A Population History of the Missions of the Jesuit Province of Paraquaria

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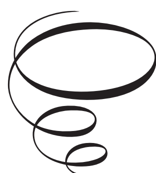
By

Robert H. Jackson

Cambridge Scholars Publishing



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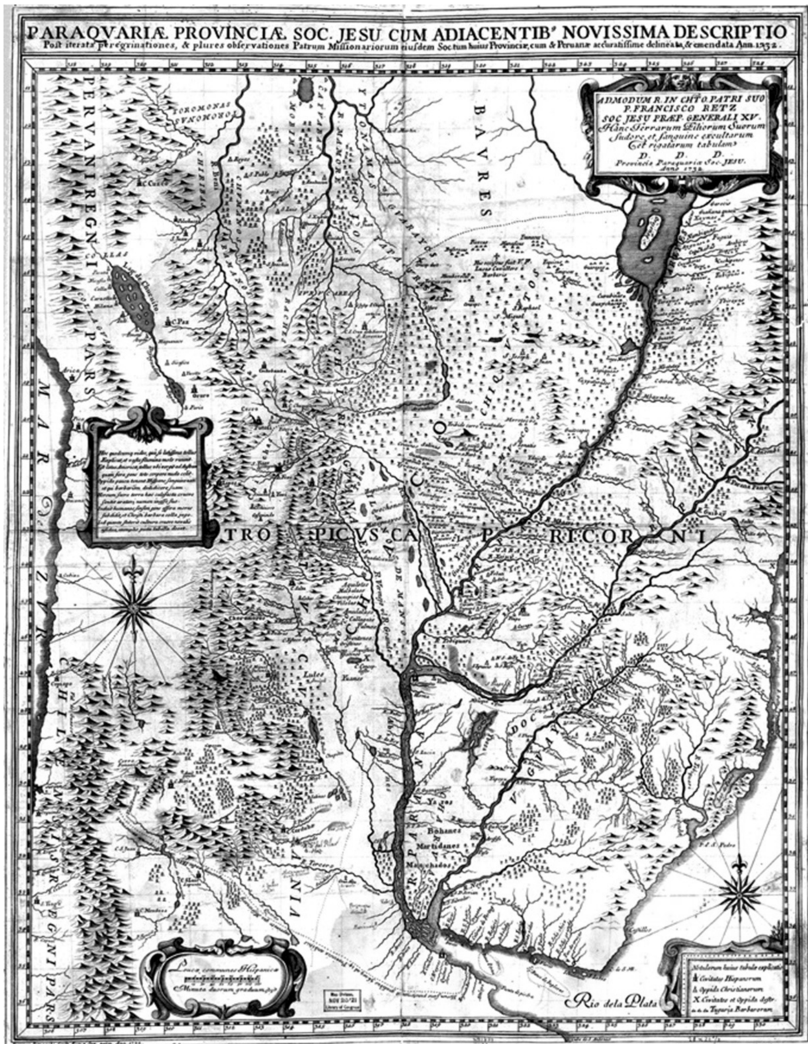

Map 1: A 1732 map of the Jesuit Province of Paraguay. *Paraguariæ Provinciæ soc. jesu cum adiacentibg. novissima descriptio: post iteratas peregrinationes & plures observationes patrum missionariorum eiusdem soc. tum huius provinciæ, cum & Peruanæ accuratissime delineata & emendata ann. 1732/admodum r. in cht. o. patri suo P. Francisco Retz, soc. jesu præp. generali XV, hanc terrarum filiorum suorum sudore et sanguine excultarum et rigatarum tabulam; D.D.D., provincia paraquariæ soc, jesu, anno 1732; Ioannes Petroschi, sculp. Romæ sup. perm., ann. 1732.* Library of Congress Geography and Map Division. Call Number: G5200 1732.R4 Vault. Digital ID Number: g5200 br000088 http://hdl.loc.gov/loc.gmd/g5200.

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ACKNOWLEDGEMENTS

I first put pen to paper some 40 years ago to write about the historical demography of native populations brought to live on missions. I have continued to write on this theme, and particularly to refine my findings based on new documentary sources and to respond to the comments of some who fail to comprehend the complexities of demographic analysis. With this volume I have finally concluded the intellectual journey that I began so many years ago and that I incorrectly thought I had finished in recent years, but found that I had not. This is my final word on this subject, and now it is for others to continue the task of understanding the more than five centuries of demographic change those native peoples of the Americas experienced after 1492.

I have many debts of gratitude that date back to my university education at the University of California, Santa Cruz, the University of Arizona, and the University of California, Berkeley. I was fortunate to study with inspirational mentors. They were David Sweet, Murdo MacLeod, and the late Don Tulio Halperin Donghi who directed my doctoral dissertation at the University of California, Berkeley. He helped me select the topic of my dissertation that dealt with another indigenous frontier in Cochabamba, Bolivia, and the freedom to develop. They helped frame my intellectual development, but I alone am responsible for what I write. I was also fortunate to study with Kenneth Wachter at Berkeley, and learned much about historical demography from him. I have been fortunate to have been able to interact and collaborate with interesting and informed colleagues over the years. At the top of the list are Susan Deeds, Erick Langer, Gregory Maddox, and Bob McCaa.

