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The Impact of Inequality

INTRODUCTION

RATHER THAN DISCUSSING CONCEPTS OF FAIRNESS AS THEY MIGHT apply to various aspects of life, I want to draw attention to some of the more important social and health effects that result from different amounts of inequality in modern societies. Most of the evidence comes from comparisons of market democracies or between the 50 states of the United States. As the different amounts of inequality we are comparing are all well within the bounds of what is practically possible, the implications of these comparisons will be relevant to policy.

I will start by showing that health and longevity tend to be better in more egalitarian societies. To understand such a relationship means to understand a causal chain that runs all the way from broad issues of social structure right down to the risk factors that affect individual biology. Causality runs from the corrosive effects of inequality on the character of social relations in a society, through the risk factors that modern epidemiology has shown make our health so sensitive to the quality of the social environment, and ends up with the biological effects of social stressors. It is a fascinating journey, showing us how we are all intimately affected by inequality. Essentially, epidemiological research on the determinants of population health has opened up what looks like a new sociology, which will help us to understand ourselves as human beings and what it means to be social. At the same time it takes us back to the political perceptions that have fired radicalism for centuries and made inequality a central theme.

Before discussing the evidence, I would like first to point out that although we use income distribution as a measure of the amount of

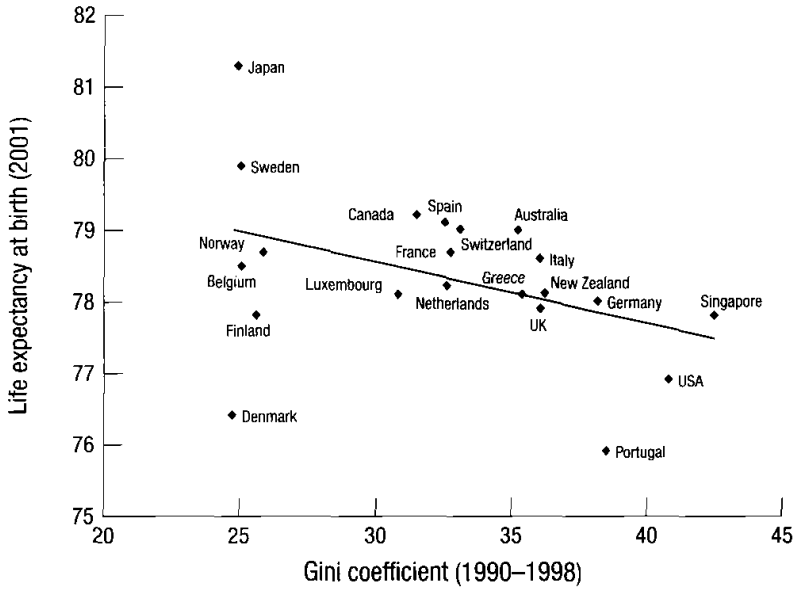

Figure 1 Life Expectancy and Income Distribution in the 21 Richest Countries Data Source: De Vogli et al. (2005). Reproduced with permission from the BMJ Publishing Group.

inequality in a society, that does not mean the main effects of inequality are necessarily the direct, socially unmediated effects of different material circumstances themselves. Indeed, it seems that the most likely reason income inequality is related to health is because it serves as a proxy for the scale of social class differentiation in a society. It probably reflects not only the scale of social distances and the accompanying feelings of superiority and inferiority or disrespect, but also, as status differentials increase, how they are likely to become more important than they would be in a more egalitarian society. The effects of social status on health are likely to be exacerbated by the greater insecurities facing those who lose out in the competition for status. A number of theoretical and empirical considerations point clearly in that direction (Wilkinson and Pickett, 2006; Wilkinson, 2005).

INCOME INEQUALITY AND HEALTH

That health is better in more equal societies is demonstrated by a large body of evidence. We reviewed some 168 analyses published in peer-reviewed journals (Wilkinson and Pickett, 2006). Overall, 78 percent showed at least some statistically significant evidence of a tendency

for health to be better in more equal societies, after the use of whatever control variables the authors thought appropriate. Comparing just those papers that found no statistically significant supportive evidence with those in which all associations were significant and supportive, 70 percent were wholly supportive against the remaining 30 percent, which were unsupportive. If we look at results before the use of control variables and exclude papers in which inequality was measured in areas too small to reflect the overall scale of class inequalities in a society, we are left with 128 analyses using data on inequality in areas as large as metropolitan areas, regions, or whole countries, of which only 10 (8 percent) are unsupportive. As examples, figure 1 shows the international relation among 21 rich developed societies; figure 2 shows it among 528 cities in 5 developed countries; and figure 3 shows it among Canadian provinces and the 50 US states. Similar relationships have been shown among richer and poorer countries, and among regions and cities in a number of other countries. The measures of health used have included life expectancy, mortality among infants and working age adults of both sexes, and self-reported health.

