

A Folk Guide to Geography as a Holistic Science

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This article defines geography as a holistic science that seeks to explain variations in the human-environment relationship over the earth's surface. By critically evaluating the ontological, epistemological, and methodological commitments of geography, an attempt is made to bridge the gap between the specialized, professional discussion of geography and practical pedagogical needs. The central argument is threefold. First, by combining natural and social science, the geographical perspective is crucial as a means to explain, and to help solve, real world problems. Second, such a multidimensional science demands a holistic approach. Finally, if this message is to be heard, geographers will need to put more effort into translating their professional discourse into that of nongeographers. The key is to change the prevailing "folk model" of geography held by nongeographers as a means to render the geographic project more intellectually coherent and institutionally legitimate. **Key words:** *geography, human-environment relations, holism, pedagogy.*

Glick (1990, 1983) recently has described what he calls the "folk model" of geography. This model, held by nongeography colleagues, students, and the general public, essentially determines the intellectual and institutional support that the discipline receives. Unfortunately, according to Glick (1983, 92), the prevailing folk model assumes that geography entails merely "a grade school emphasis on topographical facts." Less cynically, most folks are skeptical of geography's claim to be a holistic science of nature and society. Apparently, then, geographers have not been very good at explaining their science to non-geographers.

The present "folk guide" to geography is an attempt to address this issue directly. The first component of the guide includes an examination of how geographers have portrayed their science. On one hand, I argue most geographers have not focused enough attention on translating their professional discourse into terms accessible to nongeographers. On the other hand, those geographers who have addressed such pedagogical needs have done so in a way that makes it difficult to consider geography a distinct science. Establishing "four traditions" (spatial, area studies, man-land, and earth science) or "five themes" (location, place, relationships within places, movement, and regions) for geography merely confirms the suspicion of most folks that geography has no specifiable object of study that other disciplines have not already assumed (Pattison 1964; Natoli 1994).

The second component of this guide thus involves an attempt to define more coherently both the object of study of geography (its ontological commitment) and how geographers study this object (geography's epistemological and methodological commitments). Unlike other sciences, I argue

geography studies the human-environment relationship. The twist in the argument is that humans are considered always as social beings and, more significantly, that "environment" is considered to be both natural and humanly constructed. Expanding the definition of environment makes it easier to understand the links between physical and human geography. Unlike Glick (1983) and others (Norton 1992; Johnston 1983), I consider that the combination of physical and human perspectives is what renders geography both unique and potentially at the cutting edge of interdisciplinary science.

To make sense of such a multidimensional object of study demands, in turn, a holistic epistemological approach. The present guide proposes that holism involves the ability to focus on, and understand, the relationships among natural and social phenomena generally viewed as separate by analytical sciences. Focusing on the relationships between, say, economic and hydrological phenomena allows one to see more clearly how the real world is a complex whole of mutually determining interrelations. Such a focus is the important first step toward determining the exact nature of such interrelations, or precisely how the economic is related to the hydrological and so on. The key is to initiate such a holistic perspective by discussing it at a level where other folks, besides specialists, can enter the discussion.

This last point signals the third component of this guide. The emphasis in what follows is on how best to explain the science of geography to nongeographers. This is the practical problem of rendering the professional discussion about geography more comprehensible at the level of folk knowledge. Toward this goal, the guide includes pedagogical techniques I have found useful in explaining geography to other folks.

These include an example of how to portray the multidimensional object of study of geography as well as a simplified three-step introduction to geographic holism. This emphasis on developing practical pedagogical techniques is intended to help bridge the gap between the professional and folk models of geography.

A Practical Look at Geography as a Science

There has been much recent discussion in the professional literature about how best to characterize geography as a distinct science. According to Driver (1994, 92), this discussion is part of the "current efflorescence" of writing in the history and philosophy of the discipline. Recent works, such as those of Buttimer (1993), Gregory (1992), Livingstone (1992), and Cloke et al. (1991), portray geography as a scientific project worthy of a place within institutions of higher learning. Other works, such as those of Abler et al. (1992), Unwin (1992), Johnston (1991, 1983), and Gaile and Willmott (1989), examine the practice of geographers in an attempt to render more explicit the common nature of their work. This discussion of the nature of geography is important, particularly in the U.S. context where geography exists as a university discipline but is not normally a separate subject at lower levels of education.

