

GEOGRAPHY IN THE PUBLIC DOMAIN: AN APPRAISAL

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Abstract

Geography is one of the oldest forms of intellectual inquiry. There is little disagreement among professional geographers as to what the discipline is actually about. This agreement about this discipline, among its practitioners, has to some extent caused considerable reputation to those who are practicing the subject. This however, does not mean that the subject is looked upon in a positive way by the public, with the result that most of those who wish to study the subject are unsure what they will do after graduation. This paper explores the roles of geography in a historical perspective. It examines the methodology of geography and the way it has evolved so as to give the subject a place of its own among other subjects. Geography's roles in various sectors and frontiers are examined. An attempt has been made to appeal to students, teachers and other practitioners who are concerned with preserving the public image of their subject as an academic discipline, as well as a field of applied research. This could be one of the ways to convince and attract those who have doubts about the subject to understand its value.

Introduction

The central aim of this paper is to provide a readable account of the historical perspective of geography, its methodology, perception, and its roles as an academic discipline. It is written as a challenge not only to teachers, students and practitioners of the discipline, but also to those who have failed to get a clear understanding of what the discipline is all about. This paper encourages those closely related to the discipline to maintain its central role among other disciplines.

What is geography? Its historical perspective

Indeed, what is geography? One way to answer that question is to not give a direct and brief definition of the subject, but rather to look at what geographers have done through the ages. However, this approach may impose upon us the duty to examine the history of the discipline in order to appreciate the scope of its content and the methodologies of geographers. Bird (1989: 214) advocates that "geography is what geographers have done, geography is what geographers strive to accomplish." It has been argued that a discipline is the collective activity of its practitioners; geography can thus be seen as being what it is that geographers choose to do (Unwin, 1992). Geography also has been defined according to particular objects of study within the subject matter. Johnston (1986) calls this "vernacular," which suggests that there are certain objects that are geographical while certain others are not.

Herm 1. de Blij has written that "Geography is a modern science with traditions that extend to the dawn of scientific inquiry and research (de Blij, 1980). It is an ancient and modern discipline because people in all societies throughout history have been geographers. The theory and practice of geography is one of the most essential attributes of a development-oriented and developing social-economic systems. It is important, therefore, to appreciate the primacy and priority that must be given to geographical training and research.

In historical perspective, some of the best "students" of geography (although not in a formal way) and its application, are recorded in the Bible. Abraham was inspired with the desire to build "a great

nation", and a study of his migratory movements throughout the Middle East and parts of Africa reveals incisive geographical details of peoples' living conditions, land tenure and land use systems, as well as their planning and construction of water development systems. He traveled between Iraq and Egypt, temporarily settling in many places while developing considerable wealth through livestock fanning. Much of his experience is recorded in detail. One of the earliest cases of the discipline of resource assessment and land use planning is recorded in chapter 13 of the book of Genesis. It is reported here, to illustrate the basic geographical practices involved:

So Abraham went up from Egypt to the Weger ...

Lot went with him. Abraham had become very wealthy in livestock and in silver and gold. .. Now Lot, who was moving around with Abraham also had flocks and herds and tents. But the land could not support them while they stayed together, for their possessions were so great that they were not able to stay together. And quarreling arose between Abraham's herdsmen and the herdsmen of Lot... Abraham said to Lot, Let's not have any quarreling between you and meIs it not the whole land before you? Let's part company. If you ,go the left, I go to the right.... Lot looked and saw that the whole plain of Jordan was well watered So Lot chose for himself the whole plain of Jordan and set out towards the east. The two men parted company.

The text illustrates clearly the key geographical principles that development and the accumulation of wealth imposes pressure on the land. This pressure generates social conflict. Land use surveys such as those done by Abraham and Lot through their indigenous knowledge illustrate how to allocate land appropriately when interests conflict.