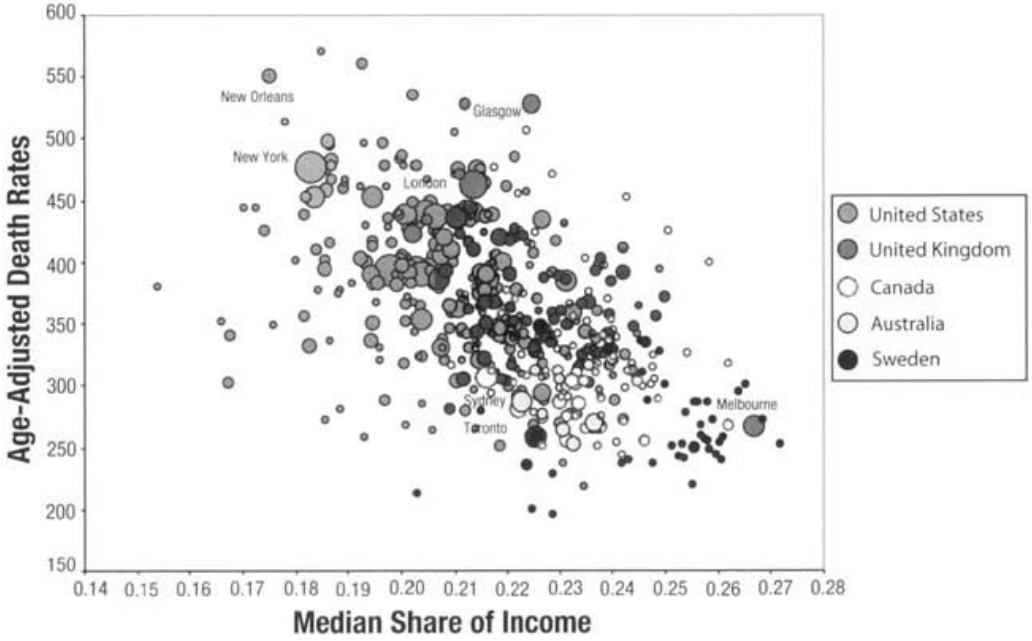

Figure 2 Income Inequality and Death Rates among Working Age Men in 528 Cities in 5 Countries
Data Source: Ross et al. (2005).

