesis could work for individuals, such strategies could also help early modern empires transform political practice and pull together divergent institutions. It is perhaps no accident that many of the best Jesuit cartographers came out of the Holy Roman Empire—Eusebio Kino (1645–1711) in Mexico’s Pimería Alta, Ignaz Kögler (1680–1746) in Qing Beijing, Samuel Fritz (1654–c.1728) in Peru and Brazil, among many others. Newer scholarship reflects “globalization” histories that describe the stitching together across political, linguistic, and religious boundaries of different institutions, informal networks and actors through an appeal to cartographic technique. In the late 1990s and 2000s, for example, cartography became central to the “new Qing history,” which emphasized its role in early modern empire making more generally.¹⁷ This scholarship has grown more subtle both in terms of the

la Plata (Leiden: Brill, 2014), esp. 164–210. In an early essay, Anne Godlewska described Jesuit cartography as part of a broader European “modernity”—both in terms of imperialism and anthropology and sociology. “The Fascination of Jesuit Cartography,” in *Jesuit Encounters in the New World*, ed. Joseph Gagliano and Charles Ronan (Rome: IHSI, 1997), 111. Godlewska took Harley’s place at the 1992 Loyola conference from which the Gagliano and Ronan volume emerged.

- 15 Karl Rahner, “Experiment Mensch: Theologisches über die Selbstmanipulation des Menschen,” in *Die Frage nach dem Menschen Aufriss einer philosophischen Anthropologie* (Freiburg: Alber, 1966), 53. Cited in Sloterdijk, *Not Saved: Essays after Heidegger*, trans. Ian Moore and Christopher Turner (Cambridge: Polity Press, 2017), 143 [originally *Nicht gerettet: Versuche nach Heidegger* (Frankfurt: Suhrkamp, 2001)].
- 16 Roger Hart, *Imagined Civilizations: China, the West and Their First Encounter* (Baltimore: Johns Hopkins UP, 2013), esp. 253–56; Qiong Zhang, *Making the New World Their Own: Chinese Encounters with Jesuit Science in the Age of Discovery* (Leiden: Brill, 2015); and “Matteo Ricci’s World Maps in Late Ming Discourse of Exotica,” *Horizons: Seoul Journal of Humanities* 1, no.2 (December 2010): 215–50.
- 17 Peter Perdue, “Boundaries, Maps and Movement: Chinese, Russian, and Mongolian Empires in Early Modern Central Eurasia,” *The International History Review* 20, no.2 (June 1998): 263–86; Perdue, *China Marches West* (Harvard: Harvard University Press, 2010), 447–57; Laura Hostetler, *Qing Colonial Enterprise: Ethnography and Cartography in*

fragmented nature of imperial polities and the problem of treating the Jesuit mission in China in isolation from complex webs of institutions within, external to and moving across fluid imperial boundaries.¹⁸ Similar approaches have used Jesuit science and Jesuit cartography to trace complex networks within and across the Spanish and Portuguese empires.¹⁹

Taken in tandem, these three phases of scholarship—semiotics, autopoiesis, and networks—have fostered innovative and distinct methodological approaches to Jesuit cartography, opening up of a robust field that dramatically redefines both the history of cartography and the history of early modern globalization. The call for papers for this issue, designed to assess the field as it is developing, revealed interesting new clusters of work—a fundamental rethinking of the work and legacy of Matteo Ricci, approaches that reassess the importance of French Jesuit cartography in reframing global practices, and finally work on the neglected aftermath of the Jesuit expulsions. In each case, the authors have given new reasons why Jesuits mapped, showing how through their activities Jesuits transformed the cartographic object into a tool for negotiating between administrative institutions and global subjectivities produced by the various “modernities” arising from a world of new encounters.

The first part of the issue, “Ricci Revisited: ‘Imagined Civilizations,’” suggests new directions not only for the study of Jesuit cartography in China but also for how to read Jesuit maps more broadly. “Imagined Civilizations” references Roger Hart’s reframing of Benedict Anderson’s “Imagined Communities” and the more general issue of the relationship between printing in East Asia and

Early Modern China (Chicago: The University of Chicago Press, 2001); Benjamin Elman, “Ming-Qing Border Defence, the Inward Turn of Chinese Cartography, and Qing Expansion in Central Asia in the Eighteenth Century,” in Diana Lary, *The Chinese State at the Borders* (Vancouver: UBC Press, 2007), 29–56; Benjamin A. Elman, *On Their Own Terms: Science in China, 1550–1900* (Cambridge: Harvard University Press, 2005).

