Confronting the Challenges in Reconnecting Urban Planning and Public Health

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Although public health and urban planning emerged with the common goal of preventing urban outbreaks of infectious disease, there is little overlap between the fields today. The separation of the fields has contributed to uncoordinated efforts to address the health of urban populations and a general failure to recognize the links between, for example, the built environment and health disparities facing low-income populations and people of color.

I review the historic connections and lack thereof between urban planning and public health, highlight some challenges facing efforts to recouple the fields, and suggest that insights from ecosocial theory and environmental justice offer a preliminary framework for reconnecting the fields around a social justice agenda. (*Am J Public Health.* 2004;94:541–546)

DESPITE THE COMMON historical origins and interests of urban planning and public health, only minor overlaps between the 2 fields exist today. One result of this "disconnect" is an uncoordinated approach to eliminating the glaring health inequalities facing the urban poor and people of color.[1–5] While public health is increasingly concentrating on biomedical factors that might contribute to different morbidity and mortality rates between the well off and least well off, the field is just beginning to seriously investigate the role of land use decisions and how the built environment influences population health. At the same time, urban planning practice shows few signs of returning to one of its original missions of addressing the health of the least well off.[3,5] The result is that work in the 2 fields is largely disconnected, and both areas are failing to meaningfully account for the economic, social, and political factors that contribute to public health disparities.[4] However, the public health significance of the disconnect between planning and public health has not gone unnoticed.

A series of recent reports have emphasized the importance of reconnecting planning and public health. For example, a 2001 Institute of Medicine report titled *Rebuilding the Unity of Health and the Environment* emphasized that the "environment" should be understood as the interplay between ecological (biological), physical (natural and built), social, political, aesthetic, and economic environments.[6] The National Center for Environmental Health of the Centers for Disease Control and Prevention, in its 2000 report *Creating a Healthy Environment: The Impact of the Built Environment on Public Health*, argued for the reintegration of land use planning and public health, explicitly linking transportation and land use planning to public health outcomes such as increased obesity, asthma, and mental health.[7] A 1999 report published by the World Health Organization, *Healthy Cities and the City Planning Process*, emphasized the importance of developing a model of "healthy urban planning" to ensure the health of the world's increasing urban and poor populations.[8] Finally, *Healthy People 2010* lists eliminating health disparities as 1 of its 2 top priorities and acknowledges that only an interdisciplinary approach to health promotion will accomplish this goal.[9]

While these reports are important steps toward reuniting planning and public health, what is missing is an articulation of the challenges each field must confront in any reconnection effort and a theory or framework articulating why and for whom the fields should be reconnected.[10] This article highlights some of these challenges and offers a framework by drawing on insights from ecosocial epidemiology and environmental justice. I suggest that ecosocial epidemiology and environmental justice are useful paradigms because the former provides an explicit framework that attempts to explain health disparities across populations and how social relations can be pathogenic, biologically "embodied," and expressed as health inequalities,[11–13] while the latter outlines a democratic research and public decisionmaking agenda that is attentive to the distributive, procedural, and corrective justice concerns of people of color.[14–17]

THE DISCONNECT BETWEEN PLANNING AND PUBLIC HEALTH

Public health, city planning, and civil engineering in the United States evolved together as a consequence of late-19th-century efforts to reduce the harmful effects of rapid industrialization and urbanization, particularly infectious diseases.[8,18,19] Reformers recognized that poor housing conditions, inadequate sanitation and ventilation, and dangerous working conditions helped cause devastating outbreaks of cholera and typhoid.[18] Planning and public health were regularly affiliated during this era of miasma and contagion, and engineering-based sanitary reforms, largely influenced by the Chadwick report in Britain, were instituted to limit hazardous exposures through such measures as sewerage, garbage collection, and rodent control.[20–22] Planners also used the power of the state to separate out populations suspected of causing disease. Yet, both miasma and contagion failed to explain certain aspects

of population health, such as why epidemics occurred only sporadically, even with the seeming ubiquitous filth present in many urban areas, and how diseases traveled.

By the end of the 19th century, the driving ideology in public health had shifted to germ theory, and this shift continued through the first half of the 20th century. According to germ theory, there are specific agents of infectious disease, in particular microbes, and these agents relate in a one-to-one manner to specific diseases.[20] This conceptual shift was accompanied by shifts in public health and planning practice. Public health research shifted from investigating ways to improve urban infrastructure to laboratory investigations of microbes and interventions focused on specific immunization plans, with physicians, not planners, emerging as the new class of public health professionals.[12,19]

In urban planning, the German-inspired "Haussman model" of zoning began to take hold in the United States during this same period.[23] This model focused on functionality and a hierarchical ordering of land use that tended to separate residential areas from other land uses, particularly those involving industry.[24] At the core of the Haussman model was the idea of dividing up functions within the economy (e.g., zoning), isolating those functions deemed unhealthy (e.g., industry), and placing strict regulations on the kind of contact occurring between people and land use functions.[24] Zoning was aimed at "immunizing" urban populations from the undesirable externalities of the economy, such as industrial pollution.

