

POPULATION GEOGRAPHY IN INDIA

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Given the task of examining the status of Population Geography in India, I define my assignment as a review of the contemporary work being done in this branch of our discipline with a focus on the most recent. The job is to identify the stage of its research transition in terms of quantity, quality, and variety of the work being accomplished. An implicit objective is to enunciate an agenda for future research.

It is impractical to have an access to all what is being published on the theme. Equally difficult is it to render a perusal of all what is available. One can take, at best, note of some more visible strands. The present exercise follows that style. It has no pretension of being comprehensive. It does take into account all that is important and representative, selective though.

The review poses the following questions for their resolution :

- (i) Has Population Geography in India acquired a distinctive character of its own or does it remain under the influence of the Western format?
- (ii) Is it comprehensive in treatment of various themes ? Does it cover all parts of the country ? What is its productivity and diversity ?
- (iii) Has it matured in terms of conceptualisation and methodology ? Can one mark different phases in its

development? What is its state-of-the-art?

- (iv) Where does Population Geography stand vis-a-vis other branches of Indian Geography? Has it improved in its position over time? Which are its research frontiers?
- (v) What was the response of the Indian Population Geography to the contemporary economic, social and political issues? Did it contribute to policy formulation?
- (vi) How is Population Geography placed in the wider arena of Population Studies in India ? Could it make an impact ? Was it successful in establishing the relevance of 'spatial perspective' in our understanding of demographic patterns and processes ?

A confident answer to above questions required a systematic perusal and evaluation of relevant literature and information. The next step was to present the main findings in a structured manner. Accordingly, the present discussion here is organised in six sections. The first describes the sources of literature which were tapped to build the information base. The second surveys the prevailing trends in Population Geography at the global level. The third is a review of the reviews of Indian Population Geography. The fourth places Population Geography in the overall framework of Indian Geography. The fifth offers a critical

analysis of the conceptual and methodological aspects of research publications in the field. The final section sets forth the research agenda. Main messages of the article are underlined in the concluding paragraphs.

SOURCES OF BASIC INFORMATION

A variety of source material was located and consulted to arrive at an authentic review of Population Geography in India.

First, all the review articles on Population Geography published in the journal *Progress in Human Geography* were studied closely. The purpose was to discern the status of Population Geography in international geography and to identify its major thrusts and concerns. This permitted a placement of the Indian Population Geography in the international context.

Secondly, a specific note was taken of a recent review article by Kosinski and Kurji (1993). The article is a comprehensive treatise on the matter. It examines Population Geography at the global level.

Thirdly, the available reviews on Population Geography in India (Gosal : 1972, 1983, 1984, Gosal and Chandna : 1979; Chandna : 1991 and Mehta and Ram : 1996) were scrutinised. This represented the assessment of the progress made in this field over time. The objective was to acquaint ourselves with the trends and gaps, as identified, in the progress of Indian Population Geography.

Fourthly, the available geographical journals of the country, such as *Annals of the National Association of Geographers, India*, (New Delhi), *Indian Geographical Journal*, (Madras), *Geographical Review of India*, (Calcutta), *Transactions of the Indian Institute of Geography*, (Pune), *National Geographical*

Journal of India, (Varanasi), *The Geographer*, (Aligarh) and *Population Geography*, (Chandigarh), were scanned for articles on Population Geography. This gave an idea of the frequency, nature and methodology of population research. In addition, two published bibliographies by Dutt and Bhattacharya (1985) and Sinha (1986), and the references listed in doctoral dissertations, were also gone through.

Fifthly, two representative journals, namely *Annals of the National Association of Geographers, India* and *Population Geography* were adopted for a systematic analysis of the articles published therein. The first journal has the largest circulation and the second is the only one specialising on the theme of Population Geography in India. Every paper relating to Population Geography was tested on a variety of parameters, including its nature (empirical, theoretical or applied), objective stated, question raised, hypothesis formulated, type of data (primary or secondary) used, scale of study (macro, meso or micro), and the kind of techniques (quantitative, cartographic or others) employed. Three tables, based on this information, were prepared.

Sixthly, a request was made to all the Geography Departments at various universities to send information on the work accomplished in the field of Population Geography at their centres. About fifteen departments responded. The responses gave a fairly good idea about the nature of doctoral work at different places.