Another ancient record which illustrates the role of geographers, and use of geographical information in social-economic development, is the work of Joseph in Egypt. Joseph, who had an incisive local knowledge of "environmental science" was able to develop a model of forecasting the hydrological regimes of the Nile River, to show how they affect the yields of crops; and to use that information for planning the production, storage and distribution patterns of food and livestock. In this way, famine was eliminated as a factor in the social and political system of Egypt. The King of Egypt found so much wisdom and discernment in this environmental scientist that Joseph was appointed to be Prime Minister for life:

You shall be in charge of my palace, and all my people are to submit to your orders.

Only with respect to the throne will I be greater. (Genesis 41 :40).

Eratosthenes is said to be the first scholar to use the word Geographia (Geography). Thus the academic discipline of geography began to be identified in Greek scholarship. Eratosthenes conducted his research in Libya, his country of birth. Strabo, who is probably the best acclaimed of the ancient Greek geographers was born in Tmkey in 63 B.c. and was determined "to write a compendium of the field that would set down everything that had been achieved, and establish new directions." He traveled to Rome, studied in the library where Eratosthenes had worked for-many years earlier in Alexandria, and read everything geographical that had been written.

One important fact that was noted is that all ancient scholars who contributed to geography were men of extensive learning; widely read and widely traveled. Eratosthenes for example, was a poet, a librarian, an explorer, a cartographer, and a well rounded scientist. He is in fact best remembered for the precision of his calculations of the circumference of the earth. One of his innovations was an attempt to define the limits of major environmental regions of the world. Ptolemy, born in 23 A.D. wrote a monumental book in eight volumes entitled "Guide to Geography."

Methodology and Content of Geography

With regard to the content of geography, there has always been resistance against setting limits to the subject of study. Indeed, as Hagget (1965) observed, "geography has long been a thorn in the side of school and university administrators." The question being whether its natural home should be with the arts or sciences. At the University level, it has been variously classified as an "earth science," a "social science," and more recently as an "environmental science." This controversy often necessitates hard bargaining in order to secure developmental resources from uncertain administrators. In some universities, geography as a discipline is even denied resources when it comes to field studies with the argument that it is not an indoor practical oriented subject where experiments have to be carried out. Indeed geographers themselves have conceived the study of geography in different terms at various stages of its evolution. The three dominant views are that:

- (a) Geography is the study of the earth's surface.
- (b) Geography is the study of the relationship between man and his environment.
- (c) Geography is the study of location and distribution of phenomena of the earth's surface.

Thus, there has always been in geography, an "Ecological School,;" a "Landscape School" and a "Location School."

While there is no doubt that the central concern in geography is with location and distribution, geographers prefer that their discipline not be limited to one phenomenon. What geography offers to scholarship, therefore, is not a certain body of facts, but rather a view point and methodology for examining reality. Geography retains the capacity to extend its methodology to events in the physical and social realms of study in order to provide fresh insights and appreciation of the dynamic interaction between human activity and natural systems.

One British scholar has summarized the methodology of geography in three words: graphicacy, numeracy and literacy. First and foremost the geographer is associated with maps, graphs and diagrams. This is the component of "graphicacy" in his or her training and in the presentation of information. The second component is the use of quantitative data and analytical methods. That is, a geographer must be "numerate," although not necessarily a mathematician. Thirdly, a geographer must be literate, and widely read. These methodological imperatives imply that the best geographers should be the best scholars, remaining abreast of development in many related fields.

In the last three decades, beginning in the mid-sixties, geography has experienced major innovations in methodology. In what has been called the quantitative revolution, new techniques in the gathering and storage of information, as well as methods of analysis of data, were adopted. The geographers' interest has shifted considerably from descriptive studies of areas towards problem solving and topical studies. A stronger interest in systems analysis and the study of processes has also developed. Whereas, in earlier times, numeracy was confined to studies of physical geography particularly in climatology, the quantitative revolution extended the application of refined statistical and mathematical models to human and social aspects of geography (Hagget, 1965; Cole and King 1968; Chorley and Kennedy, 1971).

