Tanya Ball
Jamie Kadoglou

Appropriating Indigenous Scientific Knowledge: Andrés I. Prieto. *Missionary Scientist: Jesuit Science in Spanish South America, 1570-1810.* Nashville: Vanderbilt University Press, 2011

In *Missionary Scientists Jesuit Science in Spanish South America, 1570-1810,* Andrés I. Prieto carries out an intellectual history of Jesuit scientific practices that emerged in early modern Spanish South America. The central argument in Prieto's work is to demonstrate how the reorganization of the Jesuit Missions in Spanish America affected the ways in which scientific knowledge was obtained, distributed and applied during the two centuries that they were present. In each section of his book Prieto explores the challenges faced by the Jesuits in their South American missions. Prieto deftly examines the ways in which indigenous knowledge of the natural world, medicinal plants and animals was translated and re-appropriated to fit into a more acceptable Christian paradigm. Central to Prieto's work is the use of Mary Louise Pratt's term 'contact zone' used to designate the interactions between the Jesuits and the different indigenous groups as "privileged spaces where individuals belonging to different cultural and historical traditions came together in unequal power positions under which both parties exchanged information relevant to their respective cultures" (33).

Later chapters demonstrate how an international intellectual Jesuit network was established to disseminate these appropriated knowledges. The final chapters provide a comparison of works written by different Jesuits on the subject of natural histories, which were highly influenced by the *doctrinas* of Jesuit José de Acosta in his *De Procuranda.*

Prieto divides his book into three parts, all of which reveal the challenges faced by the Society of Jesus in order to construct a network of shared knowledge within the Peruvian viceroyalty (5). In Part I Prieto focuses on the vast expansion of the *doctrinas de indios* and how these both affected the ways in which knowledge was obtained and disseminated within the Society of Jesus. Prieto discusses the changes that arose due to Jesuit José de Acosta's *De Procuranda Indorum Salute* where he proposed that the missionaries must live in Andean communities inhabited by natives for longer periods of time in order to establish Jesuit residences, colleges and seminars so that the Indian nobles could be educated (19).

Part II deals with one of the most salient features of Jesuit scientific practice in South America and in the early modern period in general, namely, it's collaborative character. More specifically, Prieto demonstrates how Jesuits became acquainted with other missionaries and scholars travelling throughout the Americas and how they remained in contact with academics in Europe via correspondence. For example, Prieto demonstrates how Bernabé Cobo came into contact with Portuguese explorer and cosmographer José de Moura Lobo in Mexico, thus demonstrating how Cobo

extended his network of informants by befriending travelers and explorers passing through the viceregal capital (112).

In Part III Prieto compares works written by Jesuits on the subject of natural histories. These comparisons exemplify a change in natural philosophical thought that occurred in South America. For example, Prieto charts the development of natural history from Acosta's philosophical study of nature in his *Historia natural y moral de las Indias* to the more proto-nationalist work of Creole Jesuits like Diego de Rosales's *Historia general del reyno del Chile.* Prieto notes that unlike Acosta, Rosales placed "much more emphasis on the bounty of Chilean nature than on its marvels" (9).

Prieto's argument becomes increasingly evident throughout the book. That is, each section reveals how the Jesuits adapted their scientific practice alongside cultural, linguistic, political and ecological challenges. In Part I he discusses the development of the missionary identity in South America and how the Jesuits distinguished themselves from other religious orders. In this respect, Prieto could have expanded more on previous Franciscan and Dominican approaches to teaching Christianity to the indigenous groups. By measuring the Jesuit works against other missionary works and scientific currents that were circulating at the time, the notion of Jesuit agency and innovation would be further strengthened. This is evident in Chapter 2 where he looks at the work of the Italian Jesuit Joan Bautista Ferrufino, who translated Valdivia's Mapudungun catechism into the Chono language (52). The eagerness to translate from one indigenous language to another demonstrated the willingness of the Jesuits to immerse themselves in the native cultures in order to better evangelize them.

Part II tackles the collaborative and international character of Jesuit learning in the early modern period. For example, in Chapter 5: "Astronomy between Chiloe, Lima, and Rome" Prieto explores the advantages of the Jesuit system in regards to their expansion of colleges, residences, and friendships. Prieto looks at the case of Niccolò Mascardi, who joined the Jesuits in 1638. Mascardi was exceptional in that he successfully balanced his dedication to scientific discovery and evangelization despite the extreme conditions of the Buena Esperanza reduction. He was also known for his collaborative efforts with other missionaries, with whom he shared information, books and possibly scientific instruments. Among these missionaries was the Belgian Jesuit Raymond Coninck, who, along with Mascardi, documented his observations of the comet of 1652. As Prieto notes, this documentation was later sent to the Jesuit Athanasius Kircher who resided in Rome. As a result, the Jesuits were able to create a bridge between American and European knowledge on the natural world.

