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Toward a Historical Demography of India: Some Preliminary Findings*

I. Introduction

THE pursuit of historical demography is in its infancy in India. Neither the demographers nor the historians seem to take keen interest in the historical aspects of India's population. The reasons for this lack of interest are not far to seek. After gaining Independence, the attention of the Indian government and the scientists has been directed towards the various aspects of the social and the economic development of the country. The population scientists are so much preoccupied with studies on family planning that other aspects of the demography of India receive scant attention. The situation is made worse by the fact that data are hard to come by.

Estimates of birth and death rates utilized in India's plans are derived from sample surveys or Sample Registration Scheme (initiated in 1965). Thus even now the sub-continent lacks in reliable registration of vital events. For the closing decades of the last century onwards, the Indian birth and death rates

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have been estimated on the basis of stable population analysis. The age distributions obtained from the census data, subject to various adjustments for heaping, underenumeration etc., showed remarkable stability over time. The stable population technique and its modified form for destabilization, if necessary, reveal that the birth rate in the Peninsula is of the order of 40-42 per 1000. We know now, from the Sample Registration Scheme, that the birth rate circa 1972 was around 36-38 per 1000 indicating a small decline in the last several years.

The basic assumptions of the stable population analysis arc worthy of mention here. For mathematical convenience, it is postulated that :

(a) the population is closed to migration;

(b) the age specific fertility rates remain the same over time;

(c) the age specific death rates do not change over time.

From these conditions, it is shown that at a far distant point of time, the age distribution attains a stable state and is independent of the initial age distribution, being uniquely determined by the mortality and the fertility rates only. The virtual stability noted in the Indian age distribution is apparent. Even so, it cannot be presumed that the vital rates were not at all changing on a temporal plane. This applies to both the 19th century India and to the 20th century. Only a historical demographic analysis would be able to throw light on the constancy or the changing nature of the vital situation on the sub-continent and also on its sensitivity to economic and social factors.

The primary purpose of my project is to generate a time series of national and if feasible, regional, birth and death rates for India in the 19th century from available sources of data. The second objective of this study is to look for the existence of sensitivity to socio-economic factors at an early point in time. This would then help to uphold or rejecl the contention of this author[1] and Srikantan and Ray Chowdhary.[2]

1. Krishnan, P. (1975), "Sensitivity of fertility to indicators of modernization in India", paper presented at the annual meetings of the Canadian Association for South Asian Studies, Edmonton.

2. Srikantan, K. S. *and* Ray Chowdhary *(1973),* "Inter-state fertility differentials in India", in I. Hussein (ed.) -Demographic Analysis, Bombay : Somaiya Publications.

II. Literature Review

I do not wish to give you the impression that little is done or has been accomplished on India's historical demography. Das Gupta[3] has presented estimates of population for the Indian Union from ancient times onwards. He adjusts the population figures provided by various writers (e.g. Pran Nath[4], Moreland[5]) by scaling them down to the present geographical boundaries of India. A similar attempt is noticed in Sen Gupta[0] *et al.* and Das Gupta and Roy[7] for Pakistan and Bangladesh respectively. Davis[8] in his magnum opus adjusts the census returns and the statistics available in Playfair[9], M'Culloch[10], and the British India publications[11] for securing the total population of undivided India and the native states. Russell[la] also has drawn our attention to the population figures from the Mohenjodaro times onwards. He seemed to get his inspiration from the accounts of the Chinese travellers to India. Appendix table I gives us an overview of India's population from 300 B.C. to 1871 A.D.

Regular decennial censuses commenced in British India and the native states from 1871 onwards. Because of the differential coverage in the various censuses, Davis has corrected the earlier census totals assuming that the 1931 and 1941 censuses are good, from the coverage point of view. Appendix table 2

3. Das Gupta, A. (1972), "Study of historical demography of India", in D. V. Glass and R. Revelle (eds.), Population and Social Change, London : Harvard University Press.

4. Pran. Nath (1929), A study in the economic condition of ancient India, London : Royal Asiatic Society.

5. Moreland, W. H. (1920), India at the death of Akbar, London : Macmillan.

6. Sen Gupta, S., M. Ghosh, A. K. Datla, and A. Das Gupta (1970), "Estimates of 19th century population of Pakistan", Bulletin of Socio-Economic Research Institute, 4.—Quoted in Das Guha Roy.

7. Das Gupta, A. and S. Guha Roy (1976), "Population estimates for Bangladesh: the use of a specific transitional model", Population Studies, 30, 15-30.