Another discussion within geography concerns the proposed national standards of geographic education at the K-12 level (Joint Committee on Geographic Education 1984; Harper 1990a, b). This has included debate over whether "geographic alliances" between university and nonuniversity faculty are the best means by which to expand geographical awareness (Fuller 1990, 1989; Bednarz 1989). Significantly, this pedagogical discussion involves the explicit attempt to render the more theoretical work of the professional literature accessible to nonspecialists.

Here I will take stock of these attempts to promote geography from the practical point of view of a university teacher. There now exists a plethora of introductory textbooks in geography. Each of these textbooks has the requisite chapter on geography as a field of study, but there is never much critical discussion about this for the familiar reasons of book trade and length limits. What is generally left is a brief version of geography as the study of earth as the home of humankind from an integrative, holistic perspective.

This common textbook approach is both attractive and yet unconvincing. It is attractive because if accepted without criticism geographers can feel quite good about what they do. Being holistic, it is assumed, is better than being simply analytic. Yet, this textbook approach is unconvincing because, when examined critically, the assertion of holism is both daunting and not a very realistic statement about what geographers actually do. The uninitiated view (one that most nongeographers hold) is that such holism is simply impossible. The typical understanding is that geographers need to know everything or, instead, that they know a little about a lot of things (and not a lot about anything). None of this is very helpful as a means to legitimize geography as a distinct science.

Here is where a stronger bridge must be built between the current professional discussion of geography and actual classroom needs. There is a huge gap in level of argument between this more specialized discussion and the typical geography textbook. Indeed, as Raguraman (1994) points out, many specialist works are beyond the intellectual reach of even our graduate students. The need is for texts pitched at the intermediate level that would provide both more detailed and more critical views of the study of geography. Anyone who has attempted to make use in undergraduate classes of recent texts that appear to be pitched at this level, such as Macmillan (1989), Wolch and Dear (1989), and Peet and Thrift (1989), knows that successful translation of specialized knowledge into a folk-friendly form is a very difficult task indeed. Unfortunately, those geographers who best succeed at this, such as Johnston (1991), Cloke et al. (1991) and Kobayashi and Mackenzie (1989), do so at the expense of largely ignoring physical geography. This is also the case with those now arguing for synthesis on the basis of "place" or "locality" instead of region (Agnew and Duncan 1989; Harloe et al. 1989).

These last points signal the practical problem of this professional portrayal of geography. Geographers who without criticism promote what Hanson (1994, 127) calls the "mysterious multidimensionality of geography" merely confirm that geography has no distinct object of study. This helps explain the increasing subspecialization in the discipline, as geographers themselves focus their research efforts along less mysterious, if not wholly analytical, lines (Goodchild and Janelle 1988). As long as the multidimensionality of geography remains so mysterious, the distinct nature of geographical research will remain in the eye of the beholder, particularly at the level of folk knowledge. Faced with this situation, the multidimensionality of the object of geography must be rendered much less mysterious. Indeed, critically examining the nature of this object should put geography at the forefront of the current reexamination of the worth of analytical, disciplinary science (Wallerstein 1991). In what follows, I will support these assertions on the basis of a critical evaluation of the ways in which geography has been portrayed by those geographers more involved with such pedagogical issues.

The Four Traditions and the Five Themes

The arguments of geographers now involved in pedagogical work are thus crucial to the present guide. There have been two major attempts to influence the folk model of geography that have remained, importantly, at the level of folk knowledge. The first attempt was that of Pattison (1964) in his still often referred to rendition of the "four traditions of geography" (spatial, area studies, man-land, and earth science). The second attempt is the current move to establish guidelines for geographic education on the basis of the "five fundamental themes of geography" (location, place, relationships within places, movement, and regions) (Joint Committee on Geographic Education 1984).

Both of these efforts to portray geography approach the issue in the same manner. Pattison is most clear about this in

that his traditions are derived directly from the work of geographers. Like Hartshorne's (1939) approach, the traditions of geography are based on what geographers traditionally have done. This notion of "geography is what geographers do" is also carried over to the more recent five themes approach. These themes are explicitly an update of Pattison's four traditions based on recent trends in the practice of geography (Natoli 1994).

