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Jaago/Bidaari: Rescuing Our Community from a Demographic Crisis

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SUMMARY

This is an extended version of a paper delivered at the 2010 Houston Congress. Within the Zoroastrian community, there is little consensus on population figures and demographic trends. This paper attempts to provide a realistic estimate of the worldwide Zoroastrian population—including Parsis, Iranian Zoroastrians, and Iranis—based on the best scholarly and community estimates available. It questions, due to lack of evidence, the idea that thousands of people are converting to Zoroastrianism worldwide. Having established the actual small size of the community, this paper furthermore highlights the staggering demographic crisis that it faces. Amongst the Parsis of India, at least, population figures are dropping rapidly and the prime reasons are not out-migration to the West or even, for the moment, intermarriage. Rather, a large corpus of scholarly studies indicate that the Parsi population crisis is due to stunningly low fertility rates; that is, an incredibly limited number of children born to the community. Low fertility rates are not due to biological problems but rather due to cultural and attitudinal factors that prompt late marriage and non-marriage amongst Parsis. Quite simply, Parsis' decisions to marry late, or not marry at all, have translated into a drastically shrinking population.

*This paper is based on data and scholarship produced by actual demographic scholars in India and the United States. I have simply summarized findings that have been well known in the academic community yet surprisingly unknown within the Zoroastrian community. I conclude by suggesting that Indian Parsi demographic trends may also hold true in the diaspora. I also offer some ideas on how we can reverse our current population trends. **Please feel free to distribute this paper and publish excerpts. My aim in writing this paper is to educate our community and provide some realistic data.** You can contact me at dpatel@fas.harvard.edu.*

INTRODUCTION

The title of my paper today, as listed in the Congress schedule, is “Jaago/Bidaari: Preserving Our Heritage and Community.” “*Jaago*” and “*bidaari*,” for those of you who know Gujarati and Farsi, respectively, mean “wake up” or “wakefulness.” I planned to address two particular issues in this paper: (1) the challenge of maintaining our unique identity and heritage while assimilating into new societies in the diaspora and (2) a challenge that threatens the long-term survival of our community and religion, a demographic crisis of staggering proportions. In the course of researching this paper, I came across so much interesting and vitally important information on demographics that I decided to orient this talk entirely around the second theme.

In this paper, therefore, I will provide an in-depth analysis of figures and trends for the worldwide Zoroastrian population. I will begin with the question of how many Zoroastrians there are in the world today. Within our community, there seems to be little consensus on the answer to this question. Tallying population estimates in Iran, the United Kingdom, Australia, and North America, as well as census figures from Pakistan and India, I hope to arrive at an answer that is backed up by the best data and evidence that we have at the moment. Secondly, I will address the issue of population decline. Within India, the Parsis have registered a stunning decline in numbers over the past few decades. According to the 2001 Indian census, less than 70,000 Parsis remain in India. When figures for the 2011 census are released, most experts anticipate an even smaller number.

Most of the Parsis in India have accepted the fact that their population is rapidly dwindling. Within the community, however, there is limited consensus on precisely *why* this is occurring. Some parties have claimed that the dip in the Parsi population in India is solely due to out-migration of Parsi youth to the West and that our overall numbers have remained stable or are actually growing. In this paper, I hope to offer convincing refutation of this argument. As we will see, the numbers simply do not add up.

We must instead consider other reasons for the population decline. I will rely upon a range of scholarly demographic studies—authored by professionally-trained demographers at universities in India and the United States—in order to argue that the Parsi population decline is due to a range of social factors—including many social factors that are not commonly discussed in the community—such as late marriage, non-marriage, and a propensity to have few or no children. The Parsis have witnessed a dramatic fall in fertility rates (basically defined as the number of children born within the community) and the reasons are social and behavioral rather than biological. Finally, I will explore the implications of these trends for the wider community, including those of us here in the diaspora, and propose some steps to be taken in order to help arrest our steady decline in numbers.

I am not a professional demographer. But it does not take a professional demographer to wade through the mountain of evidence that the Parsi population is shrinking, that the main reason for this decline is an abysmally low fertility rate, and that, consequently, the long-term survival of our community remains in significant jeopardy. I am a historian, and, as a historian, I am in the business of harnessing evidence and records to either confirm or cast doubts upon common conceptions and beliefs. In the course of this paper, I hope to destroy a few myths: that low population projections are biased or unreliable; that the Parsi population is not declining in numbers significantly; and that, even if the Parsi community disappears, Zoroastrianism will survive somehow. Unquestioning acceptance of such myths, I believe, have deterred the community from proper discussion and action in order to tackle a very urgent matter. My

objective today is to present the overwhelming evidence for low Zoroastrian population figures and a population decline. My objective is to help our community wake up and face some very disturbing facts.

ESTIMATING THE WORLDWIDE ZOROASTRIAN POPULATION

I would like to begin by asking a question to the audience. Precisely how small is the worldwide Zoroastrian community? Might anyone here venture to guess the total population of Zoroastrians in the world today? (*Question to audience*) As you can tell by the responses to this question, there is a diverse array of presumptions about the size of our population. In this section of my paper, I will attempt a rough population estimate, which is possible by looking at government censuses, scholarly studies, and surveys and headcounts conducted by local Zoroastrian organizations.

Iran

Let us begin with Iran, and let me begin with a brief historical overview. The Sasanians, the last Zoroastrian empire of Iran, were defeated by conquering Arab forces by 642 A.D. Sometime probably in the 8th or 9th century there was a migration of Zoroastrians to India which became the Parsis. While we obviously have extremely limited hard data, scholars such as Jamsheed Choksy have argued that, after the Arab invasion in the 7th century, conversion amongst the Iranian population from Zoroastrianism to Islam took place “more slowly than once presumed;” i.e., it took place over the course of several centuries.¹ Statistical studies by scholars such as Richard Bulliet of Columbia University have claimed that when the Abbasids took power in 750 A.D., roughly one century after the fall of the Sasanians, only 8 percent of Iran’s city dwellers were Muslim. By the end of the 10th century, however, this proportion had risen to around 80 percent, although Zoroastrianism remained stronger in rural areas.² While I would caution against accepting such precise figures, there is substantial evidence in favor of this general trend of gradual conversion, starting in the cities and moving into the rural hinterlands.

Further conversions—both free and forced—persecution, and periodic massacres whittled down the remaining Zoroastrian population to only a few thousand by the 19th century. When Maneckji Limji Hataria visited Iran in the early 1850s, tasked by Bombay Parsis to investigate the depressed conditions of the Iranian community, he found less than 7,000 Zoroastrians remaining in the country.³ Improved economic and political conditions for the Iranian Zoroastrians allowed for the dwindling community to rebound in the 20th century. The Iranian census of 1966 revealed a Zoroastrian population of approximately 20,000, with over 9,000 of them residing Tehran, which was quickly eclipsing Yazd as the primary center of the community.⁴ By the time of the Islamic Revolution in 1979, the Zoroastrian population was

¹ Jamsheed Choksy, *Conflict and Cooperation* (New York: Columbia University Press, 1997), p. 70.

² *Ibid.*, p. 83. These studies, which must be taken with an obvious degree of caution, were made using Muslim biographical dictionaries. Choksy himself cautions that “the data may not represent a random sampling of the Iranian population.”

³ Maneckji reported 6658 Zoroastrians in Yazd and its environs, 450 in Kerman and its environs, 50 in Tehran, and a handful in Shiraz. Mary Boyce, *Zoroastrians: Their Religious Beliefs and Practices* (London: Routledge, 1979), p. 210. Maneckji reported these figures in 1854 in Bombay to the Society for the Amelioration of the Conditions of the Zoroastrians of Persia.

⁴ Janet Kestenberg Amighi, *The Zoroastrians of Iran: Conversion, Assimilation, or Persistence* (New York: AMS Press, 1990), p. 267. The scholar Eckehard Kulke reports similar estimates for 1960: between 17,000 to 18,000

anywhere between 20,000 and 30,000, according to estimates by Michael Fischer, a professor now at MIT who wrote a dissertation on the Iranian Zoroastrians in the early 1970s; Shahin Bekhradnia, an educator and community activist who authored an MA thesis on Iranian Zoroastrians while at Oxford University; and an estimate provided to me by Mobed Mehraban Firouzgary of Tehran.⁵

Population estimates become particularly difficult after the Islamic Revolution. Mobed Firouzgary informs us that the first census taken after the Revolution, in 1981, returned a Zoroastrian population of over 92,000.⁶ This is, to say the least, a gross overestimation, and is most likely a product of new political dynamics under the Islamic Republic. Iran officially recognizes four religions: Islam, Christianity, Judaism, and Zoroastrianism. Baha'ism, which counts many adherents in Iran, its country of origin, has never been recognized. It is very likely that many Baha'is self-reported themselves as Zoroastrians in this census. Being a Baha'i has never been easy in Iran, but it has become much more difficult since 1979.

In subsequent censuses, the Islamic Republic of Iran has not counted people by their religious affiliation. As a result, we must rely on assumptions and broad estimates in order to arrive at an approximate Zoroastrian population in Iran in 2010. In 2004, Mobed Firouzgary contributed to a special edition of the *FEZANA Journal* on demographics, estimating that the Iranian population stood at 24,000, a figure that seemed to corroborate well with recent electoral statistics.⁷ The Zoroastrian population had declined due to massive migration to Western countries, a movement spawned by poor economic conditions in Iran, a phenomenon that shows no sign of abating. Today, it is commonly believed that due to the migration of the youth, the Zoroastrian community has as much as halved since 1979, leaving behind a largely elderly community. Shahin Bekhradnia believes that there are now no more than 12-15,000 Zoroastrians remaining in the country (see **Image A** for a table of select historical population estimates).⁸

Again, I must emphasize that these are assumed figures, and that we have no hard, precise evidence. But they are assumed figures based on what appears to be a very serious situation in Iran, and we should all pause to consider the fate of Zoroastrianism in the country with which it shares its longest and deepest historical association. For the purposes of our population estimates, I will record Iran's current population as **between 15,000-24,000**, since the margin of difference between the figures is significant in estimating our overall population.

Diaspora

Let us now turn to the diaspora, which I will define as the Zoroastrian population outside of the traditional homelands of India, Iran, and Pakistan. While major emigration from these three countries has created a burgeoning community in places such as North America since the

Zoroastrians based on figures received from A. Rustam Guiv, then serving as the Zoroastrian member of the Iranian Majles (parliament), and Aqu-i-Asad Homayoun of the Iranian Embassy in Pakistan. *The Parsees in India: A Minority as Agent of Social Change* (München: Weltforum Verlag, 1974), pp. 35-36.

⁵ Michael Fischer, *Zoroastrian Iran Between Myth and Practice*, Ph.D. dissertation submitted to the Department of Anthropology, University of Chicago, 1973, p. ii; Shahin Bekhradnia, "Zoroastrianism in Contemporary Iran," *International Journal of Moral and Social Studies*, summer 1991, p. 122; email correspondence with Mobed Mehraban Firouzgary, 5 December 2010.

⁶ Ibid.

⁷ Mobed Mehraban Firouzgary, "Zarathushtis in Iran—A Demographic Profile," *FEZANA Journal*, Winter 2004, p. 26.

⁸ Email correspondence with Shahin Bekhradnia, 5 December 2010.

