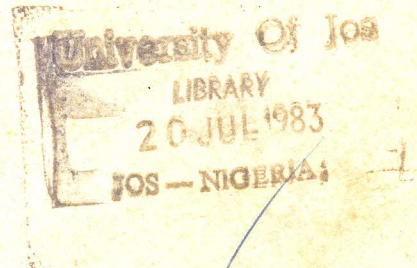
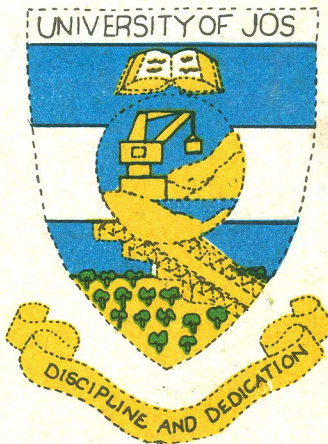


UNIVERSITY OF JOS

GEOGRAPHY FOR DEVELOPMENT PLANNING: THE JOS EXPERIMENT



INAUGURAL LECTURE

by

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Professor of Geography

UNI JOS INAUGURAL LECTURE SERIES 2

UNIVERSITY OF JOS, NIGERIA

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GEOGRAPHY FOR DEVELOPMENT PLANNING: THE JOS EXPERIMENT

INTRODUCTION

FROM TIME TO time the practitioners of a profession or discipline stop to take stock of their activities and achievements, and to map out their future lines of operation. Such a balance sheet usually ensures that mistakes or oversights are identified and rectified. In addition, methods, techniques and tools are re-examined and sharpened towards achieving future objectives. In particular, the relevance of the profession or discipline, with regard to the current and future needs or expectations of the society is duly ensured.

For the individual practitioner within the profession or discipline, an occasion such as this inaugural lecture affords one the opportunity also to reflect on what one has been doing. In particular, one assesses how one's academic and professional pursuits fit into the overall objectives of the discipline and the society.

I have often asked myself what the role of geography and geographers should be in the present-day Nigeria. I have attempted at various occasions to determine what the Nigerian society and the Nigerian economy expect of geography and geographers. I have also tried to imagine how best geography and geographers in the country could contribute more directly and effectively to development planning for the good of the society.

In 1969, while discussing the major challenges that confront Nigerian geographers (Ajaegbu, 1971), I posed two related questions. The first was, what type of geographers do we want to make of our students? The second was, what geographical skills should be emphasised for Nigerian geographers today? That was exactly ten years ago. I did at that

time suggest that "we should aim at producing professional, practical geographers who can practise their profession using their specialist (geographical) skills, just as do such other professionals as engineers, doctors, economists and so on."

There was then, and there still is today, in Nigeria the need to plan and manage the Nigerian space, environment and endowments (natural and human) for effective development. These questions and objectives have guided my attitude to, and orientations in, geographical studies, teaching and practice.

It was A. L. Mabogunje (1968; 1970) who argued for the advancement of geography in Nigeria as a policy discipline. In 1972, K. M. Barbour, then Head of Geography in the University of Ibadan, edited a collection of rather radical, pre-emptive essays written by the staff members of that Department, arguing for the adoption of regional planning in Nigeria. This publication, in particular, also called attention to the fact that geographers in Nigeria should develop their theories, methods and skills to be able to meet the needs of planning for Nigeria. I credit the early stimulus for my professional attitude to geography as a planning/policy discipline to these two professors who were former teachers and colleagues of mine.

I will, within the time available to me this evening, attempt to (a) review the geographical perspective to development and planning; (b) highlight the major lines of my own studies in this regard; and (c) discuss the approach to geographical teaching, research and practice being adopted in this university.

SECTION I

GEOGRAPHY AS A PLANNING/POLICY DISCIPLINE

In nearly all countries of the world, geographers are today increasingly being concerned with issues of development and planning for that development. White, et al. (1962) expressed the view that geography can make a powerful contribution to the advancement of society through relating the widely ranging geographic studies to social needs. They also maintained that its voice can be made powerful in policy making and planning decisions because of the experience and refinement of analyses it has to offer.

