

THE INDIAN POPULATION OF SOUTHERN GUATEMALA, 1549-1551:

AN ANALYSIS OF LÓPEZ DE CERRATO'S *TASACIONES DE TRIBUTOS*¹

THE *tasaciones de tributos* compiled between 1548 and 1554 under the supervision of Alonso López de Cerrato have long been recognized as the most important tribute documentation extant for mid sixteenth-century Central America, being of particular interest to all those whose inquiries have focussed on various aspects of the economy and demography of regions stretching from Chiapas and Yucatán in the north to Honduras and Nicaragua in the south.² For the purpose of this paper, we wish to concentrate simply on one spatial component of the *Libro de tasaciones* forming part of the celebrated legajo 128, a rich set of documents housed in the Archivo General de Indias in the section of the archive classified as the Audiencia de Guatemala: that spatial component

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² Among the studies which are based, at least in part, on the Cerrato *tasaciones* are Juan López de Velasco, *Geografía y descripción universal de las Indias* (Madrid, 1971); Francisco del Paso y Troncoso, *Epistolario de Nueva España, 1505-1818*, 16 vols. (Mexico City, 1939-42); Rodolfo Barón Castro, *La población de El Salvador* (Madrid, 1942); John F. Bergmann, "The Distribution of Cacao Cultivation in Pre-Columbian America," *Annals of the Association of American Geographers*, 59 (March 1969), 85-96; David R. Radell, "Historical Geography of Western Nicaragua: The Spheres of Influence of León, Granada, and Managua, 1519-1965" (Ph.D. Diss., Berkeley, 1969); Sherburne F. Cook and Woodrow Borah, "The Population of Yucatán, 1517-1960," in Sherburne F. Cook and Woodrow Borah, *Essays in Population History: Mexico and the Caribbean*, Vol. 2 (Berkeley, 1974), pp. 1-79; Peter Gerhard, *The Southeast Frontier of New Spain* (Princeton, 1979); and Linda A. Newson, "Demographic Catastrophe in Sixteenth-Century Honduras," An analysis of the Cerrato *tasaciones* also forms the basis of Dan Stanislawski, *The Transformation of Nicaragua: 1519-1548* (Berkeley and Los Angeles, 1983).] in David J. Robinson, ed., *Studies in Spanish American Population History* (Boulder, 1981), pp. 217-241.

referred to by contemporary Spanish officials as “los términos y jurisdicción de la ciudad de Santiago de Guatemala,” that is, the territory which in early colonial times fell under the administrative authority of the city of Santiago.³

In terms of present-day political boundaries, the territory falling “within the limits and jurisdiction” of the old colonial capital of Santiago can be regarded essentially as southern Guatemala (the area of the Republic of Guatemala excluding Belize and El Petén) with some overlap into the Mexican state of Chiapas to the west and El Salvador to the east (Figure 1). Within this culturally and environmentally diverse unit of analysis (approximately 75,000 square kilometers in extent) attention will be directed toward manipulating the Cerrato tasaciones in order to draw from them some idea of the number of native people who inhabited southern Guatemala in the mid sixteenth century. To achieve this end, four procedures will be followed. First, the immediate antecedents of the Cerrato assessments will be summarized with a view to placing the man and his work in historical context. Second, the basic geographical feature of the tasaciones that concerns us here will be outlined, namely the number of *tributarios* (Indian tribute payers) recorded as being associated with the various settlements comprising the assessments. Third, the reliability of the Cerrato tasaciones as a demographic source will be critically evaluated, for inherent in the assessments are several deficiencies that many scholars have not taken properly into account when using them for purposes of population reconstruction; any reading of the Cerrato tasaciones must be done with some understanding of the way in which they were compiled and of the difficult and unstable circumstances under which they were compiled. And fourth, a simple mathematical exercise will be conducted, taking into consideration the points raised in procedure three, in which a global estimate is suggested for the Indian population of southern Guatemala in the mid sixteenth century. This estimate will then be viewed in relation to a figure we have recently proposed for the contact population of the region, indicating that (as elsewhere in the Americas) conquest and subjugation by imperial Spain precipitated, between 1520 and 1550, a massive demographic collapse of the native population.

THE CERRATO TASACIONES IN HISTORICAL CONTENT

The tasaciones put together by López de Cerrato and *oidores* (judges) working under him were the third such tribute assessments compiled by

³ Santiago is known today simply as Antigua Guatemala. For a history of the city, see Christopher H. Lutz, *Historia sociodemográfica de Santiago de Guatemala, 1541-1773* (Guatemala, 1983).

officials of the crown in sixteenth-century Guatemala. The very first endeavor, in response to *reales cédulas* issued in 1533 and 1534, dates to 1535, when Alonso Maldonado, at that time an oidor in the Audiencia of New Spain, attempted to persuade Pedro de Alvarado, then governor of Guatemala, of the legal necessity to have controlled and systematic tribute assessments levied upon Indian communities.⁴ Alvarado's reaction—that of outright refusal even to consider, let alone permit, such an undertaking—was typical of an insatiable despot who recognized no authority but his own and who regarded Guatemala as little more than his personal estate.⁵ It was not until Maldonado (himself not without vested interests) was able to work with the first Bishop of Guatemala, Francisco Marroquín, that enough political clout and no small amount of courage were mustered to overcome the opposition not only of Alvarado but also of the *cabildo* (municipal council) of Santiago, thus enabling *tasaciones* to be carried out. These first tribute assessments, made specifically in response to a real *cédula* issued on February 23, 1536, were undertaken some time between 1536 and 1541.⁶ We have been able, so far, to locate only a handful of these *tasaciones*; most scholars have hitherto regarded them as lost, but fragments of them remain for a half dozen or so important Guatemalan communities, including Sacatepéquez, Ostuncalco, Tacuba, Jumaytepeque, Momostenango, Comalapa, and Utatlán.⁷ Although they have the distinction of being the first completed *tasaciones*, these assessments unfortunately contain little of demographic value to the historical researcher.