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Robert H. Jackson,
Mexico City, Mexico

Chapter One

Introduction

In the first decade of the seventeenth century Jesuits from the *colegio* in Córdoba (modern Argentina) established a new administrative jurisdiction in Spanish territory in lowland South America known as the Paraguay Province (Provincia de Paraquaria). It came to embrace a large swath of territory in what today is northern Argentina, parts of southern Brazil, Paraguay, and eastern and southern Bolivia. The jurisdiction included urban colegios in cities and towns such as Buenos Aires, Asunción, Tucumán, and Tarija, among others. It was also a missionary jurisdiction, and the Jesuits established missions among different sedentary and non-sedentary indigenous groups.

The mission was the quintessential colonial Spanish frontier institution in the Americas, and had a simple objective. The Spanish imposed a system of indirect rule on existing political structures in Mesoamerica, the Andean region, and other areas where they subjugated sedentary and hierarchical state systems. They wanted to reproduce that pattern on the fringes of their territory where they encountered peoples that lived in tribes, clans, or at a more basic social-political level in small bands. The Crown employed missionaries from different Catholic religious orders to establish mission communities, congregate indigenous peoples, and to direct the program of political, social, and cultural transformation, as well as religious conversion. The implementation of mission programs met with mixed results and different outcomes on the frontiers of Spanish America, and among sedentary and non-sedentary indigenous populations.

This study examines one aspect of the historical experiences of the native peoples brought to live on the missions, demographic patterns. In the centuries following first sustained contact with the Old World indigenous populations experienced a sea-change in demographic patterns brought on by the diseases transmitted by Europeans such as smallpox and measles, warfare, exploitation by the European colonizers, and competition for

sexual partners, among other factors.[1] There has been considerable debate and different interpretations regarding post-contact indigenous demographic patterns.[2] However, the processes of demographic change were complex. The demographic history of the missions in the Paraguay Province was a microcosm of these larger historical changes, and is the subject of this

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[1] For a useful overview to the different factors contributing to population shifts and population loss see Massimo Livi-Bacci, "The Depopulation of Hispanic America After the Conquest," *Population and Development Review* 32:2 (June 2006), 199–232.

[2] Entries in the debate over post-contact demographic exchange include the works of the so-called Berkeley school (Lesly B. Simpson, Sherburne F. Cook, and Woodrow Borah), who examined population change in Mexico and other areas in the Americas. Representative of their publications are Woodrow Borah and Sherburne F. Cook, *The Population of Central Mexico in 1548: An Analysis of the Suma de visitas de pueblos* (Berkeley and Los Angeles: University of California Press, 1960); and Sherburne F. Cook and Woodrow Borah, *Essays in Population History*, 3 volumes (Berkeley and Los Angeles, 1971–1979). In central Mexico Cook and Borah posited a continuous decline in population from sustained contact and conquest in 1519 to the mid-seventeenth century, when the native population reached its nadir. The works of Simpson, Cook, and Borah have their supporters and detractors, the works of some of whom appeared in William Denevan, ed., *The Native Population of the Americas in 1492* (Madison: University of Wisconsin Press, 1976, 1992). The most heated debates have focused on the size of native populations at contact, which is generally used to estimate the degree of native population loss. See David Henige, "On the Contact Population of Hispaniola: History as Higher Mathematics," *Hispanic American Historical Review* 58 (1978), 217–237; Angel Rosenblat, *La población de América en 1492: viejos y nuevos cálculos* (Mexico, DF: El Colegio de Mexico, 1967); Angel Rosenblat, "El desarrollo de la poblacion indigena de America," *Tierra firme* 1:1 (1935), 115–134; Angel Rosenblat, "The Population of Hispaniola at the Time of Columbus," in Denevan, ed., *The Native Population of the Americas in 1492*, 43–66; William T. Sanders, "The Population of the Central Mexican Symbiotic Region, the Basin of Mexico, and the Teotihuacan Valley in the Sixteenth Century," in Denevan, ed., *The Native Population of the Americas in 1492*, 85–150; Rudolph A. Zambardino, "Critique of David Henige's 'On the Contact Population of Hispaniola: History as Higher Mathematics'," *Hispanic American Historical Review* 58 (1978), 700–708; Rudolph Zambardino, "Mexico's Population in the Sixteenth Century: Demographic Anomaly or Mathematical Illusion?" *Journal of Interdisciplinary History* 11 (1980), 1–27. Also see Nobel David Cook, *Demographic Collapse: Indian Peru, 1520–1620* (Cambridge and New Cork: Cambridge University Press, 1981); and Nobel David Cook, *Born to Die: Disease and New World Conquest, 1492–1650* (Cambridge and New York: Cambridge University Press, 1998).

study.[3] The populations studied here included sedentary and non-sedentary groups, geographically isolated mission communities, and missions connected by river highways that facilitated commerce and the spread of contagion. It also includes missions located in a war zone, and the ways that conflict modified demographic patterns. Mortality during epidemics varied on the different missions from low to moderate to catastrophic that in some cases was more than 50 percent of the population of a given community. This was close to the level posited for so-called "virgin soil" epidemics, the first outbreaks following sustained contact.[4] There were also indigenous groups not brought into the missions such as the Guaraní who lived in the Spanish area of settlement and were subject to the *encomienda*, and their historical experiences are not discussed here.