18 See especially Mario Cams, *Companions in Geography: East–West Collaboration in the Mapping of Qing China (c.1685–1735)* (Leiden: Brill, 2017).

19 This has been especially true in the rich recent scholarship on the Spanish and Portuguese frontier in South America, see especially Neil Safier, *Measuring the New World: Enlightenment Science and South America* (Chicago: University of Chicago Press, 2008); Tamar Herzog, *Frontiers of Possession: Spain and Portugal in Europe and the Americas* (Cambridge: Harvard University Press, 2015), esp. 70–95; Camila Loureiro Dias, “Jesuit Maps and Political Discourse: The Amazon River of Father Samuel Fritz,” *The Americas* 69, no. 1 (2012): 95–116; Carmen Fernández-Salvador, “Jesuit Missionary Work in the Imperial Frontier: Mapping the Amazon in Seventeenth-Century Quito,” in *Religious Transformations in the Americas*, ed. Stephanie Kirk and Sarah Rivett (Philadelphia: University of Pennsylvania Press, 2014), 205–27.

the development of “civilizations” rather than “nations.”²⁰ Ricci’s central cartographic idea was a kind of comparative greatness, emphasizing in some ways oceans over land and highlighting the limits of Ming conceptions of geography. As Florin-Stefan Morar demonstrates in “The Westerner: Matteo Ricci’s World Map and the Quandaries of European Identity in the Late Ming Dynasty,” this notion of greatness helped create and sustain a “Western” or European identity. Morar’s investigation of Michele Ruggieri suggests that cartography was explicitly not part of the initial Xavierian mission, and it only became so as a way of expressing a “Western” identity distinct from Buddhism and a conception of the “West” as India. Not only does his research suggest early tensions within the Jesuit order over the meaning and usefulness of cartography, but it also helps explain why, at least in the case of China, cartography became a significant aspect of the mission. Following the rapidly shifting identities of Ricci, the world map becomes neither a tool of conversion nor a reconstruction of the world but a method for defining Ricci’s and by implication the mission’s identity as distinct from both Buddhism and a European Christendom fractured by confessional rivalries and competing state enterprises. In this way, the Ortelius-Mercator map (1569–70) becomes like the Clauvian-Gregorian calendar (1582), a portable and distinct time-space associated with the “West.”

In “Pleasing the Emperor: Revisiting the Figured Chinese Manuscript of Matteo Ricci’s Maps,” Cheng Fangyi tells a very different story about the use of animal imagery in what are called the “figured” Ricci manuscript maps, copies made of the Ricci map that were colored and decorated with creatures. Here the copying of the Ricci map gives important insights into the complexity of print and manuscript production during the late Ming, something that alludes back to Ricci’s own awe at the large numbers of inexpensive books as well as manuscripts in circulation in China.²¹ The key text for Cheng is the *Zhifang waiji* (1623) [職方外紀, Records of foreign lands] by the Italian Jesuit Giulio Aleni (1582–1649) and the Hangzhou scholar Yang Tingyun (楊廷筠, c.1560–1627), which contained many of the descriptions of the animals later added to the manuscript versions of Ricci’s maps. What appears to have happened with Jesuit cartography in the late Ming is an increasing micro-scale emphasis

20 Roger Hart, *Imagined Civilizations*; Benedict Anderson, *Imagined Communities*, 2nd ed. (London: Verso, 1991), esp. the section on maps, 163–86, added in this edition. See the brief mention of Jesuit mapping in Thongchai Winchakul’s *Siam Mapped* (Honolulu: University of Hawaii Press, 1994), 30.

21 See Rivi Handler-Spitz, *Symptoms of an Unruly Age: Li Zhi and Cultures of Early Modernity* (Seattle: University of Washington Press, 2017), 182n7; Kai-Wing Chow, *Publishing, Culture, and Power in Early Modern China* (Stanford: Stanford University Press, 2004), 19.

on “pleasing the emperor,” in this case by adding animals to the maps, even as the Jesuits pursued other strategies in the field for conversion. Cartography here becomes tied to the court and its desires, a connection that would only deepen during the early Qing Dynasty (1644–1912). Somewhat paradoxically, by directly engaging the emperor’s desires, this also helps build a Jesuit connection with the Joseon court and its emissaries to Beijing, even though the Jesuits themselves were not allowed to bring their mission to Korea.