As if in a conscious effort to see these objectives realized, geographers have in their studies and publications, especially since the 1960s, dealt with several relevant themes in the general field of Geography of Development (Connel, 1971; Mabogunje, 1973), or Geography of Modernization (Riddell, 1970; Ojo, 1975). The specific themes include spatial aspects of development (Hoyle, 1974), development planning and spatial structure (Gilbert, 1976), spatial policy problems of the British economy (Chisholm and Manner, 1971), regional planning and national development in Africa (Mabogunje and Faniran, 1978); a geography of Nigerian development (Oguntoyinbo, et al. 1978), and urban and rural development in Nigeria (Ajaegbu, 1976).

The literature shows two broad concerns among the authors. The first is to understand the spatial patterns of development as well as the functioning of development processes. This concern has led to the modelling of how development processes operate in time and space, the functioning of environmental systems, and the relationships between human spatial organizations and development processes. The researchers attempt to find answers to such questions as what development levels have been attained in various areas or regions (dev-

elopment surfaces)? How do modernization traits (including innovations) diffuse over time and space among various societies? And, what development inputs or impetus make the greatest impact or have the greatest positive effects on development levels and surfaces?

Broadly, therefore, the studies aim at achieving two main objectives. The first is to discover the spatial order/arrangements and the processes that operate in the environmental systems, or in human occupation and performance in various parts or regions of the earth's surface, as well as how these help or retard human development efforts. The second is to understand, measure and predict the spatial framework and mechanism of development in their various settings, viz national, regional, local, rural or urban. This is attempted at various scales of consideration, from the global/regional to the community, household and individual levels of decision making that affect development processes. Moreover, the modelling is attempted in respect of each of these scales and settings as subsystems of the development process.

Hence, models of spatial processes, interactions and development mechanisms exist in geographical literature. In broad terms, attempts are made to understand and model the mechanisms involved in spatial national development, regional development, rural development or urban development. The functioning of development processes is conceptualized at these levels of spatial subsystems. In more specific terms, there are, for instance, attempts to model the functioning of national systems of cities, regional dynamics and inter-regional linkages, as well as settlement systems and the relationships between these and development processes (Logan, 1970; Pedersen, 1970; Wilson, 1970; Dokmeci, 1973; Allen and Sanglier, 1979).

The models help us to assess the effects of, say, the pattern of distribution of settlements, the distances separating homes (residences), workplaces and markets or shopping centres, the density of occurrence of given resources, services, facilities, or even information field and intensity). Such efforts are measured regarding the extent of development achieved or the efficiency of the functioning of development processes in a given rural area, urban centre or other unit area (planning unit).

Furthermore, there are several location models useful for the spatial/regional allocation of various resources, services and other development inputs; for the siting of development projects within a planning unit; and for measuring the efficiency of planning decisions and development efforts. Among the publications in these regards are those on locational analysis in human geography (Haggett, et al, 1965), location and space in human social administration (Massam, 1975), locational models (Haggett, et al. 1977) and locational methods (Haggett, et al. 1977). Single review or other journal articles are, of course, numerous (Godlund, 1964; Scott, 1970; Adejuyigbe, 1972; Wagner and Falkson, 1975; Goodchild, 1979).

It was Allan Gilbert (1976) who asserted that "without clear understanding of the spatial process which govern the movement of people from rural to urban areas, the relations between town and country and the ways in which certain regions grow and others stagnate... we would not be able to formulate appropriate spatial development models and strategies to help the poor."

The geographers have, in general, been guided by the need to encourage or achieve regional development, even development and welfare objectives of development. Their concern has spanned through environmental (natural and habitational), population, economic and

social development, particularly in their national, regional and local unit areas and varying ecological settings.

Moreover, there is a recognition of the fact that there could be no single, universally applicable conception of development or model of development processes. Hence, geographical literature is also full of several local studies of the peculiar requirements of given ecological settings for development, the various approaches adopted towards achieving development in different localities, and the performance of development programmes/projects and the space-economy in different parts of the world. From these studies, various forms of spatial development policies are enunciated.

The second major concern among the authors is with the requirements for effective planning for development. Geographers are in this regard guided by the desire to plan for, to order, and to enhance development processes in their spatial and temporal settings. They try to determine how development processes could be induced, initiated or maximized within a given unit area, within varying ecological units, or within given socio-cultural settings. They try to evaluate the bases and the critical conditions necessary for development, and subsequently, attempt to chart alternative paths for the development processes envisaged. They, thus, also attempt to predict which spatial models, spatial organizations, among several alternatives would most effectively enhance the functioning of development.

