

The Post-Jesuit Expulsion Population of the Paraguay Missions, 1768-1803

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In 1767/1768 King Carlos III ordered the expulsion of the members of the Society of Jesus from all Spanish dominions. In the aftermath of the expulsion, thousands of Guaraní residents of the missions left, and the populations of the missions declined. Drops in population also resulted from epidemics, particularly of smallpox. The populations of the thirty missions dropped by more than half in the three decades following the Jesuit expulsion from 88,796 in 1767 to 45,637 in 1801 (see Figure 1).² However, rates of decline and out-migration varied between individual missions

In a recent article Massimo Livi-Bacci and Ernesto J. Maeder hypothesized that the population decline resulted primarily from the Guaraní exodus from the missions, and secondarily from epidemics, including epidemics in the 1770s (1771, 1777), 1788, and 1796-1797. Furthermore, the authors argued based on limited combined data for all thirty missions that death rates were higher following the expulsion than they had been under Jesuit direction, although it appears that they skewed the results by including mortality rates from both epidemic and non-epidemic years.³ In describing post-expulsion demographic trends in the missions Livi-Bacci and Maeder relied on limited sources, and did not ex-

¹ Office of Federal Acknowledgment, Dept. of the Interior, Washington, DC.

² Jackson, Robert H. "Una Mirada a los patrones demográficos de las misiones jesuíticas de Paraguay," *Fronteras de la Historia* 9 (2004), 162.

³ Livi-Bacci, Massimo and Maeder, Ernesto, "The Missions of Paraguay: The Demography of an Experiment," *Journal of Interdisciplinary History* 35:2 (Autumn 2004, 220). Identifying out-migration as the primary cause for the post-expulsion decline in the mission populations represented a shift in Maeder's previous interpretation of post-expulsion population dynamics. In earlier publications Maeder identified increased mortality as the principal cause for the population decline. See, for example, Maeder, Ernesto, *Aproximación a las misiones Guaraníticas* (Buenos Aires: Universidad Católica Argentina, 1996), 117-120.

plore other records that might shed light on population change such as detailed tribute censuses or mission accounts and inventories that could provide clues to ecological crises such as drought or epidemics among mission livestock that would have caused famine and contributed to the spread of epidemics. Moreover, the authors do not consider how medical treatments and responses to epidemics or the rhythm of regional trade facilitated disease transmission.

This essay examines and evaluates the factors contributing to the post-expulsion decline of the Paraguay missions, including the effects of and the treatment of epidemics, primarily smallpox, out-migration, as well as shifts in royal policy and regional conflict. In 1800, for example, royal officials implemented a limited emancipation of Guaraní living on the ex-missions, and regional conflict between Spain and Portugal involved the missions. In 1801, a Portuguese militia force occupied the seven missions located east of the Uruguay River, and permanently incorporated this territory into Brazil. This essay also examines in more detail a case study of Los Santos Mártires del Japón to outline the effects of disease and out-migration, as well as evaluate the question of mortality before and following the Jesuit expulsion. The first topic is epidemics and disease treatment as factors contributing to demographic change.

Epidemics, Disease Treatment, and Population Change

Disease treatment in the missions and ex-missions generally was not effective. The germ theory did not gain general acceptance until the end of the nineteenth century, and during the period of the Jesuit tenure in the missions and following the expulsion of the Jesuits medical theory ranged from the belief that epidemics were sent as a punishment or blessing by God, that disease resulted from imbalances in the four basic humors, or rose and spread as poisonous clouds called miasma from rotting vegetation, decaying corpses, or other corrupt material.⁴

⁴ For contemporary European demographic patterns, theories of disease, and methods used to combat epidemics see Flinn, Michael. *The European Demographic System, 1520-1820* (Baltimore, 1980); and Jackson, Robert

Quarantine was the most common technique used in contemporary Europe to combat epidemics. It entailed physically isolating those infected by or exposed to contagion away from the rest of the population in a pest house where those suffering received minimal care if any care at all. Moreover, quarantine required restrictions in the movement of people into or out of communities where an epidemic had broken out. The Jesuits and following the expulsion the civil administrators practiced quarantine in the missions, separating the ill and exposed from the general population.⁵ However, as mortality levels during epidemics in the seventeenth and eighteenth centuries show, quarantine measures did not often prove effective. Moreover, there were instances of resistance to having family members sent to plague hospitals, as documented during a 1786 smallpox outbreak at Apóstoles and San José.⁶

The Edward Jenner cowpox vaccine, first described in 1796, did not reach Spanish America until the early nineteenth century, and during the seventeenth and eighteenth century smallpox was the greatest killer of native peoples in the Americas. The earliest reference to the use in the ex-Jesuit missions of inoculation by variolation, a smallpox treatment introduced into Europe in the early eighteenth century from the Middle East where it had a long history of use, was in 1785. In that year a doctor inoculated Guaraní living at San Miguel, significantly reducing mortality from the contagion. Officials at other missions relied on quarantine in temporary hospitals.⁷ A decade later in 1796, the doctor stationed at ex-mission Yapeyú inoculated a total of 126 people at ex-mission San Fran-

H. *Indian Population Decline: The Missions of Northwestern New Spain, 1687-1840* (Albuquerque: University of New Mexico Press, 1994).

⁵ Cardiff, Guillermo Furlong, S.J., *Misiones y sus pueblos de guaraníes* (Buenos Aires: Tip. Editora, 1962), 612.

⁶ Royal officials reported Guaraní at Apóstoles hiding the sick to prevent them from being sent to the quarantine hospital. See "Expediente s[ob]re la Epidemia de Viruelas q[u]e acometio a los Pueblos de S[a]n J[ose]ph y Apóstoles," Archivo General de la Nacion, Buenos Aires (hereinafter cited as AGN), Sala 9-11-8-3, expediente 52 (hereinafter cited as EEV).

⁷ EEV.

cisco de Borja during a smallpox epidemic, of who only fifteen died. The doctor attributed these deaths to other complications, such as venereal disease that would have weakened the immunological system of those also infected by smallpox.⁸

Inoculation by variolation entailed injecting pus from a ripe pustule on the skin of a smallpox victim into the body of a healthy individual, in the hope that the resulting infection would be milder. However, smallpox was such a dreaded disease that there was general popular resistance to the procedure perceived to spread contagion and place the healthy at risk of dying from a horrible disease. The Spanish government disseminated information on the technique through Spanish America in the last decades of the eighteenth century. Doctors first used the procedure in Mexico City during a smallpox epidemic in 1779, and two years later, after the contagion had spread northward to the mission frontiers, several Dominican missionaries in Baja California inoculated neophytes at their missions. Death rates at the missions where the natives had been inoculated were much lower than at neighboring missions where the natives went unprotected.⁹ There was little that the Jesuits could do to protect the Guaraní neophytes from periodic epidemics, and the ineffectiveness of treatment in the missions, but by the end of the eighteenth century it appears that civil administrators responded aggressively to the threat of disease.

The limited evidence available suggests that although disease remained a problem in the ex-missions, there were no major epidemics following the Jesuit expulsion that claimed the lives of thousands of Guaraní. Epidemics in the 1730s and again in 1764-1765, for example, exacted a heavy mortality in the Paraguay missions. However, there is only one instance of mortality following the expulsion of the Jesuits that paralleled the severe outbreaks of the 1730s and 1760s. That was at Yapeyú in 1771, where more than 5,000 people reportedly

⁸ Cardiff, *Misiones*, 609.

⁹ Jackson, Robert H. "The 1781-1782 Smallpox Epidemic in Baja California," *Journal of California and Great Basin Anthropology* 3 (Summer 1981), 138-143.

died.¹⁰ The crude death rate per thousand population at Yapeyú was more than 600, which made this one of the most lethal outbreaks in the history of the Paraguay missions, and the population of Yapeyú dropped from more than 8,000 to 3,322.

Several factors explain the severity of the 1771 smallpox outbreak at Yapeyú. Epidemics generally spread through the Paraguay missions about once a generation, when there were enough potentially susceptible people born since the previous outbreak of contagion to maintain the chain of infection.¹¹ The previous smallpox outbreak occurred in 1764-1765, but few people died at Yapeyú during this epidemic.¹² Given the large size of the population of Yapeyú in 1771 and particularly the number of people not previously exposed to smallpox, the outbreak proved to be particularly lethal. However, subsequent outbreaks at Yapeyú in specific and at the other ex-missions in general, while severe, did not claim as many lives as during the epidemics of the 1730s and 1760s.

Smallpox mortality in the 1770s, 1780s, and 1790s appears to have not been as severe as in previous periods, although the contagion continued to be a health problem. A 1777 census for Corpus Christi, for example, reported that 277 people died there from smallpox, or an estimated crude death rate of 63.7 which was low when compared to death rates during previous epidemics.¹³ Aggressive intervention by royal officials in 1785 and

¹⁰ Martin Joseph de Larrazalde, Yapeyú Padrón, AGN, Sala 9-18-8-7.

