



# HISTORICAL MEDICAL GEOGRAPHY

## Introduction: Epidemics, History, and the Present

*Susan Craddock and Jennifer Gunn*

Amid growing threats of a global epidemic of avian flu in November 2005, President George W. Bush announced “an aggressive \$7.1 billion national strategy to safeguard against the danger of pandemic influenza,” including \$4.7 billion for the development and production of a vaccine. The H5N1 virus itself, meanwhile, has garnered widespread media coverage and intense institutional surveillance of its geographic reach and potential mutability into a human-based pathogen, an exercise that inevitably galvanizes greater fear as well as visibility with every new picture of dead birds and ailing Asian children. The extent of global scrutiny of and Bush’s national response to viral threats serve as vivid reminders of the interrelationships among unpredictable pathogens, discourses of national security, media representations of epidemic, the porousness of national borders, and the promises and limitations of science in preventing disease.

Responses to avian flu, as well as to other recent epidemics and events, also provide a backdrop to this special issue on geographic and historical investigations of disease. When the editor of this journal contacted us to do an issue on historical medical geography, it seemed an excellent opportunity not just to ask scholars to write random research pieces, but rather to bring the insightful investigative tools of geography and history to bear upon some of the more unsettling public health events of recent years, including HIV/AIDS, Hurricane Katrina, the war in Iraq, bioterrorism, tuberculosis, and the possibility of deadly pandemic influenza. What was new about these events and what was not? What insights might history bring to bear upon current policy debates and the politics of intervention? How does attention to spatial and geographic analyses further our understandings of the social contexts of disease and its experience? And,

conversely, how does the social history of disease and medicine further our understanding of the promoting and constraining role of geography in health and disease?

Beyond facile associations of current avian flu with the 1918 pandemic, it seemed to us that critical questions pivoting around current understandings of and responses to disease threats in global contexts are finding resonance in historical episodes of transnational disease eradication. Polio and malaria eradication campaigns, for example, posed similar concerns over the development and deployment of technology in disease prevention, the vexed power relations among nations and populations confronting public health crises, contestations over heightened government powers, tightened national borders, and inequitable applications of public health policies. Whether and under what circumstances to use quarantine, the availability of vaccines, the effectiveness of surveillance techniques, the protection of the healthy from the sick — all are issues that have equal relevance — and irresolution — today as they did one hundred years ago.

In seeking reflections upon these and other questions, we also decided not to limit ourselves to historical medical geographers, but instead to ask a broader array of scholars from various disciplines and subdisciplines for the insights their research might have on these interrelations of place, politics, pathogens, and population. Our original list of participants thus included environmental historical geographers, a social historical geographer, population geographers, and several historians of medicine. Time constraints unfortunately weeded out many of these participants, but the three remaining scholars — two geographers and one medical historian — nevertheless cover a considerable scope in conveying historical insights into particular moments and debates of the present.

Clearly this meeting of disciplinary minds is not new. History of medicine and geography have traditionally come together in the history of public health, a topic inherently rooted in place (the natural and built environments, and the migration of people and organisms) and the social (populations, cultural customs, and policies). Historians and geographers have been informed by each others' approaches, and the product has been not only studies of plagues and pandemics, or the history of bacteriology and urban public health, but a rich and growing literature on medicine in colonial and post-colonial contexts and the intersection of medicine, biology, and the social sciences in the construction of race and otherness. Academic work in historical geography and medicine has in turn permeated such popular metanarratives as Laurie Garrett's *The Coming Plague* and Jared Diamond's *Guns, Germs, and Steel*.<sup>1</sup>

We asked participants to think, within the contexts of their own research, about the directions in which medical histories and geographies might fruitfully develop, theoretically and empirically. Three participants alone obviously cannot do justice to the possibilities inherent in interdisciplinary investigations of health and disease. Yet we are aware of areas of

historical inquiry that have not been adequately investigated, that lend themselves to multidisciplinary analysis. These include the integration of the history of biomedicine and public health, the connections and differential geographies of colonial medicine and development policies, the relationships – oppositional and elided – of individual and population at local, national, global levels within biomedicine and public health, and the complementary and competing flows of financial, technological, scientific, and biological processes across borders, to name a few.

