Demographic Predicament of Parsis in India

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The Parsi community in India is perhaps the only community outside Europe to have experienced dramatic population and fertility decline. This indicates that a country that is experiencing high population growth can also have communities that have different kinds of demographic patterns. Parsis are a small but prosperous religious community that maintained some sort of social isolation by practising endogamy and not accepting any new converts to their faith. Their population started declining since 1941 and the explanations that are put forth pertain to the issues of under-enumeration, fertility decline and emigration. In this paper, the relative importance of these factors in the light of 2001 Census is examined. This study demonstrates that the unprecedented fall in fertility among Parsis is the prime contributor to its declining population size. Also in this paper, the population of Parsis is projected up to the year 2051.

INTRODUCTION

Parsis are perhaps the only community which had experienced dramatic population and fertility decline outside Europe (Coale, 1973; Coale and Watkin, 1986). This indicates that in a country that is experiencing high population growth can also have communities, which amazingly have different kinds of demographic pattern (Axelrod, 1990; Lorimer, 1954). This is happening due to the fact that wide cultural differences exist among the communities within a national territory (Kulke, 1974).

Parsis are a small but prosperous religious community of India, which reached a peak of population of about 114 thousand in 1941. The recent census enumerated Parsi population about 69 thousand in 2001. The unprecedented fall in Parsi population has drawn the attention of researchers, policy makers, and Parsis themselves. For a declining population of this magnitude, demographers are anxious to know when the size is going to be halved and the timing by which a population is likely to be extinct. Thus, the main objective of this paper is to examine the trend of fertility, mortality and emigration among the Parsi population and project its population by 2050. For this purpose data are taken from different censuses, and surveys conducted by the International Institute for Population Sciences (IIPS), Mumbai (Karkal 1982) and Tata Institute of Social Sciences (TISS), Mumbai (Singh and Gowri 2000).

Parsis are the followers of monotheistic form of religion known as Zarathustra found 2500 years ago in Iran (Persia). They migrated to India from their motherland after the Arab victory over last ruler of Sassanid dynasty around 640 A.D (Briggs, 1852; Pithawalla and Rustomji 1945). They first landed at around 100 miles North of Bombay, a place called Navasari in Gujarat and from there they moved to other cities in India. With the rise of political power of European trading companies in India by nineteenth century they acquired prominent positions in economic, educational and political life of the country. By the end of nineteenth century, 85 per cent of the Parsis community was urbanized, and only 15 per cent lived in the villages (Desai 1968; Bose and Kullar, 1978).

In India, Parsis maintained some sort of social isolation by practising endogamy and not accepting any new converts to their faith (Visaria, 1974a; Alexrod, 1980). However, they have selectively adapted themselves to social milieu of Gujarat by accepting the language and the dress of the region (Visaria, 1974a).

SIZE, GROWTH AND AGE-STRUCTURE

Table 1 presents the size of Parsi population from 1901 to 2001. It may be noticed that during 1901 to 1941, there was a slow but steady increase in Parsi population. Although there occurred several famines and epidemics during this period, Parsis were least affected by these natural calamities as most of them were living in urban area (Visaria, 1974a). After 1941, Parsi population declined. The figures of 1951 census were likely to be affected by the partition of the country due to exclusion of Parsis who remained in the city of Karachi or other parts of Pakistan (including present day Bangladesh). But even after considering the population of Parsis in Pakistan, in the Indian subcontinent as a whole, the growth of Parsi population during 1941-1951 was not more than two percent (Visaria, 1974a). This shows that the effect of fertility decline on the growth of Parsi population started much before than the fertility decline experienced by the average Indian population in the mid 1970s.