¹¹ For this point see Robert H. Jackson, "Demographic Patterns in the Jesuit Missions of the Rio de la Plata Region: The Case of Corpus Christi, 1622-1802," *Colonial Latin American Historical Review* 13:4 (Fall 2004), 337-366.

¹² A Spanish army used the Paraguay missions as a base from which to launch a campaign in Rio Grande do Sul, and spread smallpox through the missions. However, because of its location in relation to the other missions the Jesuits at Yapeyú may have implemented effective quarantine measures. For a general discussion of the epidemic see Jackson, "Una Mirada;" and Jackson, "Demographic Patterns in the Jesuit Missions." The 1764 and 1765 censuses of the Paraguay missions summarized smallpox mortality. In 1765, some 4,000 people died from the contagion, and the largest number was 1,833 reported at Loreto, or a crude death rate of 404 per thousand population. In comparison the crude death rate per thousand population at Yapeyú was 55.7 and 44.9 respectively in 1764 and 1765.

¹³ Jackson, "Demographic Patterns in the Jesuit Missions," 15.

1786 perhaps coupled with a relatively small number of potentially susceptible hosts limited mortality during a 1785-1786 smallpox outbreak. However, the contagion claimed more lives at a number of the ex-missions in 1797 and 1798. For example, there reportedly were 777 deaths at Yapeyú in 1797.¹⁴

Were epidemics the primary cause for the decline of the ex-missions following the Jesuit expulsion? Fiscal and economic records relating to Los Santos Mártires del Japón provides clues that suggest that epidemics were not the primary cause for the decline in numbers in the three decades following the expulsion. Studies have shown that epidemics in pre-modern societies could occur in conjunction with subsistence crises such as famine. The farming and ranching economies of the Paraguay missions could be susceptible to food shortages caused by crop failure or decreases in the number of livestock as a result of drought that degraded pasture, warfare or raids that depleted herds and flocks, or disease that killed large numbers of animals. Volatility in the

¹⁴ Individual censuses found in the AGN, Sala 9-18-6-5 and AGN, Sala 9-18-2-4, reported the total number of burials and/or smallpox mortality in 1797. The majority of the censuses only reported total mortality, but the enumerator at Concepción recorded 135 smallpox deaths and 61 deaths from other causes. Crude death rates for are estimated, since there are no available population figures for the previous year so the base population has been estimated by subtracting births and adding deaths to the reported population, and this estimate is used to calculate the crude death rates. See Table 9.

Scholars generally define a mortality crisis as 3x normal or non-crisis mortality, and by this standard the smallpox epidemic at several of the ex-missions (San José, Yapeyú, La Cruz) could be considered a mortality crisis. The epidemics in the 1730s and 1764-1765 caused much higher mortality at many of the missions, and in some instances 50 percent or more of the population of a given mission died during an epidemic. When compared to these epidemics, mortality in 1797/1797 at most of the ex-missions was moderate even if elevated from mortality reported in non-epidemic years. For mortality rates in the 1730s see Jackson, "Una Mirada," 167-169. A small fragment of registers of baptisms and burials from San Francisco de Borja between 1798 and 1811 recorded the short term and long term consequences of a smallpox epidemic. The smallpox outbreak raised mortality, but the number of births in the years immediately following the outbreak erased the decline resulting from the smallpox. See Table 10.

price of basic food crops recorded in accounts or inventories that noted rapid declines in livestock might indicate a subsistence crisis. At the same time active regional trade, particularly trade in basic foods might blunt the effects of food shortages if grain could be imported from areas with surpluses to areas of scarcity.

Accounts from Los Santos Mártires del Japón do not provide evidence of subsistence crisis. In the 1770s, for example, even during the period when smallpox killed more than 5,000 Guaraní at Yapeyú, prices for corn, peroto (a type of bean), tobacco, and yerba mate remained stable.¹⁵ The numbers of most livestock also remained stable.¹⁶ At the same time the accounts identify one element of the post-expulsion regional economy that facilitated the transmission of contagious disease. The civil administrators of Los Santos Mártires del Japón traded surplus production with other mission communities, and other markets in the region. The different missions evidenced economic specialization, and Los Santos Mártires del Japón specialized in yerba mate. The accounts recorded sales of yerba mate transported on boats owned by other nearby mission communities located on the Rio Paraná and Rio Uruguay, and the ease and frequency of the movement of goods on the navigable rivers in the region also facilitated the spread of contagious disease.¹⁷

¹⁵ Los Santos Mártires de Japón, December 31, 1785, "Testimonio del Ynbentario del Cargo de las Quentas de D[o]n Juan Fernandez q[u]e conluio en 31 de Diziembre de 1785. Y El Ynbentario Orijinal de la Entrega q[u]e hiso d[ic]ho Fernandez a su sucesor D[o]n Thomas Gomez q[u]e concluye, en 27 de Diziembre de 1787. Yncluso en el Estancias de mismo Pueblo Como el anterior testimonio, y son Dos Ynbentarios," AGN, Sala 9-18-7-3. Civil administrators charged royal accounts for supplies provided to Guaraní from Los Santos Mártires de Japón for military service or labor services provided to the royal government. These records from the 1773 to 1784 do not provide evidence of crop failures. Other contemporary accounts documented regional trade, and in the case of Los Santos Mártires de Japón sales of yerba mate. These accounts also do not provide evidence of crop failures. See, for example, Juan Martin Martinez, Los Santos Mártires de Japón, August 8, 1771, "Diario de la Admin[istraci]on de este Pueblo," AGN, Sala 9-17-4-4.

¹⁶ Inventories prepared in selected years reported numbers of livestock belonging to Los Santos Mártires de Japón. See Table 11

¹⁷ Accounts from the 1770s and 1780s, for example, recorded the

Guaraní Diaspora from the Missions

The populations of the ex-missions experienced sea-changes in the decades following the expulsion of the Jesuits, and a diaspora from the ex-missions was one of the most if not the most significant of these changes. Although periodic epidemics swept through the ex-missions, the Guaraní living on the missions continued to be viable populations. This section outlines shifts in the structure of the populations of the ex-missions following the expulsion of the Jesuits that not only provide evidence of the accelerated diaspora from the missions, but also how the diaspora modified the age and gender structure of the mission populations as well as the persistence of the social and political relationships within the missions defined by the *cacicascos*.

The diaspora from the missions actually began prior to the Jesuit expulsion (see Table 1), but escalated following the removal of the Black Robes. One report recorded the number of Guaraní classified by royal officials as fugitives absent from the ex-missions between 1772 and 1776 in one post-expulsion jurisdiction located in what today is southeastern Paraguay. The number of fugitives from Santiago totaled 750, from Santa Rosa 329, from Santos Cosme y Damián 281, from Santa María la Fe 683, and from San Ignacio Guazú 368.¹⁸ A 1778 report on conditions at eight of the missions (Candelaria, San José, San Carlos, Apóstoles, Concepción, Los Santos Mártires de Japón, Santa María, and San Francisco Javier) reported 1,146 Guaraní as fugitives.¹⁹

Royal officials did try to return fugitive Guaraní to the ex-missions but were not always successful. A 1790 report, for example enumerated the number of fugitive Guaraní in different jurisdictions in preparation for an effort to return the

transportation of yerba mate and other goods from Los Santos Mártires de Japón in boats belonging to Ytapua, Corpus Christi, San Jose, Candelaria, San Ignacio Mini, and Yapeyú. See the sources cited in the previous note.

¹⁸ Edgar Poenitz and Alfredo Poenitz, *Herencia Misionera*, Internet site, url: www.herenciamisionero.com.ar/, chap. 20.

¹⁹ *Ibid.*, chap 18.

fugitives to their home communities. Tomás Estruday at the Colonia do Sacramento in the Banda Oriental enumerated 13 fugitive Guaraní, including seven from the ex-Jesuit missions.²⁰ A second report listed more than 300 Guaraní classified as fugitives in the jurisdictions of the Villa de Concepción del Uruguay, San José, and San Antonio (see Table 2).

Guaraní residents of the missions also migrated to the disputed borderlands of the Banda Oriental, and established new communities that were independent of the Jesuits. One such community was called Las Viboras, and was first settled in 1758 following the suppression of the Guaraní uprising. Some 1,500 people lived there in 1800. An analysis of 1,045 entries in the baptismal registers from Las Viboras for the years 1770-1811 provides evidence of the diverse origins of the Guaraní residents of the community. The majority, 784 or seventy-five percent of the total, were children of Guaraní who had once resided in the Jesuit missions. Others were from the Franciscan missions in southern Paraguay, and from other areas in the larger Río de la Plata region. The residents of Las Viboras abandoned the community in 1846 as a result of an attack during a civil war in Uruguay.²¹

Another important cause for the post-expulsion diaspora was the physical destruction of many of the missions located in what today are Rio Grande do Sul (Brazil) and Misiones (Argentina) in a series of wars in the first three decades of the nineteenth century between Portugal/Brazil, Argentina, and Paraguay over control of the borderlands of the Banda Oriental and neighboring areas. In 1801, during a war between Spain and Portugal related to the ongoing conflict in Europe, a Portuguese militia force occupied the seven missions located east of the Uruguay River.²² The Portuguese distributed

²⁰ Estruday, Tomás. Colonia do Sacramento, March 31, 1790, "Relación de los Yndios que se han recojido de la provincial del Paraguay, y de los Pueblos de Misiones del Uruguay y Paraná," AGN, Sala 9-17-3-6

²¹ Rissotto, Luis Rodolfo González, "La Importancia de las Misiones Jesuíticas en la Formación de la Sociedad Uruguaya," *Estudios Ibero-Americanos* 15:1 (June 1989), 191-214.