There is no question that such attempts to influence the folk model of geography are desirable for both institutional and pedagogical reasons. Yet, how well do these particular renditions accomplish their task? Certainly both approaches portray the multidimensional nature of geography as it is practiced, thereby allowing for what Pattison calls disciplinary "pluralism." And, certainly, much thought went into deriving the five themes which, in turn, seem to emphasize holism more than the four traditions (that is, place and region are given more emphasis). However, what is one to make of such a plural definition of geography?

The answer from my students and nongeography colleagues is that geography has no definition other than what geographers do. The problem is that the four tradition/five theme approach mixes incoherently geography's ontological, epistemological, and methodological commitments. The object of study of geography is simply combined with the various phenomena and processes that geographers focus on in their research. Thus, *what* geographers study and why they study this object is lost in the narrative about *how* they attempt such a study. The resulting folk model of geography is either that geographers must combine all of the traditions/themes in their work or, conversely, that it is possible to be a geographer even if one studies only, say, earth science (is it then geology?) or location (is it then merely cartography?) to the neglect of the other traditions or themes. Again, the first possibility elicits incredulity, the second simply fragmentation into so many analytic pursuits.

This is the truth behind Blouet's (1990) too brief comments on the possibility that the five themes could be reduced to two—that is, location and place—without loss of substance. Similarly, it is here where Harper's (1990a, 1990b) critique of the "new school geography" hits its mark, if not for the reasons he suggests. The problem is not that the five themes "do not fit into any of our geographic traditions" as defined by Pattison (Harper 1990a, 28). As noted, these themes are based specifically on Pattison's earlier work. The problem, as Harper (1990b, 135) also points out, is that an "overall integrating perspective" or "conceptual framework" is not made explicit in the emphasis on the various themes (nor I would argue is such a perspective explicit in the four traditions approach). As Harper (1990a, 28) puts it, the five themes "are components necessary to undertake the study of any kind of geography but, even together, they are not geography." A more coherent integrating conceptual framework is necessary, in other words, as a means to determine what is significant for geographers to study and why.

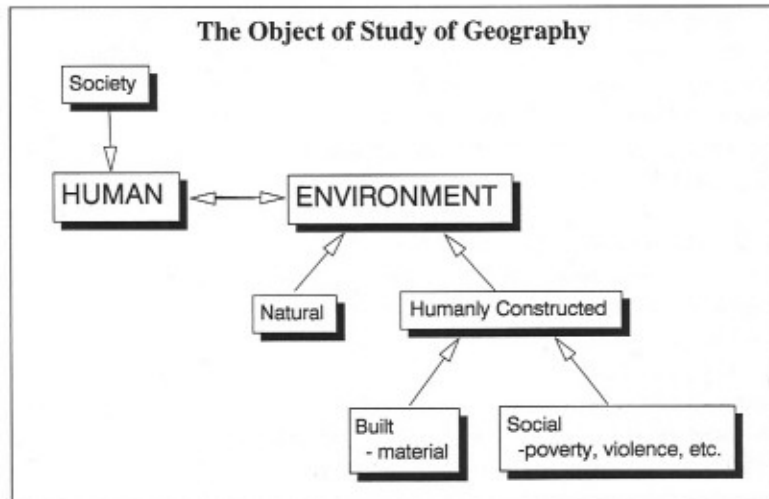


Figure 1.

A Practical Ontology for Geography

Arguing for a more coherent conceptual framework for geography does not mean a desire to return to the kind of oppressive disciplinary "monism" Pattison (1964) describes. Nor do I seek to construct a dogmatic metanarrative in order to re-center the discipline at the expense of "difference" (Rose 1993; Dear 1988). What follows is rather a critical discussion about intellectual coherence along with an account of what has worked for me in terms of introducing the geographical perspective to other folks. The point is that this perspective is crucially important, both because of its focus on the human-environment relationship and because of its holism. Whether this perspective is confined in a strict disciplinary way is beside the point (pace Eliot-Hurst 1985).