Table 1: Size of Parsi population, 1901-2001, India

Year	Persons	Male	Female
1901	94,140*	-	-
1911	100,096*	51123	48973
1921	101,7780*	52355	49423
1931	109,329*	56366	52963
1941	114,890*	58248	56642
1951	111,791	56137	55654
1961	100,772	49425	51347
1971	91,266	44803	46463
1981	71,630	35328	36302
	(**86,013**)**		
1991	76,382	37736	38646
	(77,353)**		
2001	69,601	33949	35652

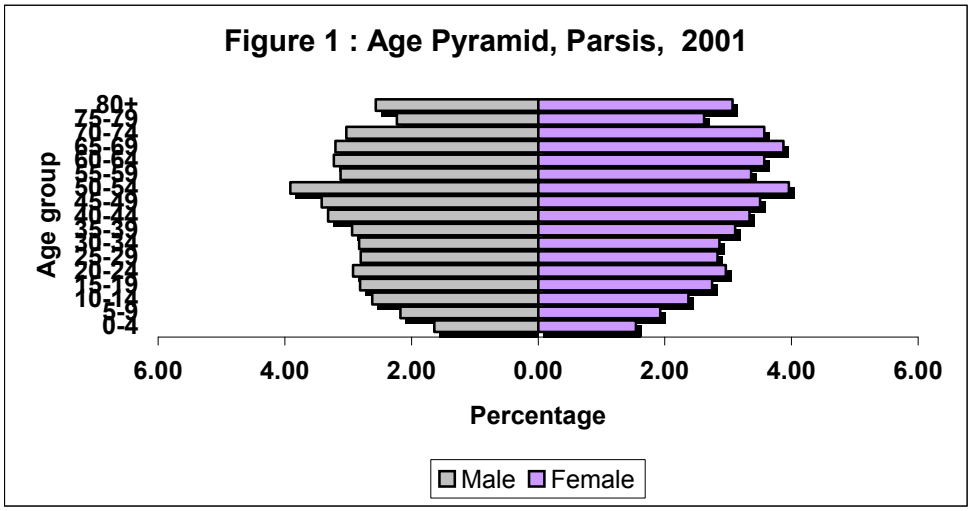
* Undivided India

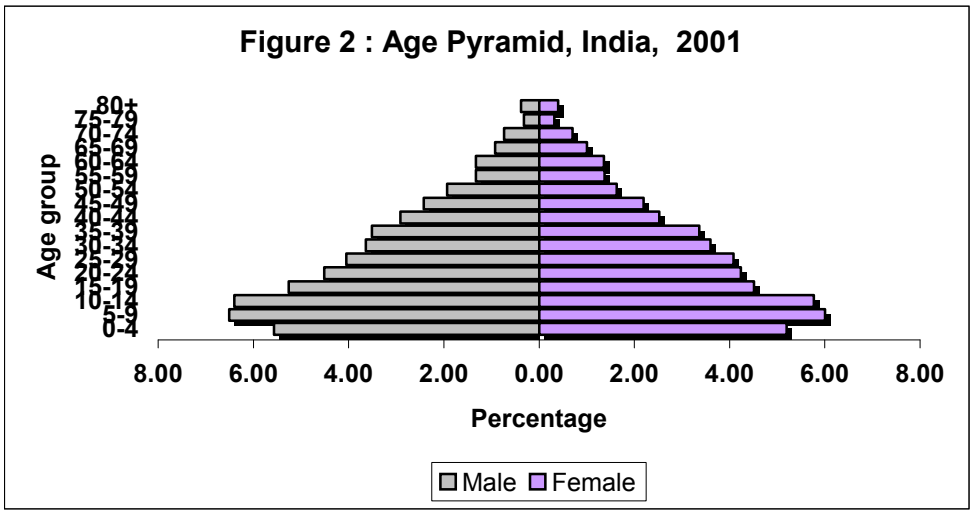
** Estimated based on reverse survival method using the age-group 0-9 of 2001 census.

Table 2. Decadal growth rate of population in India and among Parsis

Decade	All India	Parsis
1951-1961	20.40	-9.86
1961-1971	24.80	-9.43
1971-1981	24.66	-21.52
		(-5.75)
1981-1991	23.86	6.63
		(-10.07)
1991-2001	21.34	-8.88
		(-10.02)