Richard Pegg picks up the story in, “The Star Charts of Ignatius Kögler (1680–1746) in the Korean Court.” Kögler was an important Jesuit at the eighteenth-century Qing court in Beijing. Korean envoys, who brought Ricci’s maps and Adam Schall von Bell’s (1591–1666) star charts from the Ming Dynasty back for King Sukchong (r.1674–1720) in 1708, began subsequently in the 1740s to introduce Kögler newer Qing star charts in the service of calendar reform. These appeared on screens at court, used according to Pegg as visual tools by eighteenth-century Korean kings to show both connections with the scientific efforts of the Qing and their own authority over political factions of gentry and literati families. The reformer King Yeongjo (r.1724–76), used such screens to help consolidate symbolic authority and push forward his “Magnificent Harmony” (*Tangpyeong*, 蕩平, 탕평) policies in the face of factional political fighting among the literati. Thus in Korea, Jesuit cartography, especially Kögler’s star charts, acted as both a bridge between Korea and the Qing and at the same time enabled the Joseon Dynasty (1392–1897) to develop a new degree of cultural autonomy that could be used to centralize authority at home, simultaneously and in highly contested ways imagining both a civilization and what might be called a nation. Taken together, Morar’s, Cheng’s and Pegg’s papers suggest the ways that Jesuit cartography, including star charts, were used in Ming and Qing China and Korea to redefine and localize “civilizational” time and space in ways that were largely escaped the control of the Jesuits. The interesting case of Korea suggests that this imagining could happen through the maps themselves in politically charged settings with no direct Jesuit involvement.

The second section of the issue, “The French Turn: Enlightenment and Empires,” opens up questions about the links between empire formation and science in the seventeenth and eighteenth centuries. Traditionally research on Jesuit cartography has tended to gravitate towards two poles—the China mission and the Spanish Americas.²² In “Seventeenth-Century Jesuit Explorers’

22 For the initial development of the field in the Spanish Americas, see the landmark collections by Guillermo Furlong Cardiff, *Cartografía jesuítica del Río de la Plata* (Buenos Aires: Jacobo Peuser, 1936), and Ernest Burrus *La obra cartográfica de la Provincia Mexicana de*

Maps of the Western Great Lakes and Their Influence on the Subsequent Cartography of the Region,” Carl Kupfer and David Buisseret examine the remarkable work of a series of French Jesuit cartographers in New France—Claude Allouez (1622–89), Claude Dablon (1619–97), Jacques Marquette (1637–75), and Jean-Baptiste Franquelin (1650–c.1700)—who were responsible for early maps of the Great Lakes. As Kupfer and Buisseret suggest, their skill emerged because of French Jesuit educators like Jean François de Nevers (b.1582), a correspondent of Marin Mersenne (1588–1648) and possibly the mathematics tutor of René Descartes (1596–1650) at the college of La Flèche. In several books published in the 1650s, de Nevers popularized and expanded the work of Christoph Clavius (1538–1612), elaborating and developing the very basic instructions in the *Ratio studiorum* (Naples: Tarquinio Longo, 1598, promulgated 1599) that Jesuit schools should teach geometry and globes.²³ The Jesuit educational system in France brought a rigorous mathematics to Jesuit cartography before the royal interest in cartography promoted by Louis XIV (r.1643–1715) and Jean-Baptiste Colbert (Minister of Finances, 1665–83). This was an education appropriate for an organization that relied upon a global network or what Stephen Harris has called a “geography of knowledge.”²⁴

la Compañía de Jesús (1567–1967) (Madrid: José Porrua Turanzas, 1967) as well as the field-defining David Buisseret, “Jesuit Cartography in Central and South America,” in *Jesuit Encounters in the New World*, ed. Joseph A. Galiano and Charles E. Ronan (Rome: IHSI, 1997), 113–62.