The Jesuit missions in the Paraguay Province included those established among the Guaraní after 1609. Chapters 2, 3 and 4 discuss and document demographic patterns, and the factors that shaped those patterns. Chapter 2

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[3] This study offers a synthesis of my own previous publications, but also incorporates new data and interpretations. See Robert H. Jackson, *Demographic Change and Ethnic Survival Among The Sedentary Populations On The Jesuit Mission Frontiers of Spanish South America, 1609-1803: The Formation and Persistence of Mission Communities in a Comparative Context* (Leiden: Brill Academic Publishers, 2015); Robert H. Jackson, *Frontiers of Evangelization: Indians in the Sierra Gorda and Chiquitos Missions.* (Norman: University of Oklahoma Press, 2017); and Robert H. Jackson, *Regional Conflict and Demographic Patterns on the Jesuit Missions among the Guaraní in the Seventeenth and Eighteenth Centuries* (Leiden: Brill Academic Publishers, 2019). These studies examined several issues related to post-contact indigenous demographic patterns. One was an evaluation of epidemic mortality patterns and the applicability of the model of "virgin soil" epidemics. The second was the difference in demographic patterns between sedentary and non-sedentary populations. A third was the effect of conflict on demographic patterns. A final was the geographic factor in determining the spread of contagion and epidemic mortality.

[4] On the concept of so-called virgin soil epidemics see Alfred Crosby, "Virgin soil epidemics as a factor in the aboriginal depopulation in America," *The William and Mary Quarterly: A Magazine of Early American History* 33: 2 (1976), 289–299. Henry Dobyns advocated an extreme model of indigenous demographic population collapse and the spread of epidemics across the Americas. See "An appraisal of techniques with a new hemispheric estimate," *Current Anthropology* 7: 4 (1966), 395–416; and his monograph *Their number become thinned: Native American population dynamics in eastern North America* (Knoxville: University of Tennessee Press, 1983). The study of patterns on the missions of the Paraguay Province challenge this model.

outlines regional conflict and the militarization of the missions, and the related issue of Diasporas from the missions, some instances of which were related to regional conflict. Chapter 3 explores epidemic mortality. Chapter 4 analyses demographic patterns on the missions, and the variations between the individual missions. Beginning in 1691, the Jesuits established missions on the Chiquitos frontier in eastern lowland Bolivia. These missions in some ways were similar to those established among the Guaraní, and one similarity was the existing clan system. There were also differences. The Chiquitos missions had open populations, for example. Demographic patterns on these missions are the subject of Chapter 5. The last two groups of missions were those established in the late 1740s in the Tarima region, and the missions established among different non-sedentary Chaco groups such as the Abipones, Mocovies, and Tobas. Chapter 6 outlines patterns on these missions that were different, particularly on the Chaco missions. Appendices at the end of the study summarize figures on the population and vital rates of the missions.

Demographic patterns were also related to economic patterns, food production, and the reliability of the food supply. The following section evaluates an interpretation that argues that the Jesuits fostered the economic dependence of the Guaraní, who came to depend on the missionaries for their sustenance. This is followed by a discussion of sources available for reconstructing the demographic patterns on the missions.

Were the Guaraní an Economically Dependent Population?

Demographics cannot be separated from related topics such as economics, political structures, and cultural change. The Spanish colonial agenda is also an important element for understanding processes of demographic change. The indigenous populations were to pay tribute and provide cheap labor to colonial elites. The missions were to pave the way for the imposition of this pattern on frontier communities. Moreover, subsistence security or insecurity was a key demographic factor. Based on one general report drafted by the Jesuits in 1743 for the consumption of royal officials, historian Julia Sarreal posited that the Guaraní living on the missions were dependent on communal production for their sustenance, an interpretation that is not substantiated by further documentary evidence.[5] Were the

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[5] Julia Sarreal, *The Guaraní and their missions A Socioeconomic History*. (Stanford: Stanford University Press, 2014), 175-181.

Guaraní an economically dependent population? Sarreal constructs hypothetical neo-liberal based data on the average consumption of communal production by the Guaraní during the Jesuit period. The author then goes on to argue that the Guaraní regained self-sufficiency following the Jesuit expulsion, and produced goods for the market in addition to practicing subsistence agriculture.[6] Post-expulsion records show less distribution of communal goods to the Guaraní, which leads the author to argue that the economies of the missions declined under civil administration. Sarreal's hypothesis, however, suffers from a lack of evidence regarding abambaé or documents that show distributions of food to the mission residents that thus leave her interpretation unsubstantiated. Moreover, there is no evidence to suggest that the Jesuits attempted to foster a similar form of economic dependence of the residents of the Chiquitos missions. This was a strategy only employed by missionaries attempting to pressure non-sedentary natives into adopting a fully sedentary way of life, as the Franciscans attempted to do on the Sierra Gorda missions in Mexico and later on the California missions.[7]