On the basis of the arguments put forth in the professional literature, geography is the study of variations in the human-environment relationship over the earth's surface. The key, however, is that both sides of the relationship must be examined critically. With regard to Figure 1, "human" must be understood as not individuals, but members of societies. Human individuals do not exist and relate to their environments in isolation, but in community with others. Societies, in this respect, are the source of the spatial variability of the human-environment relationship.

This last point becomes clear when attention is paid to the other side of the relationship. Environment must be understood as both natural and humanly constructed. This accomplishes two things. First, such an understanding explicitly includes a physical component. Second, expanding the definition of environment to include humanly constructed phenomena precludes the narrowing of geography's focus solely to that of a naturalistic human ecology (Barrows 1923; Duncan 1980; Archer 1993). Physical geographers focus most on the human-natural environment relationship. This focus renders their work different from other scientists who focus more singularly on natural phenomena and processes. Similarly, human geographers focus most on the human-humanly constructed environment relationship. The humanly constructed environment includes the built environment, or the con-

structed material environment, and the social environment, or environments of social relations like those of poverty, violence, and rapid population growth. This focus renders the work of human geographers different from other scientists who focus more singularly on analytical divisions of this relationship (e.g., architecture, economics, politics, etc.).

Importantly, humans are both conditioned by, and yet condition, their natural and humanly constructed environments, and this ongoing process has significant spatial variability over the earth's surface. While each side of this human-environment nexus is examined separately by scientists in other disciplines, the focus of geographers is on the very relationship between them. In short, the object of study of geography, its practical ontology, is the human-environment relationship as variably manifest on the earth's surface.

Claiming the human-environment relationship as the object of study for geography may seem no better than claiming to study the "earth as the home of humankind." That is, such claims are largely empty slogans that promise much more than they can possibly deliver. Yet, such a specification of the object of geography actually accomplishes three things. First, by explicitly maintaining the focus on the human-environment nexus, such a perspective precludes the possibility that geography simply can be collapsed into geology (the earth science tradition) or cartography (spatial science or location). Such a focus also makes it clear that geographers study place and movement for reasons beyond the purposes of trivial pursuit.

Second, by thus specifying the object of study of geography, one can see more clearly the connection between physical and human geography. It may be that today's human geographers have little truck with physical geographers (Abler et al. 1992). But this is not a necessary scenario as Johnston (1983) and Norton (1992) imply. Such a view simply ignores the cutting edge debates about analysis, holism, and scientism now taking place in the natural sciences (Barlow 1991; Prigogine 1980).

This last assertion points to what can be considered the third benefit of specifying the object of study of geography as the human-environment relationship. Real world natural and human environmental problems are the result of human activity. While perhaps an obvious statement, the implication is that we need more people trained to see such connections. Maintaining and strengthening the links between human and natural science will enable geography to meet this growing demand. While perhaps a hopeful assertion, this goal makes more sense than fragmenting along the lines of analysis at the very time when it is becoming clear that disciplinary walls have blinded scientists to the complex, holistic nature of real world problems.

Geography as a Holistic Science

Merely specifying geography's object of study, however, will not suffice. It is necessary to determine how the study of a multidimensional object such as the human-environment relationship can be undertaken. This is where epistemological holism becomes important. In geography, epistemological

holism has been understood in three main ways. The first and still prevalent understanding is that holism entails the attempt to know "everything" about the object of study. The quotes signal that most understand this is an impossible goal, but one that can be approached by gathering as much information as possible. This is the gazetteer model of geographic holism that fuels the predominant folk understanding of geography as merely a derivative science with nothing original to offer.

The second way in which holism has been understood in geography is that it is something quite intuitive. From the early, rather mystical, understanding of earthly organisms (Glacken 1967) to the more recent understanding of regional geography as more art than science (Hart 1987), this understanding of holism considers it more a "habit of mind" (Harris 1971) than a specifiable epistemological approach. A geographer must somehow "get under the skin" of a region to know it and, even then, not all will succeed. There is not much that can be said about geographic holism from this perspective because, as Relph (1989, 153) argues in a different context, this would be like a "biologist killing an animal to find out what makes it live." Nevertheless, the predominant folk understanding of such a claim about holism is either that it is grandiosely empty, given what generally passes for geographic research or, more charitably, that it is a type of understanding that only a very few can ever attain. Either way, geographic holism remains ultimately an unknown and, indeed, largely unknowable proposition.