1960s, the Zoroastrian diaspora has had a much longer history.⁹ Parsi merchants from Bombay established trading outposts in Canton, Hong Kong, and Macau in the early 19th century, and you can read more about this in a new book, *China and the Making of Bombay*, written by Madhavi Thampi and Shalini Saksena and published by the K.R. Cama Institute.¹⁰ Through the 19th and early 20th centuries, Parsis established other small communities in places such as Aden, Zanzibar, Rangoon, Shanghai, Mombasa, and Kobe. These settlements, which numbered a few hundred at best, have mostly collapsed with the end of the colonial era, though in many of these places you can still find Parsi cemeteries and other reminders. For my Ph.D. dissertation on Dadabhai Naoroji, I have been researching the origins of the Parsi community in the UK, which had about 50 members in 1861 when Naoroji helped set up what is now the Zoroastrian Trust Funds of Europe.¹¹

Estimating the population in the diaspora—the diaspora that really started emerging from the 1960s onward—is challenging since many Western countries, including the United States, do not ask people about their religious affiliations in censuses. Once more, we will have to rely upon assumptions, rough approximations, and selective surveys, both those given by Zoroastrian associations and those quoted in scholarship. Today, the big diasporic centers are the US, Canada, the United Kingdom, and Australia. Luckily for us, the respected historian of the Parsis, Professor John Hinnells, has provided us with detailed descriptions of these communities in his 2005 book, *The Zoroastrian Diaspora*.¹²

I will begin with the United Kingdom, the oldest Zoroastrian community in the West. While Hinnells cites suggestions in the 1980s of a population of 2,000 Zoroastrians, by the 2000s the ZTFE was quoting figures as high as 6-7000, reflecting an influx of Parsis from East Africa.¹³ Similar numbers have been quoted to me by individuals within ZTFE. However, the 2001 British census returned only 3,738 Zoroastrians in England and Wales, a figure that is probably too low due to under-reporting.¹⁴ Russi Dalal, a well-known figure to anyone familiar with the London community, believes the total British Zoroastrian population to be **5,000**, and I find this figure to be reasonable.¹⁵ We will use it for our survey.

Australia has seen a surge of immigration from India in the past two decades. While in the early 1970s, there were an estimated grand total of 75 Zoroastrians on the continent, this number had increased to at least 850 people in Sydney alone by 1999, as reflected by the Sydney association's directory.¹⁶ An officer in the Australian Zoroastrian Association, which represents

⁹ The Iranis of India and Pakistan, who migrated from Iran to British India from the late 1800s onward, can arguably be termed as a diaspora as well. Curiously, there has yet to be any detailed academic or popular study of this community.

¹⁰ (Mumbai: K.R. Cama Oriental Institute, 2009).

¹¹ John Hinnells, *Zoroastrians in Britain* (Oxford: Oxford University Press, 1996), pp. 107-8.

¹² (Oxford: Oxford University Press, 2005).

¹³ *Ibid.*, p. 323.

¹⁴ In order to account for under-reporting, this number was rounded up to 4000 by the Office for National Statistics. See <http://www.statistics.gov.uk/CCI/nugget.asp?ID=954&Pos=&ColRank=2&Rank=208>. There were some strange figures in this census. It should be remembered that in this census, 390,000 Britons, 0.7 percent of the total population, recorded their religious orientation as “Jedi Knight!”

<http://www.statistics.gov.uk/census2001/profiles/commentaries/ethnicity.asp#religion>.

¹⁵ Russi Dalal, “Demographics of Great Britain,” *FEZANA Journal*, Winter 2004, p. 64. Rashna Writer, however, has recently cautioned me that, based on her research, the British population might be closer to the 7,000 mark as indicated by individuals in ZTFE.

¹⁶ Hinnells, *The Zoroastrian Diaspora*, p. 555.

Sydney, states that the entire population in New South Wales is now around 2,300.¹⁷ This might be an overestimate. Indeed, a 2004 headcount of Zoroastrians in all of Australia, based off association directories, showed about 2,000 individuals. New Zealand has recently become a very popular destination for Indian Parsis. Its directory reported 840 Zoroastrians in 2004.¹⁸ For both Australia and New Zealand, therefore, I will round up slightly and assume a total population of around **3,000**.

What about North America? We have conflicting estimates and guesstimates. I have heard individuals in North America quote figures as high as 30,000 and 40,000. These appear to me to be very exaggerated numbers. For starters, these figures are significantly higher than what was reported in 2000 in the *FEZANA Journal*'s "millennium commemorative issue," which was 7,000 for Canada and 18,000 for the United States. John Hinnells believes these 2000 estimates to anyway be "optimistic." The Canadian census of 1991, for example, returned only 3,185 self-identified Zoroastrians, although it is likely an underestimate.¹⁹ The US census does not record religious affiliation.

In 2004, Roshan Rivetna compiled what is probably our most accurate estimate of the North American population, calling up community leaders in every US state and Canadian province and tabulating both the numbers of known Zoroastrians on association records and estimated maximum populations. In Canada, she recorded 5,341 known Zoroastrians and an estimated maximum of 5,975. In the United States, there were 9,158 known Zoroastrians and an estimated maximum of 10,794. This gives us a total North American population of anywhere between 14,500 and 16,800.²⁰ I will average it and assume **15,500** North American Zoroastrians.

Scattered outposts elsewhere in the diaspora, such as Hong Kong, Singapore, South Africa, continental Europe, and the Middle East, do not add up to much. Even Hong Kong, which the community celebrates as an important center, had no more than 120 Zoroastrians in the 1980s, and has perhaps 200 today.²¹ I have seen claims of 2,200 Zoroastrians in the Gulf region, but I think that this figure is greatly over-exaggerated and I have yet to see any supporting data.²² I will assume that the remaining diaspora population is around **2,500**—this is an extremely crude estimate on my part, but since the number is relatively low it is not terribly significant.

Before I turn to Pakistan and India, I would like to address one other persistent myth. Since the breakup of the Soviet Union in 1991, there have been rumors of potentially thousands of so-called "lost Zoroastrians" in Central Asia in addition to converts there and in Russia. Indeed, I have heard many a Parsi claim that, "Parsis might die out, but Zoroastrianism will live on—just look at all the converts in Central Asia." Unfortunately, few individuals have thought about actually verifying this claim.²³ Rumors of scattered "lost" Zoroastrian tribes in

¹⁷ Email correspondence with Seema Honarmand, 8 December 2010.

¹⁸ "Zarathushtis 'Down Under,'" *FEZANA Journal*, Winter 2004, p.76.

¹⁹ Hinnells, *The Zoroastrian Diaspora*, p. 458.

²⁰ Roshan Rivetna, "Zarathushtis in USA and Canada," *FEZANA Journal*, Winter 2004, pp. 55-59.

²¹ Hinnells, *The Zoroastrian Diaspora*, p. 156; Yazdi Parekh, "Zarathushtis in the Far East," *FEZANA Journal*, Winter 2004, p. 82.

²² Meher Bhesania, "Diaspora in the Persian Gulf," *FEZANA Journal*, Winter 2004, p. 70.

²³ There is a long and colorful history of Parsis imagining "lost" Zoroastrian settlements and even falling for outright scams. In 1840, for example, a Muslim named Sayyed Hussain came to Bombay and told Parsis that he came from a Zoroastrian kingdom in Khotan in Central Asia ruled by a Zoroastrian king called Gustasp Bahman. Obviously having done his homework on Zoroastrianism, Hussain claimed that the Zoroastrians of Khotan had many fire temples and dakhmas and spoke Zand and Pazand. Led by Jamsetjee Jeejeebhoy, a group of prominent Parsis, including Khurshedji Cowasji Banaji, and Navrozji Fardoonji, excitedly considered this revelation and decided to

mountainous areas appear to be just that—rumors—and I sincerely doubt that any such religious groups would have survived seven decades of Soviet rule.

All indications point toward there being an extremely small number of Zoroastrian converts in Central Asia and Russia, perhaps a hundred people or so in total. In a paper that she delivered to the University of Kent in England in 2010, for example, Shahin Bekhradnia addressed the common belief that a Zoroastrian resurgence was occurring in Tajikistan, the Central Asian country that can claim the strongest cultural and linguistic ties to Iran. She found precisely 14 Tajik individuals who had converted to Zoroastrianism and formed an anjuman; unfortunately, the anjuman has collapsed since its leader was killed in 2001.²⁴ I seriously doubt that any Zoroastrian convert faces an easier time in less liberal countries such as Uzbekistan.

As for Russia, perhaps a few dozen people follow Pavel Globa, who has begun an esoteric school of astrology loosely based on some Zoroastrian ideas.²⁵ During the 20th century, we saw the rise and fall of several esoteric religious movements that drew on Zoroastrianism to various degrees: the Mazdaznans, the International Mazdayasnan Order, and a small group in San Diego in the 1920s and 1930s that even proposed building a *dakhma*, a “tower of silence,” on Point Loma. It is not my place to say whether the Russian Zoroastrians fit into this pattern of ephemeral movements. Regardless, their membership does not seem significant enough to radically influence the size of the worldwide Zoroastrian population. We should definitely not rely on such movements—and, worse yet, rumors of such movements in Central Asia—to significantly increase our population in the near future.²⁶

Pakistan and India

This leaves us with the Indian subcontinent. Let us begin with Pakistan. Karachi, which was a relatively small town at the beginning of the 20th century, attracted a number of enterprising Parsis from Gujarat in the decades before independence in 1947. By 1911 it

compose a letter to the king with Hussain’s help. They also gave Hussain Rs. 1,000 to take the letter to King Gustasp Bahman. That was the last that anyone heard of Sayyed Hussain, who left Bombay a rich man having deceived some of the most prominent individuals of the Parsi community. In the 20th century, Parsis reported and debated about the existence of other “lost” communities in Germany and even the South Pacific. None of these had any factual basis. Recalling the Sayyed Hussain affair, Dasturji M.N. Dhalla lamented in his autobiography, “The above incident took place a hundred years ago. But even at the dawn of the 20th century university graduates and collegians with logic for a subject, have inherited the acceptance of such fairy-tales and continue to believe them even today.” Dasturji Dhalla’s words ring true today. *Saga of a Soul* (Karachi, 1975), pp. 381-83. My thanks to Daniel Sheffield for bringing this passage to my attention and also for translating into English the Gujarati entry for this incident in *Parsi Prakash*, Vol. 1.

²⁴ Shahin Bekhradnia, “Zoroastrianism in Tajikistan: A Political Tool?,” paper delivered at the University of Kent, March 2010, p. 13. Arash Zeini, a Ph.D. candidate studying Zoroastrianism at SOAS, traveled to Dushanbe in Tajikistan in 2005 partly in order to investigate the rumors of Zoroastrian conversions. He could not find a single person who was even familiar with the terms “Zartosht” and “Zartoshty” (email communication with Arash Zeini, 10 December 2010).

²⁵ Michael Stausberg, “Para-Zoroastrianisms: Memetic Transmission and Appropriations,” in John Hinnells and Alan Williams, eds., *Parsis in India and the Diaspora* (Abingdon: Routledge, 2008), pp. 249-51.

²⁶ Individuals in the Iranian Zoroastrian community have repeatedly told me of there being hundreds and thousands of Iranian Muslims in Iran who desire to convert to Zoroastrianism if they were given the chance. Due to a lack of hard evidence and the political situation at the moment, where conversion from Islam would bring swift punishment, I simply cannot comment on this. Historically, at least, many Iranian Muslims have expressed interest in Zoroastrianism and conversion in the 20th century but this has translated into very few actual converts. Aside from Ali Jafarey’s Zarathushtrian Assembly, I simply do not see there being a large body of Iranian Muslims here in the diaspora, where there are no laws against apostasy, who have actually converted to Zoroastrianism.

exceeded 2,000 people, and during the first census of independent Pakistan, held in 1951, the Karachi population was recorded at 5,018 people, dropping to 4,685 by the 1961 census.²⁷ Significantly smaller populations were located in Quetta, Lahore, Rawalpindi-Islamabad, and elsewhere.

In 1969, Elizabeth Gustafson of the University of California, Davis published an exhaustive demographic survey of the Karachi population in the journal *Social Biology*. Given an aging population and a high rate of out-migration to the West, she felt that conditions were “insufficient to maintain the population in the long run.”²⁸ This prediction, sadly, is being borne out today. In 1995, the Karachi-based Zarthoshti Banu Mandal conducted a comprehensive headcount of the Pakistani Parsis. They found 2,831 individuals remaining in the entire country. By September 2004, the population was down to 2,121, and as of today, according to Toxy Cowasjee, it stands at **1,766**.²⁹ This is a truly staggering decline, taking place at breakneck speed (see **Image B**). Out-migration is one of the prime culprits, but as I will explain later in this paper, it is not the only culprit.

Finally, we get to India, and friends, the numbers are truly scary. The large majority of the world’s Zoroastrians have called India home for several centuries. But we are disappearing rapidly here. The Government of India has held detailed, fairly reliable censuses every decade since the 1870s, providing us with a very clear picture of the historical trajectory of the Parsi community:

Census Year	Parsis (All-India)	Decennial Change (%)
1881	85,078	
1891	89,490	+5.19
1901	93,617	+4.61
1911	99,412	+6.19
1921	101,075	+1.67
1931	108,988	+7.83
1941	114,890	+5.42
1951*	111,791	-0.27
1961	100,772	-10.93
1971	91,266	-10.42
1981	71,630	-27.41
1991	76,382	+6.63
2001	69,601	-9.74 ³⁰

*The drop in population reflects the loss of 5,000 Parsis to Pakistan after the Partition of British India.

