The *Longue Durée* in Filipino Demographic History

The Role of Fertility Prior to 1800

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Demographic trends reflect mortality, fertility and migration, which themselves are the outcome of complex social and biological processes. Examining the relative importance of these components of demographic change particularly over a *longue durée* is therefore a hazardous task. Even for Europe, where vital records are more readily available, there continues to be a debate about their relative importance (Wrigley 1969:146–202). In explaining long-term demographic trends in Southeast Asia, Boomgaard (2003a:198) has noted that scholars have tended to emphasise the role of mortality. High mortality has been invoked to explain low population levels in pre-European times and account for the initial decline in the native population following European contact, as well as the demographic crisis of the seventeenth century.¹ Furthermore, the subsequent phenomenal increase in population from the eighteenth century, though beginning in different regions at different times, has been attributed to falling mortality rates.²

Factors deemed to be significant in influencing levels of mortality in the Philippines, but also in Southeast Asia more generally, include changing levels of conflict, both inter-polity and with Europeans and Moros, the labour and production burdens imposed by this conflict and colonial rule, famines, epidemics and environmental hazards. Scholars that focus on mortality generally recognise that the death rate not only influenced demographic trends directly, but also indirectly through its impact on fertility, for example, through disrupting marital relations, undermining subsistence production and causing stress-induced amenorrhea. However, due to the shortage of evidence, especially for fertility, there has been little discussion about the relative importance of birth and death rates for historical periods. Writing in 1987, Norman Owen (1987a:56) could ‘only lean toward the view’ that Southeast Asian populations always had high fertility until the nineteenth century. He suggested that up until then, demographic growth had been tempered by periodic catastrophes, but thereafter reduced levels of conflict, the introduction of smallpox vaccination, famine

1 Reid (1987: 33–43, 1988, I:11–18, 1990b: 649–652, 2001: 46–49); Newson (2009: 60–61).

2 Owen (1987a:56); Reid (1987:43; 2001:50–53).

relief and improved sanitary conditions moderated their impact allowing the population to increase. However, focussing on the Philippines specifically, De Bevoise and Smith have argued that the death rate did not decline substantially in the nineteenth century. In fact, De Bevoise (1995:27) suggests that the impact of many acute infections was greater in the nineteenth century, when population growth and improved communications facilitated their spread (see also Newson 2009:262), while Peter Smith (1978:76) attributes raised mortality rates to the commercialization of the economy that resulted in deteriorating peasant livelihoods and increased susceptibility to disease. Owen (2002:10–11, 13) later recognised that he may have underestimated the importance of fertility, admitting that marriage may have occurred earlier, and that there may have been increased coital frequency and reduced birth control. Nevertheless, he still saw mortality as the most significant influence on population trends in the nineteenth century.

Any debate about the relative importance of mortality and fertility in determining demographic trends, especially for remote historical periods, is hindered by the lack of data and research, particularly on fertility. Whereas documentary sources often record the numbers dying in epidemics, conflict, famines, or environmental disasters, it is generally more difficult to find evidence, especially of a quantitative nature, for levels of fertility (Owen, 1987a:50). While by no means abundant, sources for the early Spanish Philippines are perhaps more available than for some other Southeast Asian regions since colonial rule was in the words of John Phelan (1959:13) ‘essentially a missionary enterprise’. This meant that priests often resided in native communities for extended periods and moreover were interested in recording native customs and practices. Of particular importance are the seventeenth-century accounts of the Jesuit fathers, Pedro Chirino and Francisco Ignacio Alcina,³ the latter serving in the Visayas for 35 years. Also, significant is the account by the Franciscan, Juan de Plasencia who was based among the Tagalog at Nagcarlan in Laguna de Bay and wrote in some detail on their law, customs and religion (Plasencia 1892).

It is not the aim of this chapter to argue that fertility was more important than mortality in determining demographic trends in historic Southeast Asia or even the Philippines alone, for it is unlikely that any generalization would be valid over such broad areas as these, but rather to suggest the relative lack of evidence should not lead to the dismissal of the role played by fertility. While quantitative data might be elusive, contemporary observations of birth

3 Chirino [1604] 1969. For the text of Francisco Ignacio Alcina's writings see: Martín-Meras, María Luisa and María Dolores Higuera 1974 and Yepes 1996.

and marriage practices do exist for the Philippines and some inferences can also be made from the changing nature of economic conditions and social practices recorded in colonial sources. It is important to note that these sources are only available for Luzon and the Visayas, and not for the southern islands of Mindanao and the Sulu Sea.

