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Geography and Social Development: Perspectives and Contributions

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Geographers have much to contribute to research on social development. Development measures and indicators begin to reveal patterns, but the geographer's unique perspective sheds new light on patterns of development. The processes and relationships associated with social development are many and varied. They are economic, social, cultural, legal, historical, political, and psychological. Geographers are trained to view the processes as a system within a spatial context. The element of place is not merely one more factor that effects social development. It is the context that impacts all that occurs.

The Interdisciplinary Nature of Geography

In recent decades the discipline of geography has undergone significant changes. The discipline is quite different from what it once was. Historically the discipline has been guided by one, or even two, pre-dominant paradigms, e.g., regional geography, human-land traditions, and spatial analysis. However, today the discipline has a variety of research agendas that are accepted, respected, and published. As a result, the discipline has experienced a proliferation of sub-fields.

The Association of American Geographers (AAG) is the leading professional organization for academic geographers in the United States. Members of the AAG join Specialty Groups within the organization. The Specialty Groups function as smaller interest groups for geographers with similar research and teaching interests, e.g., urban geography, geomorphology, and population geography. In recent years the number of these Specialty Groups has increased dramatically to more than 50 Specialty Groups. While this demonstrates the great diversity of the discipline it also has the potential to fragment it.

Many geography departments have changed their names to reflect these new approaches. Some assume different names that leave geography in the name, e.g.,

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Geography and Urban Studies, while others eliminate geography from the name, e.g., Department of Environmental Studies. Therefore, the identity of the discipline is changing. It is seen as a more diverse and all-encompassing discipline.

Geography is inter-disciplinary by nature and has long looked to other disciplines to work collaboratively. Geography's unique position in the sciences and social sciences has been that of a unifying discipline. Geographers integrate principles from other fields and examine how they interact within their spatial context, e.g., how humans interact with the environment. We are trained to look at the big picture, to examine and analyze why phenomena occur within their spatial environment.

As President of the Association of American Geographers (AAG), Ned Taaffe's (1974) presidential address outlined this interdisciplinary nature of the discipline in his diagram showing the overlap of geography with other disciplines. This schematic still holds true today, e.g., biogeographers draw from biology, economic geographers from economics, and political geographers from political science.

The interdisciplinary approach serves geographers well, and they serve it well. However, the separate identity as a discipline is at risk. As the discipline fragments into different sub-fields, the thread that ties us together as a discipline becomes more translucent.

The fragmentation became quite evident in American geography with the recently constructed divisions of the premier academic journal, the Annals of the Association of American Geographers. The journal was segmented into four distinct subdivisions: Environmental Sciences; Methods, Models, and Geographic Information Sciences; Nature and Society; People, Place, and Region with four separate editors for each subdivision. Thus allowing varying epistemologies, research designs, and paradigms to be published in the journal. It was a real statement towards validating varying paradigms and not permitting one to dominate at the expense of others.

We must be careful not to allow the discipline to be lost in these fragmentations. At the core of all of these segments is the geographer's spatial perspective. We examine, analyze, and interpret why things are where they are. We understand the spatial implications of economic, social, and political decisions and policies. When removed from their spatial context and examined devoid of the element of the place, then they lack basic understandings of implications. Just as you should not investigate and interpret without the benefit of knowing the temporal context, the spatial context is also important.

It hasn't always been that way. Golledge (2001) points out that geographic knowledge used to be declarative and now it is generated by cognitive process.

"Throughout most of the history of the discipline, geographic knowledge has

been declarative-i.e., it has focused on collecting and representing the physical and human facts of existence. In the latter part of this century there has been a change from inventory dominated activity to the creation of knowledge generated by emphasizing cognitive demands, such as understanding "why" and "how" in addition to "what" and "where." This has required a change from an emphasis on form to an emphasis on process." (p. 1.)

With all of this diffusion and fragmentation we are at risk to lose our identity. Even the National Geographic Society is having trouble locating geographers. This year the National Geographic Society implored geographers to submit proposals for funding when they discovered they are financially supporting more and more non-geographers for their research proposals. Only twelve (6%) of the proposals funded in 2001 were specifically geography. "The other disciplines in order of their percentage of the total, were biology (40%), archaeology (25%), paleontology (17%), geology (6%), anthropology (4%), astronomy (1%), and oceanography (1%)" (AAG Newsletter, March, 2002, p.1).