²⁷ Hinnells, *The Zoroastrian Diaspora*, p. 204; Elizabeth B. Gustafson, “A Demographic Dilemma: The Parsis of Karachi,” *Social Biology*, 1969, p. 116.

²⁸ *Ibid.*, p. 117.

²⁹ Toxy Cowasjee, “Demographics of Zarathushtis in Pakistan,” *FEZANA Journal*, Winter 2004, p. 50; email communication with Toxy Cowasjee, 11 December 2010. On the topic of the Banu Mandal’s statistics, Hinnells writes, “the general professional nature of the people involved, and the respect in which the Mandal is universally held, means that these figures are likely to be as reliable as one could hope for—probably more reliable than an official census” (*The Zoroastrian Diaspora*, p. 217).

³⁰ Statistics taken from Leela Visaria, “Demographic Transition Among Parsis: 1881-1971: I—Size of Parsi Population.” *Economic and Political Weekly*, October 12, 1974, Appendix II, p. 1737; Hinnells, *The Zoroastrian Diaspora*, p. 45.

As you can see from the statistics provided here, in 1881 the Parsi population stood at roughly 85,000, increasing to almost 115,000 by 1941, the last census conducted in undivided India. From here onward, the Parsi population begins to slide: first, due to the loss of 5,000 Parsis now in Pakistan, and then for other reasons. By the last Indian census, held in 2001, the Parsi population had plummeted to **69,601**. Between 1951 and 2001, the total population of India increased by around 185 percent. In contrast, the Parsi population in India dropped by 37.7 percent in the exact same time period.³¹

Estimating the Worldwide Population

If we sum up the populations that have been discussed above, we arrive at the following figure for the worldwide Zoroastrian community:

Iran (current estimates)	15,000-24,000
United Kingdom (2004 estimates)	5,000
Australia & New Zealand (2004 estimates)	3,000
North America (2004 estimates)	15,500
Elsewhere (2010 crude estimate)	2,500
Pakistan (2010 figures)	1,766
India (2001 figures)	69,601
TOTAL	112,367-121,367

As is plainly obvious, we are members of an extremely small community. What I would further like to emphasize is that this population estimate—although it is crude and can by no means be absolutely precise—nevertheless strengthens the argument that the worldwide population of Zoroastrians has been falling for the past few decades.

Let us review some numbers. According to the Census of India, as we have seen, the Parsi population of undivided India reached its numerical maximum of roughly 115,000 individuals in 1941.³² At that time, we can assume that perhaps 3,000 Parsis were scattered elsewhere such as Rangoon, Aden, China, East Africa, and England. We have no precise figures for Iran, but based off scholars' estimates it was probably around 15,000 in the early 1940s.³³ With these statistics and estimates, we arrive at a worldwide Zoroastrian population of **roughly 133,000 in the early 1940s**, which is around 12,000 people more than our maximum estimate for today.

We have another set of numbers for the early 1960s. In the 1961 census, when the Bombay Parsi Punchayet (BPP) commissioned a special census study in order to look into the question of falling numbers, the Parsi population of India stood at around 101,000. The Pakistani census of the same year returned a Parsi population of approximately 5,200.³⁴ According to Iran's 1966 census, approximately 20,000 Zoroastrians were in that country.³⁵ Furthermore, the report of the Second World Zoroastrian Congress in Bombay in 1964 estimated

³¹ Zubin Shroff, "The Potential of Inter-marriage on Population Decline of the Parsis of Mumbai, India," working paper, Harvard School of Public Health, 2010, p. 3.

³² Kulke, p. 35.

³³ The German scholar B. Spuler estimated the Iranian Zoroastrian population to be 16,800 for 1938 (Ibid., p. 35). Bekhradnia cites lower figures: roughly 14,000 by 1956 ("Zoroastrianism in Contemporary Iran," p. 122).

³⁴ Kulke, p. 35.

³⁵ Amighi, p. 267.

around 5,000 Parsis abroad in Asia, East Africa, and North America.³⁶ Totaling these figures, we arrive at a worldwide Zoroastrian population of **approximately 131,200 for the 1960s**, which is still higher than today's estimated numbers.

What do these numbers tell us? Basically, out-migration to the West, as some parties have asserted, cannot by itself account for the drop in the Parsi population in India. If this were the case, the worldwide Zoroastrian population would not have fallen by up to 20,000 people since the 1940s; it would have *at least* remained stable. Migration cannot fully explain why the Parsi population in India was 115,000 in 1941 and only 69,700 as of the last census in 2001. Migration *might* account for some decline in India, but other factors are clearly at work here. In the next section of this paper, I will outline these factors in detail by drawing upon a significant body of demographic scholarship.

UNDERSTANDING PARSI POPULATION DECLINE

What, exactly, are the reasons for the stunning decline of the Parsi population in India? While some elements of the community still refuse to acknowledge that this decline is even taking place, there has been some lively discussion on the issue that has focused on a number of factors, such as migration to the West and intermarriage. Fortunately, for the purposes of understanding this phenomenon, we are blessed with very detailed Indian census data as well as numerous scholarly demographic studies that have been conducted over the past seven decades. I have listed a few of these studies here:

- Paul Axelrod. "Cultural and Historical Factors in the Population Decline of the Parsis of India," *Population Studies*, November 1990, pp. 401-19.
- . "Natality and Family Planning in Three Bombay Communities," *Human Organization*, Vol. 47, 1988, pp. 36-47.
- . *A Social and Demographic Comparison of Parsis, Saraswats, and Jains in Bombay*, Ph.D. dissertation submitted to the Department of Anthropology, University of North Carolina at Chapel Hill, 1974.
- J.K. Banthia. "Parsi Demography: Past, Recent, and Future," paper presented to PARZOR Seminar, 4 October 2003, Mumbai.
- C. Chandra Sekar. "Some Aspects of Parsi Demography," *Human Biology*, Vol. 20, May 1948, pp. 48-89.
- Sapur Faredun Desai. *A Community at the Cross-Road* (Bombay: New Book Co., Ltd., 1948).
- Government of India. *Census of 1961: Parsis of Greater Bombay*, Vol. 10, Maharashtra, Part X (I-D), 1971.
- Malini Karkal. "Marriage Among Parsis," *Demography India*, Vol. 4, 1975, pp. 128-45.
- . *Survey of Parsi Population of Greater Bombay*, report of the International Institute of Population Studies, Mumbai, 1982.
- Ketayun H. Gould. "Singling out a Demographic Problem: The Never-married Parsis," *Journal of Mithraic Studies*, Vol. 3, 1980, pp. 166-84.
- . "The Never-Married Parsis: A Demographic Dilemma," *Economic and Political Weekly*, Vol. 17, June 26, 1982, pp. 1063-68.
- Elizabeth B. Gustafson. "A Demographic Dilemma: The Parsis of Karachi." *Social*

³⁶ Kulke, p. 36.

- Biology*, Vol. 16, 1969, pp. 115-27.
- Maneck Pheroze Mistry. "Report of the Survey of Gujarat Parsis (Rural)," Trustees of the Bombay Parsi Punchayet, 1967.
- Buddhishchandra V. Shah. *The Godavara Parsis: A Socio-Economic Study of a Rural Community in South Gujarat*, Godavara Parsi Anjuman Trust, Surat, 1954.
- Zubin Shroff. "The Potential of Intermarriage on Population Decline of the Parsis of Mumbai, India," working paper, Harvard School of Public Health, 2010
- D.P. Singh and V.G. Gowri. *Parsis of Mumbai: A Socio-Demographic Profile*, report of the Tata Institute for Population Sciences, Mumbai, 2000.
- Sayed Unisa, R.B. Bhagat, and T.K. Roy. "Demographic Predicament of Parsis in India," International Institute for Population Sciences, Mumbai. Paper presented at XXVIth International Population Conference, Marrakech, 27 September-2 October 2009.
- Leela Visaria. "Demographic Transition Among Parsis: 1881-1971" (three parts), *Economic and Political Weekly*, Vol. 10, 12 October 1974, pp. 1735-41; 19 October 1974, pp. 1789-92; 26 October 1974, pp. 1828-32.
- . *Religious and Regional Differences in Mortality and Fertility in the Indian Subcontinent*, Ph.D. dissertation submitted to Princeton University, 1972.

These studies—which have been conducted by experts from both India and the West—are remarkable in their agreement on one matter: that the dramatic decline in the Parsi population is due to a simply stunning drop in Parsi fertility rates.

What does this mean? Basically, it means that Parsis have extremely few children and our inability to fully reproduce the next generation is steadily cutting at our numbers. Now, these studies make a further observation: low Parsi fertility is probably not due to any biological reasons. Rather, it is the product of cultural and attitudinal factors: late marriage, non-marriage, and, consequently, extremely small families. Yes, these studies acknowledge, out-migration and out-marriage probably do have a part to play in Parsi population decline. But by downplaying the importance of these three phenomena—late marriage, non-marriage, and limited family size—we are ignoring the veritable elephant in the room.

Before I delve in detail into these three phenomena, I will make a quick note about possible biological factors. Whenever I bring up the issue of declining fertility rates within the community, an immediate reaction I get is that it must have something to do with our genetics. Could infertility be a product of too much endogamous marriage—that is, marriage within our small community—an inevitable consequence of having a tiny gene pool? Fortunately, this does not appear to be the case. The earliest scholarly demographic study of the Indian Parsis was undertaken in 1948 by C. Chandra Sekar of the All-India Institute of Hygiene and Public Health in Calcutta. The paper was presented at Johns Hopkins and later published in the academic journal *Human Biology*. Chandra Sekar ruled out biological factors and instead emphasized social and cultural factors for low fertility.³⁷

A similar conclusion was reached by Paul Axelrod, who completed a Ph.D. dissertation on Parsi demographics at UNC Chapel Hill in 1974. In a 1990 paper that he published in the academic journal *Population Studies*, he looked at statistical results and concluded that "[i]t would appear that Parsi women are not sub-fecund [i.e., more biologically infertile] and, once married, are able to bear children quickly and without difficulty." He brings up the fact that

³⁷ C. Chandra Sekar, "Some Aspects of Parsi Demography," *Human Biology*, May 1948, p. 57.

cousin marriages, which were once quite common amongst Parsis, are actually statistically associated with higher biological fertility.³⁸ Axelrod, like Chandra Sekar, and like every other demographer and scholar who has looked into this issue, instead pointed to social, cultural, and attitudinal factors. When fertility *is* a biological problem amongst Parsis it is because they get married and try to produce children at such a late age. On that note, let us look at the issue of late marriage in greater detail.

Late Marriage

Late marriage is nothing new in the community. We can trace it back to the 1880s, to some of the earliest records we have on the Parsis (see **images C and D**). In 1881, according to records kept by the Bombay Parsi Panchayet, more than half the marriages in Bombay took place before the wife was 15 years of age and in only 10 percent of marriages was the wife above the age of 20. This was the era of child marriages, and the Parsis were amongst the first in India to abandon this bad practice. By 1890, a mere decade later, most Parsi women in Bombay married between the ages of 16 and 20, and by the 1901 Indian census, almost half of Parsi women are marrying when they are over 20 years old. By 1930, the median age of marriage for a Parsi woman was over 24.³⁹

Many other communities in India followed the Parsis' lead in eradicating the practice of child marriage. However, unlike the case in these other communities, the Parsis continued to delay marriage until later and later ages. By 1961 and 1971, the mean age of marriage for Parsi women in India was 27.⁴⁰ Figures were similar across the border in Karachi. In 1969, Gustafson found that age 26 was the youngest cohort at which there were more Parsi women married than unmarried, while this balance was not reached for men until age 32. As a point of comparison, the average age of marriage for a Muslim woman in Karachi was just over 18 years.⁴¹ According to one of our most recent studies, authored by three demographers at the International Institute for Population Sciences in Mumbai, the median age of marriage amongst Indian Parsis now stands at 27 for women and 31 for men.⁴² This is, to say the least, significantly higher than the corresponding figures for all Indians, and significantly high ages for *any* group of people that desire to have enough children in order to replace their population.