In as much as scholars have focussed on fertility there has been some debate as to whether changes in birth rates were related to economic or cultural factors. Much of the debate has centred on the nineteenth century for which records of vital events are more readily available. Reid has suggested for Southeast Asia as a whole that the adoption of world religions, especially Christianity and Islam, might have led to increases in fertility.⁴ On the other hand, research on Indonesia, especially Java and Sulawesi, has suggested that fertility increases were associated with the commercialization of the economy through the increased demand for labour and/or opportunities to enhance household income, though views differ over the precise mechanisms underlying this relationship.⁵ Did the birth rate increase because new employment opportunities encouraged women to have more children or did the heavy labour with which it was associated result in reduced breast-feeding, shortened intervals between births and hence larger families? It is not the purpose of this chapter to enter into this debate, but to suggest that the balance of cultural and economic factors influencing fertility is likely to have varied between different geographical regions and for different historical periods.

While Spanish colonial rule brought significant changes to life in the Philippines, the commercialization of the economy proceeded slowly. The islands lacked the gold and silver found in the Americas and there was little prospect of developing agricultural exports since their production was uneconomic given Spain's monopolistic control over trade and the long distance across the Pacific. Spanish possession of the islands depended on trade with China and commercial activities remained concentrated in Manila and its hinterland (Newson 2009:7–9, 36). Yet the Spanish had another objective in the Philippines, which was to 'civilize' its native population and convert it to Roman Catholicism. These processes brought significant changes to native economies and societies that were reflected in demographic trends.

Not only was the impact of Spanish colonial rule uneven in the Philippines, but it affected populations differentially according to the nature of the societies themselves and the environments in which they lived. My own research on Latin America has consistently suggested that marriage and birth practices

4 Reid (1987:40–41, 1988, I:16, 1993, II:161–164).

5 White (1973); Alexander (1984); Boomgaard (1989a); Henley (2005b, 2006, 2011).

played a key role in determining how quickly and to what extent native societies were able to recover from demographic crises occasioned by Old World epidemics and Spanish conquest (Newson 1995, 1998, 2006). For example, marriage rules governing the acceptability of particular spouses or remarriage that functioned to keep population levels low might threaten survival in conditions of demographic decline and reduced marriage pools (Newson 1998:55; Wagley 1951). As will be shown in this chapter, the imposition of colonial rule, including the introduction of Catholicism, directly affected cultural values, and as such requires consideration alongside economic explanations in understanding changing patterns of fertility, and hence demographic trends.

This chapter examines evidence for the role of fertility in demographic change in the pre-colonial and Spanish Philippines to about 1800. It examines differences in subsistence patterns and social practices that existed in the Philippines at the time Europeans arrived and argues that they are important in understanding long-term demographic trajectories in the islands under colonial rule, particularly as they affected the ability of societies to recover from the crises they experienced. In particular the chapter explores regional differences in age at marriage, bridewealth, penis inserts, abortion and infanticide, slavery and debt servitude that might have affected fertility. The focus of this chapter will be primarily on differences between societies in the Visayan islands and Luzon (the Tagalog region and Ilocos); it will not consider those islands in the southern Philippines that remained outside colonial rule or the semi-nomadic shifting cultivators in interior mountain regions for which evidence is scant before the nineteenth century.

Social Practices, Fertility, and Population Densities in the Pre-colonial Philippines

Social practices in the pre-colonial Philippines reflected the nature of societies found there. For the most part pre-colonial Filipinos resided in small communities, known as *barangays*, which were held together by kinship and common interest. The authority of their leaders, known as *datus*, depended on their ability to command popular support through demonstrated success in raiding, trading and regulating outside contacts, though it did not extend beyond their *barangays*. Relations between *barangays* were often hostile.⁶ Characteristically settlements were located on the coast or a riverbank where the inhabitants

6 AGI, PAT 23–9, Miguel de Loarca [1582]; Chirino (1969: 363–364); Morga (1971: 271).

subsisted primarily on rice and fish.⁷ A few larger settlements had emerged as a result of trading contacts with the Chinese and Arabs (Hutterer 1974:294–297; Junker 1999:22–23, 222–231), while Brunei traders had established towns at Pasig and Tondo in Manila Bay (Doeppers 1968:35–36). Nevertheless, even in the most densely settled regions of the Philippines, such the Central Plain of Luzon, around Manila Bay, and in Laguna de Bay, very few settlements exceeded a few thousand people. Population density in the Philippines was characteristically low, a feature that the islands shared with the rest of Southeast Asia. Yet, there were differences within the islands (Table 6.1). Population density in the Visayas was, with the exception of Panay, under 10 persons per square kilometre and in the Tagalog region about 15 persons per square kilometre, whereas in Ilocos population densities averaged about 27 persons per square kilometre (see also Xenos 1998:44). Clearly these figures are broad and indicative rather than precise.

