Part III Summary: What is the Role of the Social Environment in Understanding Inequalities in Health?

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That the social environment is inextricably involved in the health of individuals and populations was recognized long ago, extending back beyond the parallel activities in England, France, and Germany during the mid-1800s that led to the beginnings of the public health movement.[1] Despite the important contributions of early urban sociologists,[2,3] for the next century and a half the discussion of the social environment tended to focus on material living conditions such as housing, sanitation, water quality, and so forth. During the last quarter of a century, the discussion of the social environment broadened with John Cassel's paper "The Contribution of the Social Environment to Host Resistance" being a sentinel marker of this change.[4] In this paper, Cassel called upon evidence that linked poorer health to social disorganization of counties, social instability and poverty level of census tracts, levels of family competence, acculturation, and life stress and poor social support. More recent papers have shown that characteristics of the areas in which people live,[5] patterns of social connections,[6] social and economic policies,[7] organization of work,[8] and other aspects of the social environment are associated with important variations in health status. The papers presented in this part of the symposium show that this explosion of interest is alive, well, and exciting.

But what is the social environment? We can relatively easily define the physical environment, whereas a definition of the social environment is elusive. While it may actually not be important to come up with an exact definition, inspection of FIGURE 1, or other similar representations,[9–12] gives some idea of the magnitude of the terrain that is involved when we speak broadly of the social environment. Thus, we can think of social and economic policies setting the context for the development of particular institutions and regulatory systems related to health care, education, public safety, local and regional development, and working conditions. It is important to remember that these social and economic policies are embedded in history and geography and contain cross-currents related to discrimination and culture. The nature of neighborhoods and communities, living conditions, both material and neomaterial, and patterns of social relationships between individuals and groups set in place processes that facilitate or impede the development of individual risk factors, both behavioral and psychosocial, that may feed back on upstream determinants. Thus, in order to understand the day-to-day experience of individuals and groups and

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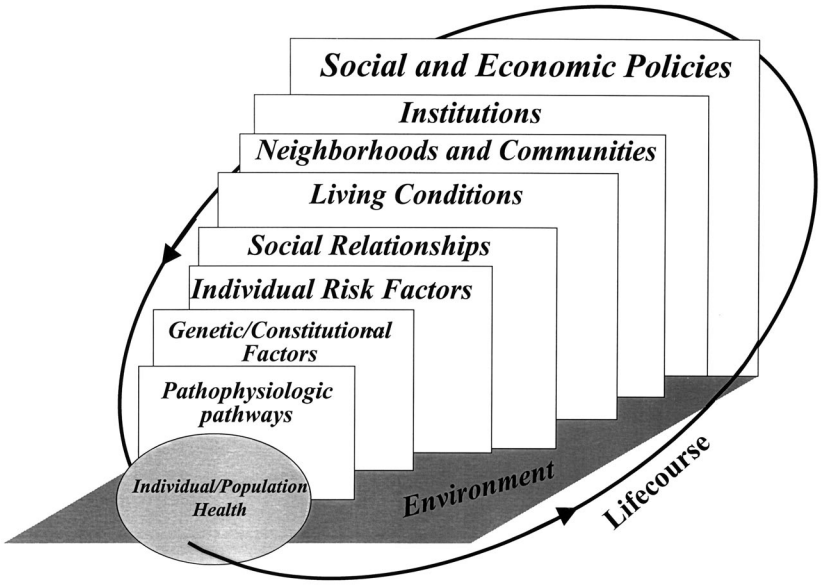

FIGURE 1.

how that translates into better or worse health among the richer and poorer,[13] we will have to consider the social environment from a dynamic, multilevel, and upstream perspective.

How, then, can knowledge concerning the impact of the social environment on health contribute to our understanding of the relationship between socioeconomic status and health? Consideration of FIGURE 1 shows that there will be no easy answers. The contemporary penchant for statistically estimating the "independent" effects of single variables is not likely to be useful when analyzing dynamic, multilevel phenomena with feedback between levels. Furthermore, such techniques may be misleading because they often fall victim to being "prisoners of the proximate."[14–15] That is, they epistemologically privilege causal factors that are more proximate to the disease outcome, whereas consideration of FIGURE 1 would lead to an appreciation of the joint role of multiple factors, across levels—all being potentially involved in the causal explanation of the reasons for socioeconomic gradients in health. It is likely that the most complete understanding of the reasons for socioeconomic gradients in health, the role of the social environment, and what we can do to reduce these gradients will come from efforts to build bridges across the multiple levels shown in FIGURE 1. Such efforts hold the greatest potential for elucidating both the pathways by which economic inequalities in health are generated—the "how"—as well as the determinants of these pathways—the "why."[16]

Within this framework how are we to understand the interesting work presented in this session? First, it is clear that an upstream focus is called for. The authors of

the papers examining health outcomes in humans point to the importance of social and economic policies in determining working conditions, the impact of racist ideology and history on the socioeconomic and socioenvironmental disadvantage experienced by African-Americans, and the role of economic forces in eroding social capital and cohesion. Furthermore, in their studies of cynomologus monkeys, Kaplan and Manuck[17] point out an important parallel between nonhuman primates and humans—namely, the contextual nature of the relationship between rank and health. Thus, they posit that the impact of rank, used metaphorically by some as equivalent to social class, will only be felt physiologically where rank is associated with inequities in access to material goods and other resources. Thus, it is not rank *per se* but instead the interaction of rank and the differential distribution of demands and resources by rank that allow individual differences in reactivity to social stress to be expressed physiologically. This expanded view of hierarchy and dominance, which has been way overinterpreted by some researchers studying social inequalities in health, is consistent with a growing recognition among primatologists that social rank may have far less to do with physiology than previously thought. In fact, referring to differences in physiology and stress-related disease, Sapolsky argues "…[how]…little, in fact, rank predicts any of these endpoints" (Ref. 18, p. 39).

Second, we are only beginning to get an understanding of how racial discrimination, high-stress jobs, low social rank, or living in an area with low social capital contributes to differences in the day-to-day experiences of people, and how these experiences influence behavior and biology. As an example—how does income inequality lead to poor health?[19] Is it a marker for underinvestments in human and physical capital? Poorer health care and education? How are they experienced? Does it lead to increased stress or depression with fewer effective coping resources available? Perhaps we need to address the role of the social environment in health inequalities more from the perspectives used by primatologists and anthropologists when they attempt to capture the every-day experience of individuals and groups.

Finally, if aspects of the social environment contribute to socioeconomic gradients in health, we need to ask how the social environment can be changed in order to reduce inequalities. Our lack of knowledge in such areas is variable. In the area of work stress there is a considerable amount known.[20] While the recent Independent Inquiry into Inequalities in Health Report[21] contained many useful suggestions on ways to potentially reduce inequalities in health, detailed suggestions for interventions on the social environment were relatively few. What this underscores is a need for expanded efforts to evaluate the impact on inequalities of health of interventions conducted at all levels shown in FIGURE 1. Some would argue that many of these interventions would be outside the pale of medicine and public health. Surely without such changes it is likely that we may see little reduction in health inequalities. Given the magnitude of the health burden associated with socioeconomic inequalities in health, there is little choice but to mount an interdisciplinary approach, venturing out into an area of intervention where the success is uncertain but the payoff could be dramatic.

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