Finally, the author (Krishan : 1989) had himself attempted a paper on the 'new themes in population research'. This had sensitised him to the variety of multidisciplinary work being done in population studies in India. This helped him in taking a wider view of the issues concerned.

We may indicate here as to what could not be consulted. This includes the reports of the

research projects, sponsored by the agencies like the University Grants Commission, Indian Council of Social Science Research, and National / State Governments, which normally remain unpublished and research papers published by population geographers in journals of allied disciplines. To that extent, the present review is inadequate.

POPULATION GEOGRAPHY : A GLOBAL VIEW

An assessment at the international level is that Population Geography has produced a few studies worthy of wider attention (Nash : 1994, p.386). A recent review of population studies makes a mention of just one population geographer (McNicoll : 1992, p.15). The basic reason is that we, as geographers, lack the consistency and the rigour of sustained research on a specific theme (Simmons : 1992, pp.335-56).

Indeed the performance evaluation of Population Geography has varied over time. Writing in the first volume of the *Progress in Human Geography*, Clarke (1977, p.137) observed that, over the past one decade, Population Geography has not evolved as rapidly as one might have envisaged. The old textbooks in the field survive without any worthwhile challenge from anything innovative. The relevant research output showed a greater interest in themes, such as residential mobility, social segregation and human welfare, which overlapped with work in urban geography and social geography.

In 1984, Clarke strikes a different, distinctly optimistic note. He underlines that Population Geography has not only diversified in terms of themes and methodology but has also got a wider acceptance in scholarly circles. He estimated that more than one tenth of all published geographical research output falls

under the category of Population Geography (Clarke : 1984, pp.1-10).

By the beginning of nineties, a lively debate had crystallised about the future directions for Population Geography (Findlay : 1993, p.79). One group represented by scholars like Willekens (1991, pp.22-23) emphasised that Population Geography should grow in the nature of spatial demography or geodemography or demogeography. The other group, including Zelinsky (1991, p.9), sets a wider canvas for Population Geography covering questions like globalisation of economy and terrestrial ecosystem vis-a-vis population growth. The first approach is likely to make Population Geography more sophisticated and scientific, and thereby enhance its acceptability in the wider sphere of academics. The second was assessed as more stimulating because it embraces issues of societal relevance but as lacking a strict adherence to the purpose and spirit of the field.

In the same vein, Kosinski and Kurji (1993, pp. 197-198) observed that while the tendency toward greater specialisation in geography favoured the emergence of Population Geography, the increasing emphasis on an interdisciplinary approach is not without its implications. This may make it difficult for population geographers to retain their specialism. On the positive side, this may intensify the demand for population geographers in joint research projects.

REVIEWS ON INDIAN POPULATION GEOGRAPHY

The first trend report on Population Geography in India by Gosal (1972) observed that the Department of Geography at Panjab University was the first to promote this branch of geography in the country through both research and teaching. Gosal's (1956) doctoral dissertation