²² Herencia Misionera, chap. 21.

Guaraní mission lands to settlers in grants called *sesmarias*.²³ Moreover, the eastern missions now served as a base of operations for Portuguese invasions of the region between the Uruguay and Paraná Rivers during the turbulent decade between 1810 and 1820. Invasions occurred in 1811 and 1812, and again in 1817 and 1818. During this last invasion 3,190 people in Misiones died and 360 were taken prisoner, and the Portuguese invaders sacked many of the missions. Moreover, a major battle occurred in early April of 1818 at San Carlos that resulted in massive damage to the church and other mission buildings. The Paraguayans also attempted to assert control over the territory between the Paraná and Uruguay Rivers, and occupied and sacked the mission communities along the eastern bank of the Paraná River in 1817 including San Ignacio, Santa Ana, Loreto, and Corpus Christi.²⁴

The Guaraní abandoned many of the missions located in the war zone, and sought refuge elsewhere or were forcibly relocated. The odyssey of a group of Guaraní residents of missions east of the Uruguay River illustrates how refugees were caught up in the unsettled political conditions in the region. In 1828, during the last stages of the war between Argentina and Brazil over Uruguay, Uruguayan president Fructuoso Rivera led a force that sacked the seven eastern missions, and took some 6,000 Guaraní back to Uruguay where they established a new settlement on the Paraná River called Santa Rosa de la Bella Union. The refugees remained at the site for five years, but were forced to flee following an attack on the settlement by the militia of the Colorado faction involved in civil war in the region with the Blancos. A group of 860 originally from eleven missions established a new community called San Borja del Yí, and eventually the population of the town reached some 3,500. Of the 860 who initially settled San Borja de Yí, 139 came from San Francisco de Borja mission. Another 350 originally came from the other six eastern missions, and 371 from Yapeyú, La Cruz, Santo Tomé, and Corpus Christi.²⁵

²³ Moacyr Flores, *Reduções Jesuíticas dos Guaranís*. (Porto Alegre: EDIPUCRS, 1997), 127.

²⁴ Ponitz, *Herencias Misionera*, chaps. 26-28.

²⁵ González Rissotto, "La Importancia de las Misiones Jesuíticas," 201-203.

Economic change in the larger Río de la Plata region also contributed to the diaspora from the ex-missions. During the Jesuit administration the missions sold yerba mate, and the post-expulsion civil administrators continued to do so. By the end of the eighteenth century the mission communities produced 121,000 arrobas (1,512.5 tons) per year. Reports from 1787 and 1790 recorded the amount of yerba mate produced at six ex-missions. In 1787, production totaled 22,500 arrobas or 281.25 tons, and sales totaled 30,667 pesos.²⁶ Yerba mate ranked second in total sources of income for the six ex-missions behind cattle hides that generated 45,174 pesos in income.

The civil administrators and the Guaraní themselves also took advantage of new economic opportunities that opened in the last decades of the eighteenth century, such as hide exports. Hide exports from the Río de la Plata region to Spain increased following the loosening of trade regulations in the 1770s under the policy of “free trade” (comercio libre), which meant freer trade within the Spanish empire. In the years 1768 to 1771, exports from Buenos Aires totaled 177,656 hides, and this increased to 1,258,008 hides in the years 1779-1784.²⁷ The civil administrators of a number of the ex-missions, but particularly Yapeyú, took advantage of the growth in the hide trade to increase the number of cattle rounded-up, and to slaughter animals on the range. Moreover, the administrators of several of the ex-missions restored the cattle herds following a decline in the numbers of animals immediately following the expulsion of the Jesuits. The number of cattle reported for Yapeyú dropped from 48,119 in 1768 to 24,500 in 1778, but then increased to some 76,000 in the early 1790s.²⁸ This was accomplished by rounding-up wild cattle, and in some instances through the purchase of cattle from other missions.²⁹

²⁶ See table 12.

²⁷ A report from 1743 noted that the Jesuit missions earned around 100,000 pesos per year from the sale of 10,000 to 18,000 arrobas of yerba mate, 25,000-26,000 arrobas of yerba de palo, 25,000 to 26,000 varas of cloth, 3,000 arrobas of tobacco, and 300-400 arrobas of sugar: Pastells, Pablo. S.J. *Historia de la Compañía de Jesús de la Provincia de Paraguay* (Madrid, 1956), vol.7: 484-488. See Table 13.

²⁸ *Ibid.*, 153.

²⁹ An example of the rounding-up of wild cattle comes from a request by

The number of cattle owned by six ex- missions located east of the Uruguay River totaled 53,811, increased to 150,575, and declined again to 112,397 in 1801 when the Portuguese occupied the mission district.³⁰ Guaraní left the ex-missions to take advantage of employment opportunities.

Censuses prepared following the Jesuit expulsion, particularly from 1799 and 1801, documented the Guaraní diaspora. These population counts provide evidence of the scale of out-migration (see Table 3), as well as clues to the age and gender profile of Guaraní royal officials classified as fugitives from the ex-missions.

A gender imbalance already existed in the missions at the time of the Jesuit expulsion, with more women and girls than boys and men. Post-expulsion population counts show a widening gender imbalance, particularly towards the end of the century. Censuses prepared for selected missions in 1799 showed this gap (see Table 4). Data for ten ex-missions show that 13,217 Guaraní still resided on the ex-missions, but that 8,301 were absent. Males comprised between sixty one and seventy seven percent of those absent, and children comprised between thirty one and forty seven percent of the fugitives. Men and boys more commonly left the ex-missions at the end of the century, and husbands either abandoned their wives or left their wives and girls on the missions for safe keeping. Data from the 1801 censuses also show that single men and older orphan boys tended to leave the ex-missions, which would be easy given that they had no family to keep them there. The documents do not, however, provide any clues as to whether or not absences were temporary or permanent.

Guaraní officials from Yapeyú in 1797 to round-up bulls from the area on the other side of the Uruguay River between the Cuarey and Ybicuy Rivers. See Feliz Cute, et al. Yapeyú, August 22, 1797, AGN, Sala 9-17-3-6. The administrators of the ex-missions also purchased cattle. In 1791, for example, the administrator of ex-mission San Juan Bautista purchased 3,674 cattle from ex-mission San Miguel, and another 700 from Don Joaquín Bernudez. Nicolás de Atienza, San Juan Bautista, February 15, 1792, “Cuenta que formo yo Don Nicolás de Atienza Adm[inistrad]or actual y Proprietario de este Pueblo,” AGN, Sala 9-17-3-6.

³⁰ See Table 14.

The 1801 censuses estimated of the age of the residents of the ex-missions, including those who were present and absence. However, the age data did not have the same precision as did that from a 1759 census for Corpus Christi, where the Jesuits also noted the date of baptism for the Guarani living on the mission.³¹ The ages given in the 1801 censuses show many of the same problems as documented for other population counts from different regions during the same time period. There was a tendency to give round figures such as 20, 25, or 30, and some ages clearly showed that the census takers arbitrarily assigned a figure for older Guarani who looked old to them. It is possible if not highly probable for individuals to live into their 70s or even 80s. Nevertheless, an analysis of the age and gender structure derived from these counts does provide additional evidence of the gender imbalance in the ex-missions.

The Guarani caciques continued to enjoy a privileged status within the ex-missions, although there were also instances of friction between the caciques and Spanish officials. The population of the ex-missions continued to be organized politically and socially in cacicazgos. Moreover, records generated as late as the early 1840s show a continuing role for caciques in the ex-mission communities, and the definition and registration of the population based on the cacicazgos.³² At the same time many cacicazgos declined in population as a result of the Guarani diaspora from the ex-mission communities, and there were instances reported in a number of post expulsion tribute censuses of cacicazgos that had been reduced to only the nuclear family of the cacique. In some cases the caciques themselves were also absent from the ex-missions.

The 1801 tribute censuses recorded the population by cacicazgo, although the type of and the completeness of the

³¹ For an analysis of the 1759 Corpus Christi census see Jackson, "Demographic Patterns in the Jesuit Missions of the Rio de la Plata Region."