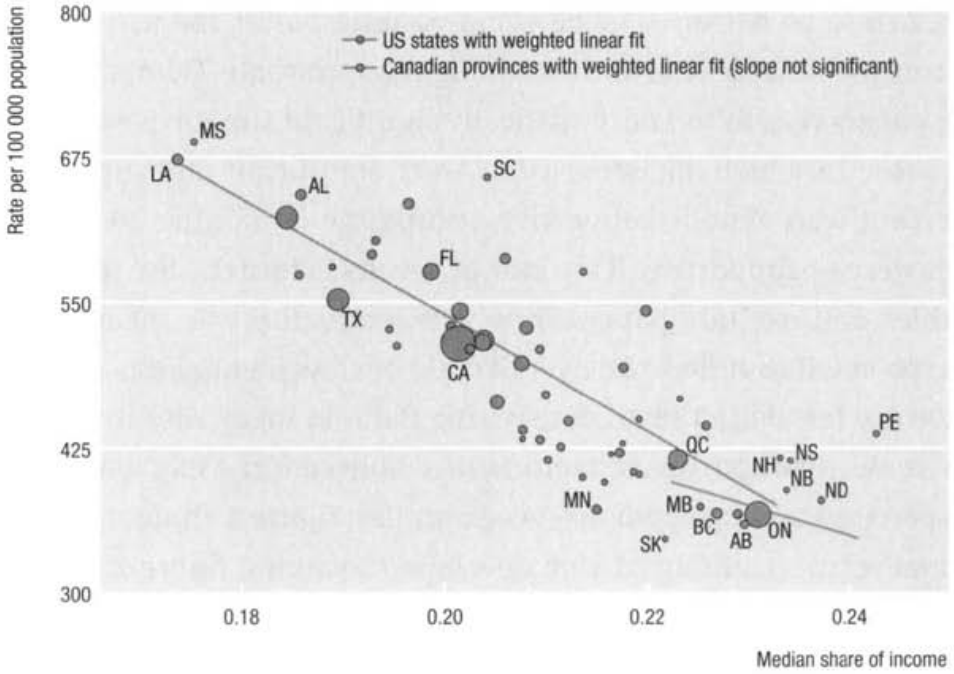

Figure 3 Mortality in men 25-64 yrs in relation to income inequality in US states (1990) and Canadian provinces (1991).
Data Source: Ross et al. (2000). Reproduced with permission from the BMJ Publishing Group.

INEQUALITY AFFECTS HOMICIDE RATES, TRUST, AND COMMUNITY

The first step in understanding what lies behind this tendency toward better health in more egalitarian countries is to look at the evidence that shows that the quality of social relations is also better in more egalitarian societies. This comes not only from studies of trust and social capital (or of the strength of community life) but also from studies of homicide. A large number of studies have reported that homicide rates are consistently higher in societies where income differences are greater. As early as 1993, Hsieh and Pugh published a review in which they concluded that this was a robust relationship. Interestingly, they also noted that—as in the studies of health—the relationships were stronger where inequality was measured in larger areas. Since then there have been a good many more studies showing the same pattern internationally and within particular countries. They are cited in our

review of research on income inequality and health (Wilkinson and Pickett, forthcoming). Figure 4 is taken from a World Bank study and shows the international relation between inequality and homicide (Fajnzylber, Lederman, and Loayza, 2002). Figure 5, taken from a study by Daly, Wilson, and Vasdev (2001), shows the same relationship among the 50 US states and the Canadian provinces. Notice in both these figures that the differences in homicide rates between high- and low-inequality societies are very large and quite strongly associated with inequality. My impression is that among those who know the evidence, no one now regards this relationship as controversial. Indeed Neapolitan (1999) said "the most consistent finding in cross-national research on homicides has been that of a positive association between income inequality and homicides" (260). Similarly, Messner and Rosenfeld (1997) noted that a "finding that has emerged with remarkable consistency is that high rates of homicide tend to accompany high levels of inequality in the distribution of income" (Messner and Rosenfeld, 1997: 1394).

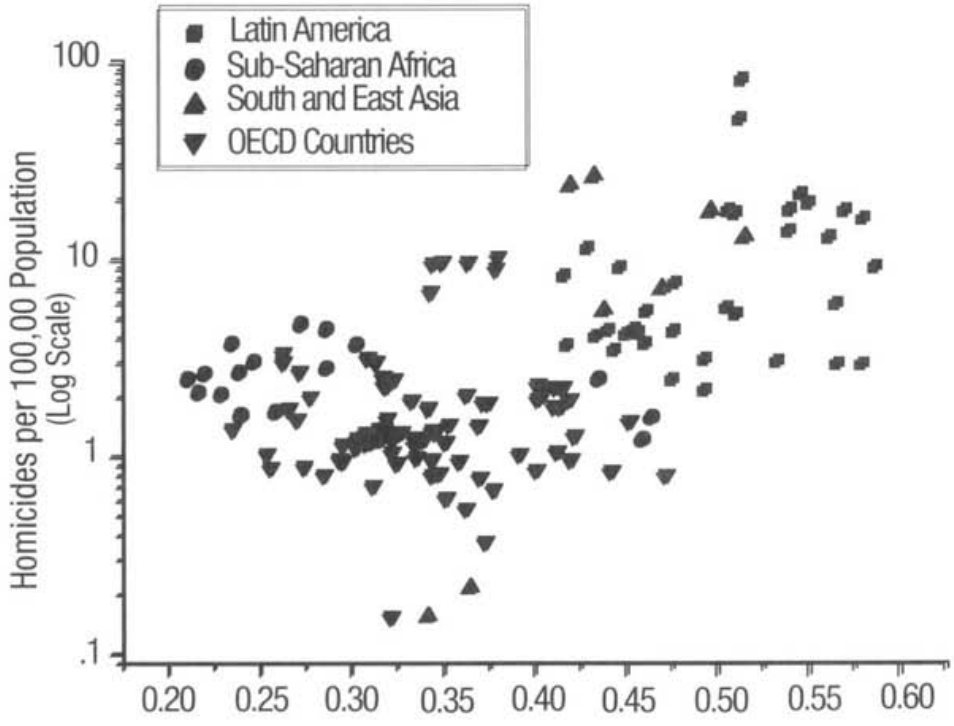

Figure 4 International Relation between Homicide and Income Inequality
Data Source: Fajnzylber, Lederman, and Loayza (2002).