- 23 On François see Chikara Sasaki, *Descartes's Mathematical Thought* (Dordrecht: Springer, 2003), 84–89. On Clavius see Ugo Baldini, “Christoph Clavius and the Scientific Scene in Rome,” in George V. Coyne et al., *Gregorian Reform of the Calendar* (Vatican City: Specola Vaticana, 1983), 145–251; and “The Academy of Mathematics of the Collegio Romano from 1553 to 1612,” in *Jesuit Science and the Republic of Letters*, ed. Mordechai Feingold (Cambridge, MA: MIT, 2003), 47–98. Clavius's original teaching program only included algebra, although in China, the Jesuit mission was interested in teaching Euclidean geometry, see Peter Engelfriet, *Euclid in China* (Leiden: Brill, 1998); Ugo Baldini, “The Jesuit College in Macao as a Meeting Point of the European, Chinese and Japanese Mathematical Traditions,” in *The Jesuits, the Padroado and East Asian Science*, ed. Luis Saraiva and Catherine Jami (Singapore: World Scientific, 2008), 33–80. On the *Ratio studiorum* (Naples: Tarquinio Longo, 1598, promulgated 1599) see Paul Grendler, “Jesuit Schools in Europe: A Historiographical Essay,” *Journal of Jesuit Studies* 1, no. 1 (2014): [full page range?], here 13. The main suggestion in the *Ratio* was to teach Euclid not Clavius, and it said little about the content of cartographic education aside from making reference to Johannes de Sacrobosco's *De sphaera mundi* (c.1220).
- 24 Stephen Harris, “Mapping Jesuit Science: The Role of Travel in the Geography of Knowledge,” in John W. O'Malley, *The Jesuits* (Toronto: University of Toronto Press, 1999), 212–40; see also Harris, “Jesuit Scientific Activity in the Overseas Missions, 1540–1773,” *Isis* 96, no.1

In Manonmani Restif-Filliozat's "The Jesuit Contribution to the Cartographical Knowledge of India in the Eighteenth Century," the effects of that education are on display among the Jesuits, who were part of the French presence in Pondicherry in India. This sizeable group, which included Jean-Venant Bouchet (1655–1732), Louis-Noël de Bourzes (1673–1735), Claude Moriset (1667–1742), Claude-Stanislas Boudier (1686–1757), Gustave-Laurent Coeurdoux (1691–1779), and many others, had emerged out of a group of refugees from Siam and later began to map the interior of India. As was the case with New France, their work was popularized by Guillaume Delisle (1675–1726), and it also caught the attention of Jean-Baptiste d'Anville (1697–1782), who had previously published the Kangxi Emperor's (1661–1722) Qing Dynasty maps by way of the Beijing Jesuits and the Lazarist Matteo Ripa (1682–1746). The work of the Jesuits in India both became part of Enlightenment-era maps of India printed in France and Britain, and unwittingly helped James Rennell (1742–1830) and the British in their cartographic efforts to map and build an empire in India.

Cartography enabled the Jesuits to play important roles in helping shape the absolutist state and "rationalized" eighteenth-century empires—whether in Europe, the Americas, or in East Asia. Madalina Valeria Veres's account of Joseph Liesganig's (1719–99) mapping efforts in the Austrian Habsburg Empire under the last empress Maria Theresa (r.1740–80), suggests the ways that cartography as developed through French Jesuit educational and royal scientific institutions came symbolize Enlightenment "science" during the eighteenth century. The Jesuits, and especially Liesganig, played a key role in helping her embark on an Enlightenment program of centralization and rationalization of the empire. Austria was one of the last places in Europe to suppress the Jesuits (1782), and Veres makes a compelling argument that this was in large part due to the cartographic and astronomical efforts of Liesganig himself. As head of the Jesuit Observatory in Vienna, Liesganig worked with César-François Cassini de Thury (1714–84) in 1761 on recording the transit of Venus. Empress Maria Theresa's rejection of Cassini's offer to help improve Habsburg surveying and cartographic efforts suggests that the in-house efforts of Liesganig were perceived as more efficient and adaptable to the needs of imperial frontiers. While Liesganig worked with other Jesuits on his surveying expedition to Hungary, the process was broadly collaborative among institutions and individuals, so that a uniquely "Jesuit" cartography by this point in the Enlightenment is often hard to discern.