The second successful assessment of Indian tribute-paying capacity in Guatemala was undertaken some time between 1543 and 1548. The rapacious Alvarado, having been killed in Mexico while participating in a Spanish offensive to quell the Mixtón uprising of 1541, now constituted no impediment, and records exist of three oidores (Diego de Herrera, Pedro Ramírez Quiñones, and Juan Rogel) having undertaken the task.⁸ Fragments of these *tasaciones* may be found in Patronato 70-1-8 and

⁴Salvador Rodríguez Becerra, *Encomienda y conquista: Los inicios de la colonización en Guatemala* (Sevilla, 1977), pp. 115-116.

⁵For a biography of Pedro de Alvarado and an assessment of his power and wealth, see J. E. Kelly, *Pedro de Alvarado: Conquistador* (Princeton, 1932); and William L. Sherman, "A Conqueror's Wealth: Notes on the Estate of Pedro de Alvarado," *The Americas*, 26 (October 1969), 199-213.

⁶Rodríguez Becerra, *Encomienda y conquista*, pp. 117-118.

⁷Archivo General de Indias (hereinafter cited as AGI): Indiferente General 857. These *tasaciones* are currently being transcribed by Wendy Kramer, W. George Lovell, and Christopher H. Lutz with a view to future publication in *Mesoamérica*.

⁸Rodríguez Becerra, *Encomienda y conquista*, p. 118.

Justicia 286 in the Archivo General de Indias. Those compiled by Rogel were not viewed favorably by the cabildo of Santiago de Guatemala, who wrote to the King complaining that:

Licenciado Rogel arrived, having been sent by the audiencia, and without proper investigation of the number of people there were or the resources they had, he reduced the tribute assessments by a significant amount. [The lowering] of the tribute affected Your Majesty's portion as well as that of private individuals.⁹

If members of the cabildo and the powerful colonists they represented were perturbed by the tasaciones compiled by Juan Rogel, they were soon to become even more incensed by the actions of Alonso López de Cerrato, an enlightened and committed administrator who arrived in the city of Gracias a Dios to assume the presidency of Spanish Central America on May 26, 1548.¹⁰ For five years before his arrival in Central America, Cerrato had served as president of the Audiencia of Santo Domingo, with its seat in the city of the same name, from which not only Hispaniola but also other Caribbean islands, including Cuba, Jamaica, and Puerto Rico, were governed. Cerrato made his mark as an ardent reformer early on in Santo Domingo when he attempted to enforce the part of the humanitarian New Laws of 1542-43 dealing with the abolition of Indian slavery.¹¹ As in Guatemala a few years later, Cerrato made many enemies among the Spanish colonists of Santo Domingo, who resented the loss of their slaves at the hands of the reformist crown official. William Sherman has summarized what he views as the distinguished highlights of Cerrato's career in his new position of authority in Spanish Central America:

A dour, dedicated judge who brooked no nonsense, Cerrato set in motion a policy that was seen by the colonists as their complete ruination—that is to say, he was completely intent on enforcing laws. His substantial achievement

⁹The *cabildo* of Santiago de Guatemala to the Crown, April 30, 1549, quoted in Salvador Rodríguez Becerra, "Metodología y fuentes para el estudio de la población de Guatemala en el siglo XVI," *Acti del XL Congreso Internazionale degli Americanisti* (Genoa, 1975), p. 246. The letter of complaint may be found in AGI: Audiencia de Guatemala (hereinafter cited as AG) 41. The Spanish text reads: El licenciado Rogel vino mandado por la audiencia y sin hacer averiguación de la gente que había ni la posibilidad y granjerías que tenía, quitó en las tasaciones mucha cantidad de tributos así a VM como a los particulares.

¹⁰William L. Sherman, *Forced Native Labor in Sixteenth-Century Central America* (Lincoln, 1979), p. 135.

¹¹The New Laws of the Indies for the Good Treatment and Preservation of the Indians, promulgated in 1542-43, prohibited Indian slavery, limited the institution known as *encomienda*, and regulated Indian tribute payments. See Charles Gibson, *Spain in America* (New York, 1966), pp. 48-67, for a general discussion of the New Laws and their role in taming the *encomienda*. Sherman, *Forced Native Labor*, pp. 129-88, contains an excellent analysis of the impact of the New Laws on the *encomienda* system in sixteenth-century Central America.

of that goal, in the face of incredible odds, was a landmark in the history of Indian labor in the New World. By 1550 the situation of the Indians was significantly altered because of Cerrato's actions, and their condition was never quite so deplorable as in the past. This is not to say that the high ideals of Spanish legislation were fully realized; indeed, life for the Indians remained that of servitude to their white masters throughout the sixteenth century and beyond. Officials who followed Cerrato were not his equal in zeal and courage, and the social patterns of the conquest society took further root.¹²

Without a strong royal bureaucratic system in control in Spanish Central America, the crown feared that its authority would be undermined both by independent-minded governors such as Pedro de Alvarado and the disloyalty of the *encomendero* class who had become an autonomous aristocracy following conquest and who dominated cabildo politics and much of sixteenth-century Guatemalan life.¹³ A man of Cerrato's character, someone (unlike many crown officials) actually committed to the enforcement of the New Laws of the Indies, could expect little else besides a hostile reception from an anti-reform cabildo such as that of Santiago de Guatemala.¹⁴ It comes as no surprise, therefore, to find the cabildo complaining to the King that "after Licenciado Cerrato arrived, the *tasación* of Licenciado Rogel notwithstanding, he ordered that everyone be subjected to yet another assessment."¹⁵ It is to the third set of *tasaciones*, carried out in Guatemala under Cerrato's supervision between 1549 and 1554, that we now turn our attention.

