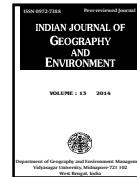


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## Book Review

### **Human Health in the context of Geographical Location**

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**Geographies of Health: An Introduction** by Anthony C. Gatrell,  
Blackwell Publishing.  
2002, ppix+294, paperback, £23.94.  
( ISBN 0-631-21985-4).

This book has nine chapters organized into three parts. It is nicely completed with details contents having three parts and nine chapters as well as appendix carrying a number of web-based resources for the further study on geographies of health. It provides all basic fundamentals in explaining the role of geographical factors on human health and spatial variation of diseases over the surface. first chapter deals with some basic concepts to reveal the proper definitions health status of human being might be measured by a number of ways like illness, morbidity, mortality, age-standardized rates, standardized mortality ratios, incidence rate, prevalence rate, nature of impairments, chronic and acute diseases, infectious diseases, disability and so on. Entire incidences come up and spread in the population that depends on type of society, social setting, belief, experience, community, behaviour, customs and geographical location of an area. In this section author assembles some colour by illustrating five case studies to be representative of rich variety of the geography of health. Three significant parts of this book are discussed in broadly below heading.

#### **Geographical setting and Health**

Some case studies are used to show the disease patterns over distinct parts of the world. first one considers the description and explanation of geographical variation in an incidence of AIDS in Uganda. A map is presented to show AIDS incidence prone areas in Uganda and its spatial variation in incidence rate of AIDS within the country. Author tries to find out the reasons. These are, first, population migration from affected urban population to rural areas (migrant labour). Secondly, HIV does spread via transport routes and thirdly it spreads through Ugandan military force. The second case study is related to childhood accidents in Huddersfield, UK. There are strong social class gradients in rates of accidents, children from poorer backgrounds at least five times as likely to die from accidents as those from more affluent backgrounds. Third case study is on racial segregation and suffering from Malaria in a British Tropical Colony. This study shows that how malaria disease is transmitted through Anopheles and incidence of mortality due to malaria in Sierra Leone

in West Africa (the colony of UK) in 1896. Forth case study presents the changing life style of women in Greater Vancouver in British Columbia, with Multiple Sclerosis which may attack differently to the different women depending on the work status, work load, basic amenities, modest accommodation, income, marital status and so on. Final case study depicts the organization of space in nineteenth-century Asylums indicating how space was organized in the Victorian Asylum.

In first chapter, author selects some specific examples to make the readers understand how geographical situation does matter in determining the health and well-being. But it is hardly possible to give complete accounts about the importance of geographical setting on health using only five case studies. Some other examples could have been taken to be understood the proper nature of relationship between context of place and health. Second chapter deals with the different philosophical stances or approaches lead to the geographies of health. He intends to comments on both the strengths and weaknesses of each approach. Some approaches- a) Positivist approach prefers mapping disease data and then strives to explain the spatial distribution. It also contains the study of healthcare, diffusion of disease and its delivery; b) Social Interactionist approach, puts emphasis on the meaning of disease to the individual and rationality behind the disease. The ultimate goal is emphatic understanding and explanation rooted with social rather than natural world; c) Structuralist approach, seeks to identify some of the political and historical factors that shape disease and health which approach is influenced by Marxist theories; d) Structurationist approach, recognizes the duality of structure and agency, which highlights time-varying exposure to various environmental problems and social stresses that have profound health consequences; e) Post-structuralist approaches are concerned with how knowledge and experience are constructed in the context of power relations. Healthy lifestyle includes eating well, regular exercise, cutting down smoking, good health behaviour etc. Other approaches should be considered like welfare, gender perspective, behavioural etc. But author never forgets discussing the drawback of each approach and he claims it is not possible to explain the holistic view of geographies of health by single approach. For explaining the contexts and approaches of health some methods and techniques could be effective. Author suggests that two types of methods or techniques are used to mapping or visualize the data

and interpreting or analyze the data. In this respect, quantitative analysis is considered to studying the spatial diffusion of diseases and illness with the support of visualization. This subsumes three tasks- a) different maps using cartographic techniques of data on geographic space for visualization like Choroplath, Cartogram, Isodemographic maps etc; b) Exploratory spatial data analysis-considering statistical techniques to discuss the spatial pattern, proximity, disease hotspots etc; c) Statistical modeling of health data in a spatial setting to signify the various aspects of controlling factors of diseases. Different models are to be applied exploring the environmental quality, ecological effect, risk factors, which may vary place to place. In this analysis, Geographic Information System (GIS) is used to integrate all information and to prepare meaningful maps for the all sorts of users through some techniques such as mapping buffer zones, accessibility, connectivity of health care centres, flow of people, affected zones, disease diffusion zones and so on.

The second powerful approach is qualitative approach. It is useful for interpreting the geographies of health with the help of information on human beliefs, values, actions etc. Except positivists, all others like interactionists, structurationists and post-modernists prefer always the qualitative method in interpreting and understanding health, disease, disability in the context of place or location. Some ways are – interviews, participatory observation and focus group discussions in qualitative method. Both methods are different in nature but some researchers prefer to use of mixing of both quantitative and qualitative methods (triangulation). But few others try to explain the power of each method individually. Author takes almost all kind of methods in explaining the geographies of health but perhaps more application of GIS and some other statistical techniques could have been better to analyze the health of people in the context of place.