³² As late as 1841, the priests stationed at Santa Rosa registered the name of the cacique in the baptismal records of new born children. Santa Rosa Baptismal Registers, Santa Rosa Parish Archive, Paraguay.

information reported varied between the different population counts. The Corpus Christi census recorded forty-one cacicazgos that ranged in size from one in which all surviving members were absent from the ex-mission, to a high of 190. The number of cacicazgos reflected the large size of the population of Corpus Christi prior to and following the expulsion of the Jesuits. The average size per cacicazgo was fifty-four present, but the census also reported the absence of 1,203 Guaraní including nineteen caciques. The 1801 Candelaria tribute census recorded twenty-nine cacicazgos with an average population of forty-eight, with a low of nine and a high of 108. A total of 624 Guaraní classified as fugitives, including six caciques.³³

The 1801 tribute censuses also enumerated a new tribute category “libres de comunidad.” These were Guaraní only recently emancipated from the authority of the caciques and the civil administrators of the ex-missions. In 1800, Viceroy Aviles ordered the emancipation of the more assimilated Guaraní, which meant that they could speak Spanish, could support themselves, and had “good customs.” In the initial stage of the emancipation program royal officials emancipated 323 families from twenty-eight of the missions, and distributed land and livestock to the heads of household.³⁴ The geographic distribution of the largest number of emancipated Guaraní also shows one purpose for this reform program. The largest number were in the ex-missions located east of and west of the Uruguay River, which was still a frontier contested with the Portuguese. On other contested frontiers the Spanish government pursued similar policies to promote the creation of local militias that could assume the burden and the costs of defense. The program to emancipate Guaraní may have had as one objective to create local militias independent of the ex-missions.

The terminology used in the census also denoted the

³³ Joaquín de Soria, Corpus Christi, March 26, 1801, “Padrón del Pueblo de Corpus,” AGN, Sala 9-17-3-6; Joaquín de Soria, Candelaria, January 26, 1801, “Padrón del Pueblo de Candelaria,” AGN, Sala 9-17-3-6.

³⁴ Poenitz, Alfredo and Poenitz, Edgar. *Misiones. Provincia Guaranítica: Defensa y disolución* (Posadas: Editorial UNAM, 1993), 78.

changed legal status of the communities following the Jesuit expulsion. The ex-missions were now politically autonomous native communities similar to the pueblos de indios in the Andean region and central Mexico. The Paraguay establishments were one of the few groups of missions that made the transition to pueblos de indios.

The emancipation of some Guaraní living on the ex-missions also reflected the reform agenda of royal officials influenced by enlightenment ideas. A growing number of civil and military leaders questioned the continued reliance on missions as a frontier institution, and increasingly viewed missions as an anachronism that prevented the integration of native peoples into colonial society. The paternalism of the missionaries was also seen as a factor in delaying integration. Similar debates occurred on the north Mexican frontier in the last decades of the eighteenth century, and in the mid-1820s the newly independent Mexican government instituted a similar emancipation program in the California missions.³⁵

The previous sections examined and evaluated evidence of epidemics and out-migration as causes for the decline of the mission populations in the decades following the Jesuit expulsion in 1767/1768. The following section analyzes in more detail population trends at one mission, Los Santos Mártires del Japón.

The Population of Los Santos Mártires de Japón Mission

The development of the Los Santos Mártires mission site had a direct bearing on demographic patterns on the mission. The mission occupied three sites during its history. The Jesuits initially founded the mission in the region east of the Uruguay River in 1628. They relocated the mission to a

³⁵ For a discussion of the debate over the missions and the California emancipation plan of the mid-1820s see Jackson, Robert H and Castillo, Edward. *Indians, Franciscans, and Spanish colonization: The Impact of the Mission System on California Indians* (Albuquerque: University of New Mexico Press, 1995), 90-93; Jackson, Robert H. *Race, Caste, and Status: Indians in Colonial Spanish America* (Albuquerque: University of New Mexico Press, 1999), 59-61; Jackson, Robert H. *From Savages to Subjects: Missions in the History of the American Southwest* (Armonk: M.E. Sharpe, 2000), 116-119.

new site in the late 1630s in the aftermath of raids by the slave traders from São Paulo, to a location just west of the Uruguay River between Concepción and Santa María la Mayor. The Jesuits relocated the mission again to a new and final site in 1704, at the beginning of an international war that pitted Spain against Portugal.³⁶

The decision to relocate Los Santos Mártires mission in 1704 was most likely related to heightened tensions between Spain and Portugal during the War of Spanish Succession [1701-1713]. Portugal was allied to England during the conflict against Spain. The new site can best be described as having been chosen for defense. The Jesuits selected the crest of a strategically located hill that could help defend the missions or serve as a place of refuge in case of Portuguese attack. The Black Robes established two other missions at strategic locations during the course of the war: Trinidad located in what today is southern Paraguay, and Santo Ángel Custodio as the easternmost of the missions located east of the Uruguay River close to Portuguese territory.

The Jesuits expended considerable labor in developing the mission complex at the new site. The main building complex that included the church and cloister built around two patios were constructed on an artificial terrace protected by a retaining wall, the remains of which can still be seen at the site. At its deepest point the artificial terrace measured six meters deep. A contemporary diagram prepared in 1792 also shows the presence of bodies of water (aguadas) very close to the housing of the Guaraní residents of the missions (see Figure 2). Mosquitoes most likely bred in these generally stagnant bodies of water, and may have spread a variety of diseases such as malaria or yellow fever.³⁷ If this hypothesis

³⁶ In a report prepared in March of 1706, Salvador de Rojas noted that the Jesuits relocated Los Santos Mártires de Japón, and a temporary church had been built and dedicated: Salvador de Rojas, San Luis, March 7, 1706, Angelis Collection, Biblioteca Nacional, Rio de Janeiro, 29-7-79, 93.

³⁷ A team of scholars affiliated with the Universidad Nacional de Misiones has conducted archaeological, architectural, and historical research on Los Santos Mártires de Japón mission. See, for example, Ruth Poujade, 2004. Arq. Graciela de Kuna developed a diagram of the mission complex

is correct, chronic mosquito-born maladies might account for several patterns that were unique to Los Santos Mártires, such as a gender imbalance with more men than women and high mortality and even net population loss in years in which the evidence does not show epidemics at neighboring missions. A comparison of crude death rates at and nearby Santa María la Mayor in non-epidemic years shows an average of 36.8 per thousand population at Santa María as compared to 58.0 at Los Santos Mártires. In the year 1756, for example, the crude death rate was an estimated 38.0 at Santa María, and 101.7 at Los Santos Mártires.

The population of the mission grew during the course of the seventeenth-century, following the relocation of the community to the site west of the Uruguay River in the late 1630s. In 1643, 1,040 Guaraní lived on the mission, and the numbers increased to 1,980 in 1682, 2,371 in 1691, and 2,124 in 1702, two years before the relocation of the missions to its final site in 1704. In 1731, the population totaled 3,874, just prior to the first of three epidemic outbreaks during the decade. At the end of 1739, and following the three epidemics, the population declined to 2,777.³⁸

A tribute census prepared in August of 1735 provides a detailed look at the population of the mission at one point in time, and particularly the effects of epidemics on the mission population.³⁹ There are several indications of heavy mortality from two epidemics that struck the mission population in 1733 and 1735. There was a large number of orphans, a total of 129 boys and 131 girls. Moreover, an analysis of the actual family size shows that the majority of families consisted of a married couple (35 percent), or a couple with one (28.3 percent) or two children (19.4 percent). If this structure had persisted over time, the population of the missions at best would have remained stable with minimal growth, or perhaps would have declined. Moreover, it suggests heavy mortality among children

that identified the bodies of water near the housing of the Guaraní.

³⁸ Jackson, *Indian Population Decline*, appendix 2.

³⁹ Francisco María Raspari, *Los Santos Mártires de Japón*, August 15, 1735, "Padrón de los Tributarios de esta Reducción de Los Santos Mártires del Uruguay," AGN, Sala 9-17-3-6. See Table 15.

during the epidemics in 1733 and 1735. Data from 1733 shows that the crude death rate was 124 per thousand population. Slightly more than twelve percent of the population died during the year. Deaths were higher among parvulos, generally defined as being less than ten years of age, than among adults. A total of 491 Guaraní died between 154 adults and 337 parvulos. The net decline in the number of children was 135.

The census recorded the population divided into cacicasgos as was the common practice for tribute censuses for the Paraguay missions, and there were a total of 35 caciques who governed populations of different sizes. The largest was the Quaratimivi with a population of 252, and the smallest the Abatubi with only seventeen people. Regardless of the size of the population, the caciques retained their status within the mission community, which included exemption from the obligation of having to pay tribute. The epidemics claimed the lives of caciques, and there were five caciques under the age of ten at the time of the census who most likely replaced a parent who succumbed to the contagion.