Non-Marriage

Late marriage has had one significant consequence: it has increased the number of Parsis that have never married (see **images E and F**). Axelrod declares that, "Though non-marriage is

³⁸ Paul Axelrod, "Cultural and Historical Factors in the Population Decline of the Parsis of India," *Population Studies*, November 1990, p. 414. Axelrod and others, such as Desai (pp. 57 & 60) and Shroff (p. 8), have suggested links between increased education, late marriage, and lower fertility rates. Parsi fertility rates begin to drop, and the age of marriage for women begins to climb, precisely at the same time that female education spread in the community (end of the 19th century). Axelrod nevertheless cautions: "The pursuit of education for Parsi women had more profound effects on fertility than merely delaying marriage for a few years...But education by itself cannot be seen as the cause of low fertility in the Parsis. It has to be seen in the context of the larger pattern of values and adaptation during the nineteenth century" (p. 414).

³⁹ Axelrod, p. 404.

⁴⁰ Leela Visaria, "Demographic Transition Among Parsis: 1881-1871: III—Fertility Trends," *Economic and Political Weekly*, 26 October 1974, p. 1830.

⁴¹ Gustafson, p. 125.

⁴² Sayeed Unisa, R.B. Bhagat, and T.K. Roy, "Demographic Predicament of Parsis in India," paper presented at XXVth International Population Conference, Marrakech, 27 September-2 October 2009, p. 3.

not always a direct result of late-marriage, this seems to be so in the case of the Parsis.”⁴³ Similarly, Leela Visaria, a prominent Indian demographer whose Ph.D. dissertation at Princeton delved into Parsi population issues, remarks that, “It is, of course, likely that the postponement of marriage to an advanced age increases the chances of one’s remaining a bachelor or a spinster.”⁴⁴ The studies of Axelrod, Visaria, and many other demographers have traced the simply stunning rates of non-marriage within the Parsi population. One demographer, Ketayun Gould, has even published several articles just on this phenomenon.

In 1948, Sapur Faredun Desai, whose book *A Community at the Cross-Road* was the first clarion call for the community to confront its demographic trends, was already bemoaning the “sorry tale” of an unmarried Parsi population that had increased by 40 percent between 1881 and 1931.⁴⁵ Indeed, Chandra Sekar shows us that, while in 1901 only 6 percent of Parsi women remained unmarried at the end of their reproductive cycle, by 1931 this figure had jumped to 16 percent.⁴⁶ Importantly, non-marriage was not a trend that was confined to urban Bombay. Studies conducted in rural Gujarat found that anywhere between 13 percent and 55 percent of women in rural Gujarat surveyed continued to be spinsters well into middle age.⁴⁷ Gustafson found the percentage of married Parsis in Karachi to be “unusually low” in the 1960s. Around 74.4 percent of Parsi women in Karachi age 20 and over were ever-married, compared with 95.2 percent of Muslim women in Karachi in the same cohort.⁴⁸ Similarly, non-marriage is not a phenomenon linked to any socioeconomic class. Axelrod found “substantial numbers” of never-married women at all educational levels.⁴⁹

Today’s figures might be even higher. Ketayun Gould asserts that “the proportionate number of single people in the community might be one of the highest in the world.”⁵⁰ In 1982, the BPP commissioned Malini Karkal, a demographer at the International Institute for Population Sciences, to study the demographics of the community. She found that 45 percent of all adult males and 38 percent of all adult females surveyed were never married. Another BPP-commissioned study, conducted by the Tata Institute of Social Sciences (TISS) in 1999, found that 40 percent of men and 30 percent of Parsis in Greater Mumbai remained unmarried throughout their lives.⁵¹ According to Sayeed Unisa, et. al., who presented their paper in 2009, one out of every five Parsi Indian males, and one out of every ten females, is still unmarried by the age of 50.⁵² Out of all the frightening statistics out there about the Parsi population, it is these statistics that frighten me the most.

⁴³ Axelrod, p. 405.

⁴⁴ Visaria, “Demographic Transition Among Parsis: 1881-1971: III,” p. 1830.

⁴⁵ (Bombay: New Book Co., Ltd., 1948), p. 44.

⁴⁶ Chandra Sekar looked at the percentage of women in the 45-49 age group. Pp. 59-60.

⁴⁷ Buddhishchandra V. Shah’s study of Godavara Parsis in 1954 showed 13.46 percent of women and 23.58 percent of men who were aged 45 years and above to be unmarried; Maneck Pheroze Mistry’s 1967 study for the BPP found 54.89 percent of women and 37.09 percent of men between the ages of 16 and 40 to be unmarried; in Axelrod’s survey in rural Gujarat, published as a part of his 1974 dissertation, he found that 25 percent of women over the age of 25 years were unmarried. Their findings are summarized in Ketayun Gould, “The Never-Married Parsis: A Demographic Dilemma”, *Economic and Political Weekly*, 26 June 1982, p. 1064.

⁴⁸ Gustafson, p. 124.

⁴⁹ Axelrod, p. 404. He does note, however, that “those with higher education are more likely to be unmarried.”

⁵⁰ P. 1064.

⁵¹ Hinnells, *The Zoroastrian Diaspora*, pp. 51-52.

⁵² Pp. 9-10.

Consequences for Fertility Rates and Population

Late marriage and non-marriage are the prime factors responsible for low rates of fertility in the Parsi community in India. Every demographic study I have read is in complete agreement on this matter. Low fertility, therefore, is the product of choices that we make—choices that are influenced by cultural and societal norms—and most likely *not* biological reasons. It is these choices that have caused Paul Axelrod to remark, "...the Parsis of India...have experienced one of the most dramatic population and fertility declines recorded outside of Europe."⁵³ It is these choices that have caused Sayeed Unisa to conclude that the fall in fertility rates amongst the Indian Parsis is "unprecedented."⁵⁴

How, specifically, have late marriage and non-marriage translated into a shrinking population? Quite simply, *Parsi fertility rates are well below replacement level*, the level necessary to sustain the community's population (see **Image G**). In 1881, when the first comprehensive Indian census took place, Parsi fertility rates were, according to Leela Visaria, "moderately high." That year, the birthrate was tabulated as 34 per 1000 population for Parsis in Bombay. This dropped to 25 per 1000 population by 1926. In comparison, the Indian birthrate for that year was 48 per 1000 population. By the 1960s, it had slid to 12 per 1000 population for the Parsis. According to another indicator, gross reproductive rates (GRR), Parsi fertility rates were already below replacement level in 1961. Visaria states that, "because of late marriage or non-marriage the births to Parsi women resident in Greater Bombay in 1961 were only 50 per cent of the number that would have occurred if every woman were married throughout her reproductive period."⁵⁵

That was 1961. The story gets worse from here onward. Unisa, et. al., in 2009 tabulated the total fertility rate (TFR) for the community. TFR measures the number of children born per woman and a TFR of 2.1 is necessary for replacement. By 1980-82, the TFR for Parsis was already 1.12; i.e., about half of replacement level. In 2000, it was 0.94.⁵⁶ Zubin Shroff, a Ph.D. candidate at the Harvard School of Public Health, has been working on a new demographic study of the Parsis for the past two years, and using data from 2001-06 he has observed a TFR of 0.88.⁵⁷ I recall him telling me that, when he disclosed this figure to a professor of demography at Harvard, she had a look of complete horror on her face. To provide some context, let us look at what the TFR is like amongst total populations in some countries. According to a United Nations report published in 2006, TFR between 2000-05 was, for each country's total population, 3.11 for India, 2.04 for the United States, and 1.29 for Japan.⁵⁸ Friends, *the Parsis of India are well below Japan*, a country that has thrown a significant portion of its resources into reversing its population decline.

A low fertility rate also created a dramatically upturned age distribution in the Parsi community, validating the observation that they are an aging group (see **Image H**). In spite of the fact that fertility began to drop in the 1880s and reached very low levels by the 1930s, the

⁵³ Axelrod, p. 402.

⁵⁴ P. 2.

⁵⁵ Visaria, "Demographic Transition Among Parsis: 1881-1971: III," pp. 1828-30. Gross reproduction rate (GRR) measures the number of daughters that would replace the mother generation, and a GRR of 1 would theoretically provide full replacement, although some mothers, of course, die before the end of their reproductive cycle. Whereas the GRR of the Parsi population was 2.15 in 1881, it was 1.43 in 1931 and 0.98 in 1961.

⁵⁶ Pp. 10-13.

⁵⁷ Shroff, p. 13.

⁵⁸ *World Population Prospects: The 2006 Revision*, Department of Economic and Social Affairs, Population Division, United Nations, 2007, Table A.15.

Parsi population in India kept growing until the 1950s thanks to lower mortality rates brought about by improved health and longer life expectancy. Quite simply, there were enough births to offset fewer deaths. But as the number of elderly Parsis increased, new generations of Parsi children became smaller and smaller (see **images I and J**). In 1881 roughly 37 percent of the Parsi population of India was age 14 and below, while approximately 5 percent was 60 and over. By 1971, however, approximately 15 percent of the population in Greater Bombay (now home to the overwhelming majority of Parsis) was 14 and below, while the cohort of 60 and above had ballooned to 20 percent.⁵⁹ By 2001, according to Unisa, et. al., one in every eight Parsis was a child under the age of 15, whereas one in every four Parsis was aged 65 and above. The percentage of the Indian Parsi population above 65 stood at 24.2 percent, which was well above figures for Japan, Spain, and Sweden.⁶⁰ The United Nations defines a population as aged if more than 7 percent of its population is above 65.⁶¹ The proportion of aged Parsis is over *triple* this amount.

If these trends continue—if Parsi fertility rates continue to fall, if the percentage of the elderly increases, and new generations of Parsis become smaller and smaller in size—what will happen to the community in a few decades from now? Unisa, et. al. calculate that by 2051 only 32,000 Parsis will remain in India; in other words, the population will be less than half of what it is today.⁶² Shroff similarly projects that the Parsi population of Bombay, which was 46,557 in 2001, will decline to 20,122. Keep in mind that roughly 70,000 Parsis called Bombay home in 1971. Do we really want to continue down a path where the Bombay Parsi community becomes, numerically speaking, a mere shadow of its former self?

Other Factors?

Before concluding this section of my paper, I want to briefly consider other potential factors responsible for the decline in the Parsi population.⁶³ While all of the experts who have looked at the Parsi population agree that low fertility is the prime culprit, and that this low fertility results from late marriage and non-marriage, they acknowledge that other factors could play a smaller yet influential role.

Let us start with out-migration, which some parties in the community believe to be the real reason for the decline in numbers in India. Now, out-migration appears to be playing a very big role in diminishing the population of Iran, due to the sheer scale of the exodus, and in the 1960s Elizabeth Gustafson identified out-migration to be a major factor in the drop of the relatively small community in Karachi. Indeed, in August 2009 the *Newsline* of Pakistan quoted community leaders as saying that almost 95 percent of Parsi youth are choosing to leave the

⁵⁹ Visaria, “Demographic Transition Among Parsis: 1881-1971: I,” Appendix II, p. 1740. Visaria writes that, for Parsis, age distribution was tabulated on an all-India level between 1881 and 1931 and for Greater Bombay after 1961. Since an overwhelming majority of Parsis have lived in Bombay since the 1950s, we should treat Bombay figures as quite representative of the entire Indian Parsi population.

⁶⁰ Unisa, et. al., p. 6.

⁶¹ Quoted by Hinnells from Malini Karkal’s 1984 study, p. 50.

⁶² This projection assumes that TFR declines to 0.75 in 2051. If TFR remains constant at 2001 to 2051 at 1.0, the population will decline to 34,000. Pp. 13-14.

