

REVIEW OF RESEARCH

ISSN: 2249-894X IMPACT FACTOR : 5.7631(UIF) VOLUME - 10 | ISSUE - 6 | MARCH - 2021



"RURAL AGRICULTURAL GEOGRAPHY AND BIOPHYSICAL ENVIRONMENT : A REVIEW"

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ABSTRACT

The evolution of agricultural geography and then rural geography is described. The main influences affecting farming and hence agricultural geography are considered under the headings of biophysical environment, agrarian structure and population, economic influences, socio-personal factors, and government and company contexts. The principal content of rural geography is discussed in relation to population and employment, settlement and housing, transport and services, recreation and tourism, and development and conservation. It is concluded that fully integrated management of rural areas



offers the best scope for contributing to the sustainability of life-support systems.

KEYWORDS: Agricultural, Geography, Rural and Economic.

INTRODUCTION

Geography is the field of knowledge that studies the relationship between the earth and its people (International, 1982). It is the study of spatial variations on the earth surface and of human relations with their environment (Americana, 1994). Agricultural and rural geography are concerned with the spatial characteristics of agriculture and of the environments and people of rural areas, including the nature and processes of change. Agricultural geography became established first and, as rural economies and societies diversified, rural geography developed to investigate the totality of rural areas. In agricultural geography's focus on the special distribution of agriculture, particular attention is given to influences that affect the decisions made by farmers and the changes affecting them. These include the biophysical environment, agrarian structure, economic influences, socio-personal factors, and the policies of governments and companies. While rural geographers may investigate any aspect of rural areas, the topics that receive most attention are population, employment, settlement, housing, transport, services, recreation, tourism, development, and conservation. Agriculture and rural areas are changing and their future welfare is fundamental to the sustainability of the earth's life-support systems.

The content of agricultural geography is considered here within the context of the influences that affect the decisions made by farmers and hence the spatial distributions and trends in agriculture. The decision-making process in farming is an extremely complex one, influenced by a multiplicity of factors, which vary from place to place, so only the main ones can be considered here and they are grouped for convenience.

DISCUSSIONS:

Variations over time in the extent and nature of agricultural and rural studies by geographers have been related in part to the changes in agriculture and in rural areas. They have reflected strongly also the sequence of different vogues in paradigm, ideology, and subject of interest within the discipline of geography as a whole and in cognate social sciences. Each perspective was only partial and, while different ones were favored at different times, this was generally not to the exclusion of all other viewpoints. Before agricultural and rural geography became generally distinguishable as distinct branches of the discipline of geography, their subject matter was contained at first within general and regional geography and then within economic geography, in particular, and social geography once these emerged as separate subfields of geography. Because of the importance of agriculture in land use, economy, and society, this material constituted a significant part of geography. The emphasis had been on describing the nature of farming and rural settlement and their variations from place to place. When geographers began to try to explain spatial patterns, interpretations were influenced strongly by the view that the geography of human activity is determined by the physical environment. Environmental influence could be demonstrated much more easily with respect to agriculture than to manufacturing and service industries and this contributed to the strong emphasis on agriculture within economic and commercial geography. As part of the geographical interest in the differences between places, considerable attention came to be given to agricultural regions. The regions treated were often delimited in terms of their physical makeup on the basis that the type of farming reflects environmental influences. Without this limitation, many studies in agricultural geography continue to investigate farming within areal contexts of different scales.

An important observation about Bowler and Ilbery's proposed framework was that political economy approaches were not introduced specifically to preserve institutionally-defined subareas such as agricultural geography. Instead, it was predicted that a 'blurring' of the boundaries of study would occur (Marsden, 1988). Political economy approaches attempted to provide better explanations of agricultural change and in so doing they demanded 'an interdisciplinary effort whereby the boundaries of sub-disciplines are progressively weakened' (Marsden, 1988). This led researchers to look beyond the farm gate to understand the agricultural sector, leading subsequently to interaction with other disciplines and geographical sub-fields and extending the range of topics studied. This is illustrated clearly in the analysis of an increasingly globalised food system (McMichael, 1993; Whatmore, 1995; Le Heron and Roche, 1995, Marsden and Arce, 1995; Goodman and Watts, 1997). A profusion of research on agricultural issues adopting this approach has been forthcoming, ensuring a revitalization rather than a redundancy of academic interest, although little further debate has taken place about the nature of agricultural geography itself. However, political economy has become the dominant discourse to the extent that, for many, it has come to represent agricultural geography. This is reinforced in a host of recent reviews which equate explicitly the development of political economy ideas with agricultural geography (Short, 1996; Whatmore et al., 1996; Marsden et al., 1996; Marsden, 1998a). An irony is that in this way political economy could be viewed as providing coherence in agricultural geography through a clearly defined theoretical position, as behaviouralist work and models of economic rent did before it, contributing to a reinforcement of the identify of agricultural geography as a distinct sub-field of inquiry.