Anthony Reid, in reviewing factors that might account for low population densities in Southeast Asia as a whole in the sixteenth century, suggests that while health and nutrition, age at marriage, family size, polygamy, abortion and infanticide might all play a role, these were less significant than

TABLE 6.1 *Estimated native populations in selected Philippine regions in 1565*

	Number of tributaries (<i>tributos</i>)	Total population	Area in square kilometres	Persons per square kilometre
Leyte	15,000	60,000	7,791	7.7
Samar	10,000	40,000	13,665	2.9
Bohol	6,250	25,000	3,913	6.4
Cebu	7,000	28,000	5,022	5.6
Panay	50,000	200,000	12,717	15.7
Negros	7,500	30,000	12,934	2.3
<i>Total Visayas</i>	95,750	383,000	56,042	6.8
Tagalog region (Laguna, Rizal, Cavite and Batangas)	30,000	120,000	8,241	14.6
Ilocos	43,000	172,000	6,465	26.6

SOURCE: NEWSON 2009:76, 140, 187, 256. AREAS ARE TAKEN FROM *CENSUS* 1905, II:28.

7 AGI, PAT 23–7, Diego de Artieda, no date; Doeppers (1968:29–30); Fox (1979:55–61); Morga (1971:270).

inter-polity warfare (Reid 1987:33–47, 1988:15–18). It should be noted, however, that Reid's argument does not focus exclusively on those killed in conflict, but does consider its impact on demands for labour, subsistence production, marital relations, and stress-induced infertility, which might have implications for fertility levels. That said, there were other influences on fertility that were less directly related to conflict. These included age at marriage, bridewealth, abortion and infanticide, penis inserts, and slavery and debt servitude.

Age at Marriage

Age at marriage is generally regarded as having the greatest cumulative effect on fertility in societies practicing little or no contraception (Marcy 1981:309). Unfortunately, little evidence is available for age at marriage for the Philippines and that which exists inevitably describes a post-contact situation where social practices might have been modified by attempts by both the secular and ecclesiastical authorities to encourage early marriage in order to expand the numbers of tribute payers and prevent what was perceived to be 'immoral' behaviour. Despite the fact that in colonial times the marriage of minors was expressly forbidden by law,⁸ Father Alcina observed that in the Visayas many women married at twelve, though the marriage might not be consummated until a later date (Martín-Meras et al. 1974:205). Marriages among the Tagalogs of Luzon were also contracted at an early date, though what is described as marriage may have in fact been betrothal. Nevertheless, it is clear that sexual relations began at an early age. Writing in the 1590s Antonio de Morga observed that from their earliest years girls and boys had sexual relations and mixed freely with little modesty (Morga 1971:277). In fact they were described in the Boxer Codex as being more 'depraved in matters of the flesh and indulge in it more than Visayans' (Quirino and Garcia 1958:373, 427). Although the conclusion is drawn from European sources, these observations date from the 1590s and were therefore written only 25 to 30 years after contact. This limited evidence from the Philippines thus tends to support Reid's view that in Southeast Asia, 'marriage occurred early and almost universally' (Reid 1988:15, 158–160). It differs from Boomgaard's finding (2003a:198–203) for regions of Indonesia outside Java, where he argues that the existence of high bridewealth was conducive to late female marriage. Even if marriage was contracted at an early age, as will be elaborated below, the potential to raise large families, especially in the Visayas, was often not realized due abortion and infanticide.

8 *Recopilación* (1943), II: lib 6 tit. 1 ley 3: 190 real cédula, 17 April 1581.

Bridewealth

It is generally recognized that age at marriage, if not betrothal, can be influenced by the need to acquire bridewealth or, in other societies, dowry. Bridewealth was the norm in the Philippines, but there were variations in the level of bridewealth demanded. In the Visayas, marriages between people without property only involved the presentation of a few simple gifts,⁹ but the marriage of a *datu* was accompanied by the payment of bridewealth, usually in the form slaves, gold or other valuable commodities (Chirino 1969:319–322; Yepes 1996:231–236). Slaves were particularly highly valued since land in the Visayas was inalienable so the key to socio-economic advancement was through the control of labour rather than land (Yepes 1996:207). For the marriage of the daughter of a *datu*, bridewealth might amount to the equivalent of 100 pesos. This was a substantial amount considering that a single slave cost between 6 and 12 pesos.¹⁰ However, even within the Visayas there was a difference in the amount of bridewealth paid. Father Alcina noted that in Leyte, Samar and Ibabao bridewealth was given to the girl's father who distributed it among his *closest* relatives, whereas in other islands such as Bohol and Cebu it had to provide for *all* the relatives. Hence it was said that in the latter islands bridewealth was higher and that it acted as constraint on marriage (Yepes 1996:242). It might be suggested that this difference in the level of bridewealth might have contributed to the slightly lower population densities in the latter islands compared to the eastern Visayas (Table 6.1), though clearly this was not the only factor affecting population levels. There was no cultural or legal barrier to polygamy, but because of the financial burden that bridewealth imposed it was relatively uncommon and where practiced only involved two or three wives.¹¹