VITAL STATISTICS OF THE CERRATO *TASACIONES*

The Cerrato *tasaciones* may be found stored for posterity in two different archives: one copy is housed in the Archivo General de Indias (AGI) in Seville and dates from 1549 to 1551;¹⁶ the other copy, dating from

¹²Sherman, *Forced Native Labor*, p. 12. The same author succinctly reviews Cerrato's accomplishments in "Indian Slavery and the Cerrato Reforms" *HAHR*, 51 (1971), 25-50.

¹³See Murdo J. MacLeod, *Spanish Central America: A Socioeconomic History, 1520-1720* (Berkeley, 1973), pp. 23-142, for a detailed discussion of economic, social, and political life in early colonial Guatemala.

¹⁴For some idea of the *cabildo's* anti-reform views and their responses to the enlightened thinking of, among others, Alonso López de Cerrato, see Murdo J. MacLeod, "Las Casas, Guatemala, and the Sad but Inevitable Case of Antonio de Remesal," *Topic: A Journal of the Liberal Arts*, 20 (Fall 1970), 53-64.

¹⁵The *cabildo* of Santiago de Guatemala to the Crown, April 30, 1549, quoted in Rodríguez Becerra, "Metodología y fuentes," p. 246. The text of the letter in Spanish reads: Después que vino el licenciado Cerrato, no obstante la *tasación* del licenciado Rogel, mandó que todos trajesen a tasar otra vez.

¹⁶*Tasaciones de los pueblos de los términos y jurisdicción de la ciudad de Santiago de la provincia de Guatemala*, AGI: AG 128 (1549-1551).

1553 to 1554, is housed in the Archivo General de Centroamérica (AGCA) in Guatemala City.¹⁷ The assessments in the AGCA, some 43 listings in all, contain only seven place names which do not appear in the *tasaciones* kept in the AGI, a much more comprehensive register with 169 settlement listings. The latter set of documents has, therefore, tended to attract more scholarly inquiry than the former, and in recent years has formed the focus of investigations conducted by, among others, Feldman, Rodríguez Becerra, and Solano y Pérez-Lila.¹⁸ Somehow—most likely because of basic paleographic problems with the original source—each investigator has divergent spellings of place names mentioned in the *tasaciones* and, our main concern here, divergent arithmetic aggregates of the tribute-paying population recorded by Cerrato and his *oidores*. Like most tasks involving historical reconstruction, successful interpretation of sixteenth-century archival records calls for care, patience, and an awareness of limitations, whether in the documentation or in oneself. The Cerrato *tasaciones* are certainly no exception. Each individual assessment must be read with considerable caution, both the text itself and the key words and figures in the left hand margin, where numbers representing tribute payers (*yndios*) are penned in Roman numerals below the name of the encomendero to whom tribute was paid and the name of the community held by him (or her) in *encomienda* (Figure II).

To improve the quality of our interpretation of the Cerrato *tasaciones* and to serve as an independent check, we enlisted the assistance of a professional Spanish paleographer, Manuel Fuentes Mairena.¹⁹ Following closely his reading of the assessments, and re-checking his figures against those in our notes and in the original documents, we tally the number of Indian tribute-payers recorded in the Cerrato *tasaciones* to a total of 23,769.²⁰ In order to show how each researcher reads the assessments differently, we point out that Feldman tallies the tributary figures to a sum of 20,558, Rodríguez Becerra to 23,660, and Solano y Pérez-Lila to 24,269.²¹ Of the 169 settlement listings, nearly all (about 150) are registered

¹⁷ Archivo General de Centroamérica, A3.16 legajo 2797, expediente 40466 (1553-1554).

¹⁸ Lawrence H. Feldman, *Los tasaciones y tributos de Guatemala* (Columbia, 1980); Rodríguez Becerra, *Encomienda y conquista* and "Metodología y fuentes;" and Francisco de Solano y Pérez-Lila, *Los Mayas del siglo XVIII* (Madrid, 1974).

¹⁹ Señor Fuentes has worked in the Archivo General de Indias (AGI) in Seville for many years, transcribing documents for scores of researchers and research institutes. He has a formidable knowledge, as anyone who has enlisted his help can attest, of colonial Spanish paleography.

²⁰ AGI:AG 128.

²¹ Feldman, *Tasaciones y tributos*, p. 75; Rodríguez Becerra, "Metodología y fuentes," p. 248; and Solano y Pérez-Lila, *Los Mayas*, p. 83.

as being held in private *encomienda*, while only seventeen are assigned to the crown. Two communities (Chiquijotla and Malacatepeque) are listed, temporarily, as being vacant and awaiting designation.

CRITICAL EVALUATION OF THE CERRATO TASACIONES

Before attempting to employ the tributary statistics mentioned above as indicators of the overall size of the Indian population of southern Guatemala in the mid sixteenth century, it is crucial that the Cerrato *tasaciones* first be examined for reliability or credibility as a useful historical source. Put simply: to what extent can we trust these tribute assessments; how accurate are they as reflections of demographic reality; what are their flaws and inadequacies as reconstructive devices? We suggest that the *tasaciones* have several serious deficiencies which must be taken into consideration when employing them as a demographic source. These deficiencies will now be reviewed.