Figures in parenthesis are estimated growth rates

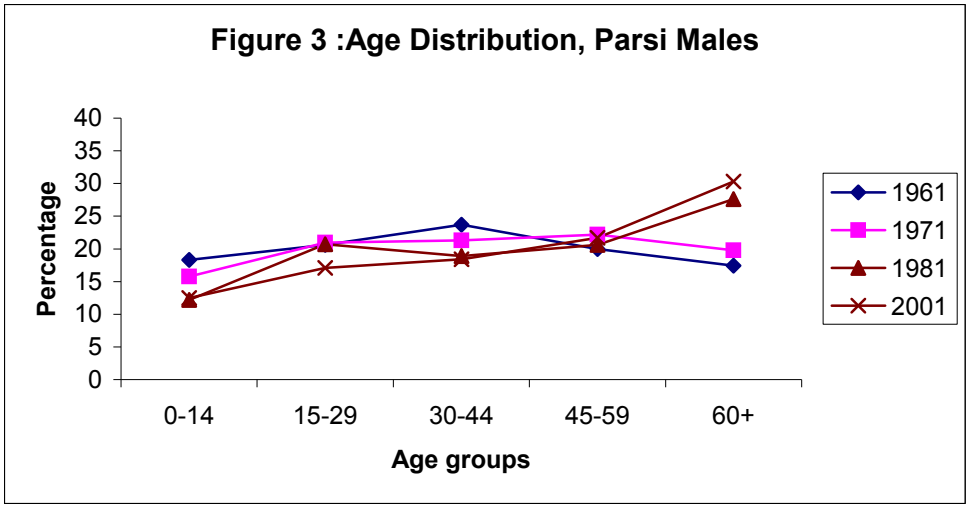


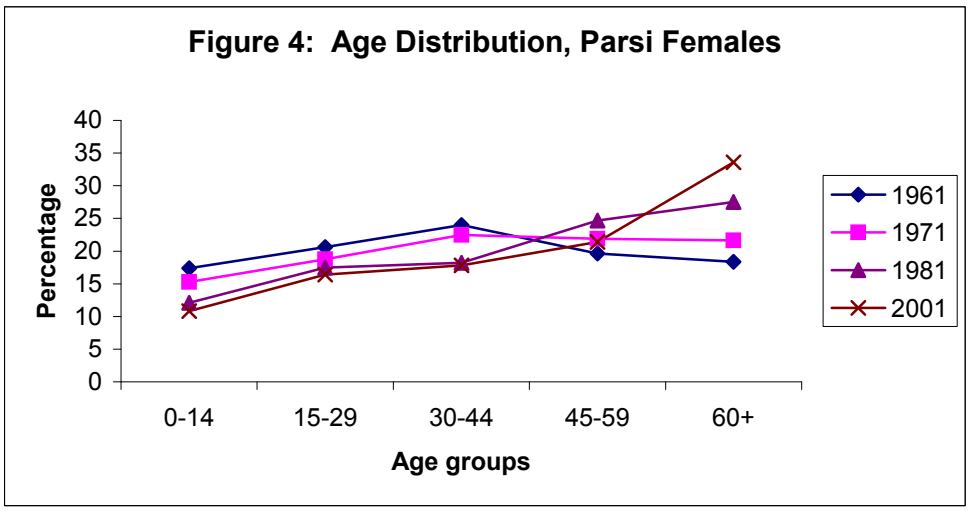


It may be seen from Table 2 that during 1971-81, a drastic decline in Parsi population is noticed followed by an increase during the decade 1981-91 and a decline again during 1991-2001.

The age structure of Parsis since the early twentieth century had undergone a significant change, but it was similar to that of the England and Wales (Chandra Sekar, 1948). In 40 years time from 1961 to 2001, the percentage of population in the age 65 and above got doubled. As a result, the percentage of aged 65 years and above among Parsis (24.2 per cent) was found higher than several developed countries like Sweden (17.4 per cent), Spain (16.5 per cent) and Japan (16.1 per cent) around 2001 (UN 2002). Further, the proportion of child population among Parsis (12.3 percent below age 15 in 2001) is also very low. By the year 2001 one in every eight Parsis was a child under age 15, whereas every fourth Parsi was an aged 65 years and above. The present age structure of Parsis population as shown in figure 1 (also see figure 2 for all India) is not possible without a very low fertility level. On the other hand, a high proportion of aged population shows the possibility of high death rate depleting the population if not replaced by high birth rate.