8. Davis. K. (1951), The Population of India and Pakistan, Princeton : Princeton University Press.

9. Playfair, Wm. (1801), The Statistical Breviary, London : J. Wallis *et al.*

10. M'Culloch, J- R. (1834), A dictionary, practical, theoretical and historical, of commerce and commercial navigation, London : Longman, Rees *et al.*

11. Great Britain (1870), statistical abstract for the several colonies and **other possessions of the U. K.,** 1854-1865, sessional papers, Cmd 146, Sixth number: H. M. Stationery **Office.**

Great Britain (1869), Parliamentary papers, statistical tables relating to the colonial and other possessions of the U. K., part 13, 1867, London : H. M. Stationery Office.

12. Russell, J. (1972), "Population of Ancient India". Golden Jubilee volume, Journal of Indian History.

shows the corrected and the uncorrected census totals for the period 1871-1941.

Davis' work, while presenting historical data on fertility, mortality, and migration from censuses for the latter part of 19th and early 20th century, confines itself to the inter-relationship between the social structure and the demographic processes. Utilization of data from alternate sources for generating estimates of vital rates has not been attempted. Unlike the Western countries, India has no parish-type registers for the majority of its population, the Hindus. At least for the Christian segment of the population, there exist some useful registers.

In recent years, topics which are of some interest to historical demographers have found favour with a few researchers. Pakrasi[13], for instance, has dug into government documents maintained by the district authorities in the 19th century to present a picture of the changing incidence of female infanticide in North-west India. Viswa Nath[14] suggests that female infanticide can be understood only in the total institutional framework of Lewa Kanbis of Gujarat. Desai[15] corroborates the Moreland estimate of the population of Akbar's empire. He uses the total land revenue in an ingenious way to come up with his estimate.

"Dividing these figures into the total land revenue of 516 crore dams, e obtain population estimates of 6.49 and 8.83 crore, or let us say, 6.5 and 9 crore for Akbar's empire. In view of the evidence we have presented earlier to show that the standards of food consumption were substantially higher than now, we consider that the actual population was nearer the lower limit of 6.5 crore.

The closeness of this figure to Moreland's for Akbar's empire, including Gujarat and Bengal—7 crore, is striking .... On Moreland's assumption of unchanged standards of consumption, our estimate would exceed 9 crore."

Social history of ancient, medieval, and 19th century India is discussed by

13. Pakrasi, K. (1970), Female Infanticide in India, Calcutta : Editions India.

14. Viswa Nath (1973), "Female infanticide and the Lewa Kanbis of Gujarat in the nineteenth century", Indian Economic and Social History Review, 10, 386-404.

15. Desai, A. V. (1972), "Population and Standards of Living in Akbar's Time", Indian Economic and Social History Review, 9, 43-62.

Apte[18], Goshal[17], Raghuvanshi[18], and others. In these accounts, an assessment of age at marriage and the influence of caste structure in the day to day life of the people are depicted. Some regions in India do have old records written in local languages. Discovering them is not easy; if found, they can reflect on the socio-demographic aspects of India's population. Avalasker[19] has a full length book on Nagaon village of Kolaba district. The data are from Marathi records and pertain to the period 1760-1840. We get a picture of the occupational distribution and the family structure from these records. Nagaon, a predominantly Brahmin village, had some distinct social features. The Brahmins did not confine to their traditional occupation. They were also active cultivators. The families, according to Avalasker, do not seem to be of the joint-family type. From the census of 1940-41, it would appear that the average number of persons per house was about 4, a very moderate family size.

In the area of mortality, Klein's[c] reports complement Davis' analysis. Klein assesses the determinants of mortality with the help of government documents and concludes that the government policies had failed in combating malaria. A recent addition to the growing literature on the historical demography of India is Siddiqui's[21] study of the geographical distribution of Moslems in the Indian sub-continent.

Historical demographic analysis from parish registers is a rare venture among the Indian population scientists. I have seen only two studies. Srivastava[82] has collected data from one parish in Goa and has presented us with a short

16. Apte, V. M. (1965), "Social and Economic Conditions" in : R. C. Majumda-r *et al.* (eds.), The Vedic Age, Vol. I, History and Culture of Indian People, Bombay : Bharatiya Vidya **Bhavan.**

17. Goshal, U. N. (1964), "Social Conditions" in R. C. Majumdar *et al.* (eds.), The Classical Age, Vol. Ill, Bombay : Bharatiya Vidya Bhavan.

18. Raghuvanshi, V. P. S. (1969), Indian Society in the Eighteenth Century, New Delhi: Associated Publishing Co.

19. Avalasker, S. V. (1966), "Some notes on the social life in Nagaon in the early 19th century", Indian Economic and Social History Review, 3, 169-173.

20. Klein, I, (1973), "Death in India, 1871-1921", Journal of Asian Studies, 32, 639-659.

Klein, I. (1972), "Malaria and Mortality in Bengal", Indian Economic and Social History Review ,9,132-160.