The population of Los Santos Mártires mission experienced a net decline of 1,097 between 1731 and 1739, but then recovered through the 1740s and early 1750s. Crude birth rates exceed death rates, and the number of Guaraní living at the mission increased from 2,777 in 1739 to 3,176 in 1751 and 2,981 in 1753. In 1756, the death rate reached 101.7, and was the highest recorded in all of the missions. In 1759, and again in the years 1762 and 1763, death rates were slightly higher than birth rates, and the numbers fluctuated. It was 3,328 in 1760 and 3,099 in 1763. Smallpox spread through the missions in 1764 and 1765, and claimed the lives of hundreds of Guaraní at Los Santos Mártires. At the time of the epidemic 381 refugees from the missions east of the Uruguay River evacuated to the missions west of the river following an uprising in the mid-1750s still lived there. In 1764, the contagion claimed the lives of 808 Guaraní native to Los Santos Mártires, and another 149 fugitives from Santo Ángel Custodio. Another 421 natives of the mission died from smallpox in 1765. The number of refugees from Santo Ángel Custodio still

numbered 330 in 1765, but the report on smallpox mortality at Mártires in 1765 did not specify how many of the refugees died in that year. However, smallpox claimed the lives of 560 refugees at different missions. At the end of 1765, there were only 1,688 Guaraní native to the mission still living at Los Santos Mártires, and 1,662 two years later in 1767, on the eve of the expulsion of the Jesuits.

Following the expulsion of the Jesuits and their replacement by Dominicans and the appointment of civil administrators to manage the mission, the population of Los Santos Mártires declined due to epidemics as well as out-migration. Post-expulsion censuses reported residents of the mission who were absent and considered fugitives, and showed evidence of epidemic mortality. In 1772, the population of the mission totaled 1,724, up from the number reported in 1767, but then dropped in subsequent years. It was 1,321 in 1785, 892 in 1793, and 609 in 1803 (see Table 7 and Figure 3).

The evidence strongly supports the conclusion that out-migration was the more important factor in the decline of the mission population following the Jesuit expulsion. A 1776 count, for example, reported the absence of 352 Guaraní classified as fugitives, since they had not been legally emancipated. Others were also not present, but were absent because they were working in the mission estancias (67 individuals) or were in the “service to the King” (32 individuals).⁴⁰

Later enumerations documented years of mortality rates higher than birth rates, as well as continued out-migration. Deaths totaled 127 in the years 1797-1799 as against 104 baptisms/births, indicating a net decline in numbers of 23. In

⁴⁰ Los Santos Mártires de Japón, September 27, 1776, “Relasion que Demuestra el numero de Jente Desertada y Existente de todos sexos que se halla en este Pueblo de Los Santos Mártires de Japón oy día de la fecha 27 de Sep[tiemb]re de 1776, assaver,” AGN, Sala 17-6-1. Guaraní, both before and following the Jesuit expulsion, provided services to the King, which included military service as well as labor on projects organized by local royal officials. One set of accounts from the 1770s recorded instances of Guaraní providing “service to the King”: See Table 16.

1797, the number of fugitives reached 41. In the following year there were 38 fugitives including 17 adult men, but 15 reportedly were returned. There were 18 fugitives and 15 recovered in 1799. Altogether, the record shows 97 new fugitives and 30 individuals returned, or a net loss to the population of 67.⁴¹

Data from 1801 for Los Santos Mártires del Japón (see Table 8) shows gender imbalances in specific age cohorts consistent with information discussed above abstracted from the 1799 counts showing the absence of men. The age pyramid constructed for Los Santos Mártires del Japón showed an excess of females in the age 5-9 to the 25-29 age cohorts, which would be the ages at which boys and men would be expected to leave. Moreover, the 20 to 24 and 25 to 29 cohorts were considerably smaller than would be expected. The shortfall in numbers in this age group may have reflected, in part, mortality during a smallpox epidemic in 1777, but also the absence of young adults in their prime who would be more likely to leave the mission to find work elsewhere.

Conclusions

The available evidence examined here supports the conclusion that out-migration was the primary cause for the decline, as hypothesized by Livi-Bacci and Maeder. At the same time there are methodological limitations in evaluating mortality trends based on an assessment of global figures that do not consider local and regional variations. Epidemics continued to spread through the region following the Jesuit expulsion, but with the one unique instance of extreme mortality at Yapeyú in 1771, there

⁴¹ Los Santos Mártires de Japón, January 1, 1798, "Anua Numeracion de los Yndividuos Existentes de todos sexos y edades en este Pueblo de la Real Corona Nombrado Los Santos Mártires de Japón en el presente año de 1798," AGN, Sala 9-18-6-6; Mártires, January 1, 1799, "Anua Numeracion de los Yndividuos Existentes de todos sexos y edades en este Pueblo de la Real Corona Nombrado Los Santos Mártires de Japón en el presente año de 1799," AGN, Sala 9-18-2-4; Los Santos Mártires de Japón, January 1, 1800, "Anua Numeración de los Yndividuos Existentes de todos sexos y edades en este Pueblo de la Real Corona Nombrado Los Santos Mártires de Japón en el presente año de 1800," AGN, Sala 9-18-2-5.

is no indication that death rates during outbreaks were higher following the expulsion than they had been prior to the expulsion. Smallpox in particular continued to kill hundreds of Guaraní in the 1770s, 1780s, and 1790s, but at the same time, as shown in response to the outbreak in 1785, royal officials and the civil administrators of the missions responded aggressively when epidemics spread through the missions. There is no evidence that civil administrators were lax in responding to epidemics when compared to the Jesuits.

The frightful mortality at Yapeyú in 1771 was the exception and not the rule for patterns of epidemic mortality following the Jesuit expulsion, and was a consequence of conditions unique to that mission. Smallpox did not kill large numbers of people at Yapeyú in 1764-1765 during the previous outbreak in the region, and the large size of the mission population coupled with the relatively large number of potentially susceptible hosts not previously exposed to the contagion explains the high death rates. However, the limited available evidence also suggests that there were no other instances of such high death rates at any of the other missions in the three decades following the Jesuit expulsion. On the contrary, the highest documented death rates at individual missions during epidemics during the eighteenth century occurred during the 1738-1740 and 1764-1765 smallpox outbreaks under Jesuit administration.⁴² No aspect of civil administration of the missions contributed to higher mortality.

Thousands of Guaraní, particularly young adult men, left the missions, and out-migration also included caciques who sought opportunities elsewhere. Spanish policy identified those who left as fugitives, since they had not been legally emancipated from the authority of the Crown and were expected to continue living and working at the missions under the authority of civil administrators. Although many Guaraní no longer resided at the

⁴² See Jackson, "Una Mirada," 144-146; Jackson, Robert H. "Mortality Crises in the Jesuit Missions of Paraguay, 1730-1740," *World History Review* 1:2 (Spring, 2004), 2-23; and Jackson, Robert H. *Missions and 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), 331-340.

missions after 1768, they continued to live within the colonial society of the Rio de la Plata and participated in the regional economy. They simply elected to move elsewhere, and efforts by royal officials to return them to the missions generally failed. The outbreak of hostilities in the region after 1800 only accelerated the process of out-migration.

Figure 1: Population of the Jesuit Missions, 1647-1801

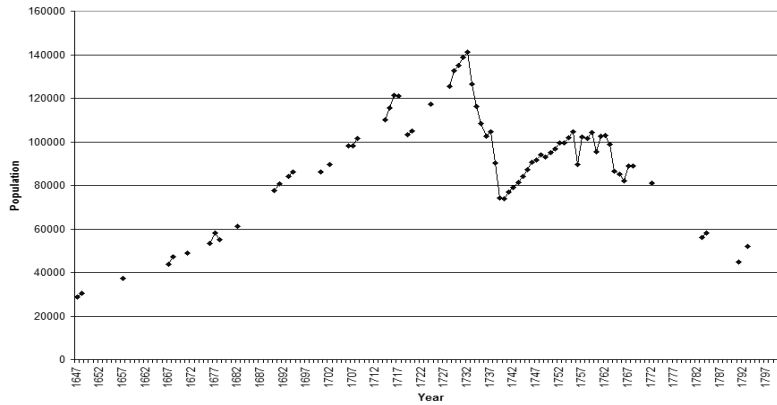
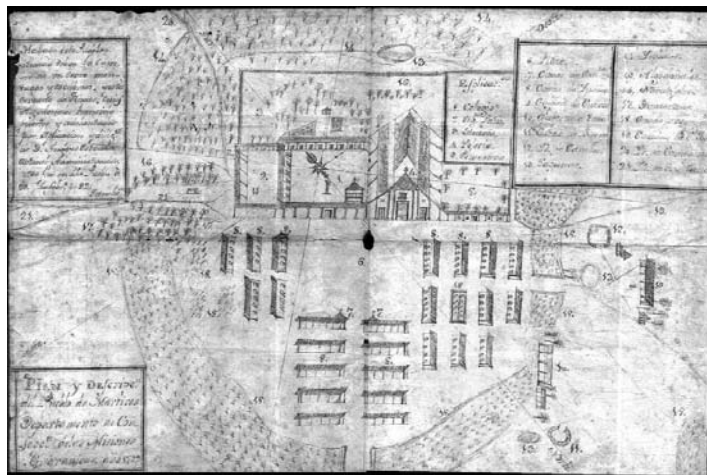