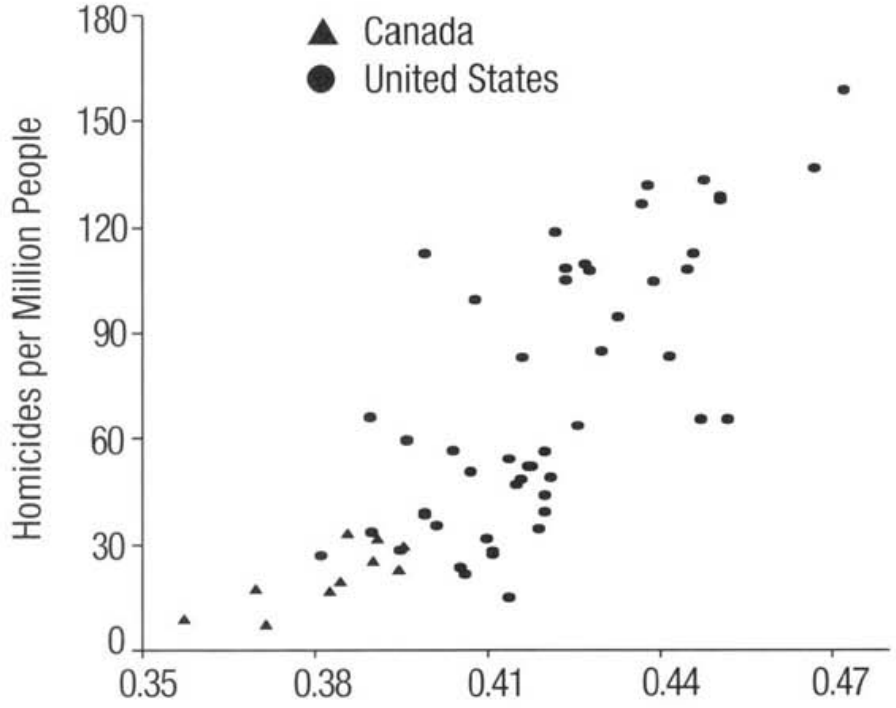

Figure 5 Homicide Rates in Relation to Income Inequality: US States and Canadian Provinces
Data Source: Daly, Wilson, and Vasdev (2001). Reproduced by permission of Canadian Criminal Justice Association.

A question from the US General Social Survey asks people whether or not they agree with the statement "Most people would take advantage of you if they got the chance." Kawachi et al. (1997) found that the proportion agreeing with this statement rose from around 10 percent in the more egalitarian of the US states to at least 35 percent in the less egalitarian, with a correlation coefficient of 0.7. Using data from the World Values Survey—but for obvious reasons excluding the postcommunist countries—Uslaner (2002) showed a clear international association between income distribution and trust.

Similar evidence of the socially corrosive effects of inequality can also be found in studies of social capital. In their study of the 20 regions of Italy, Putnam, Leonardi, and Nanetti (1993) point out in a footnote (224, n52) that there was a 0.8 correlation between income distribution

and his index of people's involvement in local community life. They contrast the vertical patron-client relationships in the less civic regions of Italy with the more egalitarian horizontal relationships in the more civic regions and, speaking of an egalitarian social ethos rather than of income inequality itself, they went as far as to say that "equality is an essential feature of the civic community" (105). In his study of social capital in the United States, Putnam (2000) again shows convincing evidence of a strong cross-sectional association between greater equality and stronger community life (see his figure 92). Interestingly, he also shows that in the less civic states a larger proportion of the population think it would do well in a fistfight! As well as these cross-sectional associations, Putnam draws attention to a striking correlation between changes in income distribution and changes in social capital during the twentieth century in the United States. He writes:

> Community and equality are mutually reinforcing. . . . Social capital and economic inequality moved in tandem through most of the twentieth century. In terms of the distribution of wealth and income, America in the 1950s and 1960s was more egalitarian than it had been in more than a century. . . . [T]hose same decades were also the high point of social connectedness and civic engagement. Record highs in equality and social capital coincided.
>
> Conversely, the last third of the twentieth century was a time of growing inequality and eroding social capital. By the end of the twentieth century, the gap between rich and poor in the US had been increasing for nearly three decades, the longest sustained increase in inequality for at least a century. The timing of the two trends is striking: somewhere around 1965-70 America reversed course and started becoming both less just economically and less well connected socially and politically (359).