Bridewealth was also payable in Tagalog societies, though in this case even fewer details are available for the pre-Spanish period (Morga 1971:274–275). The fact that polygamy was not practiced and that men had concubines suggests that bridewealth may also have been an obstacle to *formal* marriage there (Chirino 1969:81, 319; Morga 1971:277). Likewise, based on marriages practices today, it is likely that bridewealth was also paid in Ilocos in pre-Spanish times (Jocano 1982:170–172), but there is a lack of evidence both for the present day and for historical periods of the level required or of it being an obstacle to marriage. The overall impression from the accounts is that bridewealth may not have affected *age at marriage*, but whether people married at all. Prior to the

9 AGI, PAT 23–9, Miguel de Loarca [1582]; W.H. Scott (1994:140).

10 AGI, PAT 23–9, Miguel de Loarca [1582].

11 AGI, PAT 23–9, Miguel de Loarca [1582]; Pigafetta (1995:58); Yepes (1996:253).

mid-eighteenth century about 30% of the adult population in Jesuit towns of Tondo, excluding youths, was unmarried (Newson 2009:129).

Abortion and Infanticide

Related to age at marriage and bridewealth were abortion and infanticide, though the link may not be obvious.¹² Technically infanticide should be considered as affecting the death rate rather than the birth rate. Miguel de Loarca, a long-term resident of Panay recorded that in the Visayas:

It is considered a disgrace among them to have many children, for they say that when the property is to be divided among all the children, they will all be poor, and that it is better to have one child. They are very strict in who they marry for nobody marries someone who is not of equivalent status.¹³

Similarly the Boxer Codex recounts how Visayan women wanted small families because they thought that 'in having many children they are like pigs', presumably because they would be poor, so that once a woman had borne two or three children she practiced abortion. Abortions were also common for unmarried women for whom it was a disgrace to become pregnant.¹⁴ Infanticide was also practiced where families were too poor to raise more children, as well as for infants who were born blind or with deformities.¹⁵

Despite abortion and infanticide, Visayan beliefs reveal a concern for maternal and infant well-being. Pregnant women abstained from certain foods, such as turtles, tortoises, particular fish, venison or plantains, and after birth other taboos and practices were observed to strengthen the infant (Yepes 1996:110). Early colonial sources give the clear impression that abortion and infanticide were aimed at avoiding poverty and achieving social advancement (W.H. Scott 1994:118). This accords with Mary Douglas's (1966:267–268) observation that in traditional societies population control is often practiced to ensure access to status and prestige goods rather than as a response to shortages of basic resources. As such, the Spanish regarded the Visayans as selfish (Quirino and

12 For a brief review of historical sources for abortion and infanticide in the Philippines see Pedrosa (1983).

13 AGI, PAT 23–9, Miguel de Loarca [1582].

14 Quirino and García (1958:413); Rodríguez (1965–1988), XIV:481 Martín de Rada 16 July 1577.

15 Rodríguez (1965–1988), XIV:481 Martín de Rada 16 July 1577; Colin (1900–1902, II:149).

García 1958:413). Owen (1987b:11–12) has questioned the universality of abortion and infanticide in Southeast Asia as whole and, even where practiced, whether they were demographically significant. However, for the Visayas at least, Father Alcina judged that they were ‘not the least of the causes of the decline and the lack of people’ (Yepes 1996:143–144).

Abortion and infanticide appear to have been less common in Tagalog society. Although infanticide was routinely practiced for children born to unmarried women, since it was considered a disgrace (Quirino and Garcia 1958:373, 427), it does not appear to have been as widespread as in the Visayas. Tagalogs considered it desirable to have large families. This is evident from superstitions that encouraged fertility and the survival of infants. For example, a woman who wished to become pregnant raised pigs that were fed with the best foods and once the child was born they abstained from milling rice under the houses because it was thought that if the rice fell from the mortar and was subsequently consumed by a chicken the infant would die.¹⁶ However, multiple births were considered undesirable and as such pregnant women abstained from eating any foods that were joined together, such as two bananas (Quirino and Garcia 1958:386, 442). Prayers were said for successful childbirth and it was thought that any woman or child who died in childbirth would be punished in the after-life (Plasencia 1892:600, 603). Since children were highly valued, they were pampered, indulged and rarely punished (Quirino and Garcia 1958:386, 443).

In common with the Tagalogs, the Ilocanos, according to Miguel de Loarca, did not practice infanticide unlike their neighbours, the Pangasinans, who he indicates did so to avoid impoverishment.¹⁷ However, Gaspar de San Agustín (1975:624) noted that it was practiced by Ilocanos in certain circumstances, for example, when an infant was born with an umbilical cord around its neck, since it was said it would be unlucky or die very soon.