Are others taking over our discipline? If this is paranoia, then even the International Geographical Union (IGU) is paranoid. The IGU recently released a statement affirming that geographers are the only ones that can and should teach geography.

The discipline has great promise to demonstrate its value and utility in collaborative studies and interdisciplinary work with the booming Geographic Information Systems (GIS) industry. GIS allows us to view and model seemingly endless amounts of data and information. This technology has demonstrated the variety of disciplines that can benefit from geographical perspectives. The ESRI [Environmental Systems Research Institute] Map Book (2001) shows the variety of disciplines utilizing this technology.

The book publishes the maps displayed at the poster session of the ESRI Users Conference each year. Users from many different disciplines and perspectives are utilizing GIS to analyze geographic patterns. Maps in the map book and in the poster session display research from agriculture, business, cartography, conservation, disaster planning, electric/gas, environmental, geology, government, health and human services, law enforcement, local government, military, natural resources, oceans/seas, petroleum, pipeline, planning, public safety, telecommunications, tourism, transportation, and water/wastewater. GIS enabled these researchers to study soil and climate in a district in New Zealand, Napa Valley wines and viticulture, United States elections, a bank network in Alabama, European flood risk, hurricane surges, earthquake and planning for ground rupture hazards, , child care and transportation, meningococcal disease in children in New Zealand, a Tactical Pilotage Chart, oil exploration in Brazil, Telecommunications in Croatia, Public Transportation in Denmark, Flight Tracks for Asian Nations from Japan,

Olympics mapping in Sydney for the 2000 Olympics, railroads of the civil war in the United States, forestry in Tasmania, environmental consequences of conversion to organic farming in Denmark, catastrophic risk in the United States, downtown properties in Victoria, British Columbia, geomorphology of Greece, Italian landscape, ecosystems of the eastern Andes mountain range in Colombia, residential electrical customers in Pomprabsatrupai, Thailand, Sea-to-Sky land and resource management for British Columbia, drainage network for Khalifa Town (South) in Qatar, Housing and Population distribution in Qatar, Urban resources management in Galati, Romania, vegetation communities in the Flinders Ranges of Australia, Oil and gas pipelines in Moscow, Russia, the magnetic field of Earth, and even the geology and topography of Venus and Mars. These studies have stretched around the globe and even to other planets. It demonstrates the interdisciplinary nature of geographic studies and the obvious international and cross-cultural opportunities of the discipline.

GIS has even made it into mainstream television. The CBS police drama, The District features GIS in the plots to map crime. The lead character employs GIS in each large city in the United States where he works. He's viewed as a maverick. Through the use of this technology he is able to reduce crime and solve crimes.

Never in the history of the discipline have we seen such opportunities to bring a level of visibility that is so far reaching. We have much to offer and should not let the moment pass without realizing its potential.

Cross-Cultural Contributions

One of the areas we need to continue to expand our borders is in cross-cultural work. Australian born AAG President (2001-2002) Jan Monk has championed this as one of the issues of her presidency. At the AAG Annual Meetings in Los Angeles in March 2002 she sponsored a reception to welcome international visitors, organized special sessions on collaborative education in geography, and her presidential plenary session was a panel of geographers from different countries who were presidents of their geography organizations. The panel discussed how to reach across borders. The members of the panel were Maria Dolors Garcia Ramon, President of the Catalan Geographical Society; Ruth Fincher, President of the Institute of Australian Geographers; Audrey Kobayashi, President of the Canadian Association of Geographers; and myself, President of the California Geographical Society. The session focused on how we as geographers can reach across different types of boundaries. That a Presidential Plenary was organized to address these issues of reaching across boundaries with presidents of geography organizations from four different countries is significant, that they and the AAG President were all women was also an indicator of change.

In this struggle to reach across borders it is clear that language creates

boundaries. Ramon focused her discussion on inclusion of geographers who speak different languages. She stressed that the selection of editorial boards for journals is an important factor in ensuring greater opportunities for non-English speakers to publish in English speaking journals.

Studies have examined international journals (Short, et al., 2001; Harris and Fellmann, 1950, 1961, 1973, 1981) and their reliance on authors and editors from English speaking countries and the rate of publishing in English. From 1950-1980 the proportion of geographical journals published in German remained constant, those published in French dropped slightly before recovering to similar levels, and Russian rates increased slightly and then fell to similar levels. However, the proportion of geographical journals published in English nearly doubled.