What is documented is the Jesuit practice of using communal production to pay the tribute obligations of the Guaraní residents of the missions, and this was related to the Jesuit policy of establishing missions among Guaraní not encumbered by obligations to the holders of private *encomiendas*. During periods of ecological crisis as in the 1730s and again in the 1750s during the uprising in the eastern missions following the implementation of the Treaty of Madrid, the Jesuits were unable to meet the complete tribute payments. In the years 1728-1734 the Jesuits paid 66.701 pesos per year into the Buenos Aires treasury, this dropped to 28,420 in 1734-1736, 28,649 from 1736 to 1739, 28,443 in the years 1739-1742, and 18,880 in 1742-1744. In 1735, the midst of the crisis royal officials directed the Jesuits to prepare a new tribute census. Tribute payments increased to 79,992 in the years 1744-1749.[8] The uprising in the

[6] Ibid., 181-182.
[7] See Robert H. Jackson, *Pames*, *Jonaces, and Franciscans in the Sierra Gorda: Mecos and Missionaries* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2017); Jackson, *Frontiers of Evangelization.* Also see Robert H. Jackson, "Missions on the Frontiers of Spanish America," *Journal of Religious History* 33:3 (September 2009), 328-347 for a comparative perspective.
[8] Robert H. Jackson, *Missions and the frontiers of Spanish America: A Comparative Study of the Impact of Environmental, Economic, Political, and Socio-Cultural Variations on the Missions in the Rio de la Plata Region and on the Northern Frontier of New Spain.* (Scottsdale: Pentacle Press, 2005)., 148-149.

eastern missions of the mid-1750s undermined the ability of the Jesuits to pay tribute. Payments dropped to 12,081 pesos in 1758, 14,381 in 1761, and only recovered to 57,524 in 1766. Finally, the Jesuit expulsion also disrupted tribute payments. It dropped to a mere 560 in 1769 and 6,911 in 1770, but recovered again to 44,000 in 1772.[9]

The Jesuits managed different economic enterprises to produce income to cover the costs of their educational activities in colonial cities and the missions including tribute payments. In northern Argentina, for example, Jesuit owned ranches bred mules for sale in the mining centers of Upper Peru (Bolivia).[10] Jesuit owned estates in the coastal valleys of Peru produced wine and *aguardiente* (cane brandy), and employed African slave labor.[11] The Jesuits stationed on the missions among the Guaraní sold *yerba mate,* textiles, and tobacco. In 1666 royal officials limited the amount of yerba mate that could be sold to 12,000 arrobas or 300,000 lbs.[12] The Jesuits sent teams of Guaraní to collect yerba mate in stands of wild trees known as *yerbales*, but later developed plantation-style production. Some stands were located at some distance from the missions and in some cases east of the Uruguay River, and are depicted in contemporary maps. At the time of the Jesuit expulsion, for example, Santa Rosa owned 38,000 yerba mate trees, the largest number of all of the missions, followed by Santos Cosme y Damián with 25,000.[13] The Jesuits also created a network of offices in different parts of Spanish South America to market communal products and procure supplies. The offices were called *procuradurias* or *oficio de misiones*, and maintained warehouses and kept accounts with different Jesuit entities.

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[9] Ibid., 161.
[10] Nicholas Cushner, *Jesuit Ranches and the Agricultural Development of Colonial Argentina, 1650-1767* (Albany: SUNY Press, 1982).
[11] Nicholas Cushner, *Lords of the land: sugar, wine, and Jesuit estates of coastal Peru, 1600-1767* (Albany: SUNY Press, 1980).
[12] Jackson, *Missions and the frontiers,* 150-155; Sarreal, *The Guaraní and their missions,* 85-91. Sarreal (pp 220-221) published global figures of yerba mate and textile sales of 29 of the missions excluding Yapeyú, but did not provide a mission by mission breakdown. In the period 1731 to 1745, sales of yerba mate averaged 49,321 pesos and that of textiles 13,172 pesos; in the years 1770 to 1788 under civil administration it was 41,943 and 3,938 pesos respectively; and declined in the years 1791 to 1806 to 6,517 and 793 pesos respectively.
[13] Ibid., 153.

In order to understand the concept of a mission "economy," it is first necessary to define the objective of royal policy in supporting the establishment of frontier missions. The central Mexican and Andean *pueblos de indios* served as the model for the frontier mission communities established among the Guaraní, and on other frontiers. The pueblos de indios were ostensibly politically autonomous, and were allowed autonomy as long as they complied with tribute obligations and met labor demands. In the case of the Guaraní missions this included military service in the mission militia, staffing frontier guard posts, and labor to build fortifications. Moreover, they retained a communal social, political, and economic organization. Community members enjoyed usufruct rights to land that, according to colonial law, could not be alienated. The communal structure of the communities persisted to the end of the nineteenth century when it came under attack from liberal reformers who saw a system of land tenure not based on private property that could circulate in a free market to be an impediment to economic development. In practical terms this was possible when the State no longer relied on tribute as a significant source of revenue.[14]