Peter Boomgaard has discussed the link between high bridewealth and low fertility in explaining the low population densities in colonial Indonesia. The link he posits is through delayed marriage and hence reduced family size (Boomgaard 2003a:200–202). However, this study suggests that in fact the impact of high bridewealth in the Philippines at least was not so much to delay marriage, though there is a suggestion it may have had some effect, but rather to encourage abortion and infanticide to achieve smaller families so that bride-wealth might be accumulated more readily to enable marriage at an early age. A similar low fertility regime has been found by Henley (2005a:466) in Sulawesi.

16 Quirino and Garcia (1958:377–378, 434). It is not clear precisely which native groups held these beliefs.

17 AGI, PAT 23–9, Miguel de Loarca [1582].

It might partially explain the apparent paradox of early marriage and low population densities in the Visayas; in Ilocos where these birth control mechanisms were largely absent, early visitors to the Ilocos coast encountered dense populations (Table 6.1).

Penis Inserts

In addition to abortion and infanticide, a distinctive feature of sexual relations in the Visayas was the practice of penis piercing.¹⁸ This practice had the potential to influence both fertility and fecundity. Penis piercing was done with a pin or ring of metal, ivory or bone that often had wheels, spurs or other protrusions attached. It was said to provide women with greater stimulation and give them great pleasure so that men who did not possess them were scorned. This practice has been interpreted as reflecting the greater autonomy and equality of women in Southeast Asian societies, which was also evident in property rights, marriage practices and high divorce rates (Brown et al. 1988:11–12, 20). In order to accommodate the pierced penises it was said that women had their vaginas opened from the age of six, a practice that may well have affected fecundity. Father Alcina estimated that 19 out of 20 women suffered from pains in the abdomen and ‘ahogamiento de la madre’ (a nervous illness affecting reproductive functioning), which were said to be an impediment to procreation. Although Alcina attributed the affliction to frequent bathing, this cause seems unlikely; it could have derived from the use of penis inserts (Yepes 1996:144). Antonio de Morga (1971:278) reported that penis inserts resulted in women sustaining injuries and shedding a lot of blood, which together with infections that might follow could have induced infecundity, or even death. It was also said that men might die of virulent ulcers caused through using penis pins (Martín-Meras et al. 1974:13). The early seventeenth-century observer Francesco Carletti claimed that their use also reduced the frequency of sexual intercourse and was used as a form of birth control (Carletti 1965:83–84), though this appears contrary to observations above that women enjoyed it. Whether or not they were adopted as a form of birth control, they are likely to have had a negative impact on fertility. In Borneo today fertility among the Iban, who use penis pins, is lower than among the Rungus who do not (Appell 1968:205).

18 CDIU (1885–1932), III:461, Miguel de Legazpi, no date; AGI, PAT 23–9, Miguel de Loarca [1582]; Cavendish (1890:42); Martín-Meras et al. (1974:13); Morga (1971: 278); Pigafetta (1995:58); Quirino and García (1958:417–418).

Penis inserts were largely confined to the Visayas. In Luzon, the only exception were some groups in the highlands around Laguna de Bay, where they inserted small balls of tar the size of chickpeas under the skin of the penis (Quirino and Garcia 1958:387, 444).

Slavery and Debt-bondage

David Henley has collected evidence from Sulawesi and elsewhere to suggest that slave-owning societies and the slaves themselves had lower birth rates, since in both cases there was little incentive for women to have children.¹⁹ This observation is pertinent to the Philippines since slavery and debt-bondage were widespread in some regions. It is worth noting, however, that 'slaves' consisted of individuals of varying levels of economic and social standing, ranging from those who lived independently and only worked for their masters for a few days a week, to those who were chattel slaves.²⁰

Slavery and debt-bondage were widespread in the Visayas where the power of chiefs was dependent on the number of subjects and slaves he could attract or acquire through his charisma, military prowess, or wealth.²¹ It has already been noted that bridewealth was often paid in slaves and, as argued by Boomgaard (2008b:92) for Indonesia, this may have encouraged indebtedness and debt bondage. An esteemed *datu* might possess 100 to 200 dependents and his wife slightly fewer, but even ordinary *datus* commonly had 50 to 60.²² In Tagalog society also the authority of chiefs derived from their military prowess and economic status, which was evidenced by the number of 'slaves' they owned. Here some chiefs reputedly possessed 100, 200 or 300 slaves (Colin 1900–1902:75–77).

As for Ilocos, there is no mention of slavery or debt-bondage. The Ilocanos were regarded as a peaceable people and the absence of warfare suggests it was not being used to acquire slaves. It might be speculated that the high population densities found in Ilocos might have obviated the need to resort to control labour through enslavement. On the other hand, the prevalence of slavery has

19 Henley (2005a:370–373, 2005b:365–368, 2006:320–321); see also Boomgaard (2007b:132, 2008b:92).

20 Aguilar (1998:68–69); W.H. Scott (1983:142–145, 1994:133–135); for other regions of Southeast Asia see Boomgaard (2008b:85–91); Reid (1983).