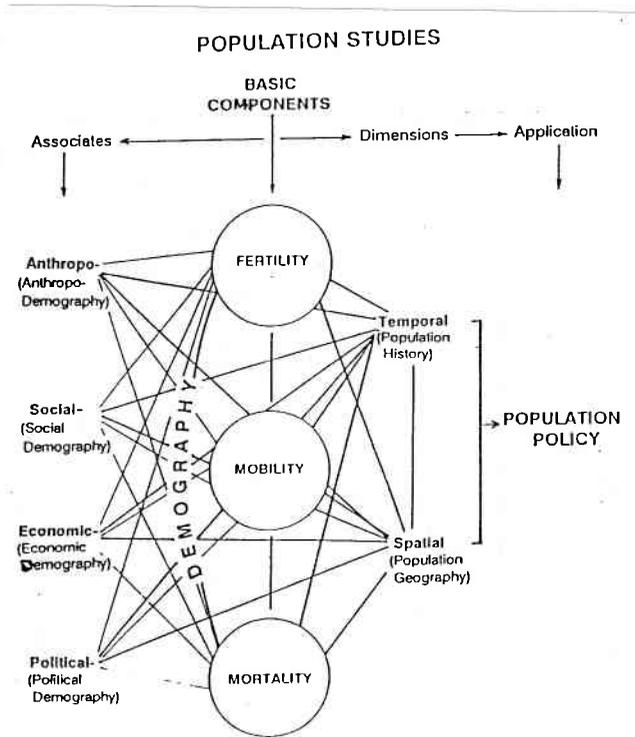


Fig. : Population Studies

on *A Geographical Analysis of India's Population* provided the initial framework for research. Textbooks by Clarke (1965), Zelinsky (1966), Trewartha (1969), served as the base for teaching. The review pointed out that Population Geography was yet to grow in its coverage of all important aspects of population. The potential areas of research were indicated as population pressure on physical and social resources, special population groups like scheduled castes and tribes, and population study of border areas of various linguistic states.

Some positive gains were noted by the second review of Population Geography in India (Gosal and Chandna, 1979). Not only was a wider attention to various population characteristics noted but also an improvement in methodology through use of quantitative techniques was underlined. The growing interest in population-

resource studies was described as a welcome development. Several parts of India, however, remained uncovered by population geographers. The ready availability of the Census of India data was noted as having a dual effect: on the one hand, it catalysed a large quantum of research work; on the other, it caused a neglect of field work.

A continuation of the same trend is highlighted in his third review by Gosal (1983). The quantum of work at different spatial scales acquired momentum. Many gaps, however, remained unfulfilled. There was a complete neglect of research on vital rates, age structure, marital status and ethnic composition. Little effort had been made toward resource / population regionalisation of India. Above all, much of the research was noted as lacking problem-orientation. It remained descriptive of the various population patterns.

Gosal's (1984) final review of Population Geography in India was more revealing. He observed that population geographers have generally gone by empirical approach; there is a need for cultivating theoretical approach also. His assessment was that actual accomplishments are incomplete in terms of both spatial spread and content. This is not unexpected in the case of a growing subdiscipline. Chandna (1991), however, strikes a somewhat optimistic note. He opines that Population Geography in India has made a remarkable progress in both quantitative and qualitative terms during the last three decades. He states that a beginning has already been made in theoretical approach to the study of population parameters, fieldwork is gradually becoming popular, and studies of deprived sections, such as scheduled castes and tribes, has caught the attention of geographers. In his concluding remarks, however, he observes that Population Geography in India has not yet divorced itself from empirical approach nor are its accomplishments complete in terms of area and content.

In their review of Population Geography in India, Mehta and Ram (1996) deal with the theoretical, methodological and thematic aspects of research in this branch of our discipline. They observe that 'conceptual issues generally occupy a backseat in geographic research formulations and research designs lack proper problematization and rarely succeed in arriving at generalisations'. They add that 'the geographic investigations have mostly concerned themselves with the study of individual attributes *per se* in the areal differentiation paradigm and have grossly neglected the study of linkages between population and development'.

The above discussion brings us to the question : Where do we stand ? The above reviews were

based largely on a perusal of available literature. These, by and large, did not conduct a systematic analysis of the various parameters of this literature itself. We have tried to make an effort in this direction.

POPULATION GEOGRAPHY IN INDIA

Till 1995, 233 papers have been published in the *Annals of the National Association of Geographers, India*, since its inception in 1979 (Table 1). Forty five or about 19 per cent, were shared by Urban Geography, 33, or around 14 per cent by Agricultural Geography, and 29, or about 12 per cent, by Physical Geography. *Population Geography* had a score of only 13 or nearly 6 per cent of the total . Other geographical journals in the country give almost the same proportion to this branch of our discipline.

Sinha (1986, pp.xxvii-xxvix) provides a comprehensive listing of about 4500 research papers published in 17 different geographical journals in India from the time of their first publication till 1985. It is found that 6.3 per cent of all entries belong to Population Geography, 20.5 per cent to Physical Geography, 11.9 per cent to Agricultural Geography, and 10.8 per cent to Urban Geography. The frequency of papers on Population Geography was comparatively higher in the *Geographical Review of India*, *Indian Geographical Journal*, and *National Geographical Journal of India*.

