GROWTH AND STRUCTURE OF SPECIALIZATION TREND IN INDIAN GEOGRAPHY

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Introduction

In the past decades a new pattern of growth has emerged in Indian Geography that needs to be identified, interpreted and described. This new pattern is now conspicuous and distinctive in both physical and human geography. The numbers of specialized branches have increased tenfold since the early 1970s and the process is still continuing. This paper analyses the growth and structural pattern of specialization in Indian Geography between 1970 and 2011 by means of perusal of literature. The purpose is as follows: (i) to present some initial findings on characteristics of growth and structure of specializations and relate them with paradigms practiced by Indian geographers, and (ii) to identify branches which are specializations.

The significant trend in post-independent Indian geography is its diversification and specialization. Specialized geography is that part of our discipline which extends beyond the conventional boundaries circumscribed by the elements of the physical and cultural landscapes. The specialization trend is a reaction and the extension to the growth of knowledge and the inability of any individual to master it within the ambit of single branch of geography. Many scholars view the increasing level of specialization as an inevitable component of scientific development. The specialization relates to in-depth studies, that is, to understand deep structure underlying the surface structure. The more we explore the particular area of study, the more it becomes complex by revealing its innumerable aspects. As a result, in the process of development, it becomes unmanageable and difficult to develop an expertise covering all the aspects. We also find that in the process many aspects become independent area for separate study for the reason that each aspect becomes so complex in its structure and development that it requires to be studied independently in course of time. Thus, specialization contributes to the growth of our knowledge with new structure, interdisciplinary in nature and through interaction with many other disciplines.

Paradigm denotes a generally accepted set of assumptions and procedures which serve to define both subjects and methods of enquiry. It originates from anomaly, crises and revolutions in the discipline. It tells the scientist what and where to look and where not to look. Paradigms and specializations are related to each other. Specializations are the end products of paradigms in its course of development. Older the paradigm, the more specialization and fragmentation it produces. It is reflected that the newer paradigms like Marxism, humanism and post-modernism have produced few specializations (Table 1) because they still

struggle for their existence and are not yet firmly established. Specializations, therefore, have developed through all paradigms and need introspection. In Indian geography, paradigms developed sequentially are as follows: physical, environmentalism, areal differentiation, spatial analysis, development, Marxism, humanism, postmodernism and methodological.

Table 1: Paradigms, Associated Specializations And Leading Practioners In India

Paradigms	Specializations	Leading Practioners
1. Physical	1. Fluvial geomorphology 2. Applied geomorphology 3. Coastal geomorphology 4. Agricultural climatology 5. Urban climatology 6. Ecological studies	K.R. Dixit, AB Mukerji, R.P. Singh, E. Ahmad, B. Arunachalam, R. Vaidyanadhan, Savindra Singh, H.S. Sharma, Amal Kar, S.K. Pal, S.C. Mukhopadhyay, Rajiv Sinha, D.C. Goswami, M.N. Kaul, V.S. Kale, V.K. Sharma.
2. Environmentalism	1. Environmental monitoring 2. Disaster management 3. Resource management 4. Environmental degradation and management 5. Global warming and climate change 6. Pollution studies 7. Watershed management	H.S. Sharma, Anu Kapur, R.B. Singh, Savitri Burman, S.L. Kayastha, Milap Sharma, Mehdi Raza, Hema Malini, P.P. Karan, J.K. Ives, Anjana Desai, V.K. Kumra. S. Chattopadhyay
3. Areal Differentiation		O.H.K. Spate, R.L. Singh, C.D. Deshpande, A.T.A. Learmonth.
4. Spatial Analysis	1. Dryland agriculture 2. Marketing and rural systems 3. Food security 4. Land use studies 5. Agricultural productivity 6. Industrial complexes 7. Transport networks 8. Urban systems 9. Morphogenesis of rural settlements	Moonis Raza, S.M. Alam, R.L. Singh, R. Ramachandran, M. Shafi, V.L.S. Prakasa Rao, B.N. Sinha, AB Mukerji, A.T.A. Learmonth, Rais Akhtar, S.R. Basu, B.J. L. Berry, S.M. Bhardwaj, J.E. Brush, A.K. Dutt,, E. Dayal, G. Rushton, G. Krishna, P.P. Karan, H. Ramachandran, W.E. Reed, K.N. Singh, P.R. Sharma, S. Subbiah, Noor Mohammad, S.K. Aggarwal, Sudesh Nangia, Jaimala Didee.