21 W.H. Scott (1994:129); for contemporary accounts, see Morga (1971: 271–272); Quirino and García (1958:407); Yepes (1996: 207).

22 AGI, PAT 25–45, Breve sumario 1593; Yepes (1996:207).

often been correlated with economic insecurity (Henley 2005b:367) and Ilocos was a relatively infertile region that suffered from regular food shortages and famines (Newson 2009:184–185). The absence of slavery and debt servitude in the region is therefore surprising. An alternative explanation, might be that Ilocano society was less stratified than in the Visayan, so that chiefs lacked access to resources that could be used either to support debt dependents in times of economic insecurity or would require the service of ‘slaves’ to make them productive or enhance their status. Although there is no documentary evidence from the Philippines to support the link between slavery and low fertility, it is supported by evidence from other parts of Southeast Asia. Differences in its prevalence may therefore have contributed to differences in population densities at the time the Spanish arrived.

Review of the Evidence for Pre-colonial Times

From this review, marriage appears to have been contracted at an early age, which should have promoted larger families. However, abortion and infanticide were widely practiced. In the Visayas there was a clear preference for smaller families, perhaps encouraged by high bridewealth. In addition, the practice of penis piercing may have affected fecundity. In Tagalog society abortion, infanticide and penis piercing were uncommon, but slavery and debt-servitude were widespread, as they were in the Visayas (See Table 6.2). All these factors are likely to have had a negative impact on fertility. In contrast, all these social practices were uncommon among Ilocanos and it was here that the Spanish encountered dense populations. Differences in social practices may not only have contributed to the geographical differences in population densities observed by visitors to the Philippines, but may have influenced the way in which societies in different regions responded to the economic, social and political changes that came with colonial rule.

TABLE 6.2 *Summary of marriage and birth practices*

	Low age at marriage	Bridewealth	Penis inserts	Abortion/infanticide	Slavery/debt servitude
Visayas	Yes	High	Yes	Yes	Yes
Tagalogs	Yes	High	Limited	Limited	Yes
Ilocanos	?	Probably low	No	No	No

Social Practices and Fertility in the Colonial Spanish Philippines

Changes to social practices introduced in the early Spanish period generally promoted fertility, though their full demographic impact was obscured during the first two centuries by the high mortality associated with Spanish conquest and the Hispano-Dutch War. Many of the changes that affected fertility came about as a direct result of efforts by the Catholic Church to make marriage and birth practices consistent with Christian beliefs. At the same time, the suppression of slavery and the commercialization of the economy, which changed land and labour relations, eroded traditional social practices, though their impact was uneven.

Age at Marriage

In colonial times officials and priests would have encouraged early marriage to increase the number of tribute payers and prevent what they perceived to be 'immoral' behaviour. During the early Spanish period there is scant evidence for age at marriage, apart from the observations noted above. At the beginning of the seventeenth century married men were liable for tribute payment at age sixteen and women from age twenty (Hidalgo Nuchera 1995:208), which suggests that at least some marriages were occurring at an early age. However, there are indications that by the early nineteenth century age at marriage had risen slightly. At that time, the average age at marriage for women in Nagcarlan in southern Luzon was about 22 years and many did not marry (Xenos and Ng 1998:204–205). It might be speculated that this rise in the age at marriage reflected the commercialization of the economy in the Tagalog region. Here labour drafts and reduced access to land may have disrupted sexual relations and delayed marriages, though it should be noted that Nagcarlan itself remained a relatively rural remote community.

Bridewealth

Changes to bridewealth payments may have had a more significant impact on trends in fertility. In pre-Spanish times bridewealth was often paid in the form of slaves, which enabled chiefs to control labour and build political support. In colonial times, however, the Spanish sought to suppress slavery and the political and economic power of *datus* became more dependent on land ownership and on the hereditary authority invested in *cabezas de barangay* and *gobernadorcillos*

by the colonial state (Newson 2009:26). This process is likely to have reduced the role that bridewealth played in economic and political relations and also moderated the amount and nature of goods demanded. With slavery being abolished, bridewealth payments were more often paid in gold, bells, and china plates or increasingly in cash. In the Indonesian archipelago as well, the items required as bridewealth were often trade goods or where populations were dense, land.²³ Nevertheless, in the 1660s Father Alcina noted that even though Visayans then had greater freedom to pursue their own livelihoods and acquire wealth than they had in pre-Spanish times, in reality many were still too poor to accumulate the bridewealth necessary for marriage; indeed he suggested that *principales*, rather than acquire several wives, often sought concubines for whom bride-wealth was unnecessary (Colin 1900–1902:74; Yepes 1996:242, 253–255).