Finally, Part III describes and compares the natural histories written by the Jesuits of South America. More specifically, in Chapter 6: "The Two Faces of Acosta's *Historia natural y moral de las Indias*" Prieto examines these natural histories against the Jesuit missions, Jesuit colleges, and the changing theoretical approaches to nature in general. The work of the anthropologist and natural historian Acosta was important because it exemplified a reconstruction of knowledge, which challenged rational, Aristotelian methods. For example, Prieto offers the example of Acosta's explanation of magnetism, where he does not make any mention of classical theories regarding the subject at hand like Giambattista

della Porta's *Magia Naturalis*. Instead, he offers his own observations and conclusions (153).

Prieto's use and range of primary sources is quite impressive, as he pays careful attention to identify each original source base within its broader historical context. For example, he introduces the Jesuit chronicler Bernabé Cobo's *Historia del Nuevo Mundo* as a work, which resulted from the knowledge he attained in his trip to Cuzco, and, more particularly, from the indigenous ruins of Tiawanaku (101). Prieto is also successful in his manner of measuring these primary sources against each other. For example, Prieto compares Cobo's *Historia del Nuevo Mundo* to Acosta's *Historia Natural y Moral de las Indias,* noting that both books followed the traditional organization of natural histories. Furthermore, he notes how each natural history included their own discussion of the origins and history of Andean peoples before the Spanish conquest (102). Despite these similarities, these works still differed greatly. One difference that Prieto notes is that while Acosta separated his study of American nature from the indigenous people; Cobo considered the study of American nature as inseparable from the native civilizations (102).

Prieto also discusses the notion of indigenous resistance to Christianity on a number of occasions, which is demonstrated through both violent and nonviolent means. For example, during Mascardi's last trip to the Magellan Strait in 1611, he was attacked and killed by two hostile members of the indigenous Poya tribe who refused to accept his Christian teachings (128). An instance of nonviolent indigenous resistance, on the other hand, is the indigenous people's hesitation towards baptism. Due to unfortunate timing, the natives often thought that baptism was the cause of

death. Therefore, out of fear, many refused the services of the Jesuits (48).

Considering Prieto's laudable aim to revalorize indigenous knowledges and the impact these had on Jesuit views on the natural world; Prieto's representation of the different indigenous groups addressed could be further problematized given that the ethnohistories addressed are filtered through the perspective of their Jesuit authors. That said, given that Prieto focuses primarily on the work of the Jesuits, it is perhaps forgivable that he does not include many native, mestizo (or even African) sources. For example, el Inca Garcilaso's overall contribution to re-writing the history of South America and his interpretation of celestial phenomena and the role of the herbalist in the Inca Empire could be addressed. That is not to say; however, that the native voice is completely ignored as evidenced by the inclusion of Peruvian native, Guaman Poma de Ayala's *El primer nueva corónica y buen gobierno*. This letter of over one thousand pages and 496 illustrations, was sent to the king of Spain as a "passionate denunciation of the country's misgovernment after the Spanish conquest, and proposals for reform" (150).

Ultimately, Prieto constructs an intriguing and convincing argument surrounding Jesuit natural histories and the influence that appropriating indigenous knowledges had on their view of the natural world, and how these new knowledges helped them in turn to challenge European misconceptions of the Americas. Furthermore, Prieto demonstrates how these once deemed demonic indigenous knowledges, where re-appropriated by the Jesuits and used as medicinal agents—thus shifting their understanding of the workings of the natural world from supernatural to more rational

explanations. Ultimately, Prieto's beautifully written book and meticulous research is an important contribution not only Jesuit intellectual history in South America and its role in the development of scientific thought in the early modern world; but it will also appeal to scholars and students interested in religion, anthropology, transatlantic studies, and indigenous America.

Tanya Ball is an M.A. student in the department of Modern Languages and Cultural studies, specialising in Spanish and Latin American Studies. Her research interests include Aztec religion and ist appropriation after the conquest; as well as natural disasters and catastrophes in seventeenth century Guatemala.

tcball@ualberta.ca

Jamie Kadoglou is an M.A. student in the department of Modern Languages and Cultural studies, specialising in Spanish and Latin American Studies. More specifically, her interests include translation from Spanish into English. She is interested in Peruvian culture and is focusing on translating Peruvian texts with an indigenous culture component that will most likely incorporate Andean cosmovision.

kadoglou@ualberta.ca