This evidence that levels of violence, trust, and involvement in community life are all quite closely related to the amount of inequality in a society seems to support the intuitive sense that inequality is socially divisive. In this context it is worth remembering that early radicals and Christian socialists argued for greater equality not because they saw it as a fairer share out of goods between self-interested individuals, but because they regarded it as an obstacle to some greater human harmony. What the data shows us that is perhaps new is that, instead of assuming that any difference inequality might make to social relations would only be apparent if we could compare our societies with some perfectly egalitarian utopia, it instead shows that even small differences in inequality—such as those between different American states or developed market democracies—matter.

THE CAUSAL MECHANISMS

We now come to the question of why it is that even small differences in inequality appear to make a difference not only to health and longevity, but also to the quality of social relations. What are the mechanisms? There are two primary sources of insight into what is taking place. The first is the nature and importance of psychosocial risk factors for health in affluent societies, and the second concerns the triggers to violence, which account for why it increases with inequality.

Social Status, Friendship and Early Life

A branch of epidemiological research has, over the past few decades, been trying to identify the causes of the steep social gradients in health found in almost every country. Wherever we look, there is a continuous gradient in health across the whole society from the rich to the poor, from those with the best education down to those with the worst. For example, life expectancy is 16 years shorter for teenage girls and boys in the poorest compared to the richest areas of the United States (Geronimus et al., 2001). Partly because these health inequalities have demonstrated how sensitive health remains to social and economic

factors, this research has also led to the identification of some of the most important determinants of health standards in populations of developed countries.

Perhaps the most surprising finding to come out of this work is the importance of psychosocial pathways: that people's health is related to their social and economic circumstances partly through their subjective responses to them. The key to the biological effects is chronic stress. Stress shifts physiological priorities from important health maintenance functions—such as tissue maintenance and repair, immunity, growth, and reproduction—to mobilizing energy for fight or flight. If the stress lasts for only a short time, this does not matter, but if people go on feeling tense, worried, and anxious for weeks or even years, the effects on many different processes, including the cardiovascular and immune systems, can make people more vulnerable to a wide range of diseases (Brunner and Marmot, 2005).

The most important sources of psychosocial stress can be divided into three groups. We shall discuss them in turn.

First, those associated with low social status, by which we mean not simply lower living standards, but social position itself. It looks as if we have long overlooked the fact that subordinate social status is an additional stressor in itself (Marmot, 2004; Wilkinson, 2005).

The second group concerns issues related to friendship or social integration. Almost any measure of social affiliation—such as whether you have a confiding relationship, how many friends you have, whether you are involved in community life—is highly predictive of good health: social integration is good for people. This has been shown not only in well-controlled community observational studies, but also in studies looking at survival after heart attack and in studies looking at susceptibility to infection after a measured experimental exposure to infection (Cohen et al., 1997; Berkman and Kawachi, 2000; Stansfeld, 2006).

Third are the psychosocial stressors related to early life experience. It looks as if stress responses throughout life are strongly influenced by early experience. This includes both the effects of maternal

stress during pregnancy leading to higher levels of stress hormones crossing the placental barrier (Gitau et al., 1998), and to experiences in babyhood and early childhood, including poor attachment and the quality of care. Our growing understanding of this area was stimulated by Barker's discovery that birth weight was related to the risk of diseases such as diabetes, stroke, and heart disease in later life (Barker, 1998). Although these links were first thought to reflect poor nutrition in pregnancy, more recent evidence suggests that the programming of stress responses is likely to be central. As well as observational evidence from human studies (Phillips et al., 1998; Teixeira, Fisk, and Glover, 1999; Mathews, Yudkin, and Neil, 1999), there is also supportive experimental evidence from animal studies (Liu et al., 1997; Caldjia, Diorioa, and Meaney, 2000).