Monk (November, 2001) calls for more geographers to work across these boundaries. She cites problems such as the dominant use of English in journals and the dominance of English speakers as editors and authors. She sets an agenda for the AAG to establish more international links and collaborations. Monk cites the discipline as having neglected international collaborations. This is evident in the Abraham and Harris (2000) study that revealed geography journals have very few articles with co-authorship of authors from different countries from 1985-1995.

Yet another indicator of the need for more international collaboration is the annual meetings of the AAG. The AAG meetings are more international than they used to be. It is also true that the international contingency is more diverse. Twenty five years ago the New York City meetings of the AAG only 119 (7%) of the 1706 attendees were from other countries. Of those 119, five were from the United Kingdom and the rest from Canada. The 2001 meetings in New York City experienced a more than doubling of the percentage of attendees from outside the United States with 866 (18%) of the 4764 attendees (Monk, August, 2001).

While the number of international attendees has increased, they are not an especially diverse group. In 2001, more than half of the non-United States attendees were from the United Kingdom and the remainder came from western European countries, Australia, Canada, New Zealand, and a few from Japan and Hong Kong (Monk, August, 2001). The 2002 meetings in Los Angeles saw an increase in the percentage of international attendees to 548 (20%) out of the 3741 attendees and a greater representation from Asia with more attendees coming from Japan, Australia, China, New Zealand (AAG Newsletter, June, 2002). However, notably absent or in low attendance are geographers from Africa, Latin America, and most of Asia.

So, international geographers do not attend the Association of American Geographers meetings. Do the American geographers attend the International Geographical Union (IGU) meetings? No, British and United States geographers are noticeably absent there. This is one avenue leading to international collaboration that geographers are not following. We must find ways to have non-United States

geographers come to our meetings, through financial assistance and collaborative research agendas, and the United States geographers should look more to the IGU.

It is through research conferences and exchanges of faculty and students that we can establish and develop ties for collaborative research and study. We need more conferences like this conference and the United States/Chinese conference hosted by the California State University at Northridge in Fall 2001.

We in the United States also face the challenge to improve the legitimacy of geography in the educational systems. Generally speaking, geography is an accepted core subject in other educational systems around the world. In the U.S. we continually defend geography's very existence to curriculum committees, education departments, and the public. Geography has lost its place in academia. The level of acknowledgment that geography is necessary is in the knowledge of basic place name geography. Some may understand that we need to know where "they" are. "They" may be an enemy, an ally, or a customer. We need to know something about "them" so we can understand why they'd want to buy our products, or take up arms and fight with us or fight against us. However, my own research demonstrates that we are not valuing geography in our educational systems. I found a disappointing decrease in the knowledge of basic place name geography (Zorn, 2000) in my students in an introductory "Regions and Peoples of the World" class. In 1990, on average they knew 12 of 20 countries on a straightforward place name quiz. Ten years later the average score had dropped to 8 out of 20. So, students are not entering universities in the United States with a basic knowledge of place name geography.

If they don't have the basics, then how can we expect them to understand that geography is about so much more than the knowledge of where places are located? It is evident that what is lacking is an understanding that geography tells us so much more. Geography is more than just knowing where something is or what language someone speaks, but it is about understanding the political impacts, economic influences, sociological patterns, environmental inter-relationships, cultural trends, legal situations, historical occurrences, and psychological conditions that create the uniqueness of the place.

As geographers follow this approach to reach across borders and boundaries, to seek collaborative interdisciplinary opportunities, and to utilize their uniquely trained perspectives more issues can be addressed with new and different eyes. The policy implications are numerous and diverse.

Geographers and Social Development

Geographers are poised to examine social development issues from the spatial perspective. We have much to offer this body of research as we integrate

phenomena and look through the lens of a geographer.

In the west the term development incorporates two types of measures of development: economic and social. Economic development measures include, e.g., Gross National Product per capita (GNPpc), income, ratio of automobiles/people. Social indicators of development measure education, health and well being, e.g., population growth rates, ratio of physicians/people, educational attainment levels.

These measures are from a western perspective of what development means, so the measures are biased. The definition of a highly developed society is debatable. Some highly developed countries could be interpreted as underdeveloped if highly developed means more advanced social structures where prejudices, elitism, crime, homelessness, illicit drug use, conflict, power, economic classes, gender bias, and psychological well being exist. Some so-called MDC's fall far short in these areas. Some of these are deemed unimportant factors in defining developed, while others are difficult to assess and, therefore, impossible to include on a continuum of development.