In the first instance, for example, the traditional divide between histories of biomedicine and public health might productively be bridged by focusing more upon global processes, structural inequalities, and the interrelations of place and policy – the kinds of investigations seen more commonly among medical anthropologists,<sup>2</sup> but evidenced in Matthew Gandy's piece in this volume. Gandy focuses on water in nineteenth-century European and colonial cities as a technology for improving the health of populations, as a site for biomedical contestation over disease causation, and as a signifier of impoverished colonial policies. Calling urban areas of the nineteenth century "bacteriological cities," Gandy investigates the precise social and financial relations within which water eventually became available to urban populations in Europe, a transformation that had at least as much to do with increasing industrial needs for abundant sources of water as with notions of sanitation, environmental health, and emerging ideas about hygiene. Yet installation of water pipes and sewers to meet the needs of growing populations occurred differentially across Europe during the course of the century, and even more hesitantly in colonial cities. This was not simply a question of the pace of advancement along a predetermined trajectory. As Gandy reflects, colonial administrations strapped with policies of minimal spending could not rationalize the capital outlay it would take to make clean water available to "native" populations whose worth the authorities viewed as marginal at best. Even in urban environments, the bacteriological revolution of the late nineteenth and early twentieth centuries has not been completed, nor have the principles of bacteriological ideal been universally applied.

Histories of colonial medicine as well as scholarship within the field of science studies have also challenged assumptions about the universal efficacy and benevolence of biomedicine at different moments of time and place, and have questioned the impacts of differential applications of new technologies across inequitable economic geographies. Yet more case histories are needed that examine the precise mechanisms governing negotiations of biomedical practice, acceptance of and access to new technologies, and the interplay of memory, politics, and need that often attend these negotiations. In particular, more scholarship is needed on the interconnections between previous moments in medical and public health history and our own time, and Richard Keller does just that in his piece in this volume. Keller's agenda is to investigate the legacies of colonial medicine still found

in current global public health interventions that on the surface appear beneficent. Rather than focusing on a single case study, Keller attempts “to provoke thought about the breadth of possible relationships between colonial ideologies and contemporary global health interventions,” seeing connections between the two that, with the exception of work done by Nicholas King,<sup>3</sup> have remained largely unexplored. In a thoughtful recasting of the meaning of the “militarization of medicine,” Keller examines medicine’s use historically as a vehicle for ideological warfare. He focuses on medical experimentation, physician’s propagation of torture in both historical colonial and contemporary war settings, and the ideologies of race that explicitly guided colonial medicine and implicitly continue to shape contemporary global health interventions – often packaged in the guise of “development” – in order to trace intimate links between colonial and contemporary deployments of biomedical knowledge and to disrupt uncritical assumptions of medical neutrality in the service of colonial or transnational agendas.

The interconnectedness of people, place, and health and disease has long been an underpinning of both historical geography and history of medicine. Gerry Kearns’ contribution is to stress that this “social shell” encompasses social movements and “solidarities” cultivated in one place or across space. Understanding the dynamic processes of interconnection requires examining the responsibilities and obligations, needs and benefits generated in those historical dependencies and interactions. While Keller argues that understanding the historical contests over medical and public health interventions is important in explaining the expectations of and resistances to contemporary public health, Kearns similarly explicates the obstacles to some alliances or solidarities and the affinity of others by establishing groups’ historical position – or place – in relation to power. Kearns’ interpretation of a “social shell” that relies on collective action evokes recent themes in history of medicine, exploring the importance of patients as activists in the women’s health movement, breast cancer, HIV/AIDS, and Chronic Fatigue Syndrome (CFS). Much more could be done to investigate the role of activism by communities of sufferers and to understand where solidarities, to use Kearns’ term, have been created with researchers, health care providers, environmentalists, and others to mobilize political and economic resources. It is equally important, as Randall Packard et al. have pointed out, to understand the contested processes by which some health problems have failed to become visible targets for public intervention and remain hidden despite activism (e.g., Hepatitis C, whose constituency remains inaccurately stigmatized as drug users).<sup>4</sup>

All three papers challenge complacency about the success or completion of the bacteriological revolution and the assumptions of medical altruism, a monolithic public interest in health, and the universal desirability of Western biomedicine. In general, both fields share an attention to pathogens and public health; the understanding of disease and health

as constructed within a social environment; and the productivity, in recent years, of colonialism as a historical site for revising traditional interpretations. Gandy's and Kearns' papers show the strengths of geography in revealing the structural elements in public health and the political economic structures of capitalism as they affect the ability of the state or society to provide for collective needs. Gandy extends the tracking of migrating germs to the flows of commodities, knowledge, technology, and capital involved in creating the disease/health environment. Kearns uses Eric Klinenberg's "social autopsy" of the 1995 Chicago heat wave to suggest that historians and geographers must critique the limits of conventional epidemiology and look beyond the demographic characteristics of the afflicted individuals or population to the localized social behavior, which is not individual, but a response across the local population to structural problems. Keller's case studies of historical encounters with colonial medicine illustrate the utility of social history of medicine to inflect the analysis of structural factors in health and disease with lived experience for a more nuanced understanding of history. It can temper any tendency to assign mechanistic autonomy to social institutions or to obscure the clear identification of historical actors and agency. History of medicine's attention to questions of authority and power in biomedical dominance, the police powers of public health, the management of chronic disease, and the construction of disease in terms of risk and individual behavior complements historical geography's flows and structures.