The number of doctoral works in Population Geography at various Indian universities is considerable, by now. One can discern a regional pattern in the nature of work being accomplished. At Panjab University, the initial tendency was to study small areas in terms of their comprehensive Population Geography by using villagewise data. The interest later graduated to national / regional level studies on

Table 1

**Thematic Classification of Papers
Published in the Annals of the National
Association of Geographers,
India:1979-1995**

S. N.	Theme	Number of papers
I	Physical Geography	29
	Geomorphology	11
	Climatology	10
	Oceanography	5
	Biogeography	3
II	Economic Geography	41
	Agricultural Geography	33
	Marketing Geography	4
	Transport Geography	2
	Manufacturing Geography	2
III	Settlement Geography	45
	Urban Geography	42
	Rural Geography	3
IV	Social Geography	36
	Medical Geography	16
	Population Geography	13
	Cultural Geography	7
V	Political Geography	9
	General Political Geography	6
	Administrative Geography	3
VI	Development Geography	13
VII	Ecological Studies	12
VIII	Regional Geography	7
IX	Historical Geography	1
X	Geographic Thought	9
XI	Geographic Methodologies	26
XII	Applied Geography	5
Total		233

individual aspects of population, such as, urbanisation, occupational structure, literacy and scheduled caste population. The work has largely been on empirical lines. Comprehensive Population Geography studies have been popular at Varanasi also. These normally cover individual states by using district level data.

At the Jawaharlal Nehru University, New Delhi, the research focus has been on population-development interface. At Patna, population-resource imbalance question aroused a greater interest. At Aligarh, themes relating to population-agriculture interplay and population structures have been more popular. At Ranchi, population and settlement patterns were examined together. At Siliguri, population planning and regional development research finds a greater favour.

Doctoral theses focusing on urbanisation and migration have been more common at Bombay. The same is true of Poona. Migration studies are popular at Tirupati also. At Guwahati, the interest is more on tribal groups.

Obviously, the research themes adopted at different places were influenced by the social peculiarities of their localities. These were also guided by the special interests of the scholars in the lead. Most of the work was based on the secondary data emanating from the Census of India.

Teaching of Population Geography has, of course, gained popularity over the years. Textbooks in Population Geography have increased both in number and linguistic variety. Notable among those in English include : Chandna (1986), Bhende and Kanitkar (1988), and Ghosh (1985). Chandna (1986 and 1987) produced textbooks in both English and Hindi and Sawant (1992 and 1994) in English and Marathi. Some authors of textbooks in Hindi may be mentioned as Goel (1991), Lal (1993), and Dube and Singh (1994).

All the textbooks generally follow the scheme set by Clarke (1965), Zelinsky (1966), and Trewartha (1969). A commendable effort is made by using Indian situations as illustration. Population theories are given a special treatment. Several of these, however, skip the task of defining and operationalising different demographic terms.

It follows that the Indian Population Geography is strong on teaching but relatively modest in research. Such a situation must be improved. Quality research is always imperative for sustainable pedagogy.

SOCIOLOGY OF RESEARCH PAPERS IN POPULATION GEOGRAPHY

A listing of all the papers in the journal *Population Geography* since its inception in 1979 gives 116 entries in all (Table 2). Almost four-fifths of these are in the nature of empirical analysis; nearly one-eighth are theoretical in orientation; and the remaining few relate to the applied and methodological aspects of the field.

Most of the empirical studies are based on data provided by the Census of India. For that reason, five out of every six papers of empirical nature use secondary data. Efforts at collection and analysis of primary data have been small. Lack of fieldwork was rightly pointed out as an infirmity by various reviews, discussed earlier.

In relative terms, migration studies have been more popular, sharing roughly one-fifth of all papers. This is in consonance with the research in Population Geography at the international level (Findlay : 1992, p.92). Population density and distribution account for nearly one in every seven, urbanisation one in every eight, and population growth for one in every ten papers. Hence these four themes take away 60 percent of the work accomplished. On the other hand, there are only a few papers on ethnic, economic and marital composition of population.