The third way in which holism has been understood in geography is more recent in origin. I will call this the theoretical approach to holism because of its emphasis on the critical examination of holistic epistemology and methodological procedures. This approach to holism is the direct legacy of the ascendancy of positivism in geography from the late 1950s (Harvey 1969). At the professional level of discussion, there have been various claims to holism made by structuralists, system theorists, radicals, Marxists, and even more recently, structurationists and realists (Cloke et al. 1991; Buttner 1993). I will not attempt to review these recent claims to holism except to emphasize the conscious attention to epistemology that they all exhibit. Because of this attention, any one of these claims could play a significant role in influencing the folk model of geography.

Nevertheless, the prevailing folk understanding of theoretical holism in geography is either that it is merely a matter of dogmatically adopting an "ism" or that such holism is as unattainable for most researchers as holism based on intuitive habits of mind (Raguraman 1994). Certainly, much of the recent theoretical debate in geography strikes even the initiated as quite abstract. But this is only because of the apparent unwillingness of theorists to render their discourse more accessible to nonspecialists. Theoretical holism, in fact, is absolutely crucial because it demands that all claims to holism in geography be examined critically.

It is clear where my own sympathies lie. But the argument can be taken even further. A growing aspect of this postpositivist discussion about holism in geography is that the various "isms" are themselves too restricting. Just like killing the

animal to find out what makes it live, theoretical holism of any variety is considered, in this view, ultimately oppressive. Holism inherently silences difference and therefore such an approach is unable to make sense of a complex, multidimensional reality. This is the tenor of the arguments of both postmodernists and feminists in geography. Taken to the extreme, such arguments claim that epistemological holism is an illegitimate, even dangerous, goal to pursue.

Nevertheless, I want to retain both holism and this critique of holisms. Holism as an epistemological perspective is not the source of the problem postmodernists and feminists (among others) emphasize so cogently. Rather it is the varying ways that holism has been undertaken. A scientific, unbending holism is no better (and perhaps even worse) than a scientific, unbending analytical approach. Yet, rather than attempt to demonstrate a nonoppressive holistic perspective at the level of high theory, I will keep to the task of describing geographic holism at the level of folk knowledge in order to open this discussion to nonspecialists.

A Three-Step Introduction to Geographic Holism

To explain geographic holism to students and colleagues in a theoretically informed way, one should begin with their concrete experience in an academy based on the factory model of increasing specialization of intellectual task. This factory model of science must be recognized explicitly as resting on the idea that the results of specialization will be the greater knowledge of the whole, or real world. Once a scientist has disciplined her focus to smaller parts of this whole, she will both know more about this part and be able to share this knowledge with others who study other parts of the whole. The implication is that all will benefit from the greater knowledge produced by this sharing process.

Explained in this way, the institutionalization of analytical science becomes suspect even to those who have not previously given it much thought. Examples of the inability of specialized scientists to talk to each other, let alone come to agreement, abound. This opens the door to a discussion of alternative epistemological perspectives, such as holism. But it only opens the door. The analytical model of science remains attractive because of its apparent successes, particularly at the level of folk knowledge. After all, one cannot know everything, can one?