Hence, the studies in these regards investigate or model various forms and mechanisms for (a) initiating or enhancing appropriate development processes in areas or regions they are lacking or lagging; (b) expanding the wealth and growth base of a country or region; (c) achieving equitable distribution of inputs, services and proceeds of development; and (d) determining adequate infrastructural bases and

social organizations for efficient functioning of development processes.

Such studies also measure, determine, simulate or predict various alternatives and most efficient choices of locations (optimum locations); spatial nets and organizations; energy inputs into the development system in a given unit area; threshold sizes, such as of populations, settlements and inputs required for meaningful development efforts and processes; critical points and distances as well as minimum and maximum levels that constitute the development margins within which individuals, communities and nations operate.

The studies also present various ideological prescriptions on which the determination of the objectives of planning and development could be based. For instance, geographers are generally guided in their studies, modelling and policy prescriptions, on the one hand, by considerations for even development (equity), welfare to the people, social justice to all, improved environmental quality in our time, and efficient management of our space and resources for today's needs and in the interest of posterity (Mc-Allister, 1976; Gaile, 1979; Lea, 1979).

On the other hand, there is consideration for the need to develop the capabilities and maximize the potentials of every one, every region, and every unit area, in contributing to total growth and development. Hence, the geographers' planning conceptions do not allow for "no-man's-land" but, rather, recognize the varying or special characteristics, prospects and problems of individuals, societies, regions and other unit areas, with regard to development, from the local to the national levels. For planning units and the allocation of development impetus, space is treated by geographers in its continuous, rather than as discrete, distribution pattern. This ensures that every region and every nook and corner is included in the framework. The geographers' hexagonal nets

(Christaler, 1966), urban-rural ecological planning units (Ajaegbu, 1976), or river-basins planning units (Faniran, 1972) are familiar examples.

We are, therefore, in an era in which geo-

We are, therefore, in an era in which geographers are orientating their researches, theorizing and modelling towards issues and problems relating to the spatial dimensions of development, the space-environment-people-welfare planning approach, and the spatial-temporal considerations in planning leading to estimations and projections to future dates. The aim is to provide strong theoretical and methodological background for spatial planning and policy decisions geared towards achieving development.

For the geographers in these fields of research, development is thus seen broadly in terms of the maximization of (a) the contributions made by the various unit areas of a country and sectors of the economy in each unit area to local, regional and national growth; and (b) the welfare, quality of life, and standard of living of the people, including improved quality of their environment (however these attributes are defined). Hence, too, their planning units are defined in terms of rural areas, urban centres and various geographical or political regional units, while the targets of their development models are essentially the people.

For the discipline, geography itself, the results of these efforts have been enormous. For example, first, there has been a strengthening of the scientific base of the discipline, particularly in the social sciences, the natural sciences, and the environmental sciences, as a development science or planning/policy science. Second, there has been the sharpening of the tools of the profession for tackling practical problems of the environment and society. And, third, opportunities have been increased for ap-

plying the skills and methods available in the discipline towards professionalizing the subject. It is noteworthy, for instance, that perhaps, more than ever before, geographers are today working hand in hand with, and are being accepted by, other professionals concerned with development processes, planning activities and spatial policy decisions.

It is in the light of these orientations in geography, towards more application of geographical models, methods and skills to solving planning and development problems, that one now looks at what one has been trying to do in Nigeria.

SECTION II

SPACIAL DEVELOPMENT ISSUES IN NIGERIA:

HOW I SEE THEM

When I look back at over fifteen years, since 1964, of my serious academic researches and geographical practice and, as could be seen from my various publications, it is, I hope, fair to say that I have devoted a large proportion of my time and efforts to development studies. Within this general area of investigation, I have been attempting to achieve three major objectives. The first is to understand the functioning of development processes and the evolution of development surfaces (varying levels of development) in Nigeria, given our circumstances.

The second is to determine how best we could organize the Nigerian (development) space in order to effectively induce or enhance development processes and achieve even (equitable) development throughout the country. This has involved trying to identify and propose regional planning models and strategies, as well as rural and urban development strategies and inputs within the regional planning context and the overall national system.

The third is to experiment on how best we could equip geographers in Nigeria for professional practice towards solving our development problems. In this section of the discussion, I will deal with the first and second of the objectives. The third forms the theme of Section III of this lecture.

Development processes in Nigeria can be analysed based on various units of the development space or different levels of the operation of the processes. For instance, the processes can be looked at within the national space, taking the whole country as one development area unit. They can also be investigated as they operate at the levels of the various administrative units, viz. the state, local government council and village council areas, etc., as officially delimited. In addition, one can study them at the level of urban centres, rural areas or other functional/ecological regions within the national or states' space.