Table 2

Research Parameters of Papers Published in *Population Geography* : 1979-1995

I	Total number:	116
II	Grouping by Nature:	
	Empirical	94
	Theoretical	14
	Applied	7
	Mapping	1
III	Classification by Themes :	
	Migration	23
	Distribution and density	16
	Urbanisation	15
	Growth	12
	Literacy/education	7
	Population and development	7
	Theoretical Issues	7
	Sex ratio/age structure/ marital status	6
	Regional population Geography	6
	Vital rates	6
	Ethnic composition	4
	Working force/economic composition	3
	Population models/ research agenda	3
	Population policy	1
	Population regions	Nil

Mortality analysis is virtually dreaded. There is no paper on population regions of any variety. Research papers on interface between population change and development process are few to count.

About one-half of the papers were on macro-regional scale, that is at global, national or multi-state level; nearly one-third on meso-regional scale, that is at state or equivalent regional level; and the remaining over one-sixth at the micro-regional or substate / district level. Research interest evidently descends down the scale from the macro to micro.

On various parameters of research methodology, the main findings may be listed below:

- (i) About 15 per cent of the papers do not even clearly state their objective and one-third fail to build any conceptual framework for the topic under study.
- (ii) Only 25 per cent of the papers raise a specific research question and hardly 13 per cent present a hypothesis for testing.
- (iii) Only one-fourth of the papers employ quantitative techniques.
- (iv) Hardly one-half of the papers reach a conclusion that could be said to be stimulating or innovative, in a manner of speaking.

Among the 22 papers in non-empirical category, 14 are theoretical in content, 7 are of applied nature, and only one deals with mapping of population data. Likewise less than one-fourth of the papers employ quantitative techniques. Lack of papers dealing with population policy issues is most disturbing. In line with Indian geography in general, Population Geography leaves a wide scope for improvement in theory, methodology, and application.

Table 3

Research Parameters of Papers of Empirical Nature Published in Population Geography: 1979-95

I	Total number	94
II	Grouping by data source	
	Secondary	79
	Primary	12
	Both	3
	Total	94
III	Classification by scale of investigation	
	Macro-regional	49
	Meso-regional	27
	Micro-regional	18
	Total	94
IV	Frequency by methodological details:	
	Use tables/charts	82
	Include maps	60
	Employ quantification	23
V	Frequency by presentation details:	
	State objective	80
	Build a conceptual framework	63
	Raise a research question	23
	Offer a hypothesis	12
	Test a theory	5
	Reach a stimulating conclusion	45

RESEARCH AGENDA

Evidently any enunciation of research agenda for a discipline has to follow a certain set of guidelines. First, it must direct itself toward reclamation of those academic wastelands which have remained unexplored. Secondly, it must be flavoured with the essence of the prevailing paradigm of our discipline which tends to emphasise territorial knowledge for planning at present. Thirdly, it should empathise with

the wider societal concerns, such as status of women, population regulation, poverty alleviation, and ecological balance. Fourthly, the changing world order, in political and economic terms along with its implications for population issues, has to be addressed. Above all, the research has to take into account the feasibility parameter, and for that matter the question of data availability.

While in the developed world, the population research is concerned with problems arising from fertility decline, aging and family disintegration; in the developing world, the major concerns remain with fertility control, youthfulness of population, and child survival. Rapid population growth is seen as detrimental to economic vigour, status of women and quality of environment. Hence a purposeful investigation of vital processes must continue.

It is observed that while there are numerous studies on fertility transition, those on mortality transition are difficult to locate. How does the behaviour of mortality decline differ from that of fertility decline? Associated with this is the question of epidemiological transition - the nature and intensity of morbidity which a society experiences at different stages of its socio-economic development.

As a part of migration studies, the question of population redistribution as a strategy for reforming the resource/population imbalance in different regions may be critically examined. Intertwined with the process of migration is the question of locals and outsiders, manifest most sharply in the 'sons of the soil' theory. Here one may try to probe deeply into the patterns and implications of the linguistic, interstate, and interregional migrations. Another theme worthy of mention is the magnitude and direction of emigration from different parts of India and also the nature of inflow from the neighbouring countries of Nepal, Bangladesh, and Pakistan.

Population growth is seen as reducing the per capita availability of natural resources and economic development and as causing the degradation of physical environment. It is also understood that technology enables more intensive, thereby less wasteful, use of resources, and economic development raises the capacity of a system for ecological conservation in terms of water quality, general sanitation, and afforestation, in particular. Here the basic question is : what is the true picture of population-ecology interface and how does it differ from one region to another?