No, one cannot. And it is at this point that one needs to be

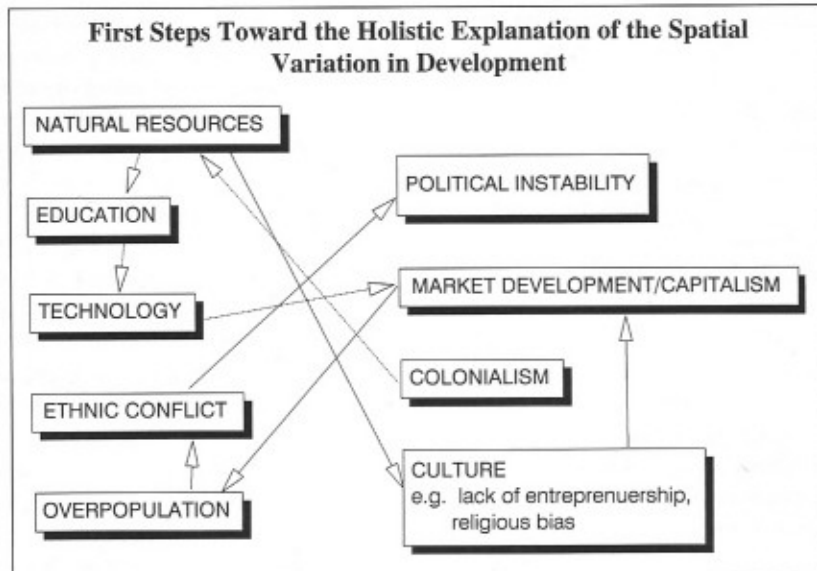


Figure 2.

critical in the classroom about the casual textbook description of geography. To be holistic is not to know everything but, rather, to relax the discipline of one's scientific vision in order to focus on interrelationships. In what ways are changes in the natural environment related to, say, politics or the economy? Once begun, such a class discussion leads quite directly to a consideration of the reasons behind the recent development of

such interdisciplinary fields as cultural studies, environmental science, policy studies, women's studies, and so on. The point is that the problem of overspecialization is neither a recent discovery nor should it be considered original to the classroom discussion.

A specific example from the classroom should demonstrate more clearly this process of explaining holism at the level of folk knowledge. This involves what I call a "three-step" introduction to geographic holism. A major section of my human geography course concerns issues of development and underdevelopment. After describing the characteristics of the global human-environmental problem of rich and poor regions, I ask the class to discuss what they think are the main reasons for such a global predicament. That is, why are some regions so rich and others so desperately poor?

Figure 2 is a composite of the types of responses I receive. Significantly, such responses already indicate the multidimensional, interdisciplinary nature of the problem. Also significant is that, invariably, one of the answers given is "resources" or, more generally, the "natural environment." This allows me to make a direct connection with physical geography. The human-natural environment nexus is discussed explicitly as a factor in what is generally regarded a social problem. The problem of development, in other words, simply cries out for a unified, geographical approach. Indeed, one could build a similar argument with regard to issues such as global warming, declining biodiversity, or groundwater contamination, generally regarded solely as "natural" problems. In any case, the list of possible factors influencing development is made and discussed so that students fully understand the reasons behind each individual response.

The second step toward geographic holism involves asking students whether they can see any relationships among the various factors. This is an important step because, not only does it encourage students to look for interrelationships, it also engenders discussion over the specific relationships made. As indicated in Figure 2, relations are made among factors such

as culture, the use of natural resources, market development, and material wealth; or, alternatively, among colonial oppression, educational attainment, and technological achievement. The point is to make such relationships explicit in order to render them open to critical discussion. Such discussion engenders self-reflection and, in the most successful instances, demonstrates to students that it is necessary to provide evidence (of whatever sort) to support their beliefs.

This last issue becomes particularly important when the third step toward holism is taken. It soon becomes clear that relationships can be established among virtually all the factors listed. When this is recognized, we are returned, despite ourselves, to the empty notion that "everything is related to everything else" with the resulting assumption that to make sense of this with any scientific sophistication is impossible. At this point, it becomes necessary to develop what I call "hierarchies of causal importance." This merely means that, while everything may be related to everything else, some factors are considered more important than others in the explanation of variations in development. Figure 3 provides two examples of hierarchies constructed by students in my introductory classes. Again, the key is to discuss critically the reasons behind each causal hierarchy in a way that both clarifies the background assumptions and makes it clear that there are always alternative explanations of the same problem.

Such talk of causal hierarchies surely must raise the hackles of those with visions of holistic straightjackets dogmatically forcing causal explanation on an unwilling reality. Yet, this postpositivist fear of explanatory dogmatism is actually incorporated in the practical holistic epistemology presented here. The critical discussion of causal hierarchies is precisely a means to make clear that there are potentially very good reasons behind quite diverse, even contrary, explanations of the same issue. Such an exercise makes students aware not only of the need to justify their own explanations but also that others will do the same. The result is a more sophisticated debate among equally good explanations, however contrary.

