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Concept's International Series in Geography No. 3

PERSPECTIVES IN URBAN GEOGRAPHY VOLUME 6

Contemporary City Ecology

Contemporary City Ecology

YADAV

Concept

Edited by
C.S. YADAV

This is the third set of volumes in the well known series entitled **Concept's International Series in Geography**. This multi-volume set has a wide coverage under the title **Perspectives in Urban Geography**. The earlier two sets in the series were: Perspectives in Agricultural Geography, and Perspectives in Geomorphology.

Traditional studies on aspects of Urban Geography had been concentrating on observational records of developments of towns and cities till the subject came to acquire a behavioural approach recently. What resulted was a new matrix of philosophies, methodologies and their ingenious application to what had been researched through the years. The present set of volumes ventures to make a rigorous survey of the literature on Urban Geography after its reorientation as it were.

The cultural revolution in geography has greatly effected the nature and subject material of urban geography and widen its horizons. This volume on Contemporary City Ecology is designed to show the relevance of ecology to geographical approach while explaining urban areas. Most of the papers in the present volume confirm that the ecologists interest in spatial associations and areal patterns is very close to the geographical approach. In essence in the present volume those articles are included which provide a geographical methods of analysing the social structure of the towns. The volume is prepared with a conviction to obtain a comprehensive knowledge of the patterns, processes and problems of contemporary urban organization and change.

The contributors to the volume are noted geographers, sociologists and city administrators from different parts of the world.

C. S. YADAV (b.1942) received his post-graduate and doctoral degrees from the Delhi School of Economics. He had participated in the UNESCO seminar on The Teaching of Geography in South-East Asia held in December 1974 and has also contributed a paper on "Uneven Development of The World" for a UNESCO publication. He has attended and presented papers in International Conferences. He has been invited to attend an international symposium on urban modelling held in Waterloo University (Canada) in 1982. He had also attended an International Conference on Asian Urbanisation held in Akron University (U.S.A.) in 1985 and presented a paper on "Process of Migration and Urbanisation in India". He is keenly interested in urban problems and is at present engaged in studies on slums and cognitive image of The Delhi City.

Currently he is a Reader in Geography at Shaheed Bhagat Singh College, University of Delhi.

CONTEMPORARY CITY ECOLOGY

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VOLUME SIX

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CONTEMPORARY CITY
ECOLOGY

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Preface

NATURE OF URBAN GEOGRAPHY

THERE are several studies on urban geography which reveal that, as a major sub-discipline, it has a long tail but a short body. However, the spectrum is so vast and broad that researchers are able to make general statements in defence of its conception, philosophy, nature and orientation. Urban geography today encompasses and interfaces with various disciplines which are interested in urban studies. As an introduction to this series, our task here is to make an attempt to briefly review the development of geographical interest in various aspects of cities.

There are several reviews of the early development of urban geography which have been dealt with by Berry and Harton (1970)¹ and Carter (1974).² Berry and Harton in their book, **Geographical Perspective on Urban System**, have made an attempt to introduce readers to its present-day status. They have clearly resolved that "the formative years of the social science in the late nineteenth century and early twentieth century were also the years in which urban studies first developed,"³ thus providing the context for geography's emerging interest in cities. However, the emergence of urban studies dates back to the writings of Greek scholars, but as a sub-discipline, it has reached its present-day status only in the past 30 years.

In their historical perspective the works on urban geography show that the pre-20th century studies primarily concerned themselves with themes of location, size and shape of the cities. The initial findings were strongly subjective, descriptive and dependent more on observation such as the works of Hassert (1907)⁴ and Blanchard (1911).⁵ In the succeeding years the conceptual framework of site and situation was criticized by Auroousseau (1924)⁶ and Crowe (1938)⁷, their conception being that cities were not inanimate objects in landscape, but also or-

ganic elements which involved people and their movements. The morphologist, later in 1960, truly brought the indigenous line of evolution in the sphere of urban geography and studies on the build-up fabric of cities (Conzone, 1960).⁸ Smail (1955)⁹ constituted the prime base of urban geography, which remained articulated without any major conceptual change till early 1960s. The studies on the morphological aspects of the urban system were influenced by external forces, consequently the methodological frameworks got impetus within the discipline. At this juncture the evolution of concepts was not based on environment but took shelter under the umbrella of economics of location, and incorporated analysis of land values and rents, and the concept of nodality and accessibility. These concepts were derived from the economic theories of Cooley (1894)¹⁰, Weber (1899),¹¹ and Hurd (1903).¹²

The Chicago School of Urban Ecology hastened the evolution of urban geography. In his monumental work Park (1925)¹³ developed the idea of order and analysis of towns. Further, a powerful thrust and much of the rationale was provided to the studies of urban geography by the Central Place Theory of Christaller (1933).¹⁴