The insights from cultural perspectives have yet to impact fully on agricultural geography. Rather, a continued evolution of a behaviourally grounded approach in a post-structuralist context can be identified strongly in the main research avenues of pluri-activity and agri-environmental policy (see Bateman and Ray, 1994; Morris and Potter, 1995; Wilson, 1996). In 9 some ways, it is understandable that work has not been more culturally sensitive because much of it has been delivered within a 'policy evaluation' mould. The monitoring brief demanded by government agencies leads inevitably to questionnaire type approaches to inform their policy adjustments, focusing on the 'principal' decision-maker. Despite these limitations, the use of culturally sensitive perspectives has begun to have an impact (McEachern, 1992; McHenry, 1994; Clark, 1994; Young et al., 1995; Morris and Andrews, 1997; Walsh, 1997). This is partly because the AEP shift has an inherent cultural dimension, as exemplified by

the ESA approach, the government's flagship AEP (Baldock et al., 1990). These are targeted on specific geographical areas and are sensitive to some of the idiosyncrasies of farming practice founded on local tradition.

Biophysical Environment:

Agriculture is based on land and on plant and animal growth and reproduction, with these being managed to varying extents by humans. Thus the biophysical environment or resource base sets the context within which the decisions made by farmers must be set. The principal influential environmental components are climate, terrain, soil, water supply, and pests. Variations in these help to explain many of the broad patterns in agricultural geography at global, continental, and national scales.

The environment sets some spatial limits to all agriculture, in that substantial tracts of the earth are too cold or too dry for any crops to grow and cultivation is not possible on expanses of bare rock and very steep slopes. Where farming is practiced, the environment affects the quantity and the quality of production. The fertility and other characteristics of the soil are fundamental in this respect. Crop yields may be related directly to rainfall and temperature but excessive levels of these may have a depressant effect. This may also impair the quality of output and increase the liability to disease.

The agricultural techniques used may vary with the environment, those practiced in irrigation farming being quite different from those in dry farming, for instance. The difficulty with which farming tasks are performed and the costs involved are also affected by the environment, as in the working of slopes and the extra cultivation needed on difficult soils. The varying environmental requirements of the different crops and livestock have a major influence on the geography of world agriculture. With reference to the climatic conditions for individual crops, for instance, there is a range from areas where the absolute values and their seasonal distributions are most favorable to ecological limits beyond which the crop cannot be grown economically or at all. Very evident as a result are the differences in the crops grown in tropical, temperate, and cold climatic regions.

Where crops are grown or farming practiced near to ecological limits, sustainability may be in doubt because of potential changes in climatic, economic, or other circumstances. This may help to explain some of the agricultural collapses of history and a current example would be the impact of expanding deserts on the farming of surrounding areas. While farmers in warm climates may have a wide range of crop choice, in cold regions there may be few or no alternatives to which farmers can resort with changing market or other conditions, so that sustainability may be threatened.

CONCLUSION:

Given the political gravity of agrarian questions and their distinctiveness within 'the rural', agriculture should continue to provide a meaningful starting point for debates and research into the next millennium. Identification with agriculture as a starting point for geographical investigations can assist an exploration of changes in the sector itself and in related economic, social, cultural and political activities, as agro-food studies are now acknowledging (Goodman and Watts, 1997). Having established the continued value of an agricultural focus for research, it is evident that since the appearance of Bowler and Ilbery's (1987) paper, the geography of agricultural change has been dominated by a political economy discourse. That a political economy approach has been of enormous value to inform and revitalize agricultural research is unquestionable. However, there has been little recent acknowledgement of the value of diversity apparent within agricultural research, apart from reiterations that political economy, as applied in a modified form to agriculture, has sought to accommodate such diversity. This can be viewed as rather disappointing, especially given the discussions that have taken place in rural geography which have propagated a substantial body of new research (Philo, 1993; Murdoch and Pratt, 1993; Cloke, 1997; Phillips, 1998). Clearly, there is a multidimensional research agenda in agriculture and so it is difficult to identify one unifying conceptual framework as envisaged by Bowler and Ilbery (1987) or Marsden (1988). It is the range of possible conceptual and empirical positions that allow researchers to appreciate the complexity of old and new agrarian issues preventing any future notion of redundancy in agricultural research.

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