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Social Inequality and Health: A Commentary

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Medical anthropologists have had a long interest in the subject of social inequality and health. Critical medical anthropologists (Farmer 1999; Singer 1986) and biocultural anthropologists (Goodman and Leatherman 1998; Thomas 1998) have all argued for the systematic study of structured economic and social inequality in communities and their impact on health. In this issue of *MAQ,* Ricardo Godoy and his colleagues add a new dimension to the anthropological study of this subject. My aim here is to provide a bit more background, to better contextualize their study.

Although anthropologists have a deep interest in the subject of inequality and health, we have contributed proportionately little to the debate. The inverse association between socioeconomic status (SES) and health, and the related positive association between social integration and health, are probably the most widely replicated of any associations observed between social variables and health outcomes. And, the SES–health relationship is certainly the most often replicated association of these two relationships. Social epidemiology is the field that has contributed the most to this literature (Berkman and Kawachi 2000). This of course will be familiar to the many medical anthropologists who are acquainted with the literature in epidemiology.

Regardless of who is doing the research, however, the question remains: why? What is it about social inequality that leads to ill health? This may seem like a silly question when you consider the grinding poverty (or absolute material deprivation) under which some people live as described in the ethnographic literature by, for example, Nancy Scheper-Hughes (1992). Her careful ethnographic description of the desolate poverty experienced by many living in a Brazilian *favela* (or "shantytown") makes it clear that some people are sicker because they are poor, oppressed, and exploited. On the other hand, it is not such a crazy question when you look at the socioeconomic gradient in health found in Michael Marmot's Whitehall study (Marmot 1994). Whitehall, of course, refers generally to the British civil service. From the housekeeping staff to the titled ministers, the inverse gradient in health can be seen. Granted, the differences in health may not be as great as those between the poorest Brazilians and Brazilian members of the international elite, but the gradient, nevertheless, is there. And, these British civil servants are fortunate to live in a society with a national health care service and with the economic wherewithal

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to purchase additional private health care (via supplemental insurance) if they so choose. So, if their material wants are satisfied and they have access to decent health care, what is it about social inequality that leads to poor health?

The exploration of this question has been enriched by the work of two British sociologists, Peter Townsend and Richard G. Wilkinson. Townsend was a guiding force behind the Black Report (Black and Townsend 1984), an examination of regional and social-class differences in health that had been commissioned by the Labour government in the 1970s, and then nearly scuttled when Thatcher came to power. The Black Report (so named for the head of the committee conducting the study, Sir Douglas Black) demonstrated the continuing social-class and regional differences in health in Britain, despite the nearly 40 years of existence of the National Health Service. Townsend also introduced the term "health inequalities" in that work (that we Americans have absurdly tried to sanitize as "health disparities") to describe how differences in health status map onto differences in social class.

Townsend (1979) also produced the nearly 1,000-page *Poverty in the United Kingdom*, the first 100 pages of which should be required reading for anyone with an interest in poverty and its amelioration. In those opening pages Townsend provides a lucid discussion of the difference between "absolute (material) deprivation" and "relative (material) deprivation" as measures of poverty. The concept of absolute deprivation underlies the U.S. Census Bureau definition of poverty (at this writing, a little under $22,000 per year in household income for a family of four). Based on an earlier basic "basket" of necessities developed in Britain, the U.S. Social Security Administration in the 1960s tried to estimate precisely how much was necessary to keep a given number of people alive in a household, principally in terms of food intake, but including such ancillary items as shelter and clothing (if the process sounds a little cold, that's because it is), and these have been updated periodically ever since. This is, in other words, the absolute minimum sustenance required to maintain life.

Relative deprivation, on the other hand, is defined in terms of living standards that are so widely accepted as the norm in a community that, to paraphrase Townsend, no person should reasonably have to live beneath those standards. While the effects of absolute deprivation are obvious, the effects of relative deprivation are more subtle and mediated by social comparison processes and psychosocial stress. Townsend argued for defining poverty in terms of relative deprivation (while acknowledging, of course, that basic sustenance was a first requirement), and he developed an index of lifestyle that he used as a measure of poverty.

Regardless of how much one comes down on one side or the other of the absolute vs. relative deprivation debate, from a logical point of view these constructs share one thing in common: their empirical referent is individual human beings. It is possible to look at other units of analysis, however, such as whole communities or even societies. Beginning in the 1970s, a number of social economists (like Levy 1987) began to seriously look at how material resources are distributed within society and the various implications of that distribution. Levy documented how, between the second world war and about 1973, income growth in the United States was evenly distributed across income strata; that is, if you divided the United States into five levels based on individual income, in those postwar years, everyone's income grew at about the same annual rate. Since 1973, however, income growth

has varied by level of income, with those with incomes above the median enjoying increasing income and those below the median suffering either income stagnation or, worse, falling real incomes.

There has occurred, in other words, increasing inequality within our society. The difference in income between the poorest and the wealthiest Americans has grown. This inequality can be gauged in several ways. One is straightforward: pick an income strata (such as the upper 20 percent of the income distribution) and determine what proportion of all wealth is held by that group (there are many variations on this theme, such as a ratio of the upper 20 percent to the lower 20 percent, but logically they get at the same thing). Others are more arcane, such as the Gini coefficient. While the formula for its calculation can be formidable, its interpretation is straightforward: if everyone in a society had the same amount of money, the Gini coefficient would equal 0.00; if only one person in the society had all the money, the Gini coefficient would equal 1.00. We can, in other words, measure how unequal societies are, as well as whether or not one individual ranks lower or higher than another individual. While some would dispute this, I would argue that societal degree of inequality represents what some epidemiologists call an "integral aggregate variable." This is a variable that describes only an aggregate (community, society), and it has no empirical correspondence to the individual elements (persons) of that aggregate (Von Korff et al. 1992).