The system of production on the mission communities before and following the Jesuit expulsion does not lend itself to a conventional neo-liberal-based analysis of economic measures such as productivity, which has little utility when discussing the concept of a mission "economy."[15] In other words, the economy of the mission communities did not function to generate profits and wealth in the conventional sense. Rather, it functioned to produce income to cover the costs of the administration of the mission communities, to procure goods, and to cover the tribute obligations of the mission residents. It functioned to support the social, cultural, and particularly religious goal of the missionaries and royal officials, and the analysis of conventional economic measures such as productivity and consumption of communal mission production is irrelevant. The Jesuits administered and sold communal production in the emerging regional

[14] I examined nineteenth century liberalism as it pertained to indigenous communities in Bolivia in *Regional Markets and Agrarian Transformation in Bolivia: Cochabamba, 1539-1960*. (Albuquerque: University of New Mexico Press, 1994).
[15] Sarreal, *The Guaraní and their missions* analyzes productivity and other similar indices in her study of the mission economies.

economy, but not with the objective of expanding production and maximizing earnings.[16]

Useful comparisons can be made between the Guaraní and Chiquitos missions (Bolivia) and the *pueblos de indios* in the Cochabamba region of Bolivia. The Guaraní lived on a frontier with a relatively small Spanish population. This was important because land was abundant and the Guaraní and the residents of the Chiquitos missions did not face competition for access to land and water from Spanish settlers. This can be seen in the way that documents described land. Inventories for Los Santos Mártires mission described land in vague terms since it was not necessary on an open frontier to be more precise and include the measurements of parcels. Records for the Chiquitos missions, also located on an open frontier and with little competition from Spanish settlers, listed communal mission lands such as *estancias* (cattle ranches), but provided little detail other than the number of properties and did not list measurements. Arable land and particularly irrigated land was limited in the Cochabamba region, and particularly in the three small valleys known as the Valle Alto, Valle Bajo, and Sacaba Valley. There was considerable competition over land and water rights with Spanish settlers, and land records recorded the size

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[16] For a discussion of the mission economy on another frontier see Robert H. Jackson, "Population and the Economic Dimension of Colonization in Alta California: Four Mission Communities," *Journal of the Southwest* 33 (1992), 387-439; Robert H. Jackson, "La colonización de la Alta California: Un análisis del desarrollo de dos comunidades misionales," *Historia Mexicana* 41 (1991), 83-110; Robert H. Jackson, "The Changing Economic Structure of the Alta California Missions: A Reinterpretation," *Pacific Historical Review* 61:3 (1992), 387-415; Robert H. Jackson, "The Impact of Liberal Policy on Mexico's Northern Frontier: Mission Secularization and the Development of Alta California, 1812-1846," *Colonial Latin American Historical Review* 2:2 (1993), 195-225; Robert H. Jackson, "Eighteenth -Century Supply System in Texas and California: The Development of Mission Economics," in John F. Schwaller, ed., *Francis in America: Essays on the Franciscan Family in North and South America* (Berkeley: Academy of American Franciscan History, 2005), 277-293. Cynthia Radding suggested the same for the Sonora and Chiquitos missions. See "From the Counting House to the Field and Loom: Ecologies, Cultures, and Economics in the Missions of Sonora (Mexico) and Chiquitania (Bolivia)."*Hispanic American Historical Review* 81:1 (2001): 45-87. I revisited the question of the mission economy again in my 2017 study *Frontiers of Evangelization* for the Sierra Gorda and Chiquitos mission frontiers.

of properties in precise terms and maps exist that documented the boundaries of properties of all sizes including very small parcels.[17]

Passo community in the Valle Bajo of Cochabamba provides a useful point of comparison to the Guaraní missions as regards the definition of land and interactions and competition over land and water with Spanish settlers. At the time of the Spanish conquest the indigenous population lived dispersed in small hamlets in a settlement pattern that obeyed the logic of the social organization of the Andean region based as it was on the exploitation of lands in different ecological zones. Royal officials attempted to congregate the natives in a smaller number of settlements, and congregated the population of 48 hamlets populated by natives from different ethnic groups to form Passo community. The natives resisted the forced settlement policy, and documents from ass late as the 1590s reported that the residents of Passo still lived in a dispersed settlement pattern.

Documents reported the surface area of the valley lands assigned to Passo community, but did not include the right of access to lands in the mountains behind the community used for pasture and the collection of firewood and building materials. In 1573, the community had 1,914 hectares of land, 1,550 hectares in 1715, 1,650.30 hectares in 1826, 1,287 hectares in 1844, and 1,233.41 in about 1878 at the point that liberal politicians attempted to privatize communal lands.[18] Although theoretically protected from alienation, Passo community experienced an erosion of its land base and the loss of water rights to hacienda Paurcapata, a private property first owned in the sixteenth century by the influential royal official Juan Polo de Ondegardo. The owners of hacienda Paurcapata obtained land through some questionable dealings, and encroached on Passo community lands and water rights. In 1593, for example, the hacienda included three *fanegadas* (8.7 hectares) of Passo community lands acquired from Inés de Maraquina, the daughter of a Passo community *kuraka* (indigenous leader).[19] The hacienda owners legalized questionable land titles through a process known as *composición de*