As clinicians increasingly implemented public health mea-sures in the mid-to-latter half of the 20th century, the field shifted toward addressing the "hosts" (e.g., individuals) of disease, be-cause the "environment" (e.g., the world outside of microorganisms) was harder for physicians to influence.[20] During this era, public health largely ignored the social dimensions of disease and emphasized modifying individual "risk factors" reflected in one's lifestyle, such as diet, exercise, and smoking.[25] Planning, searching for an identity in postwar America, turned to promoting economic development through large infrastructure and transportation projects.[26] Planning shifted from attempting to restrain harmful "spillovers" from private market activities in urban areas to promoting suburban economic development.[27] Models of economic efficiency were used in planning new towns, regional planning authorities were established to provide inexpensive and reliable resources to these areas, and an era of urban divestment and residential segregation took hold.[26,27]

By the latter half of the 20th century, the biomedical model of disease, which attributes morbidity and mortality to molecular-level pathogens brought about by individual lifestyles, behaviors, hereditary biology, or genetics,[25] was firmly entrenched as the dominant paradigm in epidemiology. Yet, the biomedical model was oriented toward explaining molecular-level pathogenesis rather than explaining the distribution of disease among populations or disease incidence or distribution at a societal level.[20,25] Urban planning underwent an analogous shift in its orientation toward environmental health by adopting the environmental impact assessment (EIA) process.

The EIA process, institutionalized after passage of the National Environmental Policy Act of 1969, ushered in the use of the environmental impact statement (EIS) for analyzing the ecological and human health effects of plans, projects, programs, and policies.[28] The EIA process is generally accompanied by a quantitative risk assessment in which human health effects are considered.[29] Risk assessment was institutionalized as part of the EIA process in almost all site-specific analyses of human health after the 1980 Supreme Court decision supporting the use of risk assessment in the regulation of benzene.[30]

Yet, both the EIS and quantitative risk assessment have been widely criticized as methods for assessing population health because they tend to overemphasize carcinogenesis at the expense of other chronic diseases,[31,32] treat all populations as similarly susceptible while ignoring the disproportionate hazardous exposures experienced by certain populations,[33] restrict analyses to quantitative data while minimizing or ignoring other kinds of information,[34] and limit the discourse and practice to experts, which can undermine the democratic character of the process by determining who is empowered to frame analyses and who will be excluded, deemed inarticulate, irrelevant, or incompetent.[29,34,35] Thus, wholesale adoption of practices such as EIS and risk assessment leads to planning becoming disconnected from environmental health.

CHALLENGES FACING THE UNION OF PLANNING AND PUBLIC HEALTH

By the late 20th century, the fields of planning and public health were largely disconnected both from their original mission of social betterment and from working collaboratively to address the health of urban populations.[8] There were some notable exceptions in each field, such as Alice Hamilton's community health work and Paul Davidoff's "advocacy planning" movement,[28,36] both of which advocated for interventions designed to improve the lot of the least well off. However, such movements were the exception rather than the rule in their respective fields. As discussed in the sections to follow, at least 4 significant challenges for reconnecting the fields emerge from this current disconnect.

Assessing the Health of Places and "Place-Making"

The first challenge facing the recoupling of planning and public health is how to pay increased attention to the public health effects of land use and places—often referred to as the built environment—while simultaneously expanding our definition of planning to include the political processes that produce these outcomes. For instance, the fields must develop new methods to understand the effects of the physical and social environment on human health by challenging the "geographic neutrality" assumptions of most environmental laws. Geographic neutrality is assumed when environmental regulations control *activities* that cause pollution (e.g., energy production, agriculture, transportation).[28] In such instances, the regulations of the Environmental Protection Agency (EPA) involve an industry-by-industry focus or an EIS assessment of a single facility; there is little regard for whether or not multiple industries or facil-

ities are clustered in particular communities.