These are powerful groups of psychosocial risk factors. Death rates among low-status groups are commonly two or three times as high as among high-status groups and differences of a similar magnitude have been found between people with weaker or stronger social affiliations (House, Landis, and Umberson, 1988; Stansfeld, 2006). The health effects of early experience are also likely to be large. However, these risk factors are not only important because of the substantial differences in risk associated with exposure; they are also important because they are risks to which a large proportion of the population is exposed. Although some people may be exposed to seriously harmful chemicals at work, fortunately only a tiny proportion of the whole population suffers such exposures, so the population attributable risks are very small compared to the common psychosocial risk factors.

If we combine the fact that these are the most important psychosocial risk factors yet identified with the fact that psychosocial factors have their biological impact through the extent to which we find them stressful, the implication seems to be that they—low social status, lack of friends, and a difficult early childhood—are the most important sources of chronic stress in modern societies. That is an important point in itself.

Social Anxiety—Society under the Skin

There is something else that we can learn from these intensely social risk factors. It seems likely that they are all reflections of one underlying source of social anxiety. We might regard early childhood processes as the biological side of what psychologists have always said about the importance of early life for later personality development—as, for instance, in the relationship between attachment and emotional security. It is likely that the quality of early life makes us more or less vulnerable to the stresses of low social status. Not only do some studies suggest that one exacerbates or offsets the effects of the other, but we use similar words for both—such as insecurity, and both are associated with higher basal cortisol levels (Wilkinson, 2005). Friendship fits easily into that same nexus: friends are a source of positive feedback, making us feel appreciated, liked, interesting, and attractive. But if you lack friends and wonder why people do not invite you to events or seem to exclude you, confidence soon evaporates and we start to fear we are unattractive, boring, stupid, socially gauche, etc.

We might guess that social status, friendship, and early childhood come up as such important psychosocial risk factors because they are each indicators of the same underlying social anxieties. When we say that humans are reflexive social beings, part of what is meant is that we know ourselves partly through each other's eyes. We experience pride, shame, or embarrassment partly through how we think others see us. It is essential that we monitor how others view us and respond, so that we can learn and shape our behavior appropriately.

If this kind of interpretation of the psychosocial epidemiology is roughly correct, then it fits very well with what many of the great sociological thinkers have said about how we are made susceptible to social influences and socialized. It is our capacity for shame and embarrassment that makes us conform and fit our behavior to social norms. Indeed, it is essential that any creature dependent on imitative learning and on an acquired culture should constantly monitor its performance in the eyes of the bearers of that culture. What the epidemiological

evidence is perhaps telling us is that what sociologists have said is the great gateway through which we are socialized and subject to social influence is also the gateway through which society gets under the skin to affect health. Let us take from this the fact that the importance of social status, friendship, and early childhood as psychosocial risk factors shows that population health in the rich developed countries is highly sensitive to the nature of the social environment.

Disrespect and Violence

The second source of clues as to why health and the quality of social relations are related to inequality comes from studies of violence. The literature on what provokes violence tells us that the most frequent trigger is people feeling looked down on, disrespected, humiliated, or ridiculed (Gilligan, 1996, 2001). After working as a prison psychiatrist for many years and talking daily to very violent men, Gilligan was still able to say: "I have yet to see a serious act of violence that was not provoked by the experience of feeling shamed and humiliated, disrespected and ridiculed, and that did not represent the attempt to prevent or undo this 'loss of face'—no matter how severe the punishment..." (1996: 110). This is not however just a prison psychiatrist's interpretation. Autobiographies written by men who have themselves been imprisoned for violence make exactly the same point about street violence (Boyle, 1977; McCall, 1994). This sensitivity to being disrespected and looked down on is the most likely explanation of the tendency for violence to be more common where there is more inequality (Wilkinson, 2004). The increased violence is not of course between rich and poor: it is predominantly among the poor. Larger income differences not only mean that there is more competition for status (so that "whether you are anyone" becomes more important), they also mean a larger proportion of the population is denied access to the jobs, pay, houses, and cars that are the markers of status. Inevitably, more people feel vulnerable and sensitive to being looked down on.

The social anthropologist Marshal Sahlins (1974) said: "Poverty is not a certain small amount of goods, nor is it just a relation between means and ends; above all it is a relation between people. Poverty is a social status. . . . It has grown with civilization . . . as an invidious distinction between classes. . ." (37). That violence increases with inequality and is most frequently triggered by people feeling humiliated and disrespected suggests that what gets to people most about relative poverty is not simply putting up with an older car or a smaller house, but what cheaper and fewer possessions seem to say about you. Second-class goods seem to say you are a second-class person. Avoiding that stigma is an important part of what consumption and having money is about (Frank, 1999).