Figure 2: Los Santos Mártires del Japós Misson in a 1792 Diagram



Source: Cortesy Graciela de Kuna, Posadas, Argentina

Figure 3: Population of Los Santos Martires de Japon Mission, 1643-1803

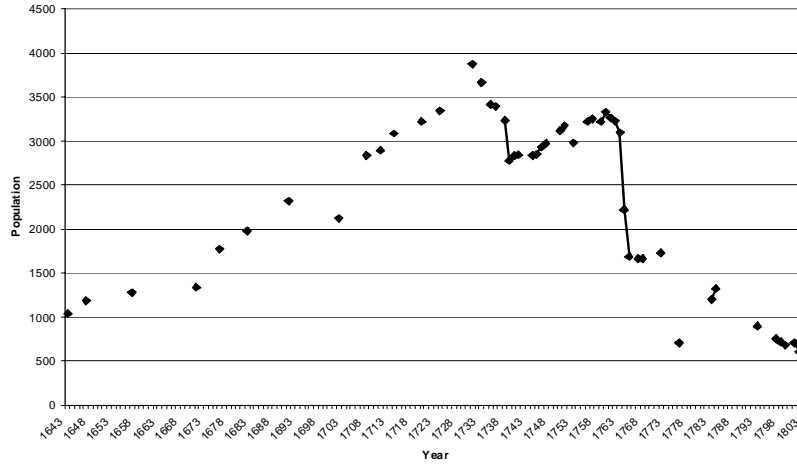


Table 1: Fugitives from the Paraguay Missions in 1735

Mission	Fugitives	Mission	Fugitives
San Ignacio Guazú	333	Apóstoles	41
La Fe	291	Concepción	6
Santa Rosa	31	Mártires	7
Santiago	27	Sta Maria la Mayor	166
Itapua	120	San Fran Xavier	47
Candelaria	29	San Nicolás	327
Santos Cosme	54	San Luis Gonzaga	166
Santa Ana	3	San Lorenzo	262
Loreto	430	San Miguel	11
San Ignacio Miní	1	San Juan Bautista	1
Corpus Christi	66	Santo Ángel	153
Trinidad	141	Santo Tomé	79
Jesús	15	San Fran de Borja	41
San Carlos	0	La Cruz	99
San José	52	Yapeyú	95

Source: Numeracion... de los Padrones [del] ano de 1735, Angelis Collection 369.

Table 2: Number of Guaraní Listed in the Jurisdictions of the Villa de Concepción del Uruguay, San José de Gualeguayes, and San Antonio de Gualeguay in 1790

Ex-Mission	# of Guaraní	Ex-Mission	# Of Guaraní
Yapeyú	21	Concepción	21
San Carlos	15	San Luis	5
Loreto	14	San Nicolás	5
La Cruz	8	Sta María la Mayor	4
Santo Tomé	4	San Javier	3
San Borja	5	Mártires	2
Sto Ángel	1	Apóstoles	6
San Juan	3	San José	8
San Miguel	2	Sta Ana	5
Candelaria	2	San Ignacio	6
Corpus	3	Trinidad	2
Jesús	5	Ytapúa	9
Santos Cosme	4	Santiago	4
Sta Rosa	5	La Fe	1
Guazú	1		
San José From:			
Ex-Mission	# of Guaraní	Ex-Mission	# of Guaraní
Loreto	1	Mártires	1
Santo Tomé	1	Yapeyú	3
Corpus	1	San Juan	1
Concepción	1	Sta Ana	1
San Miguel	1	Apóstoles	1
San Antonio From:			
Ex-Mission	# of Guaraní	Ex-Mission	# of Guaraní
Yapeyú	8	San José	1
Sta Ana	2	Loreto	2
San Luis	1	Candelaria	2
Sta Rosa	1	La Cruz	3
Apóstoles	2	Corpus	3
Santos Cosme	1	San Juan	1
Sto Ángel	1		

Source: Vicente Ximenez, Villa de Concepción, April 26, 1790, "Lista de los Yndios Guaranís procedientes de los Pueblos de Misiones que se hallan en las Villas de Concepción del Uruguay, San Joseph de Gualeguayes, y San Antonio del Gualeguay y sus partidos," AGN, Sala 9-17-3-6.

Table 3: Population of Guaraní Present and Absent from Selected Missions in 1799

Mission	Population Present	Population Absent
Ytapúa	2244	793
Loreto	1212	840
San Ignacio Miní	771	1046
Santos Cosme y Damián	939	358
Santiago	1289	266
Santa Rosa	1228	286
Jesús	981	824
Trinidad	937	528
Santa Ana	1329	1689
Corpus Christi	2287	1671
Total	13217	8301

Source: Individual Mission Censuses from AGN, Sala 9-18-2-2.

Table 4: Males as a Percentage of Total Population of Selected Missions in 1799

Mission	Present	Percentage	Absent	Percentage
Ytapúa	1,063	47.4	604	76.2
Loreto	583	48.1	584	69.5
San Ignacio	373	48.4	640	61.2
Santos Cosme y Damián	427	45.5	276	77.1
Santiago	622	48.3	181	68.1
Santa Rosa	607	49.4	218	76.2
Jesús	468	47.7	534	64.8
Trinidad	465	49.6	388	73.5
Santa Ana	654	49.2	1,087	64.4
Corpus	1,044	45.7	1,099	65.8

Source: Individual Mission Censuses, AGN, Sala 9-18-2-2.

Table 5: The Population of Selected Ex-Missions in 1801

Ex-Mission	De Comunidad	Libres de Comunidad
Trinidad	860	17
Santa Rosa	1,116	145
Jesús	993	43
San Ignacio Guazú	630	82
Nuestra Señora de la Fe	1,042	191
Santos Cosme y Damián	655	205
San Ignacio	886	20
Loreto	1,072	92
Candelaria	1,175	172
Corpus Christi	2,286	49
Yapeyú	4,899	49
La Cruz	3,196	42
Santo Tomé	1,616	170
Mártires	684	24
Apóstoles	986	328
San Francisco Xavier	712	247
San José	479	386
San Carlos	796	217
Concepción	1,033	94
Santa María la Mayor	399	160
San Lorenzo	895	142
San Nicolás	1,946	460
San Luis Gonzaga	2,500	276
San Juan Bautista	548	744
San Francisco de Borja	1,912	501

Source: Individual Mission Censuses, AGN, Sala 9-17-3-6.

Robert H. Jackson

Table 6: The Number of Fugitives reported at Selected Ex-Missions in 1801

Ex-Mission	Number of Fugitives
Trinidad	20
San Lorenzo	122
San Nicolás	204
Corpus Christi	1,203
Candelaria	624
Mártires	3

Source: Individual Mission Censuses, AGN, Sala 9-17-3-6.

Table 7: Vital Rates of Los Santos Mártires de Japón Mission, in Selected Years

Year	Population	Families	Baptisms	Burials	CBR	CDR	A.F.S.
1702	3536	897	289	259	82.4*	73.9*	3.9
1724	3343	795	190	155	57.4*	46.9*	4.2
1733	3665	901	202	491	51.1*	124.2*	4.1
1736	3396	861	188	199	55.0*	58.3*	3.9
1739	2777	723	132	545	40.9	184.2	3.8
1740	2829	682	170	95	61.2	34.2	4.2
1741	2833	701	192	160	67.9	56.6	4.0
1744	2834	699	184	201	64.5*	70.5*	4.1
1745	2847	710	170	141	60.0	49.8	4.0
1746	2930	723	220	134	77.3	47.4	4.1
1747	2974	734	214	143	73.0	34.1	4.1
1753	3235	812	188	144	58.9*	45.1*	4.0
1756	3217	737	205	341	61.1*	101.7*	4.4
1759	3218	763	187	198	57.9*	61.3*	4.2
1762	3225	760	169	182	51.8	55.9	4.2
1763	3099	729	167	185	51.8	59.2	4.3
1764	2220	324	173	1129	54.1	364.3	6.9
1765	1688	365	83	561	37.4	25.2	4.6
1767	1662	430	115	128	67.6*	75.3*	3.9
1797	751	185	44	58	57.5*	75.8*	4.1
1798	715	191	32	41	42.6	54.6	3.7
1799	681	173	28	28	39.2	39.2	3.9
1802	605		13	38	20.5*	59.9*	
1803	609	155	14	32	23.1	52.9	3.9

* Estimated.