⁶³ Singh and Gowri’s 1999 study for the BPP gives us an idea of popular attitudes toward population decline in the Bombay community. They found that 90 percent of those surveyed were aware of the dwindling Parsi population. As for possible factors, 45 percent cited conversion to other faiths, 75 percent cited emigration to the West, and 80 percent cited intermarriage. The contrast between popular attitudes and scholarly conclusions is extremely striking. Hinnells, *The Zoroastrian Diaspora*, p. 54.

country.⁶⁴

Scholars such as Leela Visaria and Sayeeda Unisa state that migration might be a contributing factor for India, but caution that it is extremely difficult to measure and assess. Furthermore—and more importantly—it does not appear to be that significant. Certainly, nowhere even close to 95 percent of the youth are opting to leave India’s shores. Given the tone of debate in India, Unisa, et. al., decided to look for tell-tale signs of large out-migration within datasets on Parsi age distribution. They found “no significant distortions in the age pattern” between 1961 and 2001—i.e., unusual drops in the population of age cohorts of young adults. Therefore, they concluded that “migration does not appear to be a reason for the decline in Parsi population in the recent past,” although an exact assessment is not possible.⁶⁵ From the numbers presented earlier in this paper, it also seems very likely that out-migration alone simply cannot account for the population decline within India since the worldwide population of Zoroastrians has also plummeted. Out-migration, therefore, plays a role in Indian Parsi population decline, but it is a relatively minimal role. It definitely should *not* dominate our discussion.

What about intermarriage? Few issues in the community have ignited such controversy in the past few decades. Intermarriage rates have definitely been increasing in India. Barely registerable when Sapur Faredun Desai wrote his book in 1949, intermarriage rose to account for 19 percent of all Parsi marriages in Bombay in 1991 and 31 percent by 2005.⁶⁶ Figures for elsewhere in India appear to be higher. Once again, our demographers admit that it is very hard to measure the precise impact of intermarriage. But experts like Axelrod are confident that, while figures for intermarriage along with out-migration can by themselves be “substantial,” they are “not sufficient to account entirely for the population decline.”⁶⁷

In his 2010 working paper, Shroff tried to measure the relative impact of intermarriage on the Bombay community’s future population. Shroff made population projections for 2051 where no children of any intermarriage were accepted as Zoroastrians, where only the children of intermarried Parsi men were accepted, and where children of both intermarried men and women were accepted. His findings are quite striking. He discovered that, irrespective of the acceptance of children of any intermarriage, “the Parsi population will decline sharply over the next few decades, given current fertility trends.” So few babies are being born into the community that the acceptance of children of intermarried couples makes hardly any difference. With current rates of fertility and intermarriage, the 2051 population in Bombay will be 19,136 if no children of any intermarried couple are accepted; 20,122 if only children of intermarried women are excluded; and 20,535 if all children of intermarriages are accepted.

For Shroff, the conclusions are crystal clear: both liberals and conservatives have over emphasized the importance of intermarriage as a factor in the community’s population decline, and instead the “abysmally low fertility” of the community has “brought the community to the brink so to speak in demographic terms.”⁶⁸ As I will argue later in this paper, intermarriage might very well be a cause for concern to the community, including the North American community, if rates continue to increase and the long-term progeny of these intermarriages—for example, children and grandchildren—are not raised as Zoroastrians.

⁶⁴ Akbar S. Ahmed, “The Exodus,” *Newsline* (Pakistan), 28 August 2009. <http://www.newsline magazine.com/2009/08/the-exodus/>.

⁶⁵ Unisa, p. 6.

⁶⁶ Shroff, p. 4.

⁶⁷ P. 411.

⁶⁸ Pp. 13-16.

There are a few other factors to consider. We have already noted that Parsi couples have very few children. An unusually high number, however, have no children at all. According to the 1999 study conducted by the Tata Institute of Social Sciences (TISS), 12 percent of married Parsi women do not have any children.⁶⁹ While biological fertility problems probably explain some of this, the inordinately high Parsi number is probably also due to deliberate avoidance of pregnancies. It has commonly been argued that there is a high rate of homosexuality in the Parsi community, especially among men. This has no scientific basis.⁷⁰ Parsis consider themselves an enlightened community and consequently have displayed much less bigotry, and much more acceptance, toward openly-gay community members, especially in comparison to other Indians. Should we be surprised, therefore, that more gay Parsis probably “come out” than other gay Indians, who still face rampant discrimination and social stigma? I think not.

What about conversion? This paper has tried to destroy the myth that thousands of people are converting to Zoroastrianism in places such as Central Asia and Russia. Conversion in Iran is punishable under the Islamic Republic and there do not seem to be significant numbers of Muslim Iranians in the diaspora converting to Zoroastrianism. So the inflow is a trickle, at best. Historically, there have been several high-profile cases of Zoroastrians leaving the faith and embracing other religions. A large number of Iranian Zoroastrians converted to Baha’ism in the late 1800s.⁷¹ In the 1830s, the Parsi community was rocked by the conversion of two youths to Christianity by the missionary John Wilson; there were a subsequent number of conversions to Christianity taking place through the 20th century, including that of Sir Ness Wadia. While we have no accurate statistics, I imagine that the number of individuals formally leaving the religion is extremely limited. At best, all we have is anecdotal evidence. I, for example, have met Parsi converts to Islam, Mormonism, and Christian Science. What is much more difficult to assess, and what may be more significant in the long-run, is the number of individuals who have not passed on Zoroastrianism to their children out of apathy or irreligiosity.

Parsi Demographics: Their Implications for the Wider Community

In summary, overwhelming evidence points toward late marriage and non-marriage being the prime reasons for dropping fertility rates, a phenomenon that bears the most responsibility for cutting the Indian Parsi community nearly in half in five decades. We have seen how late marriage and non-marriage have led to fewer and fewer births per year, skewing the age distribution and creating a community where one out of every four people is elderly. What are the implications for the wider community of Zoroastrians? Using the data and observations made by demographers and scholars, can we assess if the same holds true amongst the Iranian Zoroastrians and amongst the wider diaspora? The simple answer is no. We do not possess anywhere near as detailed a set of data on populations in Iran, here in North America, or elsewhere in the diaspora. Once again, we have some surveys. Between 1983-87, for example, John Hinnells conducted a survey of approximately 2,000 Zoroastrians in diaspora communities. From the data, he concluded that Zoroastrians in the diaspora, both Parsis and Iranian

⁶⁹ Arnavaz S. Mama, “The Pregnant Figures?” *Parsiiana*, September 2000, p. 113.

⁷⁰ Axelrod states, “There is no identifiable pattern of homosexuality in the community;” that is, there is no unusually high incidence of homosexuality in comparison to other communities. P. 406.

⁷¹ The first recorded conversion took place in the 1880s involving a merchant in Yazd named Kay Khosro Khodadad. Amighi notes that while there are no statistics on the number of Zoroastrian converts, “the number must have been quite high.” Amighi found that 30 percent of Zoroastrian families surveyed in Yazd had at least one Baha’i relative in their extended family.” Pp. 120-21.

Zoroastrians, have a fertility rate that is below replacement level.⁷²

But let me suggest one method of assessment which might be the best tool we have at the moment. Look within your own families. We are a tiny, tiny community. ***While any of our families might not be—statistically speaking—a representative sample of the global Zoroastrian population, I would suggest that each of our families can serve as a microcosm of what is going on elsewhere amongst Parsis and Iranian Zoroastrians.*** Can you observe late marriage and non-marriage in your families? How many children do your siblings, aunts, or uncles have? What is the relative proportion of youth to elderly in your extended family? Has immigration from Iran, India, or Pakistan impacted family structure both here and in the old country? Has there been a high incidence of intermarriage and has it affected whether children and grandchildren are being brought up as Zoroastrian? Regardless of whether or not this anecdotal evidence might trouble and disturb you, I think that it is crucially important that we observe it.

A CALL TO ACTION

It is on that note that I will embark on the last section of my paper. The statistics and data that I have presented to you here might very well have shocked and disturbed you. They are, indeed, despairing. It might have come as a complete surprise to see how the global Zoroastrian community is, in reality, a small and shrinking pool of individuals. In the several years that I have been active in Zoroastrian community affairs, both here and in India, I have been amazed by how little is actually known about our demographic situation, by how few people have an accurate idea of our population, by how few people are aware of some of our alarming demographic trends, and by how unwilling they are to believe it when presented with data and scholarship.

But please keep something in mind. Nothing that I have told you today is new. For over the past six decades, since C. Chandra Sekar completed his demographic study, scholars have known that Parsi fertility rates were in steep decline. The BPP has commissioned a special Indian census study, and several independent studies, all of which have confirmed a drastic population slide. Sapur Faredun Desai made the following prophetic remark about Parsi efforts to arrest plummeting fertility: “In the past the Parsis have talked and written a great deal but very little tangible has been done.”⁷³ He penned these words in 1948 but the same could very well apply for today as well. We have talked, we have studied, we have observed. Some community leaders and other individuals have done commendable work to encourage marriage and childbirth and to make housing in Bombay more accessible to young couples. This work is vital, but we will not save this community unless more is done and the rest of the community comes on board.

As I have said, the statistics are despairing. But my purpose in giving this paper has not been to make you despair. It has not been to deliberately shock or frighten you. Rather, my purpose is to call for action. ***We need to finally take bold, big steps to correct this problem.*** Despair and defeatism, I would argue, are very not very Zoroastrian traits, and surely our ancestors have overcome larger hurdles in the past in order to insure the future of this community. There is still time to do something, and there are lots of things to do. I propose two broad categories of action: organizational and individual. We must harness our community

⁷² Hinnells, pp. 138-40.

⁷³ Desai, p. 186.

resources and organizations arrest the population decline, something which mostly involves the adults in the community, who are in positions of leadership. Secondly, I propose that we each make an individual investment in preserving our community, and the bulk of this responsibility, I believe, rests on the shoulders of my fellow youth.⁷⁴

Youth: Individual Responsibility

Let me begin with the youth. I have repeated that a drastic decline in Parsi fertility is not due to biological reasons but due to cultural and attitudinal ones. And I have further suggested that some observed demographic trends might also hold true here in the diaspora. There is a silver lining in the demographic picture which I have painted today. If falling numbers are due to cultural norms and prevalent attitudes toward marriage and family, then we can take solace in the fact that attitudes can change. The Parsis of India will continue to decline in numbers for the next few decades, but the process of decline can be stopped and eventually reversed if fertility rates increase. Both Zubin Shroff and Sayeeda Unisa, et. al., show in their studies that this is possible, though it will require anywhere from a doubling to a tripling in current fertility rates. The fact remains that it is doable and achievable. The least we can do is slow down the decline.

Marriage and having children are intensely personal and individual choices, and no outside parties should force the decision. But I would also suggest that, if you value your community, and if you wish to see Zoroastrianism survive into future generations, you should personally at least *try* to do your part to prevent its steady disappearance. We are an intensely small community, and each individual, therefore, makes a big difference. I think that there are a few steps that we can all take:

1. ***Get married:*** Paul Axelrod observes that, “Obviously, if between 16 and 20 per cent of women never marry... a substantial proportion of potential fertility is lost.”⁷⁵ As I have mentioned, recent studies indicate that the number of never-married women and men in the Parsi community could be significantly higher. Marriage is an important institution in any community and particularly so in Indian and Iranian culture. Why are we so starkly different?
2. ***Do not delay marriage until a late age:*** With all due respect, 35, 40, and 45 are very late ages at which to get married. It becomes increasingly difficult and risky to have children the longer that you wait. Parsi organizations in India have set up infertility programs for precisely this reason. If you want to have a family, it is best to start looking for a potential partner at a relatively earlier age. I fully understand that many Parsis have delayed marriage due to education and careers. As an unmarried 29-year old, I am one of them. But at some point, I strongly believe that marriage should take priority over schooling and work. It at least deserves the same level of priority.
3. ***At least try your best to find a Zoroastrian spouse:*** I definitely do not believe that intermarriage is, by itself, a deplorable thing. Like probably all of you here, I know several non-Zoroastrian spouses who have fit into the community beautifully and have unquestionably strengthened it and made it better.

⁷⁴ Dr. Homi Dhalla has given excellent suggestions for what the community needs to do in order to tackle the population problem. I direct readers to his article, “Is this the Beginning of the End? Urgent Need for a Multi-dimensional Approach to Strategies for Survival,” published in the Winter 2004 edition of *FEZANA Journal*, pp. 36-40.

⁷⁵ Axelrod, p. 410.