(1) A significant number of settlements listed in the *tasaciones*, about one-fifth of the total, actually do not contain any record of the tribute-paying population they supported. Whereas most settlements appear in the left-hand margin alongside the name of the *encomendero* who held them and the number of officially recognized tributaries, thirty-six listings have no indication of the size of their tributary population.²²

(2) Not included in the Cerrato *tasaciones* are listings for large areas of southern Guatemala known to be settled at the time the assessment was carried out; examples of such areas are parts of the Cuchumatán, Izabal, and Verapaz regions and the environs of Santiago de Guatemala, the densely settled core of southern Guatemala. Given that later *tasaciones* for the same spatial unit record detailed information on over three hundred occupied places, we estimate that the population of as much as one-half of the inhabited area of southern Guatemala may have gone unrecorded.²³ Interestingly, according to Borah and Cook, for the same period of time in central Mexico the famous *Suma de Visitas* (1547-1551) covered only approximately one-half of the territory of New Spain known then to be populated.²⁴

²² AGI:AG 128.

²³ See, for example, AGI: Contaduría 973, which contains fiscal records for the years 1624 to 1710. One set of documents in this *legajo* relates to the treasury accounts of the Audiencia of Guatemala for the years around 1710, when 326 settlements are listed as constituting the spatial unit referred to in this paper as southern Guatemala.

²⁴ Woodrow Borah and Sherburne F. Cook, "Conquest and Population: A Demographic Approach to Mexican History," *Proceedings of the American Philosophical Society*, 113 (February 1969), 177-178.

(3) The category recorded in the *tasaciones* is that of *tributario*, that is, members of the Indian community who were required under Spanish colonial law to pay tribute either to the crown or to individual *encomenderos*. This category can be equated with married male Indians, since at the time of the assessments single men and other sectors of the native population were not theoretically liable for tribute payment, although they became so later in the sixteenth century.²⁵ The Cerrato *tasaciones*, unlike assessments undertaken only ten years later, do not record the number of people who, for a variety of reasons, were exempt from paying tribute (a status referred to as *reservado*), including children, the aged, the sick or infirm, members of the Indian nobility, slaves and domestic servants tied to Spanish *vecinos* or their households, and individuals involved in some way with running the parish church.²⁶ Consequently, it is difficult to know exactly what proportion of the total population *tributarios* represented in the mid sixteenth century.

(4) When Cerrato ordered that the *tasaciones* be undertaken, he relied partly for his information on reports submitted by local Indian leaders rather than on detailed personal inspections of the countryside carried out by officials of the crown. That is to say, not every settlement recorded in the *tasaciones* received a visit either from Cerrato himself or from one of his trusted *oidores*. Furthermore, the assistance of experienced clergy, who often knew the locale in which they served better than any other Spaniard, seems not to have been requested. It is, therefore, quite conceivable that, in order to reduce the amount of tribute demanded by the Spaniards, some native leaders whose counsel was sought would deliberately under-record the number of eligible tributaries living in any given community.²⁷ At any rate, Cerrato was criticized for a lack of thoroughness and good judgement by several of his contemporaries, including Bishop Marroquín and the conquistador-chronicler Bernal Díaz del Castillo. The latter, in a letter to the King, lodged the following complaint:

Your majesty should know that everything was carried out contrary to your royal order. [Indian dwellings] were not visited but assessed from the private residences [of crown officials] according to an unintelligible system . . . and he

²⁵ Linda A. Newson, "The Depopulation of Nicaragua in the Sixteenth Century," *Journal of Latin American Studies*, 14 (November 1982), 263-265.

²⁶ See, for example, the meticulously detailed *tasaciones* of numerous Guatemalan communities which may be found in AGI:AG 45 (1561-1562).

²⁷ Robert M. Carmack, *Quichean Civilization: The Ethnohistoric, Ethnographic, and Archaeological Sources* (Berkeley and Los Angeles, 1973), pp. 138-39; and Thomas T. Veblen, "Native Population Decline in Totonicapán, Guatemala," *Annals of the Association of American Geographers*, 67 (December 1977), 494-495.

[Cerrato] claims that he is sending to Your Majesty all the assessments as if they [Cerrato and his oidores] were acquainted fully with the facts and their circumstances.²⁸

Cerrato's tasaciones, which reflect in form and content the enlightened thinking of the New Laws, created (to say the least) quite a stir among the Spanish residents of Guatemala, enraging many encomenderos who considered the assessments to be artificial, inadequate, and erroneous in the extreme.²⁹ In the controversial assessments, Cerrato lowered the number of officially registered tributarios liable for tribute, as well as reducing considerably the amount of tribute payable and the labor services to be rendered. A veritable furor accompanied implementation of the tasaciones, which was not surprising since they represent the first recorded enactment of the progressive New Laws in all of Spanish America. The assessment for the community of Cochumatlán (the present-day Todos Santos Cuchumatán) actually records such consternation, for the text of the document mentions quite explicitly that the encomenderos "were offended by this assessment"³⁰ and notes that the individuals in question, the sons of Marcos Ruiz and García de Aguilar, wished the Indians of Cochumatlán to pay them more tribute (Figure III).

(5) Compared to other crown officials responsible for supervising tribute assessments, Cerrato, so it seems, was content with statistical approximations, since almost all his figures are rounded off in units of five, ten, or twenty. President García de Valverde, for instance, who assumed the governorship of Spanish Central America some thirty years after Cerrato, was more of an administrative perfectionist, diligently assessing Indian tribute-paying capacity down to individual family units and even half-units where appropriate.³¹ The figures for the settlements listed in Cerrato's tasaciones, therefore, are likely to be approximate rather than exact.