The west's definition of development typically includes high technology and access to it as important when defining developed. A country with a high proportion of people who own automobiles, fax machines, and air conditioned homes is labeled developed. However, perhaps a highly developed society is a society that more wisely utilizes Earth's resources and actually has fewer of these technological gismos. Geographers raise these critical questions and examine the integrated picture of humans and environment. They investigate how we can best utilize technological advances within the context of environmental impacts.

Attempts are made to classify the world based on indicators of development. The first problem we face with such a task is in naming the categories without using pejorative terms. We try to identify developed countries, vis-a-vis developing countries, or we use the terms Less Developed Countries (LDC's) and More Developed Countries (MDC's). The reason why we can't find a comfortable, appropriate, non-pejorative term is because the process is pejorative. The purpose is to identify the haves and the have-nots.

Dividing the world into two categories is a difficult task. Definitive lines of the division are debatable. While it might be quite obvious to place France in the developed category and Ethiopia in the developing category, other countries in the middle of the spectrum are more difficult to assess. Thus, the two categories of developed and developing are not wholly distinct groups.

We try to subdivide the world into more than two categories with terms of First, Second, Third, Fourth, and Fifth worlds. First world countries are developed countries with a market based economy, Second world countries have centrally planned economic systems, Third world countries are developing countries on the

verge of becoming developed, Fourth world countries are developing countries that need time and assistance in order to become developed, and Fifth world countries are developing countries where self sufficiency is not in their foreseeable future. These broader categories minimizes some of the problems associated with categorizing countries but does not eliminate them. Rather, countries lie somewhere on a continuum of development and not within a distinct category.

Social Indicators of Development

One of the obvious social development measures we utilize is population growth including rates of natural increase (RNI), emigration, and immigration. Currently the world's RNI is 1.3% resulting in a doubling time of nearly 54 years. By the year 2056 we could have 12.3 billion people on Earth. Much research and debate centers around the carrying capacity of Earth and how long we can sustain that amount of growth.

However, population growth pressures are not equal across the globe. The range of growth rates for countries is quite disparate. Some countries of Europe are experiencing population decline, while other developing countries are experiencing growth rates as high as 3.7% resulting in a doubling time of less than 19 years.

Infant Mortality Rates are employed as another social indicator of development. While it is true that high infant mortality rates indicate the country is less developed, it is also true that in some countries classified as MDC's the infant mortality rates are higher than they need to be. Infant Mortality Rates increase as a result of some of the ills of some societies, e.g., drug babies, fetal alcohol syndrome, teen pregnancy, lack of access to prenatal care. Some so-called developed countries have spatially isolated people who don't have access to physicians or high tech hospitals. In many rural counties in the United States pregnant women can be stranded 50 miles or more from a doctor with no car, public transportation, or phone. In urban areas the infant mortality rates climb because of the babies born to mothers with alcohol and drug addictions. Geography means the difference between life and death for these babies and their mothers.

Race is an additional factor. Nonwhite infant mortality rates are higher than infant mortality rates for whites. Therefore, infant mortality rates are not equal everywhere within a country. They vary from place to place because of te social and economic conditions of the place. Therefore, the ills of some so-called developed societies negatively impact on infant mortality rates.

Life Expectancy at Birth is yet another social indicator of development which varies by race and by geography. For example, in the United States there is a stroke belt in the southeast. This region has high rates of strokes because of lifestyles, eating habits, environmental conditions, a concentration of elderly people, and a

higher concentration of nonwhites.

Age Dependency Ratios are important in understanding social conditions of development. Countries that have large proportions of the elderly and/or children need to address health issues. Diseases spread more rapidly through these countries because of the frailty of the elderly and because of the lack of natural immunities not yet developed in its children.

These varying social measures of development reveal spatial variations. They must be examined within their environmental context to fully appreciate the relationships that exist.

Economic Indicators of Development

In addition to social indicators of development, we utilize data reflecting the economic conditions of the place. A commonly employed measure is the age dependency ratio. A high age dependency ratio indicates the country has economic challenges. A country with only 55% of its population in economically productive ages must expect that cohort to economically support the other 45%. This impacts the country's ability to maximize its economic productivity.