Source: Ernesto Maeder, "La población de las misiones de Guaraníes (1641-1682). Reubicación de los pueblos y consecuencias demográficas," *Estudios Ibero-Americanos* 15:1 (June 1989), 49-80.,"; Ernesto Maeder, "Fuentes Jesuíticas de información demográfica misional para los siglos XVII y XVIII," in Dora Celton, coordinator, *Fuentes útiles para los*

estudios de la población Americana: Simposio del 49º Congreso Internacional de Americanistas, Quito 1997 (Quito, 1997), 45-57; Guillermo Furlong Cardiff, S.J., *Misiones y sus pueblos de Guaraníes* (Buenos Aires, 1962), 175-179, 674; Thomas Whigham, "Paraguay's Pueblos de Indios: Echoes of a Missionary Past," in Erick Langer and Robert H. Jackson, eds., *The New Latin American Mission History* (Lincoln, 1995), 168; ; Pablo Hernández, S.J., *Organización social de las Doctrinas Guaraníes de la Compañía de Jesús*, 2 vols. (Barcelona, 1913), vol 2, 616-617; Julio Quevedo, *Guerreiros jesuitas na utopia de Prata* (Sao Paulo, 2000), 96; Individual annual censuses of the Jesuit missions for 1711, 1714, 1724, 1731, 1733, 1735, 1736, 1738, 1739, 1740, 1741, 1744, and 1745, 1746, 1747, 1757, 1760, 1762, 1763, 1764, 1765, and 1767 titled "Catologo de la numeración annual de las Doctrinas del Río Paraná Año; Catologo de la numeración annual de las Doctrinas del Río Uruguay; AGN, Sala 9-7-2-1, 9-6-9-6, 9-6-9-7, 9-6-10-6; "Empadronamiento de las Treinta Pueblos de Misiones, por el Coronel Don Marcos de Larrazabal," 1772 AGN, Sala 9-18-8-4; for 1797 in AGN, Sala 9-18-6-5; for 1798 in AGN, Sala 9-18-2-4; for 1798 in AGN, Sala 9-8-2-5; for 1801 in AGN, Sala 9-17-3-6; for 1803 in AGN, Sala 9-18-3-3; for 1702 Catologo de la Numeración de las Doctrinas del Río Paraná, Catologo de la Numeración de las Doctrinas del Río Uruguay, Manuel Gondra Collection, MG 592, Benson Latin American Collection, General Libraries of the University of Texas at Austin; Pedro Vives Azancot, "Entre el esplendor y la decadencia: La población de misiones (1750-1759)," *Revista de Indias* 42: 169-170 (Julio-Diciembre, 1982), 541-544; Ernesto Maeder and Ramon Gutierrez, *Atlas histórico y urbano de la región del noreste argentino: Pueblos de indios y misiones jesuíticas (siglos XVI-XX)* (Resistencia, 1994).

Table 8: Age and Gender Structure of Los Santos Mártires de Japón Mission in 1801

Cohort	Male	Percent	Female	Percent
0-4	46	12.3	32	9.9
5-9	36	9.7	35	10.8
10-14	52	13.9	53	16.4
15-19	32	8.6	32	9.9
20-24	16	4.3	16	4.9
25-29	16	4.3	15	4.6
30-34	42	11.3	35	10.8
35-39	21	5.6	22	6.8
40-44	24	6.4	22	6.8
45-49	32	8.6	16	4.9
50-54	25	6.7	23	7.1
55-59	15	4.0	11	3.4
60-64	8	2.1	2	0.6
65-69	3	0.8	5	1.5
70+	5	1.3	5	1.5

Source: "Departamento de Concepción 1801: Padron practicado por el Ten[en]te Gobernador D[on] Feliciano del Cora," AGN, Sala 9-17-3-6.

Table 9
Estimated Crude Death Rates at Selected Ex-Missions in 1797/1798

Year	Ex-Mission	Deaths	Crude Death Rate
1797	San José	164	163.8
1798	San José	66	76.0
1797	Concepción	135/196*	106.8/155.1
1798	Concepción	96	84.4
1797	Apóstoles	105	76.6
1798	Apóstoles	90	67.5
1797	Santa María la Mayor	70	106.1
1798	Santa María la Mayor	42	69.0
1797	Mártires	58	75.8
1798	Mártires	41	54.6
1797	San Fran Xavier	97	90.7
1798	San Fran. Xavier	107	101.1
1797	San Carlos	147	134.7
1798	San Carlos	53	53.2
1797	Yapeyú	777	172.3
1798	Yapeyú	127	31.8
1797	La Cruz	532	146.9
1797	Santo Tomé	280	162.1
1798	Santo Tomé	76	48.4
1797	San Nicolás	142	57.6
1798	San Nicolás	126	51.6
1797	San Miguel	92	48.0
1798	San Miguel	97	52.3
1797	San Fran de Borja	160	67.0
1798	San Fran de Borja	136	56.6
1797	San Luis Gonzaga	180	73.3
1798	San Luis Gonzaga	105	40.8
1797	San Lorenzo	91	79.5
1798	San Lorenzo	32	29.9
1797	San Juan Bautista	81	54.1
1798	San Juan Bautista	42	28.5
1797	Santo Ángel	68	67.7
1798	Santo Ángel	64	64.7
1798	Ytapúa	208	95.1
1798	Jesús	96	98.7
1798	Trinidad	94	104.6
1798	Candelaria	100	68.0
1798	San Ignacio Miní	49	65.4
1798	Santa Ana	110	82.5
1798	Loreto	97	74.5
1798	Corpus Christi	169	70.4

* smallpox deaths and total deaths.

Table 10 Baptisms and Burials Recorded at San Francisco de Borja, 1798-1811

Year	Baptisms	Burials	Net +/-
1798	125	N/A	
1799	118	N/A	
1800	N/A	88	
1801	N/A	97	
1802	N/A	100	
1803	N/A	91	
1804	163	68	95
1805	109	62	47
1806	105	64	41
1807	161	69	92
1808	144	64	80
1809	147	262	115
1810	132	75	57
1811	133	70	63

Source: San Francisco de Borja Baptismal and Burials Registers, Diocese of Uruguiana, Uruguiana, Brazil.

Table 11

Year	Cattle	Oxen	Sheep	Horses	Burros	Mules
1768	8,977	1,779	10,760	1,653	191	310
1785	10,615	729	1,218	2,706	137	408
1796	9,974	85	224	5,977	57	7
1797	9,895	480	138	6,247	109	10
1798	9,966	487	96	6,754	96	18
1801	10,119	467	42	4,850	84	75

Sources: For 1768 from Robert H. Jackson, *Missions and 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), 389; for 1785 from Los Santos Mártires de Japón, December 31, 1785, "Testimonio de Ynbentario de Cargo de las Quantas de D[o]n Juan Fernandez q[u]e concluo en 31 de Diziembre de 1785. Y El

Robert H. Jackson

Ynbentario Orijinal de la Entrega q[u]e hizo d[ic]ho Fernandez a su sucesor D[o]n Thomas Gomez q[u]e concluye, en 27 de Diciembre de 1787. Yncluso en el Estancias de mismo Pueblo Como el anterior testimonio, y son Dos Ynbentarios," AGN, Sala 9-18-7-3; for 1796 from Los Santos Mártires de Japón, August 23, 1796, "Testimonio de Ynbentario de las Existencias de este Pueblo de Mártires día 23 de Agosto de 1796," AGN, Sala 9-18-7-3; for 1797 from Los Santos Mártires de Japón, December 31, 1797, "Ynbentario de los vienes existentes en este Pueblo de Mártires en fines del año de 1797," AGN, Sala 9-18-7-3; for 1798 from Los Santos Mártires de Japón, December 31, 1798, "Ynbentario de los vienes existentes en este Pueblo de Mártires en fines del año de 1798," AGN, Sala 9-18-7-3; for 1801 from Los Santos Mártires de Japón, July 13, 1801, "Ynbentario de los vienes existentes en este Pueblo de Mártires en la entrega hecha por D[o]n Agustin de Norragaray a D[o]n Celedonio Morales Admin[istrado] entrante en 13 de Julio de 1801," AGN, Sala 9-18-7-3. Additional research is needed to document fluctuations in livestock in the ex-missions, and if there is evidence for drought degrading pasture or of disease that culled the herds of the ex-missions. There is evidence of sales of livestock between ex-missions, and the organization of expeditions to restock herds. In 1770, the administrator of Los Santos Mártires de Japón purchased 1,000 head of cattle from Yapeyú in exchange for 138 tercios of yerba mate: Juan Martin Martinez, Los Santos Mártires de Japón, August 8, 1771, "Diario de la Admin[istraci]on de este Pueblo," AGN, Sala 9-17-4-4.

Table 12
Yerba Mate Production at Six Ex-Missions in 1787 and 1790 (in Arrobas)

Ex-Mission	1787	1790
San Juan Bautista	5,000	6,000
San Lorenzo	1,000	2,104
Santo Angel Custodio	5,000	
San Luis Gonzaga	6,000	5,300
San Nicolás	4,500	6,260
San Miguel	1,000	

Source: Ernesto Maeder, *Misiones del Paraguay: Conflictos y disolucion de la sociedad Guaraní (1768-1850)* (Madrid, 1992), p. 163. In 1790, for example, ex-mission Santo Ángel reportedly had two *yerbales*, one with 18,720 plants and the second with 5,758 plants. Josef de Aragon, et al, Santo Ángel Custodio, June 18, 1790, "Inbentario de Bienes de Entrega a Don Josef de Aragón, Administrador," AGN, Sala 9-17-3-6.