The impact of the statistical method was powerful and it brought rapid and enormous changes in the field of urban geography. It also brought new insights into the development and application of urban geography towards increased quantification. Brian J. Berry, a pioneer in the field, analysed the spatial order, size and location of towns and cities. There was widespread use of innovative techniques to explore the nature of urban problems, hypotheses were tested, new theories propounded and old theories remodelled. The statistical methods were put to a variety of uses. Smith (1965)¹⁵ evaluated the classification of settlements; Berry and Garrison (1956)¹⁶ examined the utility of the rank-size rule for urban populations. The models of Park and Burgess (1925),¹⁷ Harris and Ullman (1945)¹⁸ and Homar Hoyt (1939)¹⁹ were tested and re-examined by various geographers.

A new impetus to urban geography came from social area analysis which was initially propounded by Shevky and Bell (1955)²⁰ and later on this provided a basis for factorial ecology. The collaboration of this stream in urban geography was offered by Berry (1971)²¹, Herbert (1972)²² and Johnston (1971).²³ As a consequence of these thrusts in geography after 1960, the techniques of investigation were sharpened and this has provided the basis for a scientific explanation of cities. Attempts were made to introduce new theories and frame laws

to make the explanation of events more rational and logical. Sophisticated models were propounded as urban geography entered a new era of rationalizing the subject matter of urban studies on the basis of new philosophies, new concepts, new theories, new methodologies and applications.

However, the status of contemporary urban geography has been elevated only recently by the behavioural approach. The studies of perception and cognition which have a long tradition in physiology were first introduced into the field of geography by Lynch (1960)²⁴ Dowson and Stea (1973)²⁵, Gould and White (1974).²⁶ At present there is a sudden spurt in the studies on the subject with a new paradigm. But the full impact of behavioural approaches upon urban geography has yet to be realized.

The aim of this series is to seek reorientation of the discipline strengthened by new philosophies, methodologies, subject matter or application. The series has been arranged in such a way that all contemporary viewpoints are covered comprehensively. Hopefully, this series will inspire researchers to appreciate the work already done by geographers in studying cities. Geography by nature seems to be a synthesizing field of inquiry. As such we have made an endeavour to combine some of the otherwise disparate facts garnered by other disciplines in such a manner that we can gain a better understanding of the urban system. The study of urban geography is essential if we are to analyse the human consequences of the settlements in which we live. It is useful to planners, decision makers in government and corporations and also to each one of us as citizens. Finally, it gives us a perspective on what may be happening to our cities and to the nature.

To achieve the above goal only those contributions with originality and contrasting viewpoints were selected for inclusion in this series. In doing so the editor does not wish to compete with the journals in the field in which innovative research and methodological aspects are presented. But he does wish to convey, and convey with conviction, that significant researches are being undertaken in the different branches of urban geography and in other allied disciplines. The present series is an attempt to provide a selective reappraisal and rigorous examination of the assumptions and the urge to disseminate new knowledge created by the mutual interaction. Emphasis is also placed on the conceptualization and theorization of the subject matter so that general laws may emerge. A conscious effort has been made to organize the series in such a way that it reflects the philosophical approach parallel to that of the behavioural school. Finally, a vigorous attempt has been made to demonstrate

throughout the series how geographers are basically involved in solving the urban problems.

C. S. YADAV

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ONE

C.S. Yadav

Introduction

Most of the urban geographers have agreed and oriented their discussions to current urban problems known as ecological problems. Numerous academicians have adopted an interdisciplinary approach to urban ecological issues with a view to spanning traditional disciplinary boundaries and gaining a comprehensive understanding of the contemporary patterns, processes, issues and changes in urban environment. In essence, urban ecology sheds light on the total environment of the city in which it studies the elements of its structure, identifies the patterns which they formed and makes an attempt to understand the interrelationships which existed. The basic fundamental principle of urban ecology is that everything is connected with everything else Barry Commoner (1971).¹ Thus the apparent objective of the ecological approach is to describe and analyse the system of interdependence among different elements in a common setting Gist and Fava.² As it is self-explanatory in an ecological system, every action has its consequence. In principle, while human ecology predominantly analyses the interrelationships among men in their spatial setting, the urban ecologist more particularly is concerned with these interrelationships as they occur in the city. As a matter of fact, cities offer various dimensions to an ecologist, which include the study of external expressions of ecological interrelationships as reflected in the distribution of cities, their internal structure and composition, changing skyline, alternating land uses and intimate intermingling and patterning of different urban landscapes.

However, despite these apparently laudable objectives, the impact of ecological approach on the development of urban geography is relatively brief and it has a chequered history. In essence, the dominance of ecological approach is relatively