On the other hand, to what extent the census figures are affected by under enumeration and higher emigration? The likelihood of emigration depleting Parsi population cannot be ruled out. Usually emigration takes place from the age groups 20-49 and if there is a heavy emigration it is likely to affect the age distribution of population. When we examine the age distribution of population aged 15-45 among Parsis we find no significant distortions in the age pattern over a period of time from 1961 to 2001 (see figures 3 and 4). Thus, migration does not appear to be a reason for the decline in Parsi population in the recent past. Nevertheless, it cannot be denied that the non-availability of data on migration from direct sources precludes an exact assessment of the contribution of emigration to the decline of Parsis population in India.

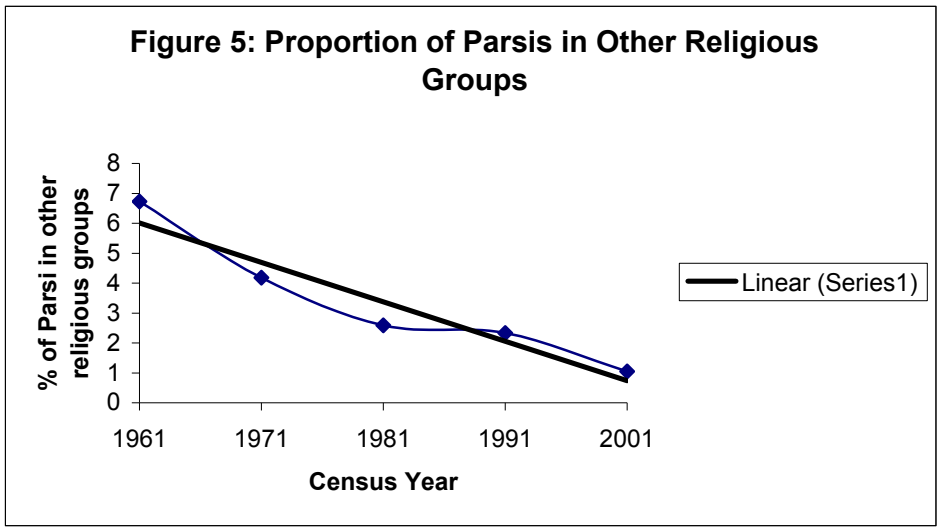




A question is always raised 'does census count Parsi population correctly?' or to what extent Parsi population is being affected by under enumeration or misclassification of Parsi population? So far under enumeration is concerned it may not be important under the assumption that it is likely to affect equally the successive censuses as well. However, we have reason to believe that more recent censuses have been able to cover Parsi population more accurately than earlier censuses because of the attention paid by Parsi community to the act of census taking. The prominent Parsi members, the Parsi Panchayat[1], and Registrar General of India made appeals to all Parsis by making announcement in daily new papers, and in the Parsi publications like *Parzor* [2] and *Parsiana*[3] for extending full cooperation to the census operation during 2001 census[4]. Enumerators were also trained to record different names of Parsi community through

which they identify themselves (Banthia, 2003). The different names used by Parsi community for themselves are given in Appendix- A).

Due to small size, Parsis formed a part of 'other religious category' in census tabulations. Misclassification of Parsis into some other religious category may be another aspect affecting the census enumeration. We have tried to estimate the proportion of Parsis to the population enumerated in other religious category and presented in figure 5 for the censuses 1961 to 2001. The proportion of Parsi in other religious groups continued to decrease until 1981 census but experienced a rise in 1991 census. Thus misclassification may have affected census enumeration prior to the census of 1991.



Note: Indian population is classified in seven broad religious categories namely Hindus, Muslims, Christians, Sikhs, Buddhists, Jains, and Other. Parsis fall in the Other Religious category.