21. Siddiqui, N. A. (1976), Population Geography of Muslims in India, New Delhi : S. Chand and Co.

22. Srivastava, H. C. (1972), Birth and Death Rates in Goa -An Appraisal of Parish Registers, Bombay : International Institute for Population Studies.

time series of birth, death, and marriage rates for the 19th century period. Obviously, these estimates refer to the Christians (mostly Catholic) of Goa, a Portuguese colony till 1962. Regional differentials within the same religious group can be hypothesized. Even though Srivastava does not employ family feconstitution, the estimates prepared by him for at least one segment of India's population have to be thought of as a pioneering attempt in Indian historical population studies. The other attempt is by Nevett[23] who employs the marriage registers of a few parishes in Tamil Nadu to investigate into the mean age at marriage. These data refer to the recent points in time.

IH. Major Sources of Data

The following are the major sources of data for historical population studies as far as India is concerned :

1. Censuses.
2. Missionary records and reports.
3. Other records (e.g. diaries, family histories, literary sources).
4. Parish registers and ecclesiastical records of Christian populations.
5. Hindu temple priest records.

•*Censuses.* The most important source of data is clearly the censuses of British India and native states till 1941 and the all India censuses from 1951 onwards. The earliest census noted is that of Delhi in 1847. Various native states and presidencies had local censuses before 1871. The amount of data derivable before 1881 is not large. But it \\ould be possible to have data on population distribution by age, religion, sex, marital status etc. from 1881 onwards. Professor Shah of Delhi University reports that the original filled-in questionnaires for some village in Gujarat for the I9th century are available. But for most of the country, these may no longer exist. Possibilities of exploiting the questionnaire for family structure and occupational mobility analysis are rather small.

The census data are beset wit*h* a lot of defects. The geographical coverage is usually not exhaustive. Age data are full of heaping and mis-statements. The

23. Nevett, A. (1964), Population : Explosion **or** Control London **: Geoffrey-Chapman Ltd.**

enumeration is by and large incomplete. Underenumeration of children, females, and even of the total population is not unknown. In regard to data on religion, the Jains and the Hindus are often mixed up leading to undercounting of the Jains. These defects can be taken care of and the data adjusted for purposes of analysis.

Missionary Records. British India was open to the activities of various missionaries from the west. The missions, sponsored by the L.M.S., the C.M.S., and the U.S.P.G. which have London H.Q., had turned in reports on their activities to their parent offices. These reports contain data on child baptisms, marriages and burials on a mission to mission basis and on a regional basis. The CMS reports do not have information on marriages and burials. These data can be employed to generate estimates of fertility and mortality for the major mission districts. Some adjustment has to be made for infant mortality among the Christian, the converted Hindu, population.

Parish Registers. Christianity had long established in India even before the arrival of the Portuguese. The arrival of the Portuguese and their forcing of the Roman Liturgy and other forms of persecution led to several quarrels between them and the Syrian Christians of Kerala who date themselves back to St. Thomas. It seems that records were not maintained in the churches as a resolution in 1559 in Diamber called for maintaining baptismal and burial records. My efforts to get old parish records before 1850 were not fruitful. But Srivastava was able to find data on baptisms, burials, and marriages for 19th century Goa. I have been able to secure baptismal data for three old churches in Kerala for a fifty year span from 1850-1900. These churches do not have registers of burials and marriages for the 19th century. But all the churches in India have good records for the last fifty years. Thus 20th century historical demography could be done better with church records in India.

The churches maintain a family register for the recent years. These registers contain useful demographic information on the members constituting the household. I have been able to get one such register for the latter half of the 19th century. This alone has been able to speak for the family structure and age at marriage among the 19th century Kerala Christians.

Temple Priest Records. The Hindus do not record their marriages, births, or deaths. But every Hindu is keen to visit some of the major pilgrim centers (e.g. Benaras, Hardwar, Gaya, Mathura) and perform religious rites in honour of

their dead. The priests, from generation to generation, record and keep the details of those who visited them. A Hindu goes only to that priest who served his forefathers. Goswamy[24] while on his hunt for genealogies of painters, stumbles on these records as a powerful source material for the writing of the social and economic history of India.

Other Records. Diaries, family histories, literary products, etc. can beputto use in reconstructing demographic history of the Indian people. Writing of family histories is not common among the Hindus and even among the Christians. I have been able to get hold of only one family history after several enquiries. Genealogies of the Rajahs and the Maharajahs are available. They can present only a lopsided picture of the life in olden days in the country. Literary sources seem to be the best and they have been exploited by alJ Indologists and social historians. Most of the studies on social history during Akbar's time are based on FazaFs Ain-i-Akbari. Apte, Goshal, Kapadia,[25] Raghuvanshi, and others make use of Sanskritic writings, and letters, and memoirs written by western visitors to India.