As late as 1815, the Bishop of Cebu in the Visayas was claiming that bride-wealth was an obstacle to marriage such that many people lived together for years without getting married (Bayle 1949:393). At that time bridewealth generally amounted to more than 10 pesos and could be as high as 40 pesos. Nevertheless, this was a significantly lower than that paid in the sixteenth century when, as noted above, the bridewealth for a chief might amount to 100 pesos. Even so, the amount required still represented a significant outlay considering that annual tribute was 1.25 pesos.²⁴ Any impact that a reduction in bridewealth may have had on nuptiality and therefore fertility would have been limited. Evidence for the eastern Visayas (Leyte, Samar, Bohol), which came under Jesuit control, suggests that between 1659 and 1755 the average percentage of adults who were married rose only marginally from 62 to 67% (Newson 2009:109).

Unfortunately, no evidence has been found of changes in the level and nature of bridewealth payments in the colonial period in other regions. However, one might speculate that changes would have been more significant in the Tagalog region than in the Visayas or Ilocos, since there colonial rule brought more radical changes to political structures and land and labour relations.

Abortion, Infanticide and Penis Inserts

Priests sought to suppress abortion, infanticide, and the use of penis inserts, as being inconsistent with Christian beliefs. Despite attempts at suppression

23 Boomgaard (2003a:202–203); Henley (2005b: 360, 2006: 313–314)

24 Hidalgo Nuchera (1995:166–169, 191); AGI, AF 296, Oficiales reales, 13 July 1709.

(Pedrosa 1983:33–36), it is clear that both abortion and infanticide continued to be widely practiced, and in the mid-seventeenth century were still deemed to be important in holding back population growth (Yepes 1996:144). Father Alcina claimed low fertility was due to unbalanced sex ratios, with most pueblos having twice as many women as men and many women remaining unmarried. This he attributed to men being drafted to serve in the navy, gun factories, and other public works (Yepes 1996:246). However, evidence, albeit to be used with caution, from the missions under Jesuit control in Leyte, Samar and Bohol reveals that this imbalance in the sex ratio extended to children. There were on average between 94 and 98 boys for every 100 girls, with the imbalance being greater in the seventeenth century when there were generally under 90 boys for every 100 girls (Newson 2009:92–93). Father Alcina noted that girls were more valued for the bridewealth they could attract, whereas boys were perceived to be a greater financial burden (Yepes 1996:233). These figures therefore hint at the possibility of differential infanticide for male infants, which perhaps became less prevalent in the late eighteenth century.

At the same time, Father Alcina reported that the use of penis inserts had largely died out (Martín-Meras et al. 1974:13). One might doubt the veracity of Alcina's account and suspect that the practice continued in secret. However, there is no evidence for their use after the mid-seventeenth century and they are not used in the Visayas today, although the practice persists in some other Southeast Asian islands, notably in Borneo. Since modern accounts suggest that the practice has a negative influence on fertility, it might be expected that its abandonment in the Visayas, for whatever reason, might have had a positive impact on fertility.

Slavery and Debt-servitude

The Spanish were opposed to slavery and sought to reduce levels of debt-dependency. By the 1660s it was said that *datus* who had previously owned 100 or more slaves by then had 10, and those who had possessed 50 or 60 had only two (Yepes 1996:207). Father Alcina's observation of the declining number of persons registered as slaves is generally supported by more detailed records of communities presided over by the Jesuits in the eastern Visayas, though slaves are not recorded consistently in these sources (Newson 2009:92–93). With their power over labour weakened, *datus* sought to retain their economic and political status by controlling it indirectly through the ownership of land (Aguilar 1998:71–75).

Unfortunately, there is little information on debt-slavery in the Tagalog region in colonial times. However, it may be speculated that the greater commercialization of the economy there might have undermined traditional socio-political structures based on slavery and debt dependence that had restricted fertility. For Sulawesi, Henley (2005b:368–369, 2006:320–323) has argued that the expansion of commercial activities provided economic opportunities and improved incomes, which enhanced economic security and obviated the need for labourers to resort to debt-bondage. However, in a later paper examining the link between the commercialization of the economy and raised fertility, he emphasizes the role of increased labour demands resulting in reduced breast-feeding and shortened intervals between births, rather than the decline in debt service (Henley 2011:7–8). For the Philippines, however, it could be argued that the increased commercialization in the Tagalog region brought increased impoverishment (Peter Smith 1978:76), which might actually have favoured the persistence of debt-relations and stimulated migration that delayed marriages and disrupted sexual relations. However, in the late nineteenth century, at Nagcarlan at least, age at marriage seems to have been falling (Xenos and Ng 1998:205).