A close examination of Parsi data from 1981 census on other religious communities reveals that Parsis were also enumerated under the religious categories of 'Gujarati', 'Irani' and 'Persian', and the total of these sub-categories was up to 2874 (Registrar General of India, 1984). In case of 1991 census these sub categories were not reported in other religious groups, but most likely included under 'Zoroastrian' category

(Registrar General of India, 1995). Thus, we have reason to believe that census figures of 1991 and 2001 are least affected by misclassification of Parsi population. Further as special attention has been given to 2001 census by the census officials involving Parsi Panchayat and influential persons within the community, we believe that 2001 census figure on Parsi population is closer to reality. Hence, we have tried to reverse survive the 2001 Parsi population to estimate the population in earlier censuses up to 1981. We find that our estimate for 1991 is close to the census enumeration, but there is a large undrerenumeration in 1981 census (i.e. 14 383). Even the estimated population size of Parsi population of 86,013 in 1981 is lower than the enumerated population of 91, 266 in 1971. Thus, only the magnitude of the decline was different and the dwindling population size of Parsis since 1941 continues to be corroborated. In the last two decades i.e. 1981-91 and 1991-2001, the Parsi population has declined by 10 percent in each decade (see Table 2).

NON-MARRIAGE & LATE MARRIAGE

The incidence of non-marriage is much higher among Parsis (Karkal, 1982; Billimona, 1991; Singh and Gowri, 2000). A survey in Mumbai shows that a significant proportion of households was headed by unmarried males (9 per cent) and unmarried females (18 per cent) (Karkal, 1982). The marital structure of Parsi population shows a deviation from universally observed pattern of marriages in India (Karkal, 1975). The primary reason for non-marriages and late marriages is due to the concern of the young males and females to have an acceptable minimum standard of living for family formation (Visaria, 1974c). As such, Parsis women are more concerned about their status and career. They are highly educated and work out side their homes. Marriage seems to be the second priority. Another peculiar feature of Parsi community is the lack of family or peer pressure to get married at a reasonable age (Bhavnagri, 2005; Gould, 1980; Ketyauntt, 1982). It is interesting to note that age at marriage among Parsi women is about 27 years and among men it is about 31 years. One out of 5 males and one out of 10

females remained single even by age 50 compared to almost universal marriages among the Indian populations.

It is worthwhile to note that Parsis vigorously retained their religion and distinctive form of dress; however, they embraced western behaviour and values in other domains. Their modernized values promote them to have marriages by their own choice; on the other hand parental and familial constraints and obligations are still formidable in the community and create a contradiction that is difficult to overcome. In the bargain, many of them remained never married. Inter religious marriages are also prevalent among Parsis, but they do not accept new converts to their faith. This has influenced the size of population among Parsis (Visaria, 1974a, Axelrod, 1980).

Table 3: Mean Age at Marriage (years) in India and among Parsis

Year	**Parsis**		**All India**	
	Male	Female	Male	Female
1961	31.1	26.8	21.3	15.9
1982	30.1	27.1	23.5	18.4
1999	30.6	26.8	24.9	19.7

Mean age at marriage for Parsis refer to Greater Mumbai only and data are taken from 1961 census, IIPS survey (Karkal 1982) and TISS survey 1999 (Singh and Gowri 2000). All India figures are estimated based on information taken from 1961 and 1981 censuses and from NFHS-2.

FERTILITY

As birth statistics are not accurately available from direct sources, indirect estimates of fertility based on child woman ratio (CWR) are derived using census and survey data. The CWR 0-4/15-49 among Parsis was 182 per 1000 women in 1961, which declined to 134 children per 1000 women in 1999 (see Table 4). This gives a clear indication of spectacular decline in the birth rate among Parsis in India.

Total fertility rate (number of children born per woman) estimated indirectly using child woman ratios during 1980-82 was 1.12 among Parsis; about four children lower than an average Indian (see Table 4). After 20 years in 2000, a further decline was noticed as it dropped to below one child (0.94). The Parsis who were residing in the state of Maharashtra had the lowest fertility compared to those living in Gujarat and other parts of the country (see Table 5). Since majority of Parsi population (nearly 80 per cent) is living in Maharashtra, their lowest fertility has contributed to the overall decline in Parsi population in India.

Further, crude birth rate (CBR) was also estimated using age distribution of 2001 census data. In order to estimate CBR, the population in age group 0-9 was reverse survived. It was estimated that CBR was 9.4 per 1000 population during 1986-1991, which declined to 7.8 during 1991-1996, and further down to 6.4 births per 1000 population in 2000-2001.