Let us this evening, however, look at the spatial development issues in Nigeria at the national, rural and urban centre units.

The National Space-Economy

If we take the national space-economy as a whole, studies reveal major characteristics of the development surfaces and inefficiencies in the operation of the development processes. First, the nature of the development surface in Nigeria is largely related to the national system of urban centres, while the levels of development achieved are greatly differentiated according to varying time distances away from the urban centres. It could be demonstrated, for instance, that troughs exist in the national development surface at considerable distances in-between any two major urban centres, say, between Jos and Kaduna. In many respects, the urban centres are our most effective development centres today.

In parts of the country in which specific measurements have been carried out (Ajaegbu, 1967; 1976) one hour travel time to an urban centre of any size is today a critical (maximum) distance for the inhabitants of an area, given whatever means of travel available to them, as the national development process affect them. This demarcates an absolute critical distance for the effective operation of the national development processes. Beyond such distances, little or no development effects are felt.

This is because most of the development agents and inputs arising from national locational decisions and investments involved in the national development processes, are characterized by hierarchical spread (Ajaegbu, 1976). This means that they would necessarily go to the urban centres (in this case, first to the State Capitals) largely according to their sizes and functional characteristics. They would, thence, spread from the highest to the lowest of the urban centres and other settlement units which possess the adequate threshold populations.

In addition, spread effects (as also backwash effects) from the urban centres diffuse in concentric patterns within contiguous areas around the centres and are, thus, subject to the effects of distance and accessibility (the distance-decay). In effect, these are the two major processes involved in the national development space and each of them discriminates against areas located at relatively long distances away from the major urban centres.

Therefore, the Nigerian space-economy is today suffering the inefficiencies of our spatial settlement organizations, particularly the national urban systems (Ajaegbu, 1973). The distances separating our development centres (growth centres) are, in many cases, prohibitive for effective spatial development. Moreover, the actual development effects of many of the centres are not adequately high to enable

them interact effectively with hinterlands, or enhance development to considerable distances away into their surrounding regions.

Thus, in many respects most of our rural settlements are disadvantageously located relative to the operation of the national space-economy and its development processes. They require to be brought effectively into the stream. The development of the State Capitals may help to improve on the national urban spatial systems. Yet, there is still the need to expand the urban system further especially into the vast areas of small scattered settlements. We still need to plan the development of the state capitals and other towns and cities in the country in a co-ordinated national system to ensure more efficient functioning of the national economy.

Indeed, as I posited six years ago (Ajaegbu, 1973), we are still confronted with two major questions in this regard. First, how can we create a national urban system for the national space-economy which would make for equitable distribution of growth and development, avoiding the over-concentrations in the few favoured areas that have encouraged the large regional disparities in development that we have today? Second, how can we employ the strategy of the national urban system in effecting greater balance in the spatial distribution of growth and development in the national economy through the allocation of various types and grades of activities and services, population sizes, and investments according to the ordering of the settlements, rural central places and national development centres within a co-ordinated national settlement hierarchy?

The second character of the national development surface is the pattern of distribution of the major demographic-economic centres in Nigeria, which today presents problems for the national space-economy. We can identify such centres by, for instance, superimposing the

patterns of distribution of towns and cities with populations of 50,000 or more, those with 20,000 or more inhabitants, the major industrial triangles in the country, and the relative importance of the industrial centres (Fig. 1, 2, 3, & 4). These show the major demographic-economic centres in the country as essentially (a) the Kano-Zaria-Kaduna-Jos area; (b) the Enugu-Onitsha-Aba-Port Harcourt-Calabar area; (c) the Ibadan-Abeokuta-Ikeja-Lagos area; and (d) the Benin-Sapele-Warri area.

These areas of the country have the largest population concentrations as well as the largest socio-economic investments relative to other areas. One may ask, what are the inefficiencies of this spatial pattern regarding the operation of the national development processes? The attraction capacity of these areas of Nigeria for development inputs and population movements creates considerable instability in the national space-economy. They could be seen as the major growth areas in the national economy, as their resource-base and the employment opportunities they provide have been continuously expanded. However, they do also, in fact, polarize development between them and the other parts of the country.