Another economic measure of development is the resource wealth of a country. Some countries lack the resources to develop. Some may lack key resources, e.g., coal, iron ore, oil, while others may lack a diversity of resources. A reliance on one product, e.g., oil, coffee, rubber for export makes them susceptible to market shifts, price changes, food consumption shifts, and changes resulting from new technologies that create synthetic substitutes for a product.

Another challenge for some countries is their reliance on primary sector goods for export. Australia is rich in natural resources such as ores. Conversely, Japan has little or no coal, iron ore or oil. Japan must import raw materials. Australia has supplied Japan with the raw materials for their production lines. The large profits are seen at the end of the production process in the sales of finished goods. Therefore, Australia reaps less of a profit from the export of its raw materials than the profit Japan realizes from its export of finished goods. The value added in the manufacturing process benefits Japan, and they have capitalized on this advantage quite successfully with their focus on developing a highly skilled labor force as a valuable resource.

Occupational Structure also tells a great deal about the level of development in a country. A country with a higher percentage of its people working in primary sector jobs of fishing, farming, and mining is classified as less developed. They are extracting the raw materials from the land and sea, e.g., fish, soy beans, iron ore. Those employed in the manufacturing jobs are transforming the raw materials into products for sale, e.g., food processing, steel industry. These are secondary sector

jobs. Tertiary sector jobs employ people in service industries, e.g., banks, restaurants, education. Additionally some now define a subset of service sector jobs, the quaternary sector, which includes information processing and telecommunications type occupations. Another subset of service occupations is sometimes identified as a quinery sector of management jobs.

The proportion of people working in these three main sectors is an indicator of development. In early development stages a country has a high percentage of people employed in primary sector jobs and small proportions of people employed in secondary and tertiary jobs. In intermediate stages of development a country experiences higher rates of industrialization and, therefore, a decline in the primary sector jobs as the people move into manufacturing and service jobs.

In later stages of development few people (less than 10%) are employed in primary sector jobs as agricultural production shifts to more mechanization and high tech solutions to growing crops. Less manual and animate labor is used in the fields. Instead agriculture is more mechanized. The proportion of people working in secondary sector jobs also declines as factories are challenged by increased global competition and they become more mechanized and efficient. The service sector jobs dominate the occupational structure in this stage. A majority of the people works in service occupations.

This occupational structure is easily measured by utilizing employment data. However, collecting accurate data may be a problem in some countries. It is also true that these data are drawn from officially identified occupations of paid employment collected by the government or other agencies. For the most part this works for capitalist economies since so much of the economic activity is incorporated in these data. But, it is not a good measure of all of the economic activity within a country because it is measuring only the formal sectors of employment. Informal sectors are not included, ergo economic activity is undercounted.

The amount of this undercount can be miniscule or significant in differing countries. In some societies many people earn their living by working for cash that is unreported to the government or any measuring entity. The amount of this differentiation varies significantly from society to society. In Canada it might be a childcare worker who works out of his/her home and doesn't report it as income or a landscaper who mows lawns and doesn't report it as income. In India it is the barber who is a street vendor trimming hair by the side of the road or the person selling handcrafts.

This measurement of economic activity also does not include many forms of income, which may be illegal in a given country, e.g., drugs, prostitution, crime,

embezzlement.

Bartering is present in some form in all societies, but can be the main form of economic activity in some places. Money doesn't change hands. It's a negotiation of one chicken for a bale of hay or an exchange of labor. John "employs" Olga to roof his house. In turn John will cut down Olga's tree. In either case, no money exchanges hands. It isn't recorded as economic activity.

In order to include these economic activities in a study of occupational structure how would it change the trends? How would it change how we define development? It's impossible to do because we can't measure all goods and services in terms of employment and also in terms of GNPpc.

We measure these indicators of development for our own uses. But, it is only measuring paid, legal employment. The extrapolation is that we judge and say that you need to be making more money in order to be developed. It can be misleading and pejorative. Whereas, they might be wealthier and better off economically than what the data reveal.

Many of these measures reveal far more if broken down by gender. Social indicators reveal gender differences. Educational attainment levels and literacy rates for a country can be quite low for women while high for men. So, examining just the overall literacy rate doesn't tell the whole story. It masks the higher rates for men and masks the lower rates for women.

