CHAPTER 4

Demographic Patterns on the Paraguay and Chiquitos Mission Frontiers

This chapter examines demographic patterns on the Paraguay and Chiquitos mission frontiers. The previous chapter outlined the effects of epidemics, and particularly smallpox outbreaks, on the native populations. Topics considered include the process of the formation of mission communities, the demographic consequences of the Jesuit urban plan which brought large numbers of people to live together in compact communities, and patterns of fertility and mortality, as also related to epidemic mortality. The discussion of general patterns is followed by case studies of individual missions.

The Demographic Consequences of the Jesuit Urban Plan

The Jesuit missionaries stationed on the Paraguay and the Chiquitos mission frontier organized the construction of compact and nucleated communities, with native housing clustered around the main square. In most instances the Jesuits directed the construction of buildings of varying sizes that consisted of multiple apartments for native families, arranged in compact rows. Several contemporary diagrams document the configuration of native housing at several missions including San Juan Bautista and San Miguel missions, both located on the eastern Paraguay mission frontier in modern Rio Grande do Sul, Brazil, and Los Santos Mártires del Japón. The missions counted scores of long multi-apartment structures clustered together in rows to form a spatially compact community. The native residents of the missions lived cheek to jowl, with families sharing small apartments, and living in close proximity to many other families (see Maps 3 and 4).

The excavated ruins of Guaraní housing buildings at Jesús de Tavarangue mission show the amount of space afforded to each Guaraní family, which was at most two small rooms. There was no space between individual apartments, so the members of families came into close contact with and mingled with members of other families, particularly during the hotter months when the Guaraní probably spent free time in the shade of the corridors outside of their apartments. People living in such close quarters in the compact mission villages easily transmitted disease from one to another, and epidemics, a major factor in shaping demographic patterns on the missions, spread quickly in the mission villages inhabited by thousands (see Illustration 9).
Demographic Patterns on the Paraguay Missions

This section outlines basic demographic patterns on the missions based on an analysis of patterns of fertility and mortality and the gender structure. The Paraguay missions were high fertility and high mortality populations, which meant that in non-epidemic years death rates and particularly infant mortality rates in non-crisis years were moderate to high, but birth rates were also high and were generally higher than death rates except during mortality crises. The mission populations grew at slow to moderate and at times high rates. As discussed in the previous chapter, periodic epidemics introduced into the missions about once every generation caused high and in the cases of some individual missions catastrophic mortality that reduced the size of the mission populations. However, following mortality crises the populations rebounded or recovered, and experienced growth even though the mission populations often did not reach pre-crisis levels (see Figure 4).

An analysis of the average crude birth and death rates at four missions in epidemic and non-epidemic years documents these general trends. The highest documented death rate in the Paraguay missions was the 565.1 per thousand population at San Luis Gonzaga in 1739 during a smallpox outbreak, or in other words 56.5 percent of the population died. Moreover, the crude birth rate that measures the number of births in relation to the total population (CBR) dropped significantly during the epidemic, and was 20.3 per thousand population. The net decline in the population was on the order of 54.5 percent. In three epidemic years at San Luis Gonzaga the crude death rate averaged 296.7 as against an average crude birth rate of 28.9 per thousand population, or a net decline of 267.8 per thousand population or 26.8 percent. Catastrophic mortality significantly reduced the size of the mission population. For example, the population of San Luis Gonzaga dropped from 4,327 in 1738 to 1,978 in 1739. However, the population rebounded and grew in non-epidemic years. In 20 non-epidemic years the crude birth and death rates averaged 61.2 and 39.6 per thousand population respectively, and the average rate of growth was 21.6 per thousand population or 2.2 percent per year. Following the catastrophic mortality crisis in 1739 the number of marriages recorded increased, and birth rates were higher. In terms of marriages, the Jesuits recorded 86 in 1736, and this number jumped to 166 in 1739 and 163 in 1740 as widows and widowers remarried and other Guaraní formed new families. The crude birth rate jumped to 87 per thousand in 1740 and 70.2 in 1741 (see Appendices 1 and 4).

The general pattern documented for San Luis Gonzaga also occurred at the other Paraguay missions. The crude birth and death rates per thousand