I do worry about current trends, however. In Bombay, intermarriage rates have burgeoned to over 30 percent; elsewhere in India; they are as high as 50 percent. We have no precise figures for the diaspora, but judging by marriage listings in publications such as *Parsiana* and *FEZANA Journal*, it is at least 50 percent. While intermarriage in Iran is negligible since it would require conversion to Islam if the future spouse is Muslim, it is definitely occurring here in the diaspora. What are the long-term implications for the community when one out of every two Zoroastrians marries a person of another faith? What is the likelihood that the children of all of these marriages are raised as Zoroastrian, leave alone grandchildren and their children? Within my own family, for example, I have a number of second cousins—and children of those second cousins—who have been lost to our community.

It seems very obvious to me that a union between two Zoroastrians is most likely to give us offspring who are raised as Zoroastrian, who are raised in our culture and our traditions. And it seems very obvious to me that we should promote such unions. I do not believe that this is a necessarily conservative viewpoint. In fact, I think that our most liberal and progressive position with regard to marriage should be to at least encourage our youth to do their best to find someone from within our community—not to harass and harangue them, but to offer positive encouragement. Over the years, I have seen many Parsi parents shrug and ask, “What does it matter?” with regard to promoting marriage amongst Zoroastrians. From my own observations, I believe that it *does* matter.

4. ***Have children:*** As I have mentioned earlier, a total fertility rate (TFR) of 2.1 is necessary for replacement of a population. The current TFR for Parsis is dipping below 1.0, so the Parsis are well below replacement level. We should promote couples having *at least* two children. In India, I think that the BPP can do much, much more to make *baug* housing accessible to young couples wanting to have families.
5. ***Raise your children as Zoroastrians:*** Please do your best to pass on your religion, tradition, and culture to a new generation. I mean this for all Zoroastrians, whether you are a man or a woman, and whether you marry a Zoroastrian or a non-Zoroastrian.

For the past century in India, it has been generally accepted that children of a Zoroastrian father and non-Zoroastrian mother can be accepted within the community, while children of a Zoroastrian mother and non-Zoroastrian father cannot. In 1908, Justice Dinshaw Davar adopted this standard in his decision in the so-called Parsi Punchayet Case, the judicial case that indirectly dealt with the admission of non-Zoroastrian spouses, such as the French wife of R.D. Tata, into the community. In explaining his definition of who was a Parsi, Davar simply declared that the Parsis were a patriarchal community such as those commonly found in the East. He did not rely upon any religious texts or precedent.⁷⁶ The question of defining who was a Zoroastrian and a Parsi came up again in 1915-18 in the so-called Rangoon Navjote case involving Bella, a child of a Parsi mother and Goan Christian father who was *navjoted*. In the original judgment, the Burma court sided with Bella’s supporters and agreed that she was a Zoroastrian, although after a round of

⁷⁶ Jesse Palsetia, *The Parsis of India: Preservation of Identity in Bombay City* (Leiden: Brill, 2001), pp. 248-49.

appeals the Privy Court eventually accepted Davar's definition.⁷⁷

My point in reciting this little bit of history is that the Parsi standard for accepting children of intermarriages derives from a British Indian legal judgment, not a particular textual injunction, and that the legal judgment was based on broad cultural precedent and was nearly challenged seven short years after it was issued. I do believe that the children of intermarried Zoroastrian women should be accepted into our faith and community, and I do not believe that a century-old legal definition should stand in the way of that happening. Our double-standard toward intermarriage is less of an issue in the diaspora than in India, although recent court cases in India might soon deal a legal blow to Davar's definition.

Adults: Organizational and Institutional Support

My suggestions for adults are fewer in number yet as crucially important. I strongly believe that organizations within our community need to make youth and youth issues one of their top priorities, with an emphasis on promoting marriage and having children. In India, the BPP has recently helped inaugurate a new group, Zoroastrian Youth for the Next Generation, or ZYNG, which appears to be quite successful.⁷⁸ FEZANA has already done a great deal to support youth efforts through organizations such as the Zoroastrian Youth of North America (ZYNA).⁷⁹ We also have NextGenNow.⁸⁰ Much more needs to be done. Here are my thoughts on where we can start:

1. ***Promote more youth interaction:*** Unlike the case in India, Iran, or Pakistan, Parsis and Iranian Zoroastrians here in the diaspora are not overwhelmingly clustered in a few select cities and neighborhoods, do not overwhelmingly attend a few select schools, and do not have facilities such as gymkhanas or clubs. As a result, regular interaction within the community becomes a much more challenging task, even in cities with bigger populations such as Houston or Toronto.

There are a few steps that we can take to promote such interaction. Local Zoroastrian associations should support and fund activities for youth and young adults. For example, Washington, DC, where I lived for three years, has a very active group of young Zoroastrians. This September, two of them got married to one another. Local groups can also organize meetings for youth in the region and neighboring associations. On the East Coast, I've often heard complaints that Zoroastrian youth in neighboring cities just simply do not know one another.

Lastly, congresses such as this one serve an important purpose to bring together Zoroastrians from around North America and the world. Indeed, I met my own girlfriend at the Dubai Congress last year. We should explore ways to hold more youth congresses, to involve more youth and to make them more accessible. We should also think of how to increase youth attendance at other congresses. A possible way to do this is to offer more scholarships to Zoroastrian youth who have never had the opportunity to attend one of these events before.

⁷⁷ Ibid., pp. 272-74.

⁷⁸ <http://www.zyng.org/>.

⁷⁹ <http://www.fezana.org/zyna>.

⁸⁰ <http://www.nextgennow.org/>.

2. ***Create infrastructure to promote marriage:*** A common complaint amongst youth is the inability to find someone within the community. Our demographic studies from India show that “inability to find a suitable match” is a significant reason for why many Parsis never get married in the first place.⁸¹

We obviously need to do something to address this concern. Here in North America, we already have several matchmakers who have brought together numerous couples. I wonder if FEZANA can help complement this by working toward creating a comprehensive Zoroastrian matrimonial website on the internet, something akin to shaadi.com or bharatmatrimony.com, except without a user fee. There are already numerous Zoroastrian matrimonial sites on the internet; however, most of them are very user-unfriendly and are quite outdated. A single, comprehensive, and regularly-updated portal would be ideal instead of several smaller competing sites. Setting up such a portal would also be a fantastic opportunity to promote cooperation amongst different Zoroastrian associations across the world, something that would link and benefit youth beyond just North America. The BPP’s ZYNG, for example, appears to have set up an online matrimonial portal. Rather than potentially reinventing the wheel, perhaps FEZANA can explore ways to partner and collaborate with ZYNG’s site in order to make it accessible to the North American community as well.

CONCLUDING THOUGHTS

I should briefly mention that, if you consider yourself to be a devout Zoroastrian, then getting married and having children is—according to custom and a plethora of religious texts—practically a religious requirement. In the Zoroastrian world view, humans are agents of Good, and, consequently, having a greater number of individuals who follow the Good Religion helps in the fight against Evil.

Consider what the great Parsi scholar Jivanji Jamshedji Modi wrote about marriage and children in the Zoroastrian tradition. Marriage, he pointed out, is favored by Ahura Mazda and encouraged by Zarathushtra. We find evidence of this in the Gathas and the Vendidad (Videvdat), amongst other texts. Marriage is a “good institution and well-nigh a religious duty, recommended by religious scriptures,” and helping to bring about a marriage is considered a highly meritorious act. We can observe this from the time of the Achaemenians, where the Greek historian Herodotus wrote about state sponsorship of marriage, down to the recent past, when philanthropists such as Jamsetjee Jeejeebhoy set up charities specifically to help poor Parsis get married.⁸² Similarly, Modi noted, having children is one of the best deeds that a person can do, something that indicated the blessings of God.⁸³ These are essential parts of our religion, a religion that is in danger of disappearing in a few generations because of low rates of marriage and childbirth. I will leave you to ponder the irony of this situation.

Time prohibits me from further discussion of how all of us can, and should, play a role in sustaining this community. Yes, there is a definite role for community institutions and organizations. Organizations like the BPP have promoted a third-child policy and have attempted to make *baug* housing more available to young couples. FEZANA can promote more youth interaction and help create a comprehensive, worldwide Zoroastrian matrimonial website.

⁸¹ Axelrod, p. 406; Visaria, “Demographic Transition Among Parsis: 1881-1971: III,” p. 1830.

⁸² Jivanji Jamshedji Modi, pp. 14-15.

⁸³ Ibid. p. 2.

Ultimately, however, it is the decisions that we, as individuals, take that make the most difference.

Let me conclude by once again emphasizing the seriousness of the demographic crisis. I have shown you how every demographic study commissioned on the Indian Parsis, who continue to constitute the biggest component of the worldwide Zoroastrian community, indicates a steep and steady decline in population due to low fertility rates. I have suggested that this might also be the case in the diaspora. It is very easy for us to outright dismiss scholarship on Parsi demographics, deny the conclusions, cling to blind faith and ignore the bad news. It is very easy for us to spin larger population figures out of thin air or spurious information. However, stubborn defensiveness and ignoring the problem will not make the said problem go away; it will only make it worse. The writing is not just on the wall; it is scribbled multiple times over every conceivable surface area. This is not the 900-pound gorilla in the room; this is a two-ton behemoth in a room of rapidly shrinking dimensions. In the 62 years that we have known about a Parsi demographic crisis, we have failed to take truly bold action, and as a result our numbers have been cut by a significant margin. In spite of studies, grand pronouncements, and regular warnings, we continue to march onward to the brink. What will you do to help stop this march?

If my paper today has served any purpose, it will make you think about what you can do. It will hopefully encourage you to involve others in the community—others who are not here today such as your family and friends, and even others who might take an apathetic attitude toward community affairs. People such as myself can talk extensively about the demographic crisis but it will make no difference if you simply forget about this problem and do absolutely nothing after you leave this room.

Above all, the demographic issue must not continue to be an item of politicized controversy. Bold action requires unity and thorough commitment—from liberals, conservatives, and all of us who fall somewhere in between. We need less divisiveness and acrimony and more cooperation and communication. We need less pointless shouting matches and reliance upon bad information and more calm, measured discussion based on the scholarly evidence at hand. We need less egotism and grandstanding and more genuine concern for the wellbeing of the community. Then, perhaps, we will all wake up to the task before us.

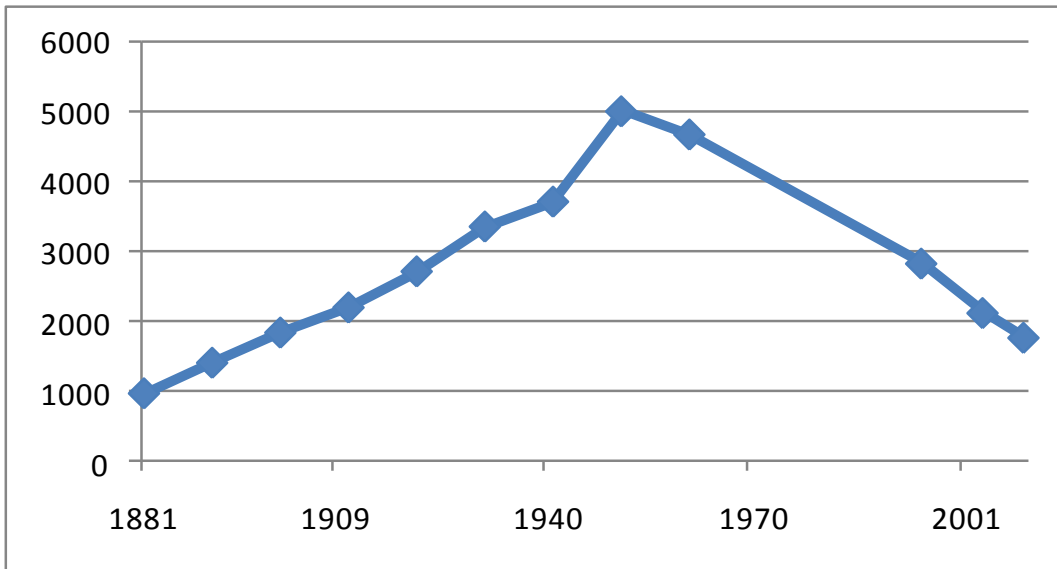
IMAGES

Image A: Iranian Zoroastrian Population Statistics

Estimate for Year	Population
1854 (Maneckji) ^a	7,000
1938 (Spuler) ^b	16,800
1960	18,000 (Guiv)^c 17,297 (Homayoun)^d
1966 (Iranian Census) ^e	20,000
1974 (Fisher) ^f	25,000
1976(Bekhradnia) ^g	30,000-36,000
1981 (Iranian Census) ^h	92,000
2004 (Firouzgary) ⁱ	24,000
2010 (Bekhradnia) ^j	12,000-15,000

^a Boyce, p. 210. ^b Kulke, p. 35. ^c Ibid., pp. 35-36. ^d Ibid. ^e Amighi, p. 267. ^f P. ii. ^g "Zoroastrianism in Contemporary Iran," p. 122. ^h Firouzgary, personal communication. ⁱ "Zarathushtis in Iran—A Demographic Profile," pp. 26-27. ^j Personal correspondence.