IV. Some Findings

I shall present here a few of my findings. These are preliminary and would be subject to revision in due course of time. These results are for the Christian population of India.

Fertility Family Size. First we present here some data on average family size for the Catholics of Changanacherry Vit-arate. The data have been gleaned from the Catholic Almanac for 1898 (see Appendix table 3).

Between 1898 and 1907, one notices a steep increase in the average family size. An explanation for this change would be possible only if we know more about the outbreaks of famines and epidemics. Travancore and Cochin (now constituting Kerala) had not known any famine or bad scarcity conditions in the 19th century unlike other states in India. But outbreaks of small pox and cholera epidemics were as common in Travancore and Cochin as in other parts

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24. **Goswamy, B. N. (1966),** " **The** records kept **by** priests at **centres of pilgrimage as a source of social and economic** history", Indian **Economic and Social History Review, 3, 174-184.**

25. **Kapadia, K. M.** (1966), Marriage and Family **in India, Bombay : Oxford University Press.**

of India. I have not been able to get at fuller details on these epidemics for a satisfactory explanation of this change in family size. Since life expectancy had not changed very much during this period, the increase in family size has to be explained through some non-demographic factors. Economic conditions have to be looked at in some detail for developing an explanation.

Direct and indirect measures of fertility are possible from the missionary statistics. For instance, for the Madras District of the USPG for 1855, we have the following :

BAPTIZED PERSONS :

Men	4455
Women	5050
Children	7371
Proportion of children	$\frac{7371}{16,876} = 43.9$ per cent

UNBAPTIZED :

Men	1631
Women	1678
Children	2515
Proportion of children	$\frac{2515}{5824} = 43.3$ per cent

Infant baptisms in 1855 759

Birth rate from baptisms : $\frac{759}{16,876} \times 1000 = 45.2$ per 1000

For 1854, these are respectively :

$$\frac{6954}{16,100} = 43.2 \text{ per cent}, \quad \frac{2434}{5650} = 43.1 \text{ per cent},$$

and

$$\frac{719}{16,100} = 44.7 \text{ per 1000}$$

We may summarize the data for Madras Mission in Appendix table 4.

Baptisms of infants were performed in the first 2-4 weeks after the birth. This means that the estimated birth rates need correction for high infant mortality; The estimates for small missions are highly unstable. After developing estimates for each mission district, I hope to make adjustments for infant mortality. But even without such a correction, the baptismaE rate and the indirect measure of fertility seem to be consistent for all the years with the exception of 1865. Fertility is indeed high.

APPENDIX

TABLE 1—ESTIMATES OF INDIA'S POPULATION, 300 B. C.-1871 A.D.

Date	*Population (in millions)*	*Source*	*Annual Growth Rate*
300 B.C.	100-140	Pran Nath	
1600 A.D.	100	Moreland	
1800 A.D.	120	Playfair adjusted	.09
1834	130	M'Culloch	0.24
1845	130	,, ,,	—
1855	175	Statistical Abstract of U.K. Possessions adjusted	2.97
1867	194	Parliamentary Papers—adjusted	0.86
1871	255	Census (corrected)	6.84

(SOURCE : Davis, K., p. 25)

TABLE 2—CENSUS RETURNS AND ESTIMATED POPULATION, INDIA 1871-1941

(in millions)

Year	*Census Population*	*Estimated Population*
1871	203.4	255.2
1881	250.2	257.4
1891	279.6	282.1
1901	283.9	285.3
1911	303.0	302.98
1921	305.7	305.7
1931	338.2	338.2
1941	388.9	388.9

(SOURCE : Davis, K., p. 27)

TABLE 3—AVERAGE FAMILY SIZE, CHANGANACHERRY VICARATE 1898 AND 1907

Region	*Family Size*		*Families*	
	1898	*1907*	*1898*	*1906*
Changanacherry	3.9	5.3	4050	3309
Anakallumical	3.4	5.6	6124	4426
Kallurkatu	3.7	5.4	4214	3124
Muttachira	3.4	5.3	8365	6530
Palai	3.9	5.4	4477	4230
Kottayam	—	4.9	—	1740
Kadathuruthi	—	5.3	—	1209

SOURCE : Computed from Catholic Church Almanacs.

TABLE 4—MADRAS MISSION; DATA ON BIRTH RATE AND PER CENT CHILDREN

Year	*Baptized % Children*	*Unbaptized % Children*	*Birth Rate (From Baptisms)*
1863	41.7	40.7	44.2
1864	42.1	40.7	40.8
1865	41.8	39.7	29.5
1867	41.5	39.5	39.2

SOURCE : Computed from missionary reports.