(6) Throughout southern Guatemala, but especially in the central and western highlands of the region, the laborious process of assessing Indian

²⁸ Bernal Díaz del Castillo, quoted in Carmelo Sáenz de Santamaría, *El licenciado Don Francisco Marroquín, primer obispo de Guatemala* (Madrid, 1964), p. 74. The letter written by Díaz del Castillo reads: Sepa VM que todo se hizo al contrario de vuestro real mando, porque no se vió cosa de los dicho sino estándose en sus aposentos, se tasó no sé porqué relación y cabeza . . . y diz que envía agora allí a VM todas las tasaciones como si tuviesen experiencia de lo que es cada cosa y las circunstancias dello.

²⁹ Carmack, *Quichean Civilization*, pp. 138-139; and Sherman, *Forced Native Labor*, 153-188.

³⁰ AGI:AG 128. The text reads "estaban agraviados de esta tasación." See Figure III, line 30.

³¹ *Razón de las tasaciones que se han hecho después que el presidente [Valverde] vino a esta audiencia, de pueblos de su distrito con lo que antes tributaban*, AGI:AG 10 (1578-1582).

tribute-paying capacity coincided with the realization of another important colonial policy known as *congregación*. This involved the gathering together of scattered pre-Hispanic communities of often no more than a few Indian families into larger, more centrally-located towns and villages.³² *Congregación* of formerly dispersed native settlements was undertaken in the mid sixteenth century with a view to facilitating the Indians' instruction in Christianity by the evangelizing missionaries. At the same time, the policy promoted the task of civil administration by making easier the organization of such arrangements as the enumeration of the native population, the payment of tribute, and the control of labor. *Congregación* and *tasación* thus went hand in hand, the one policy reinforcing the authority of the other. The process of *congregación*, however, was not without its failures and frustrations, for the Spaniards experienced constant difficulties both in removing Indians from their old homes in the mountains and in ensuring their permanent residency in the newly-founded towns and villages usually established some distance away around churches built in open valley floors.³³ Fugitiveness was a problem which afflicted *congregaciones* throughout the colonial period, but it must have been particularly rife during the devastating *gucumatz* pandemic which raged in the Guatemalan highlands immediately before Cerrato's assessments.³⁴ It is therefore likely that the *tasaciones* compiled by Cerrato and his *oidores* failed to include a considerable number of Indians who sought refuge away from the *congregaciones* where the assessments were focussed, whether to escape the onslaught of disease or simply to evade the exploitation to which they were subjected under Spanish colonial rule.

These, then, are some of the drawbacks researchers must bear in mind when consulting the Cerrato *tasaciones*. They remain, nonetheless, the singlemost important tribute assessments extant for the mid sixteenth century. Having held the source to a scrutiny warranted by the manner in which it was compiled and the circumstances under which it was carried out, an attempt will now be made to formulate an estimate of the size of

³²For a discussion of *congregación* and its consequences in colonial Guatemala, see MacLeod, *Spanish Central America*, pp. 120-142; Horacio de Jesús Cabecas, *Las Reducciones indígenas en Guatemala durante el siglo XVI* (Guatemala, 1974); and Severo Martínez Peláez, *La Patria del criollo: Ensayo de interpretación de la realidad colonial guatemalteca* (San José, 1975), pp. 443-460.

³³For a regional analysis of the long-term effectiveness of *congregación*, see W. George Lovell, "Settlement Change in Spanish America: The Dynamics of *Congregación* in the Cuchumatán Highlands of Guatemala," *The Canadian Geographer*, 27:2 (1983), 163-174.

³⁴MacLeod, *Spanish Central America*, p. 19; and Veblen, "Native Population Decline in Tonicapán," p. 495. *Gucumatz*, or *cocoliztli*, is an undetermined pestilence MacLeod believes may have been pulmonary plague.

the native population of southern Guatemala based on information contained in the assessments.

THE INDIAN POPULATION IN THE MID-SIXTEENTH CENTURY

By compensating very approximately for some of the defects inherent in the Cerrato tasaciones, it is possible to compute a global estimate which, we contend, reflects, as closely as available documentation permits, the number of native people alive in southern Guatemala around 1550. Our procedure is as follows.

First, to the tributary population listed in the Cerrato assessments (23,769) we add 20 percent (4,754) for those settlements with no registered number of yndios (tributaries) in the left-hand margin of the tasaciones (compare, for example, Figure II with Figure III). It would be preferable to estimate the tribute-paying population for the thirty-six communities with no recorded figures by using a commodity to tributary ratio known to be invariable. This method, for example, has been employed by Cook and Borah for the Yucatán component of the Cerrato tasaciones, in which a direct correlation can be made between the number of cotton *mantas* requested as part of the assessment and the number of Indian tributaries, since each tributary was required to pay one manta of cotton cloth each year.³⁵ The same method has been employed by Newson for the Honduran component and by Radell for the Nicaraguan component of the Cerrato tasaciones, in which a standardized correlation can be made between corn supplies and Indian tributaries (a quota of one *fanega* of corn for every ten tributaries).³⁶ We have attempted to identify in the Cerrato tasaciones for southern Guatemala an invariable ratio between the number of tributaries and levies of cacao, corn, cotton, salt, wheat, and numerous other items of tribute, but have found no such correlation to exist.

Second, to the above figure (28,523) add 50 percent (14,262) to allow for under-recording arising because of Cerrato's enlisting local Indian rulers to help formulate assessments, because of abandonment of communities in the wake of the gucumatz pandemic of 1545-1548, and because of problems related to the effectiveness of congregación. The estimate of 50

³⁵ Cook and Borah, "The Population of Yucatán," p. 9 and p. 16. A *manta* is defined by Cook and Borah as "four *piernas*, or strips of cotton cloth woven on a native loom, each strip three-quarters of a Spanish *vara* (about 33 inches) wide by four *varas* long."