Image B: Karachi/Pakistan Population, 1881-2010*



*Data for 1881-1961 is for Karachi; data for 1995-2010 is for all-Pakistan.

Data from Hinnells, *Zoroastrian Diaspora*, p. 211; Cowasjee, "Demographics of Zarathushtis in Pakistan," p. 50 and personal correspondence.

Image C: Trending Toward Late Marriage

Table 2. *Parsi marriages in Bombay: 1871–1946*

Age groups	1871				1901				1946			
	Numbers		%		Numbers		%		Numbers		%	
	M	F	M	F	M	F	M	F	M	F	M	F
0–5	—	—	—	—	—	—	—	—	—	—	—	—
6–10	2	16	1.1	8.5	—	1	—	0.3	—	—	—	—
11–15	30	125	16.0	66.5	1	32	0.3	10.0	—	—	—	—
16–20	72	40	38.3	21.3	13	135	4.1	66.8	1	74	0.2	13.2
21–25	70	6	37.2	3.2	112	119	35.1	37.3	86	256	15.3	45.6
26–30	12	1	6.4	0.5	120	30	37.6	9.4	202	140	35.9	24.9
31–35	2	—	1.1	—	59	2	18.5	0.6	175	74	31.1	13.2
36–40	—	—	—	—	10	—	3.1	—	57	14	10.1	2.5
41–45	—	—	—	—	3	—	0.9	—	30	3	5.3	0.5
46–50	—	—	—	—	1	—	0.3	—	9	1	1.6	0.2
51–55	—	—	—	—	—	—	—	—	2	—	0.4	—
Total	188	188	100.0	100.0	319	319	100.0	100.0	562	562	10.0	100.0

Source: E. Kulke, *The Parsees in India* (Delhi: 1974), p. 44.

From Hinnells, *The Zoroastrian Diaspora*, p. 405.

Image D: Median Age at Marriage

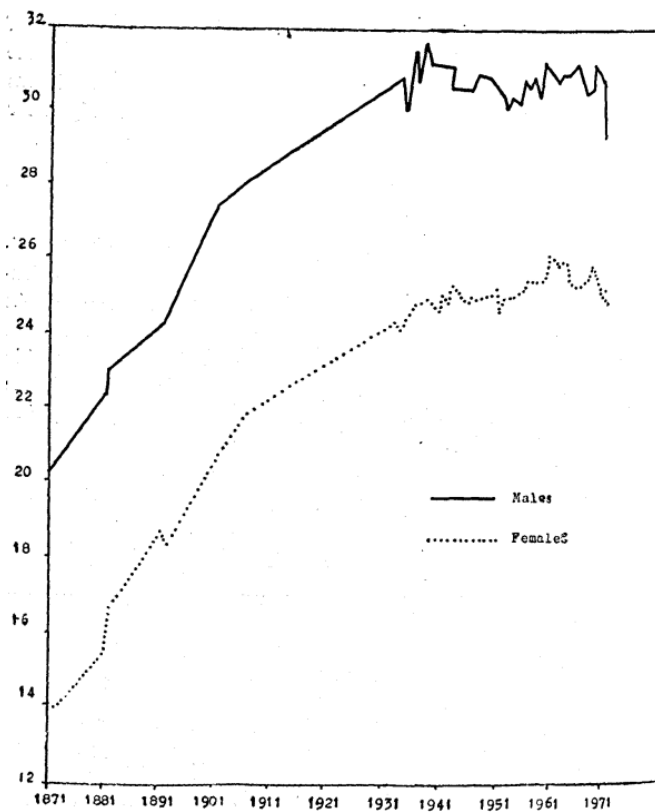


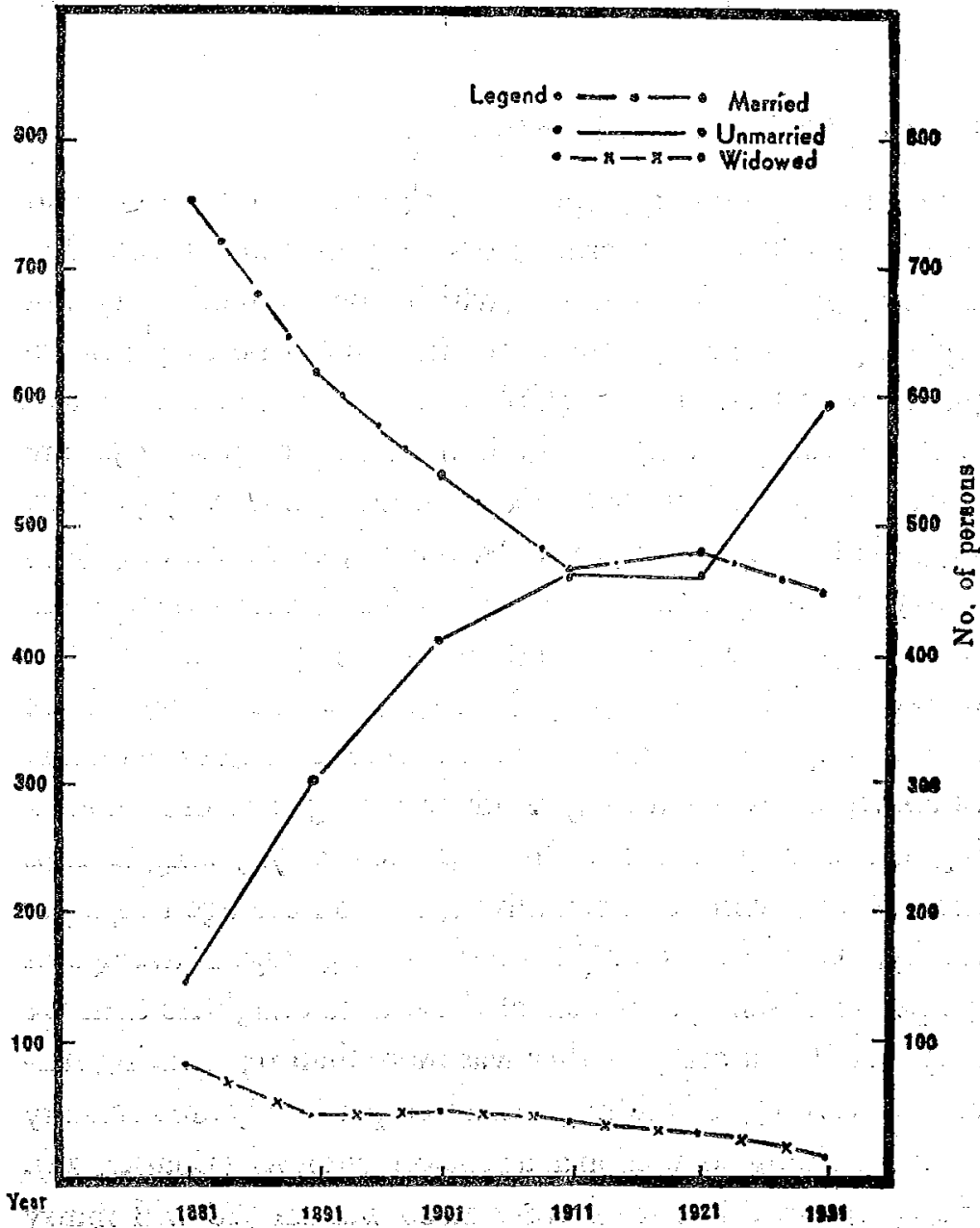
Fig. 1. Median Age at Marriage for Parsi Males and Females 1871-1971

From Karkal, "Marriage Among Parsis," p. 133.

Image E: Rising Non-Marriage, 1881-1931

Fig. 4

Married, Unmarried and Widowed Parsi Population, 1881-1931



From Desai, p. 49.

Image F: Rising Non-Marriage, 1901-71

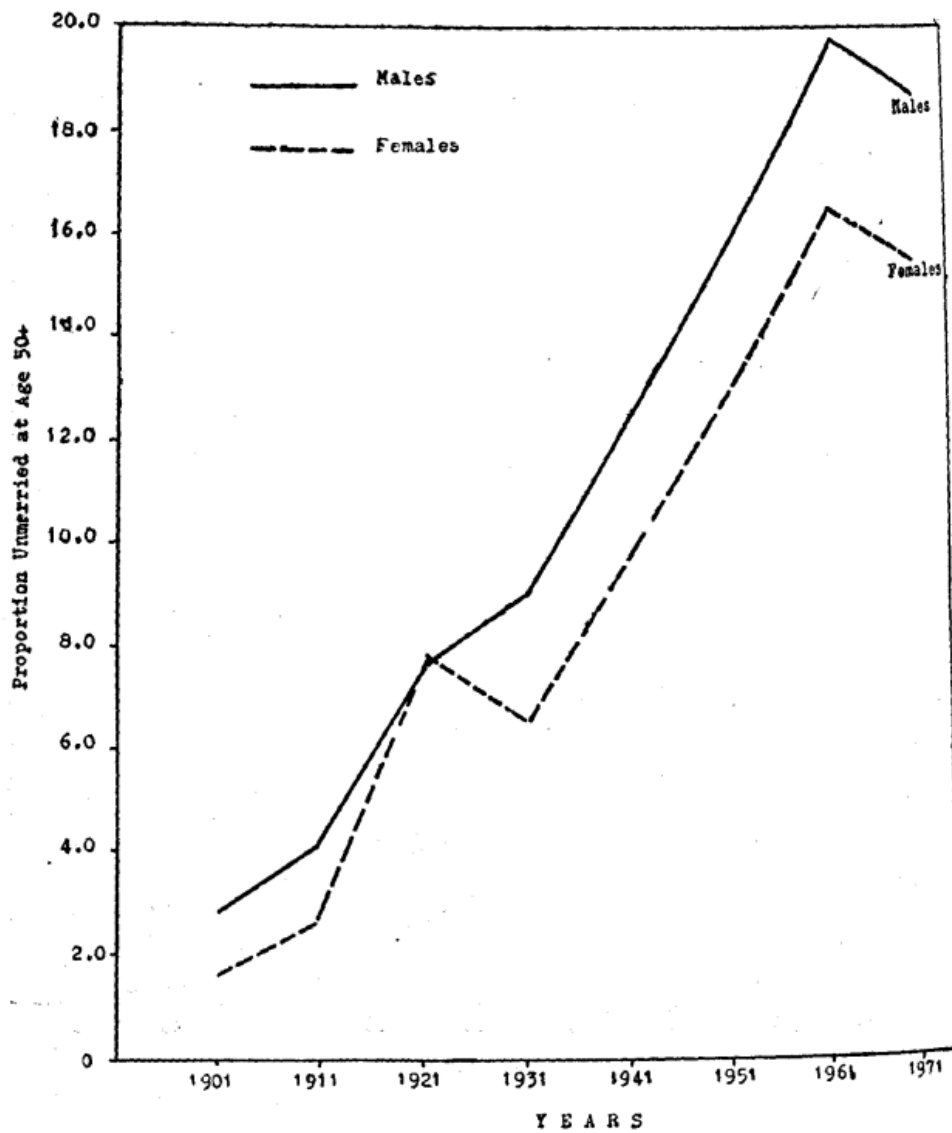
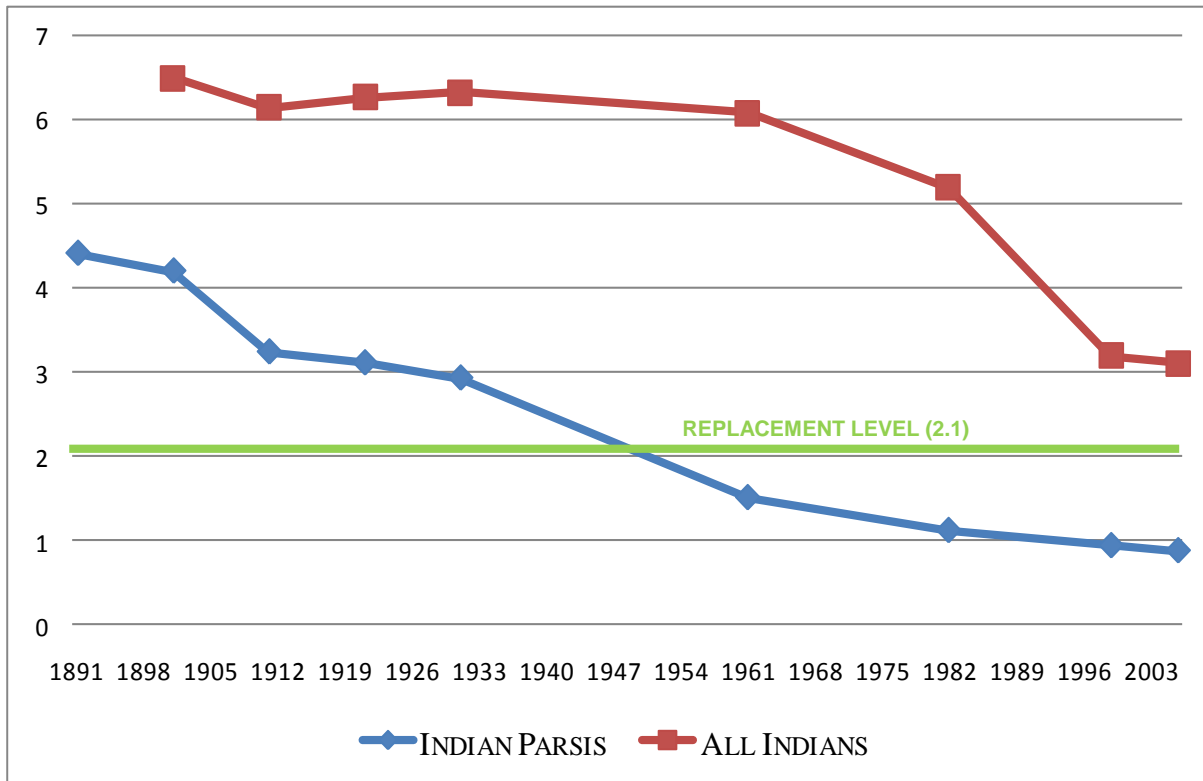