Geographic neutrality is also assumed when environmental controls are placed on a specific hazardous agent or pollutant (e.g., lead, asbestos, radon), the environmental medium, or, less frequently, the route of exposure (e.g., drinking water, ambient air). In the case of each of these scenarios, cumulative exposures from multiple hazardous agents that have effects on communities are rarely considered.[15,35] The EPA has recognized the importance of geography in some regulatory programs, such as the state implementation plans designated under the Clean Air Act and watershed protection programs such as those managing the Great Lakes and Chesapeake Bay regions.[28] However, the overall regulatory strategy remains firmly rooted in the geographic neutrality fallacy.

While reconnecting planning and public health will require increased attention to the health effects of plans in geographic places, it will also demand that the field recognize its role in the politics of "place-making."[37,38] Planning must increasingly be understood as a profession that manages conflicts over political power and values that arise when, for instance, state or private-sector objectives clash with those of local communities. If planning is to be reconnected with public health, planning practice must be conceptualized as a set of outcomes (e.g., housing, transportation systems, urban designs) and processes that can (1) involve the use or abuse of power, (2) respond to or resist market forces, (3) work to empower certain groups and disempower others, and (4) promote multiparty consensual decision-

making discourses or simply rationalize decisions already made.[39]

In other words, planning practice involves choices regarding which information is deemed relevant, what decisionmaking processes will be used, and when, or if, various publics will be involved in making the plan.[38] Reconnecting the fields will require increased attention to the politics of planning practice (i.e., in terms of shaping public agendas and attention), available evidence and norms of inquiry, inclusive or exclusive deliberations, and responses (or lack thereof) to bias, discrimination, inequality, and recalcitrance.[39]

Addressing Health Disparities

A second challenge in reconnecting the fields is developing a coordinated, multidisciplinary approach toward eliminating health disparities. A plethora of recent evidence suggests that disparities in health between people of color and Whites have not narrowed over time, are getting worse, and are increasingly linked to the physical and social environments that fall under the traditional domain of planning, such as housing, transportation, streetscapes, and community or social capital.[40–47]

For instance, Williams and Collins[42] noted that residential segregation is a fundamental cause of differences in health status between African Americans and Whites because it shapes the socioeconomic conditions faced by Blacks not only at the individual and household levels but also at the neighborhood and community levels; it also can contribute, in residential environments, to social and physical risks that adversely affect health. While African Americans have been

effectively frozen out of suburbs by racial covenants, discriminatory mortgage practices, and racial steering since the 1950s, Whites have benefited from access to low-cost suburban homes, low interest rates on government-subsidized home mortgages, and publicly funded transportation projects linking their suburban homes to employment, recreation, and commercial centers.[48,49] Such housing and transportation policies promoted segregation and continue to preclude African Americans from enjoying the accumulation of wealth associated with the improved health of populations.[42]

Developing an Urban Health Agenda

In addition to addressing health disparities, reconnecting the fields will demand a clearly articulated strategy to improve the health of urban populations. Currently, the lack of an urban health agenda has allowed each field to downplay the significance of urban–suburban–rural health disparities.[1,2] Today's absence of an urban health agenda stems in part from national and state trends of divestment in cities; this divestment has subsequently led to a deemphasis on research about, and deflected resources away from, urban issues.[26,48,49] With urban poverty rates approximately twice as high as suburban poverty rates (16.4% vs 8.0% in 1999[50]), an urban health agenda must address socioeconomic position and other social determinants of health unique to urban areas.[2] Concentrated poverty is principally an urban and racial phenomenon, and people living in poor neighborhoods often face multiple simultaneous burdens that influence their health: poor schools,

unemployment, psychosocial stress, discrimination, environmental exposures, and limited access to health care.[51]

Democratizing Practice

Finally, reconnecting planning and public health will require a new conception of participatory democracy to ensure that practices are accountable to communities that have historically been excluded from decisionmaking but face the greatest burden in terms of inequalities.[52] Research and decisionmaking in both planning and public health are often criticized for relying solely on professional knowledge at the expense of democratic participation.[52–56] Such critiques also claim that professional "knowledge elites" tend to view the "public" as largely ignorant of technical and scientific issues, reflecting a professional loss of confidence in the public's capacity to make sense of complex problems and disputes.

However, increasing evidence in the natural sciences, public health, and urban planning[53–56] reveals that expert assessments can miss important contextual information and need to be tempered by the experiences and knowledge offered by lay publics. Successfully reconnecting planning and public health will require the use of expert models, but it will also demand that these same models be recognized as contingent and fallible.[57] Democratizing practice in both fields demands that professional knowledge not be compartmentalized from practical experience, that lay knowledge be considered alongside expert judgments, and that the incomplete models of the technically literate not be mistaken for the sum total of reality.[30,35,58,59]

A RECONNECTING FRAMEWORK: ECOSOCIAL EPIDEMIOLOGY AND ENVIRONMENTAL JUSTICE

Reconnecting public health with planning will require the fields to embrace their physical and social dimensions, address health disparities burdening urban populations, and democratize research and decisionmaking practices. Although the task is daunting, insights from both fields might assist in the effort. In public health, social epidemiology, particularly ecosocial epidemiology, provides an interdisciplinary, multilevel perspective for understanding the health status of, and health disparities in, populations. In planning, environmental justice provides a framework for ensuring that decisionmaking processes and outcomes are democratic and fair.