³⁶ Newson, "Demographic Catastrophe in Honduras," p. 221; and Radell, "Historical Geography of Western Nicaragua," p. 87. A *fanega* is a unit of dry measure of approximately 1.6 bushels or 116 pounds. The area planted with this amount of seed was known as the *fanega de sembradura*.

percent under-recording is based partly on more reliable population data extant for the years following the compilation of the Cerrato tasaciones for important Guatemalan communities such as Santiago Atitlán, Comalapa, Huehuetenango, Sololá, and Zumpango (see Table I). Some idea of the extent of under-reporting inherent in the Cerrato tasaciones, listed in column one, can be gained by comparing the figures in this column with more reliable figures listed in columns two to five. The figures in column six, expressed as percentage change, reflect the difference between Cerrato's estimate and the earliest post-Cerrato estimate of the tributary population. Reckoning on the basis of 50 percent under-reporting conceals a significant margin of error, so it is intended that this figure be taken as a crude and approximate rather than precise one. Since available evidence indicates overwhelmingly that the Indian population of Guatemala declined substantially between the mid sixteenth century and 1581, the discrepancies between the 1549 estimates and later estimates (particularly those dating to the 1550s and 1561) reflect deficiencies inherent in the Cerrato tasaciones and changes in tribute assessment procedures.³⁷ It is conceivable, however, that certain deficiencies may in part be rationalized (as Borah and Cook demonstrated in their analysis of the *Suma de Visitas*) upon examination of Cerrato's assessments in the light of new material uncovered in the course of future archival investigation and better understanding of the evolution of the Spanish tribute system.³⁸

Third, assuming that the figure we now have (42,785) represents approximately one-half of the area of southern Guatemala known to be

³⁷ See, for example, *Razón de las tasaciones*, AGI:AG 10; and MacLeod, *Spanish Central America*, pp. 130-131. An increase in the number of tributaries between 1549 and 1581 must not be interpreted as a genuine increase in the Indian population but as a result of changes in the Spanish tribute system. Essentially, certain sectors of the native population hitherto granted *reservado* status were later classified as being eligible for tribute in an attempt by an impecunious royal treasury to bolster its reserves. The situation in central Mexico is discussed in detail in 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, 1960), pp. 54-74. Among those who have erroneously interpreted the statistical increase as a swelling of human numbers are George Kubler, "Population Movements in Mexico, 1520-1600," *Hispanic American Historical Review*, 22 (1942), 615-616 and 623-625; Barón Castro, *La población de El Salvador*, p. 100; Ronald Spores, *The Mixtec Kings and their People* (Norman, 1967), pp. 73-75; and Angel Rosenblat, *La población de América en 1492: Viejos y nuevos cálculos* (Mexico City, 1967), pp. 70-71.

³⁸ Borah and Cook, *The Population of Central Mexico in 1548*, pp. 1-19; and Sherburne F. Cook and Woodrow Borah, *The Indian Population of Central Mexico, 1531-1610* (Berkeley and Los Angeles, 1960), pp. 5-6. As yet, no study of the Spanish tribute system in sixteenth-century Guatemala exists that can approach the excellence of the one undertaken for Mexico by José Miranda, *El tributo indígena en la Nueva España durante el siglo XVI* (Mexico City, 1952).

inhabited at the time of the Cerrato assessments, add a full 100 percent to compensate for the considerable spatial *lacunae* inherent in the tasaciones, giving an estimated (or potential) tribute-paying population of 85,570.

The problem which remains is to establish what proportion of the total Indian population the number of tributaries represents, and convert accordingly. While no consensus can be said to prevail, we are fortunate in having several sources at hand that facilitate this task.

To begin comparatively with a review of secondary sources, for central Mexico, where the documentary record is rich and substantive, Borah and Cook reckon on a population to tributary ratio (P:T) in the first half of the sixteenth century of 3.3:1 and in the second half of the sixteenth century of 2.8:1.³⁹ In a detailed critique of the Borah-Cook methodology, Slicher van Bath raises these figures to 4.75:1, a ratio also favored by Zamora.⁴⁰ Like Slicher van Bath, Sanders rejects certain fundamental principles governing the Borah-Cook methodology, but he apparently accepts their population to tributary ratio of 2.8:1.⁴¹ Gerhard, on the other hand, declares himself to be "in basic agreement" with Borah, Cook, and the Berkeley School in general.⁴² In an earlier study of central Mexico, Cook and Simpson suggest a P:T ratio of 4:1, while Othón de Mendizábal and Cline put forward 3.2:1 and 2.7:1 respectively.⁴³ For the Tlaxcala region of central Mexico, Gibson uses a population to tributary ratio of 5:1.⁴⁴

³⁹Woodrow Borah and Sherburne F. Cook, "New Demographic Research on the Sixteenth Century in Mexico," in Howard F. Cline, ed., *Latin American History: Essays on its Study and Teaching, 1898-1965* (Austin, 1967), p. 719.

⁴⁰B. H. Slicher van Bath, "The Calculation of the Population of New Spain, especially for the period before 1570," *Boletín de Estudios Latinoamericanos y del Caribe*, 24 (June 1978), 67-95; and Elías Zamora, "Conquista y crisis demográfica: la población indígena del occidente de Guatemala en el siglo XVI," presented to the 44th International Congress of Americanists, Manchester, England. Dr. Zamora's paper is based in part on his recently completed dissertation, *El occidente de Guatemala en el siglo XVI: efectos de la presencia española sobre la población indígena* (Sevilla: Universidad de Sevilla, 1983), and will be published in a forthcoming issue of *Mesoamérica*. Other critiques of the Borah-Cook methodology include David Henige, "On the Contact Population of Hispaniola: History as Higher Mathematics," *Hispanic American Historical Review*, 58 (1978), 216-237; and Rudolph A. Zambardino, "Mexico's Population in the Sixteenth Century: Demographic Anomaly or Mathematical Illusion?," *Journal of Interdisciplinary History*, 11 (1980), 1-27.