Table 4: Estimated total fertility rates and child woman ratio (0-4/15-49) in India and among Parsis

Year	Parsi		All India	
	CWR	TFR	CWR	TFR
1961	182	1.51	659	-
1982	166	1.12	545	5.2
1999	134	0.94	211	3.2

Data for Parsis refer to Greater Mumbai only. Parsi data are from 1961 census, IIPS survey (Karkal 1982), and TISS survey 1999 (Singh and Gowri 2000). All India data refer to censuses of 1961, 1981 and 2001 respectively. TFR for Parsis belong to Greater Mumbai only because age and sex structure data was not available to the researchers. The estimation of TFR is based on child woman ratios employing the methods suggested by Rele (Rele 1967). All India figures for 1982 refer to 1980-82, and 1999 refer to 2000 from SRS.

Table 5: Estimated total fertility rate and child woman ratio of Parsi by major states of their concentration, 2001

Parsis	CWR (5-9/20-49)	TFR(1994)	CWR (0-4/15-49)	TFR(1999)

All Parsis	181	1.23	149	1.0
Parsis in Maharashtra	173	1.17	140	0.91
Parsis in Gujarat	206	1.41	186	1.27
Parsis in Rest. of India	224	1.53	218	1.5

TFR is estimated using child woman ratio based on Rele's method (Rele 1967). It is notable that TFR for Spain is 1.2, Japan is 1.4 and Sweden is 1.6 in 2000.

Along with late marriage, voluntary and involuntary childlessness is another important factor for the lowest low fertility among the Parsi community. One out of every ten Parsis women is childless in the age –group 45-49 (Karkal 1982; Singh and Gowri 2000), compared to one among every 20 women childless for the total Indian population as per 2001 census. The Parsi Panchayat is aware about this problem and is currently running fertility clinics to treat the cases of infertility among them.

In nutshell, the marriage behavior of the community combined with historical and cultural factors are jointly responsible for a tremendous decline in fertility among Parsis parallel to any European community in the recent past (Cleland and Hobercraft, 1985).

MORTALITY

Downward trend in mortality among Parsis started prior to 1881. Parsi death rate was low in comparison to all India estimate during series of famines and plague epidemics although they could not have totally escaped their effect (Desai, 1948; Visaria, 1974b). The death rate among Parsis in Bombay city fluctuated between 12 and 14 up to 1951 and moved slightly upward since then. The infant mortality was close to 30 per 1000 live births by late 1960s, a level that was attained by the United States only around 1962. Visaria (1974b) believes that further reduction in death rate has nearly exhausted due to fast ageing of Parsi population. The life expectancy at birth (e_0^0), derived from survey data using information on children ever born and surviving, shows that life expectancy was nearly 70 years during 1972-77 and infant mortality rate was between 25-29 per 1000 live births which declined to 12 by the year 1980. Similarly, the life expectancy is estimated to be about 80 years at the close of twentieth century.

The estimates of fertility and life expectancy presented above show that Parsis are a population characterised by a very high death rate (close to 15 per 1000 population compared to 9 at all India level around 2000) as well as one of the lowest low fertility in the recent decades. The fertility level (TFR 1.2; and CBR 9 per 1000 population around 2000) is much below the replacement level fertility (TFR 2.1), and ageing of the population is (24 per cent aged 65 plus) very acute. In such a demographic situation deaths are very likely to exceed births and the dwindling of the population is a demographic reality.

FUTURE SCENARIO

Chandra Sekar (1948) projected Parsi population from 1941 to 2001 based on birth and death rates derived from Parsi registration data in Bombay city. He assumed that if rates were constant over this period, the size of Parsi population would be 89,218 in 2001. But, the projected figures by Chandra Sekar were found much higher than the actual count reported in 2001 (69,601). This shows a spectacular decline in Parsi population than what was anticipated earlier.