Ecosocial epidemiology makes explicit the importance of an interdisciplinary understanding of how both biology and different forms of social organization influence the well-being of individuals and populations and explicitly investigates social determinants of population distributions of health, disease, and well-being.[13] Ecosocial epidemiology stresses a multidisciplinary population perspective that requires examination of how biological, sociological, economic, and psychological phenomena influence distributions of population health while incorporating a life-course perspective that considers the role of early and multiple pathogenic exposures that contribute to cumulative disadvantage.[13] Through its population and multilevel approach to health, ecosocial epidemiology recognizes that extraindividual socioeconomic factors closely related to the physical and social infrastructure of communities affect health above and beyond a combination of individual "risk" factors.[25]

A key concept in ecosocial epidemiology is *embodiment*, or how throughout our lives we literally incorporate, biologically, the material and social world in which we live.[13] The implication for reconnecting planning and public health is that better models are needed to understand how our biology does or does not reflect the physical, social, economic, and psychosocial environments in which we live, work, and play.[12,60–62] This insight suggests that reconnecting public health and planning will do more than simply add "biology" to "social" analyses; it will provide an understanding of health as a *continual and cumulative interplay* between exposure, susceptibility, and resistance, all of which occur at multiple levels (e.g., individual, neighborhood, national) and in multiple domains (e.g., home, work, school, community).[13,63]

Insights from environmental justice help confront the decisionmaking challenges facing the recoupling of planning and public health. A basic premise of environmental justice is that all people and communities have a right to live, work, and play in places and communities that are safe, healthy, and free of life-threatening conditions.[14–17] Claims of "environmental injustice" have highlighted that people of color and poor populations bear a disproportionate burden of hazardous exposures, experience less stringent enforcement of environmental regulations, have access to fewer environmental benefits such as parks, and have been routinely excluded from environmental decisionmaking.[15,54,64] These disproportionate hazardous exposures have also been shown to contribute to adverse health outcomes.[17] Environmental justice emphasizes *corrective justice* as well, or the notion that polluters should be punished and held responsible for cleanups and should compensate or repair communities damaged by historic pollution.[15]

Reconnecting the fields could benefit from an environmental justice decisionmaking framework that evaluates the democratic character of processes on the basis of their openness, inclusiveness, and fairness.[64] A democratic process, according to the environmental justice framework, demands that those being asked to bear an environmental or health burden "speak for themselves" in the design, analysis, and implementation stages of the process.[16] The environmental justice framework also recognizes that improved democratic decisionmaking processes require planners and others to work to ensure that disadvantaged groups receive the necessary legal, financial, and technical resources to allow their meaningful participation.[14]

A redistribution of material resources must accompany efforts to enhance participatory democracy. Material redistribution is necessary because, for instance, community networks and social capital—both of which are resources viewed as central to improving democracy and population health—cannot be built without supporting economic capital.[26,48] The conundrum is that redistributing economic growth *alone* will not guarantee the development of community networks and social organizations that are viewed as integral to determining how the benefits of economic growth and development are distributed.

Ultimately, resource redistribution requires a role for the federal government,[27,49] since local governments are always constrained by interjurisdictional competition—that is, interstate and intrastate (i.e., urban–suburban–rural) competition—in formulating redistributive policies.[50] Defining a new role for the federal government in planning and public health will be an essential part of democratizing the reconnection effort. The cruel irony is that while federal policies often helped create today's urban–suburban economic, social, and health disparities, policies at this same level are necessary to revitalize urban areas, address discriminatory programs, and help reconnect planning and public health.[26,50]

TOWARD HEALTHY AND JUST URBAN PLANNING

The successful reconnection of planning and public health will require the articulation of an explicit conceptual framework, and I have suggested one such paradigm here. Efforts to achieve this reconnection must confront a host of challenges, from redefining planning to addressing health disparities and formulating an urban health agenda. This task will not be easy. However, through an interdisciplinary approach that incorporates the multilevel, life-course, population health perspective suggested by ecosocial epidemiology and the procedural, distributive, and corrective justice principles advanced by environmental justice, a reconnection framework is possible. ■

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