⁴¹William T. Sanders, "The Population of the Central Mexican Symbiotic Region, the Basin of Mexico, and the Teotihuacán Valley in the Sixteenth Century," in William M. Denevan, ed., *The Native Population of the Americas in 1492* (Madison, 1976), p. 125.

⁴²Peter Gerhard, *A Guide to the Historical Geography of New Spain* (Cambridge, 1972), p. 23.

⁴³Sherburne F. Cook and Lesley Byrd Simpson, *The Population of Central Mexico in the Sixteenth Century* (Berkeley and Los Angeles, 1948), pp. 11-13; Miguel Othón de Mendizábal, "La demografía mexicana: época colonial, 1519-1810," cited in Borah and Cook, *The Population of Central Mexico in 1548*, p. 75; and Howard F. Cline, "Civil Congregation of the Western Chinantec, New Spain, 1599-1603," *The Americas*, 12 (October 1956), 115-137, especially p. 131, which concerns the *barrio* of San Pedro.

⁴⁴Charles Gibson, *Tlaxcala in the Sixteenth Century* (New Haven, 1952), p. 139.

Within Spanish Central America, a similar divergence of opinion concerning the relationship between total population and tributary population can be identified. MacLeod, Newson, and Sherman employ a P:T ratio of 4:1, with Newson qualifying what she regards as a conservative ratio by suggesting that a multiplication factor of 4.5 or 5 might be more preferable.⁴⁵ For the sixteenth-century Pokom-Maya of central Guatemala and the Quiché-Maya of Totonicapán, Miles and Veblen respectively employ a P:T ratio of 5:1.⁴⁶ In his demographic study of Tecpanaco (Momostenango), Carmack proposes a population to tributary ratio for highland Guatemala of 6:1 during the first half of the sixteenth century and 5:1 during the second.⁴⁷

Turning to the primary sources, detailed tribute assessments dating to 1561-1562 have survived for eight Guatemalan communities, among them important settlements such as Comalapa, Chimaltenango, Petapa, San Juan and San Pedro Sacatepéquez, and Zumpango.⁴⁸ These *tasaciones* contain significantly more information on the internal composition and structure of the Indian population than do the Cerrato assessments. In these *tasaciones*, a tributary is considered a household head and is usually a married Indian male responsible for himself, his wife, and his offspring. Tributary units are, therefore, nuclear families comprised of seldom more than three or four persons. The old, the sick, the infirm, the widowed, and all others comprising the *reservado* group are meticulously listed, and constitute anything from one-quarter to one-seventh the size of the tributary population (Table II). Using the demographic information contained in these *tasaciones*, we suggest a P:T ratio of 5:1 best reflects the relationship between total population and tributary population, a ratio that seems reasonable when viewed alongside those mentioned above. A tributary population of 85,570, obtained by manipulation of the Cerrato *tasaciones*, is therefore indicative of a total population of 427,850, a figure which we estimate to be the approximate number of native people alive in southern Guatemala in the mid sixteenth century.

It seems appropriate to conclude by placing this estimate in the context of our recent investigation of the contact population of the region, in

⁴⁵ Veblen, "Native Population Decline in Totonicapán," p. 495; and Sarah W. Miles, "The Sixteenth Century Pokom-Maya: A Documentary Analysis of Social Structure and Archaeological Setting," *Transactions of the American Philosophical Association*, 47 (1957), 766.

⁴⁷ Robert M. Carmack, "Social and Demographic Patterns in an Eighteenth Century Census from Tecpanaco, Guatemala," in Robert M. Carmack, John D. Early, and Christopher H. Lutz, eds., *The Historical Demography of Highland Guatemala* (Albany, 1982), pp. 139-140.

⁴⁸ AGI:AG 45 (1561-1562).

which we suggest that on the eve of the Spanish conquest (ca. 1520) about two million people inhabited southern Guatemala.⁴⁹ That thirty years later, at mid-century, Indian numbers may have plummeted to as few as 427,850 indicates a catastrophic syndrome of depopulation bearing striking resemblance to the post-conquest demographic experience of central Mexico, one that conforms to the tragic pattern all too familiar to students of native American historical demography.⁵⁰

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⁴⁹W. George Lovell and William R. Swezey, "The Population of Southern Guatemala at Spanish Contact," *Canadian Journal of Anthropology*, 3:1 (Fall, 1982), 71-84.

⁵⁰Borah and Cook, "Conquest and Population," p. 180. The literature on the demographic impact of the Old World on the New (surely one of the most dramatic and controversial issues in human history) is now voluminous, but the debate is admirably synthesized in William M. Denevan, ed., *The Native Population of the Americas in 1492* and in Henry F. Dobyns, *Native American Historical Demography: A Critical Bibliography* (Bloomington, 1976). Two recent contributions are N. David Cook, *Demographic Collapse: Indian Peru, 1520-1620* (Cambridge, 1981) and D. Joralemon, "New World Depopulation and the Case of Disease," *Journal of Anthropological Research*, 38:1 (1982), 108-127. N. David Cook subjects his information base to a critical scrutiny similar to the one undertaken here for mid sixteenth-century Guatemala in his "Population Data for Indian Peru: Sixteenth and Seventeenth Centuries" in *HAHR*, 62 (1982), 72-120.