(March 2005): 719. On the role of Jesuit education in shaping the development of cartography more broadly in France see Mary Pedley, *The Commerce of Cartography* (Chicago: University of Chicago Press, 2005), 26–29.

The third section examines the short and long term effects of the suppression of the Jesuit order on Jesuit cartography. This occurred at different times in the late eighteenth century—Portugal (1759), France (1764), Spain (1767), by the Papacy (1773), Austria and Hungary (1782) and the Austrian Netherlands (1788). It had direct, if at times delayed, effects on the Jesuits under the Portuguese and French in India, in the Americas under the Portuguese, French and Spanish (the British forced the Jesuits out of New France in 1759), in the Spanish Philippines (1769–71) and in Qing China (1775), where the Lazarists took control of the mission in 1785 until they were expelled in 1827. Both Joseph Tiefenthaler (1710–83) in India, as discussed by Restif-Filliozat, and Liesganig, as discussed by Veres, were affected by the expulsions in important ways.

Mirela Altic, in “Changing the Discourse: Post-Expulsion Jesuit Cartography of Spanish America,” describes the activities of Jesuits after the suppression in the Spanish Empire as a kind of momentum, a continuation of the longer tradition of Jesuit mapmaking there. The approximately 4,500 Jesuits in the empire received a pension in compensation, and many made their way to cities in Italy, the Holy Roman Empire, and the Austrian Habsburg Empire where they continued their work in cartography. Generally, this resulted in maps that were completely rationalized along Enlightenment lines, devoid of iconography, and always published within books rather than separately as sheets. It also meant a kind of stagnation, as Jesuits no longer had access to the rich networks of information that they had relied upon when mapping in the Americas. To emphasize the legitimacy of their own work, they created what Altic calls a “counter-discourse,” which relied on pre-suppression sources to critique contemporary European maps based on travel accounts and state-sponsored surveys. In this way, they had much in common with the work of Liesganig as described by Veres, which competed with military mapmakers among the Habsburgs. Unlike Liesganig, however, the expelled Jesuits did not usually have access to their own scientific institutions or teams of surveyors. This tendency towards counter-narrative may be one reason that during the independence movements and in the early republics of post-imperial Latin America, Jesuit maps were often seen by nationalists as more authentic, challenging Eurocentric conceptions of cartography.

Restoration in 1814 meant an extensive period of rebuilding, a process in which cartography came to play an important role. Peter Meurer in, “Oscar Werner, S.J. and the Renewal of Catholic Atlas Cartography in Germany, 1884–88,” takes a rare look at the late flourishing of Jesuit cartography after they were expelled from Germany during the Kulturkampf with the Jesuits Law (1872). Werner published a series of explicitly Catholic atlases, reviving a tradition from the seventeenth and eighteenth centuries, which offered a global picture

of Catholicism as a world religion. These atlases were in many ways personal, completed during a period of isolation and exile in Holland. They testify to a kind of internalization and popularization of the idea of Jesuit cartography just as Brucker began to publish his first work on the history of the Jesuit cartographers in eighteenth-century China in Paris during the 1880s and 1890s.

In all of these case studies, which do an admirable job expressing the global nature of the Jesuit cartographic enterprise and the complexities of its local manifestations, social relationships among people are mediated by cartographic images, so much so that when the formal legal and institutional networks are abolished, the images retain their own valencies. This helps explain the paradox of Jesuit cartography in that such maps were neither mere representational images nor a kind of propaganda. Instead, they are more like what Hans-Jörg Rheinberger calls “models” or “epistemic things,” which exhibit a lack of closure and an unpredictability of future development.²⁵ When de Angelis sent the copy of his map from Hokkaido, it was first copied and annotated by Jesuits in Japan, and then simultaneously sent through Macao and Goa to Lisbon and through Manila and Acapulco to Rome. These were maps that were often finished by others, whether publishers like Delisle in France, emperors in China or Austria, kings in Korea, or British East India Company employees. They were also, like clocks, portable spatial devices that could be moved from place to place and act as objects of inquiry, embodying in the words of Rheinberger, “what one does not yet know.”

25 Hans-Jörg Rheinberger, *Toward a History of Epistemic Things* (Stanford: Stanford University Press, 1997), 28–31.