Understanding the relationship between violence and inequality brings us back to our human sensitivity to how we are seen as it is affected by social status, friendship, and early childhood experience. Most obviously, it emphasizes our desire to avoid the shame and stigma of being seen negatively.

Health is related to inequality in a way that has much in common with violence. Rates of homicide are high in exactly the same areas where death rates are high from other causes (Wilson and Daly, 1997). Indeed, it looks statistically as if the social milieu that produces homicide mediates the relationship between inequality and health (Kawachi et al., 1997; Wilkinson, Kawachi, and Kennedy, 1998). It is substantially the same social-anxiety-increasing effects of inequality that also show up in the data on levels of trust and involvement in community life that account for the effects of inequality on health.

Given that poorer social relations and low social status are among the most important risk factors for health among the rich developed societies, and inequality worsens both of them, it would be surprising if health was not related to inequality. Although the effects of status on health continue right to the top, how far up the social hierarchy the modifying effects of inequality go is not yet clear. Nevertheless, the impression is that more unequal societies may be characterized

throughout by a tougher or harder culture in which increased competition for status, money, and power may lead people to become more careless about each other's welfare.

SOCIAL STATUS AND FRIENDSHIP: TWO SIDES OF THE SAME COIN?

I want to move on now to suggest why it is that issues to do with the quality of social relations are so important to us and why issues to do with friendship and social status, in particular, continue to come up together. They appear together not only as opposing risk factors affecting each person's health individually; they also appear together as they move inversely in societies—the way social relations seem to be poorer in more unequal societies. And perhaps they come together antagonistically in a third way: in our tendency to choose our friends from among our near equals. So what is the explanation of these links?

At a fundamental level they reflect opposite forms of social relation. Status, rank, class, position in the dominance hierarchy—or pecking orders among animals—are all orderings based on privileged access to scarce resources based on power, regardless of each other's needs. Indeed, this is perhaps what animal dominance ranking systems and human social stratification have in common. In contrast, friendship is about just the opposite—about sharing, reciprocity, mutuality, social obligations, and a recognition of each other's needs.

Friendship and status ranking systems are two opposite ways human beings can come together and associate. And why they are so important is because members of the same species have all the same needs. This means that in almost every species, there is a potential for serious conflict over access to scarce resources. For any individual, the most serious potential threat comes from members of the same species—or at least from all those more powerful ones above you in the dominance hierarchy who can take anything from you they want. As human beings we have the potential to compete with each other for food, shelter, jobs, sexual partners, even the clothes off each other's

backs. This is why, as inequality increases, more people agree that "others would try to take advantage of you if they got the chance". Relations of trust and mutuality break down. It is also why Thomas Hobbes, the seventeenth-century political philosopher, made the need for a sovereign power capable of keeping the peace the foundation of his politics. He believed that the most fundamental problem of social organization was the constant potential for conflict over access to whatever objects of our desires were scarce. Without a governmental power to keep the peace, he thought social life would be reduced to conflict, to the *warre of each against all.*

But humans also have another, more social, potential. As well as our potential for competition and conflict, we—to an extent unmatched in most other species—can also be each other's best source of help, assistance, and security, bringing each other the benefits of cooperation, learning, and love. As well as the potential to be each other's worst rivals, we also have the potential to be each other's best source of support and security. In effect, other people can be the best or the worst, depending on the nature of social relationships. As a result, the nature of our relationships has always been a fundamentally important determinant of our welfare and survival.

Having studied hunting and gathering societies (which of course manage without any governmental or sovereign power to keep the peace), Sahlins (1974) took up and developed Hobbes's theme. He agreed that in this "state of nature," there was at least a constant *potential* for conflict, but he argued that the overwhelming reliance of these societies on food sharing and gift exchange (usually forbidding any overtly self-interest forms of exchange such as haggling or the market) was itself a way of keeping the peace. The potential for conflict means that you have to keep social relations sweet in order to avoid it. The predominance of gift exchange and food sharing in pre-agricultural societies not only confirms the reality of our potential to be each other's worst rivals—it also shows that there is another, more affiliative social strategy that serves to outflank it. Sahlins suggested that reciprocal gift

exchange amounted almost to a primitive social contract that overcame the potential for conflict. The gift is the symbol of friendship because it says, in the simplest terms, that giver and receiver renounce competition for scarce resources and recognize each other's needs. Hence, to refuse a gift is to refuse a social relationship and is sometimes seen as tantamount to a declaration of war.