Two more emphases in the recent development of geography are notable. One is the stronger emphasis on spatial organization and the search for explanation and linkages between processes. Geography has become much more dynamic in outlook as geographers seek to know not only the existing patterns of population, settlements, agricultural systems and transport, among others, but in a significant way, geographers have developed a stronger interest in change. The second emphasis relates the study of man's role in changing the face of the earth, a subject that became much more central to geography in the mid-fifties. Thus geography is not only interested in the physical landscape, but also in cultural, urban, industrial, and commercial landscapes as well as spatial patterns and systems.

These developments have led to considerable expansion in the fields relating to the application of

geography. It has become more and more of an applied science, oriented towards problem solving rather than just mere explanation of existing patterns. Today the training of a geographer is likely to include many more skills than just traditional map reading and map interpretation. In addition to remote sensing and field work, the geographer is acquainted with a wide range of quantitative methods.

Many would claim that geography is the mother of all sciences, in part because of the broad concerns and contact between geography and other disciplines. The development of geography has also been in response to socio-economic changes, and overall intellectual progress in society. In periods of economic decline interest in scholarship appears to decline, as more and more people turn to materialism and narrow minded short-term gains. The mind of society stagnates as people become inward looking. The change in the public image of geography can therefore be the symptom of retrogressive social tendencies in our times, as well as of the decline in commitment and the principles and prospects of education in general. It has been said for example, that in Europe, "the systematic study of geography progressed little during the thousand years following the breakdown of the Roman Empire". This period of stagnation in the development of geography in Europe (500 AD. - 1500 AD.) witnessed the lack of interest in maps, deteriorating cartographic practices, and thus geography as a field of study became dormant.

The revival of interest in geographical scholarship in Europe had to await the period of the Reformation which stimulated socio-economic progress and the blossoming of scientific knowledge in general. The increased pace of global exploration for resources and markets in the fifteenth century, the need for better and more precise information, and better maps of distant continents and regions, were the main factors that stimulated interest and allocation of resources. Those who possessed geographical knowledge at the time were self-sustaining wealthy men, and great generalists in their intellectual pursuits. They were more than solely geographers.

One such scholar was Alexander Von Humboldt, who belonged to a wealthy land-owning family. His life has been described as "a scientific treasure hunt," and his travels took him to Ecuador, Peru, the Amazonian interior, Middle and North America as well as Russia and Siberia. Between 1805 and 1827 he published thirty volumes on ecological topics including historical and physical geography. Much more significant in terms of his contribution to geographical theory was J.H. Von Thunen, a wealthy landowning aristocrat with a large estate near the town of Rostocv, Germany. He studied the effects of distance from the market, and transport costs on the location of productive farming. It is now recognized that Von Thunen was ahead of his times, and his theory of spatial structure of agriculture in relation to a market-center still commands respect in modern economic geography.

Subsequent to the geographical studies of these great generalists was the development of what we must see as modern geography. The founding of modern geography is associated with the work of Carl Ritter, in Germany, in the nineteenth century. His role in the development of geography is special in that he not only conducted research to publish books, but he also trained others who were responsible for founding other centers of geographical training and scholarship. Carl Ritter was the first person to be appointed to the position of Professor of Geography, at the University of Berlin in 1820. It is to Ritter that we owe the definition of Geography as the study of the earth as the home of man, concerned with the identification of the spatial relationships between human activities and the environment. Students of Carl Ritter were responsible for founding geography in Europe and America in the later half of the nineteenth century .

The Geographer at Work

In one of the few books designed to introduce geography to the wider domain, Peter Gould (1985: xiv-xv) suggests that "Most people have little idea what modern geography is all about." His book begins with a description of a cocktail party at which the following conversation took place (Gould, 1985:4).

And What do you do? she said. Oh, I said, grateful to the usual filler, I am a geographer.

And even as I said it, I feel the safe grounding turning into the familiar quagmire. She did not have to ask the next question, but she did anyway.

A geographer?

Er Yes, a geographer, said with that quietly enthusiastic confidence that trips so easily from tongues of doctors, engineers, airline pilots, sailors and tramps Oh really, a geographerand what do geographers do?