Table 13
Sources of Income in Six Ex-Missions in 1787, in Pesos

Ex-Mission	Cattle	Yerba Mate	Cotton	Textiles	Other
San Juan	4,420	6,250	5,000		1,500
San Lorenzo	3,727	1,250	3,600	2,101	1,033
Santo Ángel	4,131	6,250		4,625	2,010
San Luis	4,675	7,500	4,000	7,405	
San Nicolás	7,921	5,667	564	8,484	35
San Miguel	20,300	3,750	1,500	3,750	62

Source: Ernesto Maeder, *Misiones del Paraguay: Conflictos y disolución de la sociedad guaraní (1768-1850)* (Madrid, 1992), p. 167. Cotton and textile production at the ex-missions was significant. In 1791 and 1792, for example, the Guaraní at San Juan Bautista produced 32.8 and 18.7 tons respectively of cotton, and in 1792 produced 20,266 $\frac{1}{4}$ varas of cloth. See Nicolás de Atienzo, Pueblo de San Juan Bap[tis]ta. Su cuenta original de un año, que se comprende desde primero de Enero de 1792 hasta ultimo de Diciembre del mismo año, cuyo adm[inistrad]or es en la actualidad Nicolás de Atienza,” Archivo General de la Nación, Buenos Aires, “Padrones de Indios,” Sala 9-17-3-6; Nicolás de Atienza, San Juan Bautista, February 15, 1792, “Cuenta que formo you Don Nicolás de Atienza Adm[inistrad]or actual y Proprietario de este Pueblo,” Archivo General de la Nación, Buenos Aires, “Padrones de Indios,” Sala 9-17-3-6. In the 1750s, the seven trans-Uruguay missions owned some 200,000 yerba mate trees: Pastells, *Historía de la Compañía de Jesús*, vol. 8: 28. Records from other missions noted similar sources of revenue. For example, between 1770 and the end of 1783, San Cosme shipped 9,686 *arrobos* of yerba mate, 1,447 *arrobos* of tobacco, 1,177 *arrobos* of sugar, 382 *arrobos*, 19 *libras* of mile de cana, and 20,647 *varas* of cloth: Rafael Carbonell de Massy, S.J., Teresa Blumers, and Norberto Levinton, *La Reducción Jesuitica de Santos Cosme y Damián: Su historia, su economía y su arquitectura (1633-1797)* (Asuncion, 2003), 226.

Table 14 Number of Cattle (*de rodeo*) at Six Missions, 1768-1801

Ex-Mission	1768	1771	1783	1790	1801
San Miguel	18,533	20,000	55,584	158,869	73,817
San Luis	6,211	5,525	17,777	14,000	10,030
San Nicolás	19,296	16,446	14,680	26,866	25,150
San Juan	2,630	3,433	29,159		200
Santo Ángel	2,231	6,095	14,326	20,457	200
San Lorenzo	4,560	2,312	19,049		3,000
Total	53,461	53,811	150,575		112,397

Source: Ernesto Maeder, *Misiones del Paraguay: Conflictos y disolucion de la sociedad Guaraní (1768-1850)* (Madrid, 1992), 152.. Several inventories provide more detailed information on the number of cattle and other livestock owned by the ex-missions. In 1789, ex-mission Concepcion owned 26,347 cattle, 704 oxen, 8,754 horses, 570 mules, 380 donkeys, 1,306 sheep, and 91 swine. Pedro Fonteloro, Concepción, December 20, 1789, “[Informe] Sobre el estado de pueblo de la Concepción y si puede o no pagar los tributos,” AGN, Sala 9-17-3-6. Inventories for San Juan Bautista in 1791 and 1792 provide detailed information on the numbers of livestock, and the uses in particular of cattle. In 1791, the ex-mission reported a total of 30,135 cattle, 2,606 oxen, 6,112 horses, 1,020 sheep, and 66 swine. In the following year the number of animals included 27,718 cattle. Cattle were used for hides, producing tallow and byproducts such as soap and candles, but also as food for the Guaraní population of the ex-mission. In 1791, the residents of San Juan Bautista consumed 5,402 cattle, another 1,353 went to feed the Guaraní living on the farms and *estancias* of the ex-mission, 312 for the workers at the *yerbales*, and 62 for troops absent from the ex-mission, including those protecting the workers at the *yerbales*. An epidemic among the cattle and attacks by “*tigres*” (jaguars) killed 2,433 cattle. In 1792, the number of cattle consumed at San Juan Bautista totaled 4,854, at the farms and *estancias* 1,536 animals, 464 by the workers in the *yerbales*, and 58 by the troops outside of the community. The epidemic among the cattle in the previous year had run its course, and in 1792 attacks by “*tigres*” totaled 877 animals. See Nicolás de Atienzo, Pueblo de San Juan Bap[ti]sta. Su cuenta original de un año, que se comprende desde primero de Enero de 1792 hasta ultimo de Diciembre del mismo año, cuyo adm[inistrad]or es en la actualidad Nicolás de Atienza,” AGN, Sala 9-17-3-6; Nicolás de Atienza, San Juan Bautista, February 15, 1792, “Cuenta que formo you Don Nicolás de Atienza Adm[inistrad]or actual y Proprietario de este Pueblo,” AGN, Sala 9-17-3-6.

Table 15
Structure of the Population of Los Santos Mártires de Japón Mission in 1735

Family Size	# of Families	# People/Families	Orphans Boys	Orphans girls	Widows	Widowers
2	312	624	129	131	133	9
3	253	759				
4	173	692				
5	103	515				
6	38	228				
7	9	63				
8	5	40				

Table 16: Guaraní from Los Santos Mártires de Japón Mission in Service to the King in the 1770s

Date	Number	Service Site
3/11/1773	10	Guarnacion de Sta Teresa
10/26/1773	23	Guardia de San Martin
11/12/1774	10	Guarnacion de Sta Teresa
11/12/1774	10	Guarnacion del Maldonado
8/2/1775	13	Guardia de San Martin
9/30/1775	10	"servicio el rey"
12/1775	50	Pueblo de Concepcion
4/13/1776	10	Guardia de San Martin
11/18/1777	12	Guardia de Santa Tecla
11/28/1777	10	Guardia de Santa Tecla
12/13/1783	5	Guardia de Santa Tecla

Source: "Testimonio del Ynventario del Cargo de D[o]n Juan Antonio Fernandez que concluo en 31 de Diziembre de 1785-Y el Ynbentario Orijinal de la Entrega que iso d[ic]ho Fernandez, a su sucesor D[o]n Thomas Gomez, en 27 de Noviembre de 1787. Incluso en el Estancias de mismo Pueblo, Como el Anterior Testimonio," AGN, Sala 9-18-7-3.

The Post-Jesuit Expulsion Population of the Paraguay Missions, 1768-1803

Robert H. Jackson

Resumen: Este ensayo examina los patrones demográficos de las misiones jesuíticas de Paraguay en los años después de la expulsión de los jesuitas de las colonias españolas en 1768. Las poblaciones guaraníes de las misiones eran poblaciones de alta fertilidad y alta mortalidad, que quiere decir que padecían altas tasas de mortalidad pero a causa de la alta fertilidad las poblaciones crecían en años sin crisis de mortalidad. Ocurría epidemias de viruelas, sarampión, y otras enfermedades como cada 20 años, pero las poblaciones guaraníes recuperaban y crecían después de los crisis de mortalidad. Después de la expulsión oficiales royales nombraron administradores civiles para administrar las misiones. Además, la corona implementó políticas para desarrollar la economía de la región del Río de la Plata como el comercio libre. La política española después de la expulsión favorecía la estabilidad de las misiones, pero muchos guaraníes salían para buscar trabajo o para comerciar. La migración de guaraní de las misiones era el patrón demográfico mas importante después de la expulsión de los jesuitas

Palavras-chave: Paraguay; misiones; migración; epidemias, viruelas

Abstract: This essay examines demographic patterns in the Jesuit missions of Paraguay in the years following the Jesuit expulsion from Spanish colonies in 1768. The Guaraní populations of the missions were high fertility and high mortality populations, which means that they experienced high mortality rates but because of high fertility the population grew in years without mortality crises. Epidemics of smallpox, measles, and other diseases occurred about every 20 years, but the Guaraní populations rebounded or recovered and grew following mortality crises. Following the expulsion royal officials named civil administrators to administer the missions.

Moreover, the Crown implemented policies to stimulate economic growth in the Rio de la Plata region such as “free trade” (*comercio libre* or free trade between Spanish territories). Spanish policy following the expulsion stressed the stability of the missions, but many Guaraní left to look for work or trade. Guaraní out-migration from the missions was the most important demographic pattern following the expulsion of the Jesuits.

Key Words: Paraguay; missions; migration; epidemics, smallpox.

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