### **Social setting and Health**

This part is on “health and the social environment”. Initially it focuses on pattern of inequalities in the health outcomes in developed world. Health inequalities in terms of life expectancy, suffering rate etc. mainly depend on the variations in social class, gender, ethnicity etc. that show the spatial patterning of health inequality. Author adopts different geographical scale, from global to local, to show the variation in health outcomes. Health inequality is caused by a number of factors that are deeply

embedded in human societies. Some examples are taken for international, regional and local comparison of health inequalities like cancer, mortality rate, life expectancy, parasitic disease and disability. Moreover disparity is prominent in different classes, groups, genders, income levels etc. Social and community influences like social network, social capital, social connection, relationships at workplace have a significant role in health status. Author never forgets to mention the role of material deprivation like lack of service, amenities, and resources in local neighbourhood. Besides these, the poor physical environment also creates a big difference. Another aspect is the analysis devoted to analysis of inequalities in terms of supply and usage of health services that is visible at variety of spatial scales. Author seeks to discuss how people use health services and whether this is shaped by location, cost or travel distance to these facilities. Some issues in the delivery of health services like levels of health care provision, geographies of rationing; efficiency and equity are employed for the analysis of health provision. Author comes forward to a comparison the health care provision between developed and developing countries regarding health care provisions.. On the other hand, malnutrition, access to safe drinking water, adequate sanitation etc are noted to explain an inequality. In developed countries – such as UK, Canada, USA - also reflect the inequalities in some aspects, for example, availability of health insurance, mean number of hours of care devoted to elderly, ratio of physician to total population etc. Author, also highlights others utilization of services in terms of primary, secondary and tertiary health care. But he does not include the quaternary and advanced technological advantages and globalization effect in health care provision. Here author also tries to establish the link between migration and both health and health care. It considers here the health consequences of human movements that involve a change in residential location. Permanent or quasi permanent migration in different location-international, inter regional, intra-region, local-short distance interacts with health and healthcare several ways. It may have short or long impacts for health outcomes due to the spread of disease through migration. On the other hand, author examines the health status of migrants differs from those of non-migrants. Impact of migration on health is discussed in depth with the help of some topics-a) Migration and stress and the health of refugees; b) Impact of migration on the spread of disease; c) Migration and the incidence of disease and ill health.

However, author does to assess how health status affects the propensity to move.

### **Human modified environment and Health**

Health and human modification of the environment is another facet of this book, using air quality. Author considers here different types of pollutants like Sulphur dioxide, Nitrogen oxides, Volatile organic compounds and their main sources and impacts on human health status. Example highlights like Radon (radioactive gas), Ozone to show the impact of these on place of sources. Besides area sources, linear sources of pollutants like carbon monoxide, nitrogen oxides, unburned hydrocarbon, oxides of nitrogen (primary and secondary sources), lead, small particulates have remarkable impact on human health near the source area. Likewise, author pays attention to link between water quality and health separately. Such links are mainly acute in large parts of the developing world. Water borne diseases and contamination of water by chemical and possible health consequences is the main concern. Primarily cholera and Schistosomiasis are taken for consideration here. Many African countries are affected by these diseases in various time periods. The deeper underlying causes of the disease are poverty and poor living condition. Gastroenteritis in developed countries is also water borne disease due to the protozoan parasites. Other way water can be contaminated-this is chemical contamination. Author selects very specific elements-Aluminium, Fluoride and Arsenic have dominant role in changing the composition of water. These three components are responsible for a number of diseases- nausea, diarrhea and mouth ulcers, reduction the solubility of tooth enamel, and chronic disease. It is also mentioned the impact of water hardness and other forms of contamination of water through hazardous waste sites.

Finally author turns his attention to broader processes of environmental and ecological change. Many of these processes are global in their scale and the health impacts are likely to be widespread. Author cites the stratospheric ozone depletion, depleted by CFC, other so-called halocarbons, used in refrigeration, as aerosol propellants and in solvents. Global climatic change is occurred in additional burden of Carbon dioxide, methane, and other gages-produced as the resultants of domestic, industrial and agricultural activities enhance the natural green-house effect. Its direct impacts are thermal stress (cold and hot temperature related mortality) and indirect impacts are vector borne diseases, food poisoning, sea level rise and

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change in agricultural practice. Other prominent effects of global change include- land use change, reforestation, and deforestation.

Author cautiously realizes the importance of World Wide Web reference for health related research in the modern era. Before reference part, a details effective portion is added for searching and accessing relevant literature concerning health research. Major health research compatible web sites for across comparisons are furnished (USA, UK, other countries)

and disease specific web reference; the geographies of health; and electronic atlases and associated sources are given systematically. Even author advises some softwares (GIS based-ESRI) are effective for better health research. Finally over 440 books and journals to related references are prescribed at the end of the book. This is a really praiseworthy attempt made by the author. Last but not least, a detail index is placed in the last which is helpful in getting required information quickly.