Fig. 3. Proportion Unmarried at Ages 50 and Over 1901-1971.

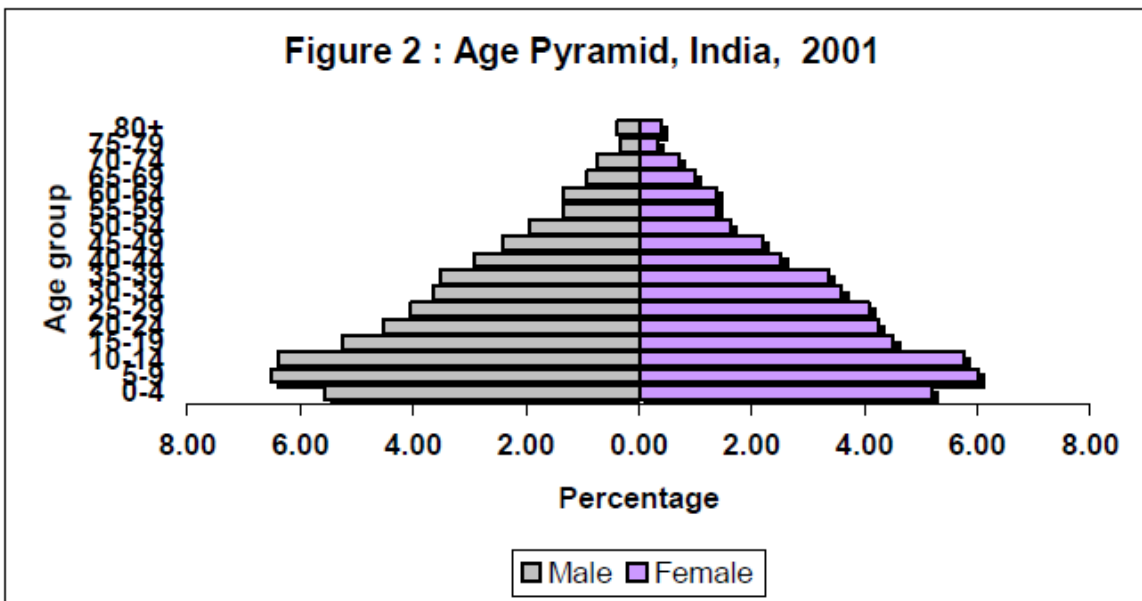
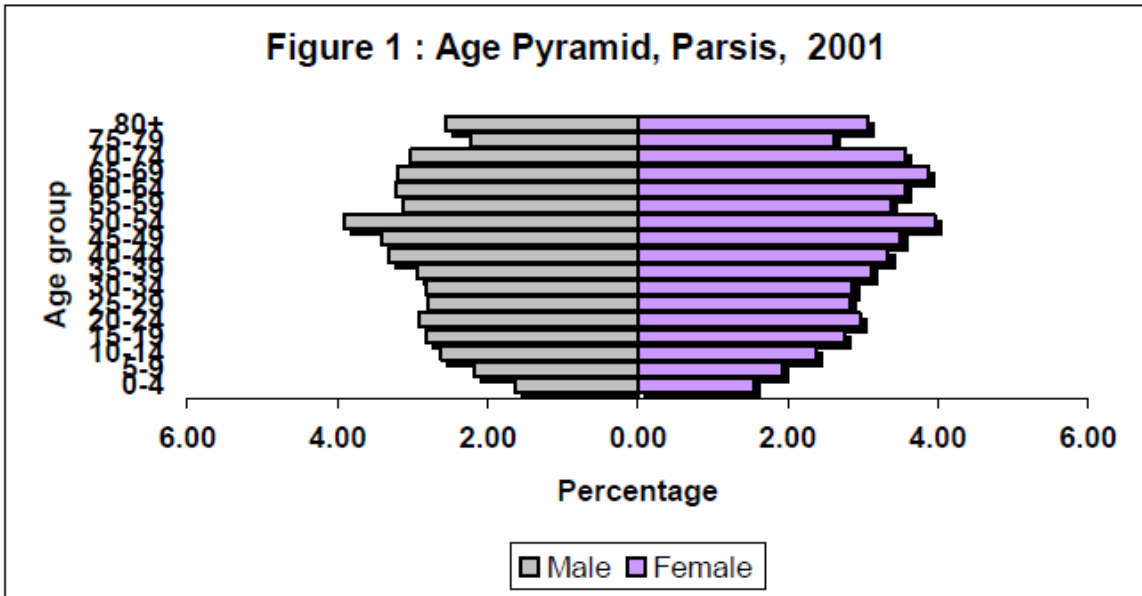
From Karkal, p. 140.

Image G: Observed Total Fertility Rate (TFR)



Data from Visaria, "Demographic Transition Among Parsis: 1881-1971: III," Unisa, et. al. pp. 10-13, and Shroff, p. 13.

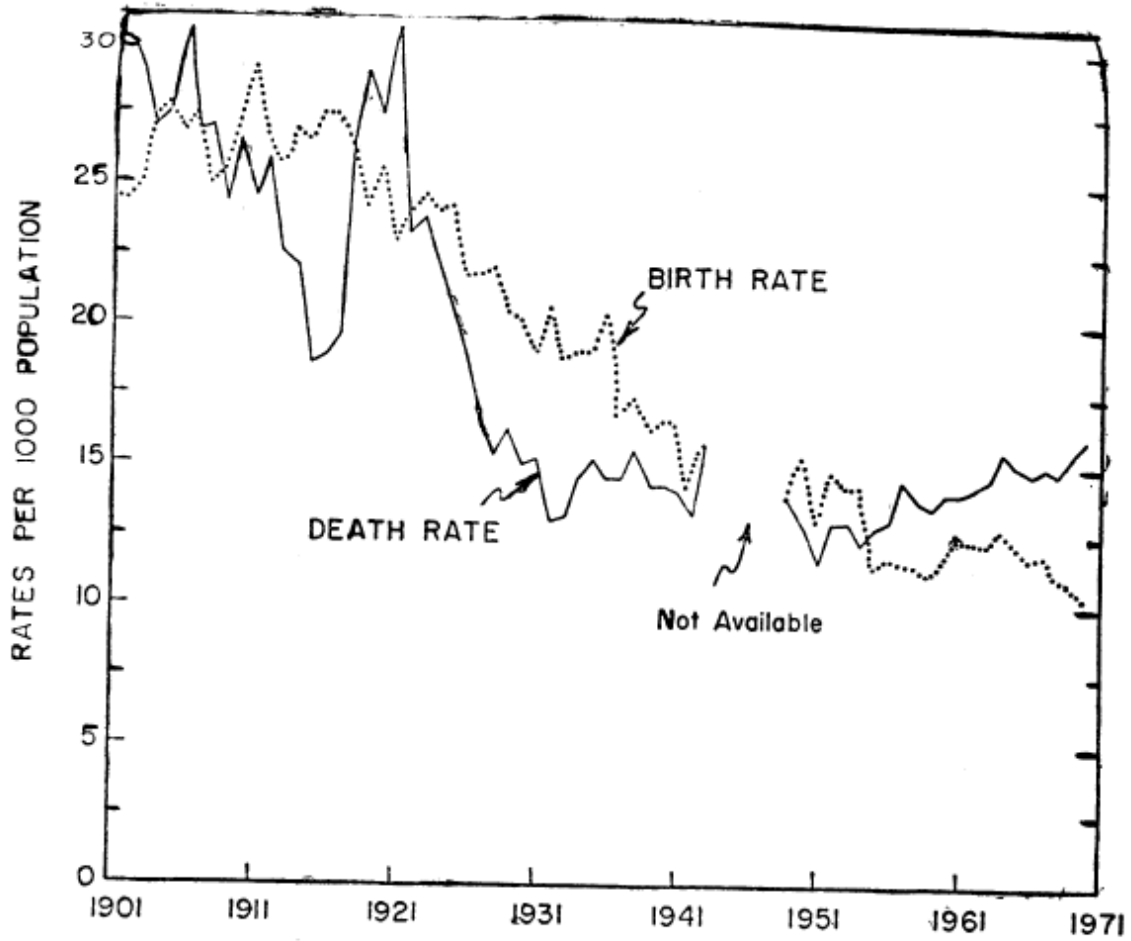
Image H: Age Distribution, Parsis vs. All Indians



From Unisa, et. al., p. 5

Image I: Birth vs. Death Rates

FIGURE 1: BIRTH AND DEATH RATES FOR PARSIS IN BOMBAY CITY, 1901-70



Visaria, "Demographic Transition Among Parsis: 1881-1971: II," p. 1729.

Image J: Excess Births over Deaths

TABLE 2.2. *BPP Review of excess of deaths over births*

Year	Births	Deaths	Excess	Year	Births	Deaths	Excess
1955	788	878	90	1978	648	1047	399
1956	817	902	85	1979	646	1084	438
1957	807	1007	200	1980	646	1084	438
1958	797	956	159	1981	650	997	347
1959	790	935	145	1982	462	983	521
1960	806	969	163	1983	486	1020	534
1961	870	971	101	1984	570	1092	522
1962	861	1001	140	1985	601	966	365
1963	844	1007	163	1986	500	1027	527
1964	893	1078	185	1987	580	974	394
1965	856	1037	181	1988	620	1048	428
1966	821	1027	206	1989	437	965	528
1967	812	1034	222	1990	220	961	741
1968	766	1016	250	1991	446	898	452
1969	730	1055	325	1992	418	1053	635
1970	699	1084	385	1993	447	1055	608
1971	692	1035	343	1994	412	998	586
1972	706	1057	351	1995	367	936	569
1973	677	1020	343	1996	380	989	609
1974	643	979	336	1997	321	903	582
1975	576	1010	434	1998	305	996	691
1976	520	1018	498	1999	276	928	652
1977	636	1059	423				

From Hinnells, *The Zoroastrian Diaspora*, p. 48.

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