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[17] Jackson, *Regional Markets and Agrarian Transformation.*
[18] Ibid., 30. Also see José Gordillo Claure and Robert H. Jacksn, "Formación, crisis y transformación de la estructura agraria de Cochabamba. El caso de la hacienda de Paucarpata y de la comunidad del Passo, 1538-1645 y 1872-1929," *Revista de Indias* 53, # 199 (Sept.-Dec., 1993), 723-760.
[19] Gordillo Claure and Jackson, "Formación, crisis y transformación de la estructura agraria de Cochabamba," 744.

tierras. The cash strapped Crown sent judges to inspect land titles, and granted titles in exchange for cash payments. The owners of Paurcapata continued to expand the size of the property through such payments. In 1593, the property measured some 629 hectares, and the owners paid 2,000 pesos to confirm titles to these lands. A second judicial review in 1645 added another 78 hectares, so that the property now measured some 708 hectares. It continued to grow, and in 1715 measured 827 hectares.[20] The assault on Passo community lands accelerated in the late nineteenth century following the passage of the liberal law of Ex-Vinculación (1874) that provided the legal framework for the privatization of communal indigenous lands.

Royal officials had superficial knowledge about the pueblos de indios that was limited by the existing structure of indirect rule. The indigenous communities enjoyed internal autonomy as long as they complied with tribute and labor obligations. Royal officials monitored the extent of land the communities controlled, but not the internal exploitation of said land. During judicial visitations such as those of 1645 and 1715 to Passo community, royal officials documented the amount of community and hacienda land. They also maintained tribute censuses used to establish rates of tribute payment. Beyond that royal officials did not document the internal workings of the communal economies, and how individual heads of household exploited the plots of lands assigned to them in usufruct. This changed in Bolivia in the late nineteenth century with the imposition of a land tax, and the preparation of detailed land registers used to assess tax rates. The cadastral surveys measured properties in a more detailed way, and assessed the productivity of the soil. Royal officials also ordered the preparation of tribute censuses of the Guaraní mission populations to set tribute rates, but because of the nature of the frontier and the lack of competition with Spanish settlers they did not monitor the amount of land exploited by the missions and the existing inventories did not record land measurements with the same detail as in the Cochabamba region.

The missions among the Guaraní did not experience the same conflicts over land and water rights, but had the same social, political, and economic organization. The kuraka in the Andean region and the cacique on the Guaraní missions controlled communal lands, and distributed usufruct rights to community members to exploit as they saw fit. There was, however, one difference. Two Guaraní terms described the organization of production on the missions. The first is *tupambaé* which

[20] Ibid., 744.

referred to communal production controlled by the Jesuit missionaries, and by civil administrators following the Jesuit expulsion in 1767-1768. It was production used to cover the costs of administration of the mission communities, and was an area of production that left a written record that scholars have analyzed as being the "mission economy."[21] Conceptually, though, tupambaé should be considered as a colonial construct imposed on the Guaraní to accomplish the goals of policy makers. Tribute was one such construct, and the cost of civil administration following the Jesuit expulsion was a second. The supply of tools used in communal production, weapons for the mission militia, and sacramental wine, among others, were all things used in the administration of the missions that had to be purchased. The Jesuit missionaries did not earn a salary charged to tupambaé, but the civil administrators and the priests that replaced the Jesuits did. That the mission residents could owe a debt to the post-expulsion civil administration was also a colonial construct. An analysis based only on tupambaé is incomplete.

The second term is *abambaé* which described the economy of the Guaraní families living on the missions. The Jesuits assigned communal lands to caciques, who in turn assigned usufruct rights to parcels to the heads of household. The Guaraní provided labor for communal production and construction projects organized by the Jesuits and later by the civil administrators for a specific number of days of the week, usually for three days. On the days they did not work on communal projects, the Guaraní could cultivate their own plots, tend livestock they may have had, or do other things for their own benefit. They controlled what they produced, and how they spent their free time. As was the case of the exploitation of communal lands assigned to residents of Passo community, much of this economy is not documented. As long as the Guaraní or the residents of Passo community complied with their obligations to the Crown such as tribute payments, the provision of labor, or in the case of the Guaraní mission's military service, royal officials left the communities alone.

Sifting the Evidence

There are a number of problems with Sarreal's interpretation of the Jesuit-era mission economy. Firstly, the author limited her discussion to the period for which there are accounts in the Buenos Aires and Santa Fe

[21] Examples include Rafael Carbonell de Massy, S.J., *Estrategias de desarrollo rural en los pueblos guaraníes (1609-1767).* (Barcelona: Antoni Bosch Editor, 1992); and Sarreal, *The Guaraní and their missions.*

Oficio offices, the years 1731-1745.[22] It coincided with a multi-year drought, the mobilization of thousands of mission militia and the provision of food to the militiamen on campaign, the flight from the missions of thousands, and a series of severe epidemics that caused catastrophic mortality. Some 90,000 mission residents died between 1733 and 1740. Sarreal glosses over the reality of the multiple crises, and does not evaluate the limitation of the data given the extreme stress on the missions. For one, the Jesuits were unable to meet the tribute obligations of the Guaraní.