FIGURE I: SOUTHERN GUATEMALA, SHOWING LOCATIONS OF SETTLEMENTS REFERRED TO IN THE TEXT

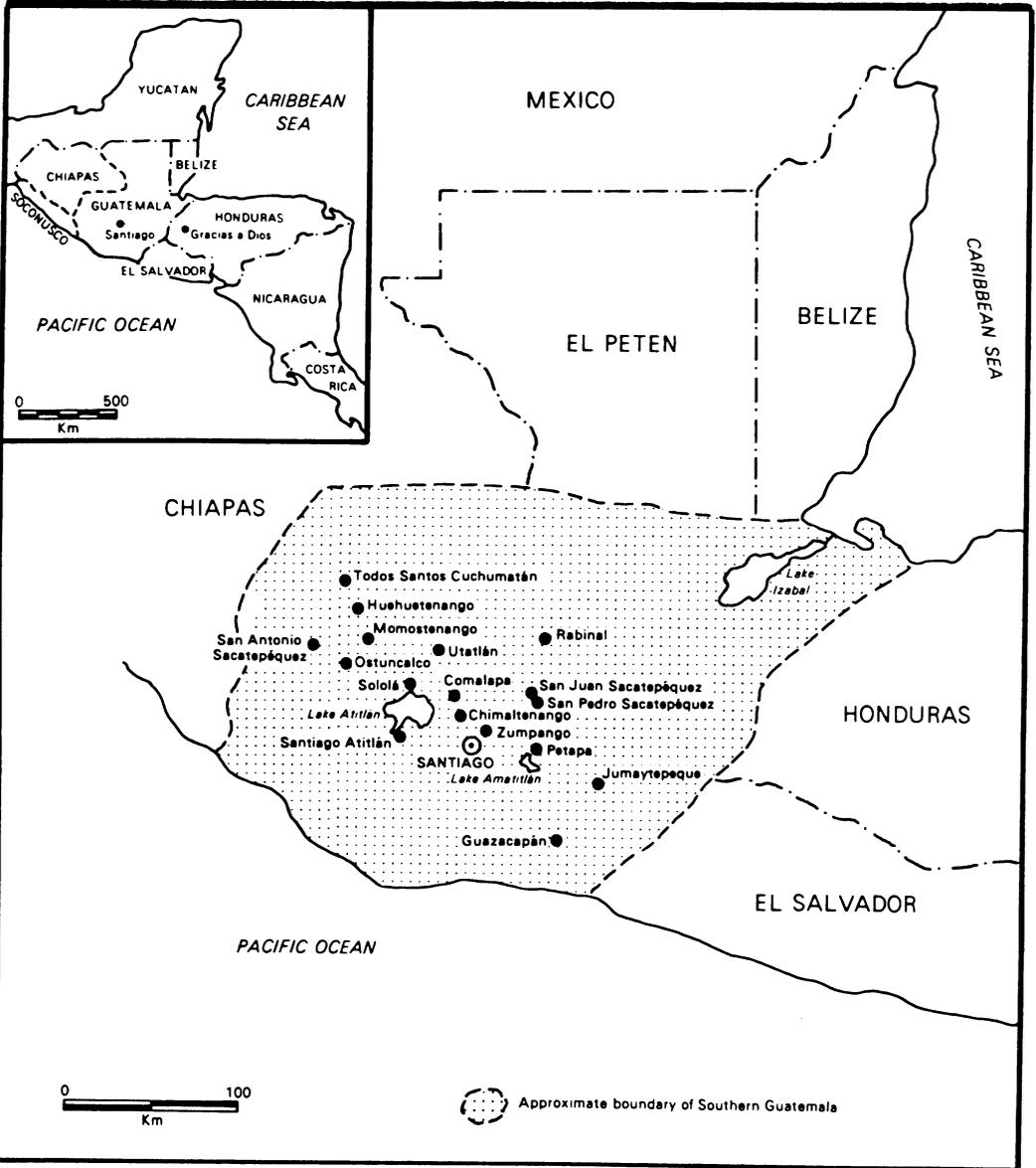


TABLE I: TRIBUTARY POPULATION OF GUATEMALAN COMMUNITIES, 1549-81

<i>Community</i>	1549 ¹	1550s ²	1561 ³	ca.1580 ⁴	1581 ⁵	<i>Percent of Change</i>
(Santiago) Atitlán	1000				2166	+116.6
Comalapa	600		700			+ 16.7
Guazacapán	400				350	- 37.5
Huehuetenango	500	570		367		+ 14.0
San Juan and San Pedro						
Sacatepéquez	700		740			+ 5.7
Tecpan Atitlán (Solola)	1000	2037		1433	1161	+103.7
Tecozistlán (Rabinal)	600				463	- 22.9
Zumpango	200		464			+132.0

¹ Archivo General de Indias: Audiencia de Guatemala, legajo 128

² Archivo General de Indias: Audiencia de Guatemala, legajo 10

³ Archivo General de Indias: Audiencia de Guatemala, legajo 45

⁴ Archivo General de Indias: Audiencia de Guatemala, legajo 10

⁵ Archivo General de Indias: Patronato, legajo 183-1-1

TABLE II: TRIBUTARIO TO RESERVADO RATIOS FOR GUATEMALAN COMMUNITIES (1561)

<i>Community</i>	<i>Number of Tributarios</i>	<i>Number of Reservados</i>	<i>Ratio T:R</i>
Comalapa	700	145	4.8:1
Chimaltenango	630	106	5.9:1
Petapa	219	31	7.1:1
San Juan Sacatepéquez	320	80	4:1
San Pedro Sacatepéquez	420	62	6.8:1
Zumpango	465	89	5.2:1

Source: Archivo General de Indias, Audiencia de Guatemala, legajo 45.