Table 6: Projected Parsi Population ('000)

Year	Projection I	Projection II	Projection III
2001	69	69	69
2011	61	61	62
2021	53	54	57
2031	46	47	53
2041	39	40	49
2051	32	34	47

Projection I – TFR will decline from 1.0 in 2001 to 0.75 in 2051
Projection II- TFR will remain constant at 1.0 from 2001 to 2051
Projection III- TFR will increase from 1.0 in 2001 to 1.4 in 2011, 2.1 in 2021 and remain constant at 2.1 afterwards. Expectations of life for all projections are same; for males it will increase from 75 to 83 and for females from 76 to 85 during 2001 to 2051.

We also made an attempt to project the Parsi population up to 2051 using 2001 census as base population. The purpose of projection is to show how Parsi population with different fertility scenarios and constant mortality pattern is likely to change in future. Component projection method is used, and for this input of fertility is TFR, and mortality is life expectancy at birth (e_0^0), and the influence of migration is ignored. Three types of projections were made under different scenarios of fertility. For the first type of projection, it was assumed that TFR would decline from 1.0 in 2001 to 0.75 in 2051 if current rate of decline in fertility continues. In the second projection, TFR is considered constant at 1.0 from 2001 to 2051 assuming that there will be no further decline in fertility. In the third projection, it is assumed that TFR will increase from 1.0 in 2001 to 1.4 in 2011, to 2.1 in 2021, and will remain constant at 2.1 afterwards (this scenario is possible only when efforts will be made by the community to increase their fertility and proportion of married women). The life expectancy representing mortality scenario is same in all three projections i.e., for males it will increase from 75 to 83 years and for females from 76 to 85 years during 2001 to 2051. In 2051, projection –I showed a decline of about 53.6 percent i.e., from 69000 in 2001 to 39000 in 2051 (see Table 6). The figures in second scenario (projection –II) revealed comparatively slower decline than that of the projection-I. In other words, the pace of decline is observed at the rate of one per cent per year up to 2051. The projected figures under third scenario are still showing a decline in spite of the assumption of increasing fertility. However, the pace of decline is reduced from one per cent in second scenario to 0.6 percent per year in third scenario in the next 50 years by 2051. Thus the projected figures of Parsis population in this study show what choices the Parsi community have to make in order to continue their existence.

Notes

1. The Parsi Panchayat is the official governing body of Parsis: there is panchayat in each city with a large Parsi population (cities with smaller Parsi population elect Anjumans) whose functions are to

maintain religious building such as fire temples, and towers of silence for the disposal of dead to administer community charities and school, and to maintain records of local Parsis.

2. Parzor is a project initiated by Parzor Foundation and UNESCO, New Delhi to create awareness among the Parsis about their own situations and heritage (see www.unescoparzor.com/project.htm accessed on 28th January, 2007).
3. Parsiana is a monthly publication on Parsi issues published by Parsiana publication Pvt. Ltd, Mumbai.
4. Lt.Gen (retd.,) A.M. Sethna, Parsi Zoroastrian Member of the National Commission for Minorities appealed to every Zoroastrian household during 2001 census "'Please do not shut your door and turn away the Census enumerator when he/she comes to your house (they will be a school teachers or government servants). Ask for their identification card and invite them in. Answer the census questionnaire accurately, please help the Census enumerated to identify yourself as a Zoroastrian in the column under Religion in the Census form".

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Appendix A. :Reported/ Recorded Returns in the Column of Parsi Religion in 2001 Census

Sr. No.	Return	Place	Sr. No.	Return	Place
1	Jarthosti	DNH	11	Zaratrashtra	MUM
2	Jorastriyan	MP	12	Zorostrian Parsi	MUM
3	Zourastrian	AP	13	Parsi Irani	MAH
4	Zorostrian	KERALA	14	Jorastriyan	MAH
5	Irani Parsi	MUM	15	Jurashan	MAH
6	Irani Zorastri	MUM	16	Nanavat	MAH
7	Jarthrosti	MUM	17	Zorostrian Irani	MAH
8	Prasi	MUM	18	Zoraost	MAH
9	Jurasil	MUM	19	Irastian	MAH
10	Hindu Parshi	MAH	20	Irthust	GUJ

Source: Banthia (2003)