Sarreal presented the total sales of communal products such as cotton, thread, wool, and yerba mate, among other things combined for all of the missions. The problem is that the Oficio offices did not maintain combined accounts for all of the missions, but rather for each mission. Moreover, there was considerable variation between each of the missions. The more meaningful analysis is of the individual missions. Sarreal also compiled some data from the reports of the visitations of the Provincials to each individual mission, specifically composite figures for the 30 missions of the sales of different products from communal production. The reports contain additional information that Sarreal did not analyze useful in defining the contours of the economy of the missions and of the question if the Guaraní were economically dependent.

The reports also recorded the debts of the mission economy administered by the Jesuits, the number of livestock, and in some instances the products the Jesuits sold.[23] A 1731 report for San Carlos mission was typical. The Jesuits enumerated the quantity of the different products they sold: iron, 2,500 *arrobas* (62,500 lbs) of yerba mate, 2,000 arrobas (50,000 lbs) of cotton, 124 arrobas (3,100 lbs) of metal for casting bells, 29 arrobas (725 lbs) of tobacco, eight arrobas (200 lbs) of wax, 1 ½ arrobas (37.5 lbs) of honey, 3,751 lbs of cloth, and 19 hats. Other missions sold other products such as cotton thread, wool, and salt, among other things. The reports, however, did not mention the supply of food to the mission residents, and also did not record the sale of food crops that the Jesuits did not have produced using communal land and communal labor.

[22] Sarreal, *The Guaraní and their missions,* 85-91. Carbonell de Masy, *Estrategias de desarrollo rural* published and analyzed the Oficio accounts for each mission.
[23] Sarreal consulted the reports for the same atypical crisis years. Reports for selected missions in 1728, 1730, and 1731, all pre-crisis years, are preserved in the AGN, Sala IX-9-9-6.

Sarreal also presents another meaningless set of figures of the mean consumption of wool, cotton, yerba mate, salt, and beef, both during the Jesuit tenure and during the period of civil administration.[24] Most of these communally produced goods were for sale by the Jesuits, and there is no reliable information for the distribution to mission residents during the Jesuit tenure. The civil administrators, on the other hand, left detailed records of what the mission residents received. There are records, for example, of the loss of livestock by accident or to wild animals, of meat distributed to certain people, the provision of cloth, as well as of the tasks assigned to the Guaraní to produce income to cover the costs of the civil administration.[25]

The Jesuits periodically prepared narrative reports known as *cartas anuas* that described conditions on the missions, and are a source Sarreal did not consult. The two cartas anuas for the crisis years of the 1730s noted in detail the effects of the epidemics and famine, the stresses of military mobilizations, and large scale flight from the missions, all described in more detail in the following chapters. The account also expressed the opinion of the missionaries regarding the crises:

Of said fugitives, that, obligated by the torment of hunger, had dispersed for all parts, [which] caused considerable pain to the missionary fathers, above all, of those that they knew of, had died in great number, wandering for the extensive fields, by jungles and swamps, some finished off by attacks by tigers [jaguars] or in their disputes among themselves for unjustified reasons. Well, such sensible effects were produced among these poor Indians by the lack of Christian doctrine, that, while they enjoyed it in their communities [pueblos], were distinguished by their Christian customs. But now lacking the continuous curing of the soul, [it is not] surprising the growth of bad passions and the thorns of the abrojo [a type of plant] produced by the inclemency of fallen nature.[26]

While expressing concern for the souls of the Guaraní, what is missing from the account of the crises is an explanation of the measures the Jesuits took to alleviate the suffering of the mission residents. However, they did

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[24] Sarreal, *The Guaraní and their missions,* 175.
[25] For an example of one mission see Jackson, *Regional Conflict and Demographic Patterns,* 81-86.
[26] María Laura Salinas and Julio Folkenand, eds., *Cartas Anuas de la Provincia Jesuítica del Paraguay 1714-1720, 1720-1730, 1730-1735, 1735-1743, 1750-1756, 1756-1762* (Asunción: CEADUC – Centro de Estudios Antropológicos de la Universidad Católica, 2017), 543. The translation is mine.

support royal officials by dispatching the mission militia, and providing the militiamen on campaign with rations during a period of food scarcity on the missions.

To the past calamities was added an epidemic that caused great losses among the indispensible domesticated animals, such as horses and mares. Moreover, six thousand Indian soldiers were taken from these missions, encamped from the month of January to May, by order of his Excellency sir Don Bruno de Zavala, to the area of the Tebicuari River, procuring them for the pacification and subjugation of the government of Paraguay. And although, because of this army, that was his primary support, [he] obtained a peaceful entrance to Paraguay and the solution [el arreglo] to the disturbances, however, it caused grave and inevitable damage to our missions. Well, to supply these soldiers, they consumed [se gastaron] almost innumerable cattle, the only resource that had remained to the many hungry of the communities [pueblos]. A few months after this military expedition, Our Catholic King ordered besiege the Portuguese Colony [Colonia do Sacramento], located on the bank of the Rio de la Plata, opposite the city of Buenos Aires. For this end they were called by don Miguel de Salcedo, the governor of Buenos Aires, another three thousand Indians. With their accustomed promptness to serve their Catholic Monarch, these loyal vassals instantly marched, at the time that they had to work the land, as such they could not dedicate themselves to agriculture, to solve [the problem] of their own hunger and of their wives and children.[27]

These mobilization occurred as the drought spread to other missions. The anua noted that: "This same year [1735] a persistent drought afflicted the four communities [pueblos] closest to Paraguay, finishing off their harvest." The drought also affected the pasture of the estancias [livestock ranches] near the Uruguay River, and a plague of locust exacerbated the situation.[28] However, the account did not document the routine provision of food to the Guaraní, nor their dependence on communal production.