In a series of extremely influential papers (summarized in Wilkinson 1984; Wilkinson and Pickett 2006, 2007), Wilkinson examined the relationship between the distribution of inequality and indicators of health status (such as life expectancy, infant mortality rates, and homicide rates). He found that as the degree of inequality increased in a society, indicators of health status declined. Furthermore, this association held among nations with higher per capita incomes (i.e., in Western Europe and North America). Others have extended the study of these associations to various other kinds of aggregates (such as states in the United States; see Kawachi and Kennedy 1999).

Given that these associations have been observed for societies with the world's highest per capita incomes, Wilkinson has argued for the importance of a sense of relative deprivation and associated psychosocial stress as underlying the associations. As he noted:

> Health and wealth have always appeared to be closely related. But within that relationship there is an important historical discontinuity which not only tells us about the changing determinants of health, but also marks a fundamental change in the limiting constraints on the quality of life in modern societies. Mortality rates in the developed world are no longer related to per capita economic growth, but are related instead to the *scale of income inequality* in each society. This represents a transition from the primacy of material constraints to social constraints as the limiting condition on the quality of human life. [Wilkinson 1984:61, emphasis added]

Wilkinson's hypothesis has not, of course, gone unchallenged (see, e.g., Lynch et al. 2004). There are those who have argued on empirical grounds that the scale of economic inequality is merely an artifact of differences between individuals

(although I do not find that argument convincing), and there are those who have argued that Wilkinson's analyses do not contribute much to the argument for social justice (I'm unconvinced by that one, too). More germane to my purpose here is the point that Wilkinson's hypothesis has generated an impressive volume of discussion, and that anthropologists have remained relatively mute in this discussion.

It is not that we have nothing to say of relevance. For example, Kawachi and Kennedy (1999) have suggested that cultural consonance (Dressler 2007) be investigated as an individual-level variable mediating the effect of the scale of economic inequality on the health of individuals. And, as I noted at the outset, there is much of relevance to the question in the theories of critical medical anthropology and a political–economic approach in biocultural anthropology (see Farmer's [1999] discussion of Wilkinson's hypothesis). But anthropologists have not directly investigated the effects of the scale of economic inequality.

This is unfortunate, because working as we often do in communities on the periphery of the global system could provide insight into factors influencing the scale of inequality and how its effects emerge. Indeed, much of the classic theory in anthropology dealing with cultural evolution focused precisely on how social and economic inequalities emerge in human societies (Fried 1967), and on how certain kinds of institutional arrangements (e.g., the *cargo* system in Latin America [Chick 1981]) might have developed to check the concentration of wealth in the hands of a smaller number of persons. The literature on the effects of the scale of inequality would, I think, benefit from this kind of input. For example, there is sometimes a direct appeal to the literature on social hierarchy among nonhuman primates to explain the effects of relative deprivation (e.g., Wilkinson and Pickett 2006:1776), while the astounding variety of human institutional social arrangements generated during millennia of sociocultural adaptation, many of which helped to moderate emerging inequalities, are left out of the discussion.

This is somewhat less the case now, however, with the publication of the work of Godoy and colleagues. Godoy and associates have been conducting ongoing fieldwork for over ten years with the Tsimane', a group practicing a mixed hunting and gathering and horticultural subsistence economy, but with variable (depending on the location of the village of residence) participation in the market economy in lowland Bolivia. They have assembled a dataset consisting of five successive surveys across 13 different villages, with a total sample size of around 900 individuals. Using a variety of indicators, they developed measures of individual wealth and then calculated the scale of economic inequality for each village using the Gini coefficient. They could thus directly compare the effects of the emerging scale of economic inequality with individual rank in the system of inequality within each village. They used number of days an individual reported that he or she was bedridden with illness in the prior two weeks as their measure of health status (self-reported health has figured prominently also in the larger literature on inequality and health, see Subramanyam et al. 2009). In addition, they included a number of variables that might mediate the effect of inequality (at whatever level of measurement) on health outcomes, including the individual's emotional state and his or her level of social capital.

The nature of the dataset, and the expertise of the research team, makes the analysis somewhat formidable (I had to scramble some to keep up with them). But

the results are well worth the investment. Godoy et al. find that scale of economic inequality indeed has no effect on self-reported health among the Tsimane' and that, while higher individual socioeconomic rank is associated with fewer reported sick days, the effect is relatively modest. The potential mediating variables do have significant associations with reported health, and they partially, but incompletely, account for the effect of individual wealth rank on health. The authors consider a number of explanations, but the most interesting one to me is that the Tsimane' continue to practice preferential cross-cousin marriage, which results in a dense set of kin relationships within and across villages. Being embedded in this dense set of kin relationships that, unlike ego-centered social support systems in mass society, are not voluntary, may help to dampen the sense of relative deprivation associated with inequality (it actually would have been nice to see a measure of centrality in the kin network introduced into the analysis). The impact of inequality both at the individual and societal level may be enhanced when these kin-based relationships contract to the nuclear family and household in the process of economic development (see Dressler 1994).

This is not to say that there are not theoretical and methodological weaknesses in the Tsimane' study. The Godoy team has had to make certain kinds of assumptions and certain kinds of compromises to collect the data. The real point, however, is that this is a valuable anthropological contribution to a problem, with data collected using a mixed-methods research design. I look forward to more such contributions that will further illuminate issues of inequality and health, and, I hope, help to expand the thinking of our colleagues in sister disciplines.

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