More thoughtful students also will begin to discern from this three-step introductory exercise something that postpositivists in geography have emphasized. Given all the evidence that can be garnered for even quite contrary ex-

planations, it may be that the truth of the matter may not be found and, even if it were, we would not be aware of it. Professionals and plain folk alike may be stuck, then, with a series of truths about development, each backed up with similarly good evidence. For these more thoughtful students, the lesson that can be drawn is as follows. If relative truths are all that can be recognized, then the most one can do is to garner the best evidence to support one's causal hierarchy. By doing this, scientific debates will be both furthered and rendered more sophisticated, if much less dogmatically black and white.

Importantly, the construction of causal hierarchies is, at once, only the beginning and yet also the culmination of the actual work of research. Classroom discussion results in what are essentially hypothetical explanations of the problem of development or groundwater contamination. For whatever reason—personal background, previous research, political or religious persuasion, and so on—one of these causal hierarchies seems better than the others. The extent to which it actually is, however, can only be determined by further research. But I want to be perfectly clear here. This is merely another way of emphasizing the necessity of garnering the best evidence. It does not mean that one will arrive at a singular truth of the matter. It does mean, however, that one may decide, on the basis of further research, that one's causal hierarchy is wrong.

This practical holistic epistemology also brings into serious question the familiar distinction between systematic and regional approaches to the study of geography. Since there is no independently existing economy, to say that the study of global development is systematic in the usual way is

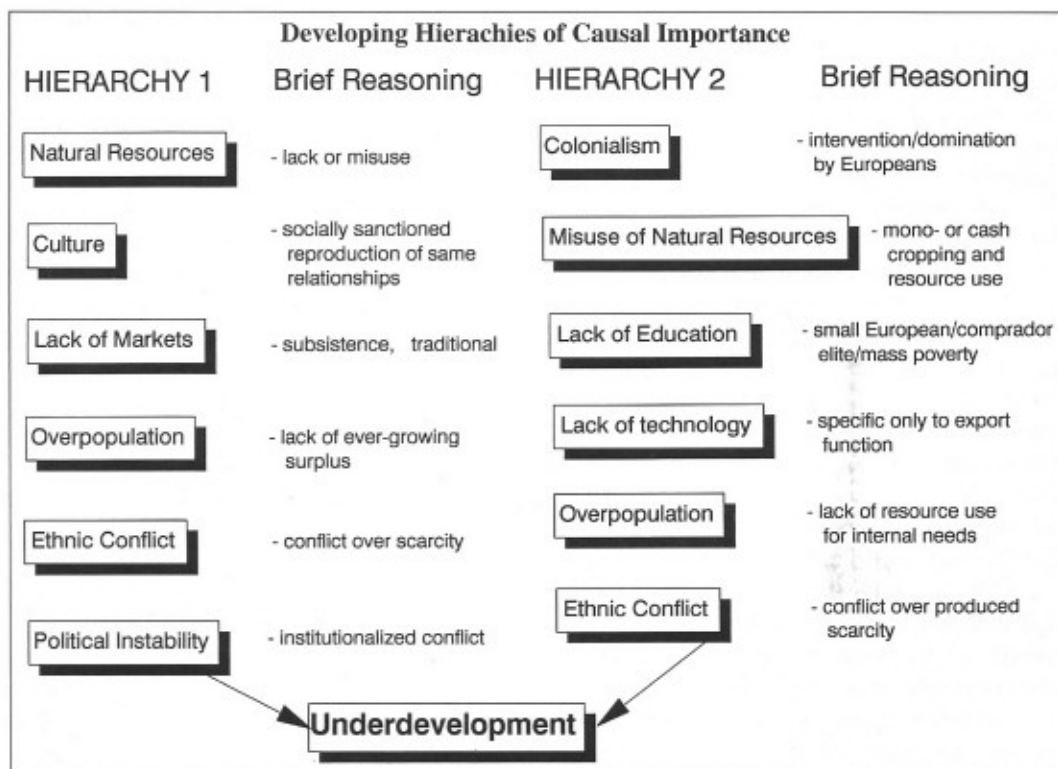


Figure 3.

misleading. Such a distinction merely pushes the focus away from holism toward analysis. To avoid this push, the focus on the relationships that exist between economic and other, even natural, phenomena must be maintained. Indeed, this is the crucial difference between economic geography and economics. In short, the systematic economic (or religious or hydrological or language) issue is merely the entry point for the geographical study of how this "phenomenon" interrelates with others to produce spatial variations in the human-environment relationship. The preceding discussion of development should be considered a concrete example of such a holistic, systematic geography.