He continues: It has happened many times, and it seldom gets better. That awful feeling of desperate foolishness when you, a professional geographer, find yourself incapable of explaining simply and shortly to others what you really do (Gould, I 985:4) ..

This account is typical of the experiences of some professional geographers, and it illustrates that the public understanding of what it is that geographers do is extremely limited. Such a situation cannot be blamed on the public in general though; geographers themselves have frequently been very poor at actually explaining and justifying their role in society. Indeed, many people teaching and undertaking research in geography departments, when faced with the cocktail party question noted above, quickly cover their tracks, with statements such as "Well, I am really a soil scientist," or "Actually, I am a consultant on development issues." It is not easy to establish precisely why this is the case, but the public perception of the discipline is so far removed from the actual practice that to say simply that one is a geographer would appear relatively meaningless. It could also be attributed to the fact that geography is such a wide ranging discipline, covering research on topics as diverse as mountain forming processes and the medieval wine trade, that the single word "geography" conveys little idea of precisely of what sort of research is undertaken by geographers. One cannot though, escape the conclusion that it may also be because many people working in geography departments remain unhappy with the idea that there is indeed something unique and worthwhile about their own discipline.

While geography has been widely accepted as a school subject some people have reservations as to its status and significance as a university course of study. It is therefore, understandable that a young undergraduate seeking to register for geography would want to know what he is contracting to become and what he may expect to be qualified to do with his/her degree, besides teaching geography. Hence, one hears such common and unfortunate statements among university students that "Geography is taught merely to be taught." This can be illustrated in the following quotation:

Asked one law student:

What are you studying in the University?

I am offering geography as a single subject. he replied.

Do you do education? he added.

No, was his answer.

But where will you work? he continued.

All this is presented against a background of apparent ignorance about geography as a discipline.

There is need for the professional geographer to show the public, and students of geography, what the discipline is all about. This should be done by showing the scope, content, methodology, and relevance of geography.

The image of geography held by most people is usually derived from their school education. For instance, geography in Britain is still widely seen by the public as being about "capes and bays," and in the U.S.A., as being concerned with "states and capitals." This can be well illustrated by a dedicated and enthusiastic teacher of geography who asks students to point out the locations of a number of places in the

different parts of the world. The students, in response, show little knowledge, even though the teacher points out that the reason he asked them to identify Britain was that, "It was the British who were our colonial masters for a long time." This illustration is particularly significant, because even if geography really is about "capes and bays" or "states and capitals," it suggests that the subject is evidently failing to provide students with a body of knowledge that they consider to be useful and worth remembering. Thus, most people have been left with the impression that geography is nothing more than an endless list of dull places to be memorized.

In the political sphere it is argued that geographers have played a very limited role in influencing decision making and in advising governments at the national level, let alone at the international level. Likewise, although the media coverage of geography is beginning to increase, geographers are still rarely interviewed on news or current affair programs. In contrast, economists are widely asked for advice concerning the handling of the economy, and botanists are turned to for the development of new high yielding varieties of crops to increase the global food production. This kind of situation was well illustrated in Rome at the headquarters of Food and Agricultural Organization (F AO). The opportunity arose to discuss the potential contribution of research by geographers on the problems and implementation of agricultural development in the poorer countries of the world, and time and again the conversation would come around to the point that the geographers had few immediately apparent skills or attributes which were perceived to be of use. Instead the F AO was keen to employ forestry experts, biochemists with specific skills in the development of pesticides, and economists to undertake cost-benefit analyses of the effects of introducing certain types of innovation. This is not to deny that geographers have played a significant part in influencing policy decisions (Hall, 1963, 1980, 1988), but it does suggest that their role is not as readily apparent as that of practitioners in some other disciplines ..