	10. Territorial service provision 11. Electoral geography 12. Administrative geography 13. Geography of health and nutrition 14. Geography of education 15. Geography of housing and crime 16. Tribal studies 17. Migration studies 18. Tourism and recreation 19. Geography of international relations 20. Geography of place names 21. Behavioural studies	
5. Development	1. Regional development 2. Rural development 3. Globalization and development 4. Sustainable development 5. Social well-being	R.P. Misra, Moonis Raza, V.L.S. Prakasa Rao, K.V. Sundaram, L.S. Bhat, M.Shafi, G. Krishna, Surya Kant, Nina Singh, Jagdish Singh, S. Corbidge, S. Banerjee-Guha, R. Ramachandran, S. Chattopadhyay, M.H. Qureshi, Noor Mohammad, S.K. Aggarwal, H. Ramachandran, Satyesh Chakraborty, A.C. Mohapatra, Surendra Singh, Abha Laxmi Singh, J.K. Routray, Raju Das, C.R. Pathak, P.S. Tiwari, H.N. Mishra.
6. Marxism	1. Social well-being 2. Uneven development 3. Residential segregation 4. Poverty and inequality 5. Economic restructuring	Satyesh Chakraborty, S. Banerjee-Guha, Hanuman Singh Yadav, Moonis Raza, A. Ahmad, Brij Maharaja, Raju Das, Sudeepta Adhikari, S. Simadri, B.S. Butola, S.K. Munshi, Ali Raza Moosvi, Sachidanand Sinha
7. Humanism	1. Cultural studies 2. Linguistic geography 3. Geography of place	A.K. Dutt, A.G. Noble, R.C. Dhussa, Rana PB Singh, R. Ramachandran, S. Muzaffar Ali.
8. Post-modernism	1. Gender and feminism 2. Geography of media	Anindita Dutta, Aparajita De, M. Satish Kumar, Kuntala Lahiri-Dutt, Gopa Samant, Saraswati Raju, Sheela Pol

9. Methodological	1. Thematic mapping 2. Aerial photo interpretation 3. Quantitative geography 4. Qualitative geography 5. Remote sensing 6. Geographical Information Systems and Geomatics	S.P. Chatterjee, S.P. Dasgupta, B.K. Roy, P. Nag, R.P. Misra, R. Ramachandran, L.S. Bhat, A.K. Dutt, N.C. Gautam, R.B. Singh, Arun Chaturvedi, S. R. Jog, Shekhar Mookherji, Surender Singh, Amal Kar, S. Chattopadhyay, S.C. Rai, Kalpana Markandey.

CONCLUSIONS

From the review of literature the following conclusions are obtained:

1. Paradigms and specializations are related.
2. Older paradigms have more specializations than newer one.
3. Areal differentiation has not produced any specialization.
4. Spatial analysis, being the ruling paradigm, has produced more than 20 specializations.
5. Older paradigms and associated specializations are universal/general and catholic in their interests and expertise and newer ones deal with smaller areas.
6. Although specialized geography has been a recurrent theme in post-independent geography, it has suffered from its lack of theory building.
7. Specializations are cross-paradigmatic in its development.
8. It is found that essentialist and non-essentialist paradigms are different from each other.
9. It is also found that paradigms are macro (space) and specializations are micro (place) in nature. In other words, macro is characterized by the process of homogenization and the micro heterogenization.
10. Both paradigms and specializations contribute to the understanding of spatial truth but their degree and intensity vary.

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