Here again, the distance-decay situation exists. The imbalances in levels of development could also be enormous, such as between the urban-industrial character of these areas and the rural, largely peasant agricultural character of the rest of the country. Moreover, the spatial pattern of opportunity situations in the country is greatly affected. For instance, one finds some correlation between the demographic-economic pattern, the demographic-ecological situations, and the population-resource imbalances in Nigeria. We now have population build-ups within varying ecological zones in the country. These have differential effects on the environmental and resource situations within such areas.

We are familiar, for instance, with the environmental effects of high rural population densities in the south-eastern parts of the country or in the Panyam-Pankshin area of the Jos Plateau. Furthermore, the areas of high population build-ups have corresponded to the areas of the greatest urban environmental problems in the country. Indeed, the inefficiencies in the functioning of the national development processes as a result of these and other spatial organizations are exemplified by the various ecological/environmental difficulties experienced in these parts of Nigeria. Yet, these same areas today form the core areas of the national space-economy.

Beyond the core areas there are vast areas of medium population densities and, thence also, very sparsely settled regions. These latter areas constitute, in effect, the peripheral zones in the national space-economy. They are essentially the inland basins, river flood plains, coastal plains and some upland pioneer fringes. In general, they are characterized by (a) relatively long distances separating them from the core areas, (b) low, non-threshold population sizes relative to their local soil, forest or other resources, and (c) relatively low levels of development. Again, their characteristics constitute an inefficient set-up for the operation of development processes.

Taken together, therefore, the core-periphery pattern in the demographic-economic character of our national space-economy is grossly inefficient and calls for a conscious spatial reorganization.

The situation could further be illustrated with reference to the migration patterns experienced in the national space. Studies have revealed that the major source regions of internal migrations in Nigeria are those parts of the country where high rural population densities and/or rapidly increasing populations de-

pend on insufficient land and other local resources or economic opportunities. They are areas where the local resources and opportunities have been over-exploited. This may occur either as a result of large population sizes or of increased exploitations by even a relatively low or moderate population in an attempt to satisfy high or increased socio-economic expectations or felt-needs. They are areas where increased economic actions or ecological hazards and difficulties have led to low resources, deterioration of, or decreased resource-base. Thus, they are areas characterised by various stages and intensities of population-resource imbalances and of population pressures.

The migration destination areas are those regions where the population-resource relationships are high and/or are constantly increasing. They thus, permit relative to the migration source-region, favourable economic development, increased standards of living and satisfaction of people's expectations and needs. Such destination areas exist either in the core areas (referred to above) or in the peripheral regions. While the core-area destinations attract mainly the rural-urban and urban-urban migrants, the peripheral destinations attract essentially the rural-rural migrants. Because of the imbalances indicated above, more movements are directed to the core-areas than to the peripheries, a situation which is not very healthy for the national space-economy.

Part of the internal migration situation can, thus, be explained in terms of the varying economic or development situations and regional imbalances in the country. As we have noted earlier, development surfaces in the country decrease spatially from the core (urban demographic-economic cores) or favoured areas, often steeply to the peripheral regions at varying route and/or time distances. Socio-economic development is highest within the major growth-generating urban centres and regional central markets, as well as in the rural hinterland areas

situated immediately at the doorsteps of these major centres. They are also relatively high in the core areas of the major export crops, such as cocoa, groundnuts, oil palm and rubber, as well as those of a few food crops, like rice.

Development within these latter areas is often highest along the major route ways, particularly the railways and trunk roads which form the main arteries of innovation and information diffusion. Beyond these major areas of relatively high economy (urban or rural) and of relatively high development, the tempo and levels of development decrease outwards through transitional areas to the peripheries.

One would have expected migrations to operate in a way to correct this situation. But, what do we have? We have two main trends of migration. The first is movement from the peripheral regions and the transitional zones to the core areas, especially the urban centres. These are essentially the rural-urban movements or the migrations to the export crop areas. The second is movement from the core areas, especially of rural population concentrations to other core areas (the urban centres) and to the peripheral regions.

Our studies have shown that it is now to a large extent no more the farming population which moves in search of farmland (rural-rural migrations) as hitherto. In fact, rural-rural migrations in Nigeria have been considerably reduced or even stabilized. Whereas the wave of such movements was high between the 1920s and early 1950s, it is today very low or non-existent in several places and directions (Udo, 1967; Ajaegbu, 1968). Conversely, rural-urban migrations and consequent concentrations in few big cities, are expanding. Thus, while the present-day migration trend does not alleviate the rural pressures, it, instead, precipitates pressures in the cities and their suburbs.