Another way of examining public attitudes concerning the value of geography is to look at employers' opinions of geography graduates. A survey undertaken in the mid-1980s (Unwin, 1986), for example, suggested that while no employers saw a geography degree as being a distinct handicap, at least half of the respondents saw it as offering no particular advantages. Of the employers who did see a geographical training as being useful, the majority thought it was the computing and statistical skills provided in geography degrees that were of the most importance.

Geography's new roles

Having seen that modern geography has developed considerably from the original descriptive and exploratory concerns of the traditional geography, we can now turn to the question of whether geography has found new roles in the world, and Uganda in particular, despite years of obscurity and misinterpretation.

Using some of the world's most highly advanced technology, geographers are helping city planners revamp neighborhoods and relocate public services. Geographers are studying the effects of air pollution on native vegetation and designing evacuation plans for nuclear power plant accidents.

Some geographers are experts in international trade, while others are making impressive progress in the field of "mental map making" and artificial intelligence, as well as behavioral geography. Other important features can be highlighted in this regard. These include: population analyses, urbanization, town planning or urban land use planning. On these important phenomena hang most of the problems for which geographers must find solutions and explanations and in which geography as a discipline is finding new roles.

Let us now look at a specific example: Since 1948, the population of Uganda has grown from barely 4 million, to almost 20 million persons. This fivefold increase in less than fifty years constitutes the most dynamic factor in the ecology of Uganda. Aside from the more precise recording and analysis of various aspects of the population geography of Uganda, vital studies are called for to assess the impact of

population growth on land, water, vegetation, and other features of the natural environment in Uganda. The codification, analysis, and popularization of issues of the interaction between population growth and the environment present the major roles of geographers in Uganda today.

The process of urbanization is still in its infancy in developing countries, and in Uganda in particular; but there is no doubt that it constitutes the second most important dynamic factor in Uganda as the home of human beings. The agglomeration of people in urban areas is a global phenomenon which has altered considerably the long established attitudes of the relationship between man and his environment. The study of urban geography and central place theory has acquired a prominent position in geographical scholarship. While Kampala and Jinja have attracted the most attention, the need for detailed studies of all the towns, trading centers, and market places in Uganda, as well as data collection and analysis of the process of urbanization will attract the interest of geographers. The contribution of urban geography to regional development planning cannot be over-estimated.

The other aspect is that geography's new roles can be seen in the context of the environmental setting and resource utilization. The understanding derived from geography of geomorphic features serves as a guide in research on mineral deposits, the structure that has favored their accumulation, and the geomorphic history of these resources. This makes possible a better appreciation of the dynamic factors of the physical environment, which can now be managed to sustain the increasing demands of the people, and it may stimulate long term solutions to their sustainability.

Another aspect of the role of geography is in the field of what is termed medical geography. It has become very important that medical personnel, as well as planners, have knowledge of the spatial distribution of diseases. The locating of ranches and disease control posts requires prior knowledge of these areas. This information is usually finished by a geographer through production of various maps that relate to the causes, location, and distributional factors. The Uganda Atlas of disease distribution compiled by B.W. Langlands has been highly appreciated by many medical researchers because certain diseases have been found to relate to climate, relief, soils, vegetation, culture and many other factors. Once the location of diseases are known, then necessary steps can be taken to eradicate them.

In the field of political geography, geographers have discovered new roles as competent advisers in constitutional decision making, as well as becoming competent debaters in the legislature. Many geographers examine how policies affect the population, crops grown, and the general level of economic development. For instance, in Uganda, political decisions have affected the distribution of crops and industries in Uganda. These decisions have not been in conformity to the edaphic climate tastes, resource potential or the aspirations of the citizens. However, a geographer can intervene and explain to the "green" authorities the conditions and time during which crops are supposed to be grown and the nature of resources that are bound to sustain the industry wherever it is located.

In this regard, geography should be encouraged to seize the central fortress, ejecting both pure science and the grossly over-promoted intellectual exercise called mathematics. Geography should stand alone with its one educational equal, the study of human spirits in English, language and literature. Without a clear grounding in the known characteristics of the earth, the physical sciences will be mere game playing and the social sciences mere ideology.

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