For all the commonalities that reflect the extent to which each field has already assimilated some of the methods and themes of the other, the styles of the essays illustrate some interesting differences and suggest new directions for research which may generate collaborative methodologies.

The historical geographers actively engage theory in their papers, something historians of medicine have sometimes been hesitant to do. For example, both Gandy and Kearns invoke Donna Haraway's theory of the cyborg as a "hybrid of machine and organism," a creature of "lived social relations," as valuable for describing the evolving symbiotic relationship of humans and technology in providing the material goods necessary for collective life and health. Haraway's conception of the cyborg as a "condensed image of both imagination and material reality" prevalent in the marriage of the technological and biological in biomedicine might also open new avenues for deconstructing the patient experience across time and space.<sup>5</sup>

All of the papers tackle in some way the relationship between the individual and the populational in medicine and health, in the disciplining of bodies, and in geographical and historical analysis. Keller argues that inequality has shaped a community or population's "risk for exposure both to disease and the interventions of the state" and Kearns asserts that since the nineteenth century the individual model of disease or even an individual locality has been inadequate to address either the causes or the

solutions of sickness. The individual-population nexus is obviously the fulcrum of the integration of the history of medicine and public health. It is also at the center of a paradox of biomedicine: even as Western biomedicine shifts to evidence-based medicine to establish protocols based on population data for treating individual patients, biomedical health policy for the treatment of global populations is forced to rely on individual behavior for its efficacy. Thus we face the absurdity of Bush administration HIV/AIDS policies in Africa that deny a collective approach to prevent HIV transmission, such as the public distribution of condoms, in favor of policing the sexual behavior of individual African citizens.

Implicit in historical and geographical perorations in this issue of *Historical Geography* is the necessity of rethinking the “environment” at the heart of the human-environment intersection for both the social history of medicine and geographies of health. A redefined “environment” could have dynamic, shifting boundaries to encompass social movements and collective action, communities of identity or imagination rather than geographic proximity, political processes that shape nature, flows of knowledge, technology, and resources, and multiple potential historical contexts.<sup>6</sup> In a more process-oriented model of environment, the meaning of the local is reconfigured to push our historical studies beyond localizing the causes of disease in particular places or bodies, beyond simple accounting of demographic characteristics, beyond blaming health problems on maldistribution of medical care, and beyond the allure of killer germs that “know no color lines” and can circumnavigate the globe in 24 hours. The dynamic environment empowers our narratives to transcend the biological definition of disease, the biomedical focus on the individual, the narrowly bounded local social-cultural geography, and the artificial epidemiological or demographic constitution of populations, and the pretense of universality and equality. It restores the ecological and political to the environment and protects against the attempts of biomedicine to lift humans out of biological and social ecosystems and to place them ahistorically in some special, universalized and individualized petrie dish. In such a changing environment, we can examine historically the social-structural influences on the particular destructiveness of disease and cataclysmic events like earthquakes, wars, and uncontrollable epidemics; we can understand the construction and management of health in the context of predisposing structural causes that reproduce inequalities, value some lives and kinds of knowledge differentially, expose communities to risk, and inspire collective action.

## Notes

1. Laurie Garrett, *The Coming Plague: Newly Emerging Diseases in a World Out of Balance* (New York: Penguin Books, 1995) and Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York: W.W. Norton and Company, 1999).
2. Paul Farmer, *Pathologies of Power: Health, Human Rights, and the New War on the Poor* (Berkeley: University of California Press, 2003) and Nancy Scheper-Hughes, *Death Without Weeping: The Violence of Everyday Life in Brazil* (Berkeley: University of California Press, 1993).

3. Nicholas King, "Security, Disease, Commerce: Ideologies of Postcolonial Global Health," in *Social Studies of Science* 32 (2002): 763-789 and Nicholas King, "Immigration, Race and Geographies of Difference in the Tuberculosis Pandemic," in Matthew Gandy and Alimuddin Zumla, Eds., *The Return of the White Plague: Global Poverty and the 'New' Tuberculosis* (New York: Verso Press 2003): 39-54.
4. Randall Packard, Ruth Berkelman, Howard Frumkin, Peter Brown, *Emerging Illnesses and Society: Negotiating the Public Health Agenda* (Baltimore: The Johns Hopkins University Press, 2004).
5. Donna Haraway, *Modest Witness@Second Millennium. FemaleMan Meets OncoMouse: Feminism and Technoscience* (New York: Routledge Press, 1997).
6. Karl H. Offen, "Historical Political Ecology: An Introduction." *Historical Geography* 32 (2004): 19-42