The Longue Durée in the Philippine Demographic History: Accounting for Regional Differences

It is not possible to isolate fertility from other influences on demographic change, but this chapter speculates that regional differences in marriage and birth practices in the Philippines may have contributed to regional differences in pre-Spanish population levels as well as demographic trends during the colonial period.

Marriage and birth practices that controlled population growth seem to have been largely absent from Ilocos, where the Spanish found some of the highest population densities in the islands. Their absence may also partially explain the relative ease with which, after the dramatic decline in the early conquest period and occasional mortality crises, the population there was able to recover relatively quickly once economic and social stability had been achieved (De Bevoise 1995:22). In the second half of the eighteenth century the tributary population was growing at 1.8% a year (Table 6.3). While part of this population growth reflected more effective enumeration by Spanish officials, it cannot account for the scale of the increase. This growth put pressure on land and fuelled outmigration, especially by men, that ultimately in the twentieth

TABLE 6.3 *Growth in the Number of Tribute Payers according to Fiscal Accounts, 1591 to 1792*

Jurisdiction	Growth rate 1591–1655	Growth rate 1655–1700	Growth rate 1700–1750	Growth rate 1750–1792
Laguna (Tagalog)	–0.8	0.3	0.8	0.2
Ilocos	–0.8	–0.1	1.3	1.8
Leyte and Samar	–0.7	0.6	1.9	–0.2
Panay and Negros	–0.1	–1.3	1.6	1.0
Cebu	0.0	1.5	1.6	0.6
<i>Total Visayas</i>	<i>0.0</i>	<i>–0.8</i>	<i>1.7</i>	<i>0.6</i>

SOURCE: NEWSON 2009:311–312.

Note: These figures are based on the numbers of tribute payers, so they reflect in part the effectiveness of registration. They should be used as indicative rather than definitive.

century led to rising age at marriage and high female celibacy (Xenos 1998:46–48, 53–58; Newson 2009:200).

In contrast, in pre-Spanish times the Visayas were characterised by low population densities. Despite efforts by the missionary orders to suppress marriage and birth practices that were inconsistent with Christian beliefs, their efforts were protracted and only partially effective. These practices, which had functioned to control population growth, made it particularly difficult for societies there to rebound from economic, political and environmental crises. Also, this region did not experience a high level of commercialization that might have encouraged labour-demand led increases in fertility. As such, although the population recovered after the Hispano-Dutch war, population growth there was much more sluggish. With the exception of Cebu for which little evidence of birth and marriage practices exists, growth was especially low in the seventeenth century, where some islands registered declines. According to the registration of tribute payers, the population in the Visayas began to increase in the early eighteenth century. This was probably related in part to more effective registration, but may also have reflected the greater effectiveness of Jesuit teaching in changing marriage and birth practices. However, the growth was not sustained especially in Leyte and Samar, where in the second half of the eighteenth century the population appears to have declined. Part of the decrease would have been due to the high mortality caused by Moro raids, which affected those islands particularly badly, or reduced Jesuit supervision following their expulsion, which permitted resurgence in native practices.

However, it is worth noting that these islands also experienced fewer changes to agricultural practices and commercial expansion (Newson 2009:105, 111).

As for the Tagalog region, Manila's demand for labour and provisions fuelled the establishment of friar estates in its hinterland. This brought significant transformation to social and economic structures at the same that colonial rule undermined the basis of native authority based on the control of labour through slavery and debt-bondage. These processes together with the absence of strong birth control mechanisms should have encouraged higher fertility and favoured a rapid expansion in the population. However, the economic transformations that occurred in this region reduced access to land, created a demand for labour in Manila, and stimulated migration, which would have resulted in delayed marriages and disrupted sexual relations. Despite reduced controls on fertility therefore, population growth in this region was limited. These reflections are highly speculative and require further investigation, but they appear inconsistent with the arguments by Boomgaard and Henley that would link increased fertility to the demand for labour. However, if valid, they suggest that in arguing for a link between the commercialization of an economy and increased fertility, greater attention needs to be paid to the specific way in which commercialization affected land-labour relations and incomes.

From the last comments it will be evident that fertility cannot be considered in isolation, for demographic trends need to take account of mortality, migration and wider social and economic changes. However, from a practical perspective, analysing fertility separately can pin-point the precise mechanisms that regulate it and facilitate cross-cultural comparisons over time and space. In addition, this chapter suggests that a focus on regions where different cultural and environmental conditions prevailed can tease out some factors important in explaining demographic trends that might go undetected when they are viewed on a larger geographical scale. It also suggests that while there may be a demonstrable link between fertility and economic change, its significance should not be allowed to obscure other factors, such as broader cultural changes including those to religious beliefs, perhaps most evident in a colonial context, which may be important in understanding fertility trends especially over a *longue durée*.