We try to minimize the problems inherent in each of these separate measures of development by creating composite measures, e.g., the Physical Quality of Life Index (PQLI), the Human Development Index (HDI). The PQLI was a composite of infant mortality, literacy, and life expectancy and the HDI a composite of life expectancy, adjusted Gross Domestic Product (GDP) and education.

The best way to classify countries on the development continuum is by employing an array of variables and creating an overall composite score of development. In the absence of perfection, it is the best we can do.

Emergent Spatial Patterns of Economic Development

One of the reasons for the difficulty of classifying countries as developed or developing is a spatial one. The political unit of a country is a political boundary. Differentiation within a country is evident. It is not a spatially homogeneous region. However, we lump all of Mexico into a basket of less development, when within many areas of Mexico you clearly see high levels of development. Many Mexicans live much like their neighbors to the north in the United States. They enjoy comfortable lives with high standards of living with expensive automobiles, cell phones, televisions, and access to good hospitals and universities. Therefore, we must recognize the differential spatial diffusion of development. A high level of

GNPpc reveals little about the distribution of the economic well being. A high level of GNPpc could result in the wealth being held in the hands of a few, e.g., some of the oil rich nations.

So, should we define development by eliminating political boundaries and identifying regions of less development and more development irrespective of country borders? That would mean political boundaries have no impact on development when in fact they do. Political instability is an obstacle to development. The laws established and enforced in a country impact the type of development and the potential for growth. For example, the Soviet Union's Five Year plans dictated the production of goods. The decisions of a government to subsidize some economic sectors, vis-a-vis other ventures encourages some development at the expense of other development. When United States President George W. Bush pulled funding for population control, it was a political decision that had immense social development impacts. So, the country borders that define the region are relevant.

Geographers view development in terms of the emerging spatial patterns of economic development. One spatial pattern of economic growth is a core/periphery pattern of economic development. For example, at a different scale we identify the core of a country as the concentrated region of development in the country. It is highly urbanized with most of the country's largest cities located within it. It has the oldest industrial development. While it may be the focal point of the country, it interacts with the periphery. It draws raw materials, food products, energy, and labor from the periphery and in turn provides the periphery with manufactured products, news, cultural activities, and governmental resources. The periphery is less densely populated and has less industrial production. Land extensive uses are more common, i.e., farming and agriculture. The periphery in developing countries will be less urbanized and in developed countries it may be fairly urbanized, but the production isn't centralized. A symbiotic relationship exists between the core and the periphery. They rely on each other for supplying each others needs.

Other countries display pockets of development rather than a core/periphery pattern of symbiosis. In such countries a cluster of development emerges, but the symbiotic relationship is absent. The pocket of development experiences advanced economic growth, but the periphery does not develop. Goods are not distributed and sold in the periphery, rather they are exported for larger profit. Economic dualism persists within the country. Two economies are operating simultaneously within the country. One free market, capitalistic form of economy is operating in this pocket of development and an informal form of economy of bartering and trading is functioning in the periphery.

These spatial patterns of economic growth are reflected in a country's urban system. A core/periphery pattern of economic growth results in a more fully

developed hierarchy of cities. The urban system is composed of cities of various sizes that fully develop an urban hierarchy. The system has the largest cities at the top of the urban hierarchy, intermediate sized cities fill out the middle of the hierarchy, and smaller towns complete the bottom of the hierarchy. As you go down the hierarchy the size of the cities decreases and the frequency of the number of cities increases. There are only a few large metropolitan areas, and, there are more intermediate sized urban areas, and even more little towns of a few hundred people. The power of the hierarchy flows from top to bottom while the demands for services are from bottom to top. A strong urban hierarchy enables the country to better distribute goods and services. It provides a network of nodes for the system. The cities at the top of the hierarchy have a greater quantity and diversity of goods and services, while the cities at the top of the hierarchy have fewer. The intermediate sized cities provide the government and businesses to have regional sites or distributions centers.

If the country lacks this strong urban hierarchy that is evident in core/periphery patterns of economic growth, then it relies on the pocket of development for a great deal. Oftentimes a primate city develops in the pocket of development. A primate city is a city that is overwhelmingly dominant in a country. It is exceedingly large as compared to the other cities in the country, e.g., Paris, Buenos Aires. It is the center of politics, economics, and culture for the country. There are no regional distribution offices for governments and citizens of the country must travel to this primate city. Operas, ballets, sports teams, and other such entertainment is found in the primate city, but they are not dispersed throughout they country. Oftentimes the primate city is more closely tied to developed countries through international trade than it is to the periphery of its own country.