A note on Terminology and Archival Sources

In this study I use the term mortality crisis and catastrophic mortality. The first term is conventionally defined as mortality three times normal mortality rates in a given population. In the case of the Jesuit missions this

[27] Ibid., 543-544.
[28] Ibid., 544.

could be a death rate in excess of 100 per thousand population or higher. The term catastrophic mortality indicates extremely high mortality. For example, the "Black Death" pandemic of the mid-fourteenth century caused catastrophic mortality in Europe. For the purposes of this study I define catastrophic mortality as a death rate in excess of 250 per thousand population, or a quarter or more of a given population.

The documents used in this study are housed in a number of archives in South America and Europe. The most important are the Archivo General de la Nación, Buenos Aires, Argentina, which also administers the Biblioteca Nacional. The second most important is the Coleção De Angelis in the Biblioteca Nacional in Rio de Janeiro. The Italian soldier, statesman, and scholar Pedro de Angelis (1784-1859) collected more than a thousand documents during a long residence in Buenos Aires and deposited them in the Biblioteca Nacional. Both archives contain mission censuses, cartas anuas which were narrative reports prepared by the Jesuit missionaries for their superiors, and other reports and correspondence. The Biblioteca Nacional published a selection of documents related to the conflict in the disputed borderlands in a useful multi-volume collection that has also been digitalized.

Royal officials sent many documents related to the American territories to Spain, and many are housed in the Archivo General de Indias located in Sevilla, Spain. For the purposes of this study the most important is the 1705 Burges report that summarized the population history of the missions and also contains a 1702 census also found in the Biblioteca Nacional in Rio de Janeiro. The Archivum Romannum Societatis Iesu, located in Vatican City is a second important European archive and contains documents sent to the Jesuit leadership in Rome. The collection also includes the cartas anuas, other reports and letters, as well as census that originally were appended to the cartas anuas. Some of the censuses, such as a 1691 and 1710 population count, are not found in other repositories.

Sacramental registers of baptisms, marriages, and burials are useful in reconstructing the vital rates of historic populations. However, these records have largely disappeared for the missions of the Jesuit Province of Paraguay. Nevertheless, other sources can be employed in the reconstruction of the vital rates of the mission populations such as censuses that summarized the number of baptisms, marriages, and burials. During the eighteenth century the missions among the Guaraní were closed populations, and the Jesuits distinguished between the baptisms of infants and the small number of non-Christians congregated on the

missions. The populations of the Chiquitos and Chaco missions were open populations, but the Jesuits also distinguished between baptisms of infants and non-Christians. In the first years of the new Guaraní communities, on the other hand, the Jesuits congregated large numbers of non-Christians.

In the second half of the seventeenth century and the eighteenth century Jesuit records evolved and by the 1720s took standardized form. The Jesuits prepared an *anua or* report for each mission that was in turn sent to the head of the missions who had a general report prepared. Individual mission reports also exist in the eighteenth century for the Chiquitos and Chaco missions. Early census reported only the population and the number of families (see Figure 1). In the seventeenth century the missionaries did not always provide complete information such as the population or the number of sacraments administered. In 1678, for example, the report on Yapeyú did not include the mission population (see Figure 2), and the same happened in the summaries of the *anuas* of several missions in 1671.[29] During most of the seventeenth century the reports were prepared in a narrative format, and included demographic information (see Figure 2). It was not until the 1690s that the reports also included tables that summarized population data (see Figure 3), and it did not become standard practice until the early eighteenth century. In some instances the Jesuits prepared separate reports on the Paraná and Uruguay missions among the Guaraní, and in some cases both have not survived. This occurred, for example, in 1705 (see Figure 3), 1711, and for several years in the 1690s such as 1695.[30]

Starting in 1714, the Jesuits adopted the practice of preparing a single general census for the missions among the Guaraní, and also did the same for the population counts of the Chiquitos missions (see Figures 5-6). The existing counts are in three formats. Some written in Latin accompanied the cartas anuas that were narrative reports written in Latin and sent to the Jesuit leadership in Rome. The second format written in Spanish is more useful, because it also summarized the number of sacraments administered (see Figure 4), and the Jesuits standardized the format in the 1720s and

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[29] Carta Annua de las Doctrinas del Paraná y Uruguay de 1678, CA; Carta Annua de las D[octrin]as del Paraná y Uruguay de 1671, CA. For an example of an individual mission report see Anua de la Doctr[in]a del Corpus Christi del año de 1675, CA.

[30] !705 is an example. The report for the Uruguay missions exists, but not for the Paraná missions. See Estado general de las Doctrinas del Uruguay del año de 1705, CA.