Thus holism is not solely the domain of regional geographers, as is so often maintained. Being holistic is not merely a matter of tying together all the analytic strings of systematic studies. Nor is it taking on an object of study, a region, that is assumed to be a whole by its very nature. The difference between the systematic and the regional approach is merely the entry point to the study of the human-environment relationship. From the regional perspective the question is not: What is development and why does this vary over the earth's surface? Rather the question is: What is Latin America or the U.S. South and why do these regions differ from others? Using the same three-step procedure, it is possible to get students to think more critically about both the location (does Latin America include Los Angeles and Miami?) and the actual relations within and between such regions which render them distinct in some way. Systematic and regional geography should therefore be considered equally holistic in this regard.

Practical Methodologies for Geography

Compared to the preceding, this section can be brief. Methodologies are the specific procedures by which evidence is garnered in support of one's explanations. Viewed in this way, it cannot be argued legitimately that there exists only one true scientific or geographic methodology. This is surely the essential message of the current postpositivist discussion in geography. The very notion of "evidence" has broadened greatly to include much that has been traditionally left out of the domain of modern science. Here the arguments of humanists, political economists, structurationists, realists, feminists, and postmodernists come together.

At the level of folk knowledge, however, the scientific model reigns supreme. In this context, the very notions of "evidence" or "data" or "facts" need to be critically discussed. It may be that, in theory, there are some methodologies or data which cannot be put to use from a holistic perspective. In practice, however, I am not so sure. Some data may not be as pertinent to one's explanation as others, but this does not mean that they have no significance at all. Determining whether, say, global warming is happening, may entail making use of data gathered as a result of methodological procedures that ignore or even deny the existence of such a phenomenon (compare Abler et al. 1992, 397).

Yet, this postpositivist methodological message also must include a discussion of the ethics of research and the presentation of evidence. The important philosophical critique of

"anything goes" is not a license to slander others on the basis simply of ignorant denial (Feyerabend 1975). This is always an immediate threat, at least from my experience in the classroom. Care needs to be taken to emphasize that even quite contrary arguments can be based on good evidence. One needs to be objective enough in research to change one's mind in the process of both interrogating reality and discussing evidence with others. This is particularly important to emphasize in classroom discussions of such controversial human-environmental issues as development, groundwater contamination, or the distinctive, if changing, nature of Latin America.

Concluding Comments

The goal of this folk guide to geography has been threefold. First, I have sought to build a bridge between the recent professional discussion in geography and folk knowledge of geography by attempting to translate specialized discourse into more accessible terms. The object is to change what Glick (1990) calls the prevailing "folk model" of geography as simply trivial place pursuit.

The second goal of this guide has been to provide a more coherent portrayal of the science of geography. Claiming the human-environment relationship as geography's object of study allows for a more obvious linkage between physical and human geography. If the reintegration of the physical with the human is one of the "urgent needs" of contemporary geography, as Abler et al. (1992, 398) maintain, then it would appear that revisiting what I have called the ontology of geography is well worth the effort.

Revisiting traditional claims to holism in geography is also of utmost importance, both because of the multidimensionality of geography's object of study and because such epistemological claims are more often assumed than truly absorbed. As it becomes clear even to strict disciplinary thinkers that real world problems are inherently multidimensional, a critically assessed geographical approach should take on added significance. We need to train ourselves and our students to be holistic if we are ever to solve such real world problems.

This last point signals the third goal of this guide. The discussion has been kept at the level of folk knowledge and I have included practical pedagogical techniques that I have found successful, even in introductory courses. In this, I fully agree with the assessment of Abler et al. (1992, 401) that a

coherent, synthetic, global discipline focused on the human use of the earth lies within the grasp of American geographers if they possess the will, the good will, the imagination, and the boldness to create it.

Perhaps bold, the present guide has put the most emphasis on coherence and holistic synthesis, particularly as a means to convince other folks of the value of the geographic perspective.

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