Urban problems arise with high unemployment rates, congestion, pollution, and high rates of rural-to-urban migration, e.g., Mexico City. Problems arise in the periphery due to its lack of development. Within countries the haves are in the urban areas and the have-nots are in the rural areas. The rural areas are in this periphery lacking goods and services.

Likewise geographers view the global community in these terms. MDC's are in the core, LDC's are in the periphery. Indeed, all of the developed nations except Australia and New Zealand lie above 30 degrees north latitude creating a clear north/south split (Renwick and Rubenstein, 1995). And the north/south gap is widening. The core has the oldest industrial complexes and has been the world's chief producer of manufactured goods, e.g., televisions, automobiles, and many steel products.

The obstacles to development are varied: cultural barriers, lack of capital, lack of skilled labor, lack of raw materials, high illiteracy rates, inadequate transportation systems, economic dualism, occupational sector imbalances, legacy of colonialism, tribalism vis-a-vis nationalism, and the status of women. These all have spatial

patterns and implications.

Cultures in Spatial Context

Geographers also examine cultures in their spatial context. The work of Carl Sauer (1925) in his Morphology of Landscape proposed the concept of a cultural landscape that geographers still identify. The cultural landscape is how a culture imprints on its corner of the world. It can be in the form of skyscrapers that indicate a level of technological advancement. The roads, highways, railroads, and airports reveal the modes of transportation and the ease of movement in a society. The religious structures, e.g., mosques, cathedrals, temples, are built by different religions indicating what may be guiding a culture. Impacts on the environment such as acid rain, smog, and erosion demonstrate how we've impacted our landscape. In addition to these material imprints on the landscape that you can see or feel, we imprint in immaterial ways too. The music, dance, and art imprint on the cultural landscape. The food that a culture prepares and eats provides different aromas and tastes that are a part of the cultural landscape.

Geographers examine how these cultures diffuse across space (Hagerstrand, 1967; L.A. Brown, 1981). Spatial diffusion is applied to the diffusion of culture, ideas, diseases, knowledge, technology, goods, services, raw materials, to name a few. Diffusion is the process of dissemination. Geographers investigate differing manners of this diffusion. Contagious diffusion starts at the core and spreads out, e.g., a disease. Hierarchical diffusion leapfrogs around through the urban system, beginning at the largest cities first and making its way down the urban hierarchy so that it eventually reaches the smaller towns, e.g., shopping malls in the United States. Sometimes change is created via stimulus diffusion when the idea is introduced to a new area but not adopted. However, it stimulates experimentation and eventual change. Relocation diffusion includes changes that occur as a result of migrations, whether they be temporary movements or permanent migrations, e.g., a migrant introduces a disease to a country.

The adoption of ideas or innovations is not automatic. Cultural barriers may prevent the adoption of something new, e.g., abortion as a birth control method. Other barriers are clearly geographic in nature. Distance decay and time decay can affect the acceptance of the new idea or innovation. Distance decay is the concept that the farther away you get from a place, the less likely the adoption will occur. Time decay is the concept that the longer it takes for the idea to reach the area, the less likely the idea will be adopted. It's all about connectedness.

Is location the factor it used to be? Singapore benefited by its location at the tip of the Malay Peninsula. Greece boomed as an international trading center because of its location. Remoteness still affects the ability to be a player in the world stage. However, the concept of remoteness is changing. A glacier, desert, ocean, or mountaintop is certainly remote, but wireless technologies and satellites permit

remote places to be connected to the rest of the world. Climbers on Mt. Everest communicate to their colleagues and families in distant places. We still can't transport coal across radio waves. But, technology has permitted us to extract oil in remote northern Alaska and distribute it to the world.

Conclusions

The interdisciplinary nature of geography positions it to contribute to investigations of social development. The many sub fields of the discipline address varying aspects of social development and development patterns. The population geographer examines demographic and migration trends within regions. The economic geographer investigates wage differentials and how they drift across space. Geographers bring new insights to development research via their unique perspective and ability to integrate relationships within a spatial context. They view processes of social development within the relevant environment and through the eyes of a geographer we can see how patterns emerge from place to place, ask the questions why, and come to understand how they diffuse across space.

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