The hunter-gatherer societies that based themselves on food sharing and gift exchange were also highly egalitarian—a fact to which two reviews of the literature testify (Erdal and Whiten, 1996; Boehm, 1993). Although some critics have pointed to minor inequalities in these societies, no one has ever suggested that they functioned even remotely like many animal dominance hierarchies in which the dominant males monopolize access to the females and prevent others from feeding until they have had their fill. The link between equality and the social bonds of friendship is clear not only in the conjunction between them in prehistoric societies, but also today, both in our tendency to choose friends from among near equals, and in the norms of politeness: if you treat someone as a friend and invite her to your house for a meal, you expect to share food equally and to deal with each other as equals.

We can now see why we have such a highly developed sensitivity and attentiveness to the nature of our social relationships, and how this is related to the extent of inequality in a society. We can also see why the quality of social relations is poorer in more unequal societies, and why we find the social relations of inequality more stressful than the more inclusive social relations of less unequal societies—particularly if one's status is low.

SOME IMPLICATIONS

One of the most important points about the relation between income distribution and both health and violence is that it provides strong confirmation that their social gradients—the fact that they are both worse in poorer areas—reflect relative income or social status rather than absolute material standards and absolute poverty.

Could some of this also apply to the wide range of other social problems that are more common in more deprived areas? If chronic stress was sufficiently important to make a major contribution to the social gradient in health, then it would be surprising if it did not also have social and behavioral repercussions. Indeed, it looks as if our growing understanding of the psychosocial pathways that contribute to a social gradient in health may also provide the basis for explaining social gradients in other problems rooted in relative deprivation. Research findings already available suggest that the social gradients in health, violence, involvement in community life, teenage pregnancies, trust, obesity, and probably the educational performance of schoolchildren as well, are all affected by increased hierarchy and the psychosocial effects of low social status (Willms, 1999; Pickett et al., 2005a; Pickett et al., 2005b). And of course psychosocial influences on health are not confined to the direct biological influences of chronic stress such as those mediated through the immune and cardiovascular systems. As well as the direct effects, the same psychosocial factors also contribute to the social gradients in behavioral risk factors such as smoking, binge drinking, lack of exercise, drug abuse. It is hard to keep up resolutions to adopt a healthier lifestyle if you are feeling ground down, anxious, depressed, and unappreciated. We all know the emotional states that lead us to want an extra drink, to eat for comfort, or to give up the struggle to stop smoking. The social gradient in risk factors such as these is itself a testament to the power of psychosocial forces in shaping behavior.

LIBERTY, EQUALITY, FRATERNITY

Although the picture I have outlined, and the interpretation of epidemiological evidence I have suggested, may seem at least partly new, we might instead see it as directing our attention to the dimensions of the social environment whose importance people once recognized intuitively. The political demand during the French Revolution was for Liberty, Equality, and Fraternity. By liberty the revolutionar-

ies meant not being subservient to the landed aristocracy and the feudal nobility. They wanted to be freemen—not beholden to anyone. Liberty is clearly related to the issues of social status and being made to feel subordinate or inferior, which we discussed earlier. Fraternity presumably stood for the quality of social relations and covered the issues regarding friendship, trust, and involvement in community life, all of which we have seen are important to health. Equality enters the picture as the precondition for getting the other two right. The greater the inequality, the greater the problems of low social status and inferiority. The more inequality, the worse the quality of social relations seems to be.

What gives grounds for optimism in this analysis is that all the evidence on which it is based comes from comparing the small differences in inequality between different US states or different developed market democracies. It shows that small differences in inequality, perfectly amenable to government policy, make a difference across a wide range of outcomes. Liberty, Equality, and Fraternity expressed the political demands of the French Revolution because they seemed the important determinants of the real quality of life. What modern social epidemiology is surely showing us is that these same dimensions are still the important determinants of well-being, and that rather than thinking of psychosocial well-being as a matter of the purely chance vicissitudes of individual mental and emotional well-being, we can begin to see that there may be policy handles capable of improving the psychosocial well-being of whole societies. It looks as if the levels of psychosocial well-being in society are built on material foundations.

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