In the spirit of post-modernism, it is essential that the Indian Population Geography makes a conscious effort at being innovative. The need is to explore the themes which have remained undiscovered, with a focus on local and unique. These essentially relate to those population groups which have suffered societal neglect, discrimination and injustice. The 'Population Geography of the Poor', for example, is a stimulating field of investigation. Who are the poor? Do they make a homogeneous group in terms of their demographic attributes? To what extent is poverty linked with caste? How do the rural poor differ from the urban poor? Research on such questions, through collection of data at the microlevel, can be compared with parallel thinking on wider issues at the macrolevel.

There is a need to promote Historical Population Geography. Most of the research efforts on the theme are confined to understanding of the prevailing patterns. Sometimes an element of the process is also incorporated but that remains at the macro or aggregated level. Historical Population Geography should aim, in specific, at discovering the patterns of various demographic variables as manifest over space at different points of time in the past. Population Geography of

India in the mid-nineteenth century could be one illustration.

Population Geography should work also on critical issues, such as regionalism, communalism, casteism, urban-rural dichotomy, and reservation question by making imaginative use of available demographic data. So far, the practitioners of the field have shied away from entering into this arena of stimulating research. Our discipline will gain wider recognition if it makes the proposed venture.

It is also important that Population Geography identifies themes which are of direct interest to administration. This requires a fresh orientation toward population issues directly related to area management. In particular, the field has much to contribute to preparation of decentralised district plans which are specifically concerned with the locational parameters of social services, employment and transport network.

Above all, Population Geography must demonstrate the utility of demographic variables as indicators of a variety of socio-economic situations, such as social backwardness, economic development, status of women, population pressure and urban-rural relations. The strength of population data lies in the fact that these are officially available in printed form up to the level of individual villages and towns, grouped successively into development blocks, subdivisions / tehsils, districts, states / union territories, and the country. This inherent virtue must be harnessed to the maximum through purposeful and innovative research.

CONCLUDING REMARKS

What are the main messages of this review ? These could be listed by points.

First, initiated under the great influence of Trewartha, Zelinsky and Clarke, Population

Geography in India commenced with a spurt in early sixties. It now finds a place as a specialised course on the geography curriculum of several universities. Indeed teaching is a stronger point of Indian Population Geography than research in this subfield.

Secondly, research in this branch of our discipline has also been considerably dispersing and diversifying. The nature of work accomplished does differ from one university department to another. It was significantly influenced, as expected, by the social peculiarities of the region of their location.

Thirdly, the Indian Population Geography still remains largely descriptive of the data provided by the Census of India. There is a need not only for making a more innovative and analytical use of this information, as indicated above, but also for conducting issue oriented studies based on data collected through field work. So far, a large part of the research has been guided more by the kind of available data rather than by a research question seeking generation of necessary data.

Fourthly, the practice of conceptualisation and adoption of appropriate methodology are yet to gain strength in Indian Population Geography. Perhaps this is equally true of other branches of our discipline. 'Empirical research, adhering to all tenets of research methodology, would only make a desired impact.' This is a precondition for enhancing our credibility in the field of population studies, in general.

Fifthly, it is imperative that, in addition to the ongoing valuable research on popular themes such as migration, urbanisation, population distribution / density / growth, and some select facets of population composition, Population Geography in India moves into unexplored areas. It may promote work on themes such as 'Population Geography of the Poor or of the

Middle Class', which would give new insights into class demography; it may initiate work on emerging themes such as regionalism, communalism, casteism and ecology damage, which are vital social concerns today; and it may identify applied themes like population projections which are of direct interest to administrators and planners. All this requires a perceptive and intelligent use of the rich data made available by the Census of India up to the level of even individual villages and towns. An expertise in using demographic variables as indicators of socio-economic parameters is a pre-requisite for all this.

Finally, there is a case for fostering Historical Population Geography with a view to discovering population patterns as manifest over space at different points of time in the

past. This will help in theory building. A serious effort is also imperative for discovering the hidden linkage between population, development and ecology as operative in different regions of the country. This will lead Population Geogarchy toward policy research.

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