

Looking for Health In All the Wrong Places

Philosophers March 22, 2004
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Introduction

Perhaps it is my advancing age—well actually my advanced age since it is always advancing—but every television show, newspaper, and—most important of all—every advertisement seems to deal with getting and staying healthy. Just count the number of health related ads during the evening network news shows. Every week we read about the latest research results that tell us to stop doing something or to start doing something that will make us healthier. More recently such reports have become even more pointed: It is not so much health itself but rather putting off death so that mine, at least, is not premature. As the baby boomers move into their sixties, this fixation on health and not getting sick will intensify if only because there will be so many of them. This concern with health also quickly moves from the latest diet, drug, and life style change to the adequacy and effectiveness of medical care and health care systems. Complicated by the politics of third party payers and the role of government in health care, this discussion can often be frustrating and confusing. While we are all aware of the systemic issues, we naturally focus on making sure that the health care we might need, if all those ads and their products don't work, is quickly available for us and those we care about. So we go on diets and lose weight, we increase our good cholesterol and reduced the bad or is it the other way around and what are lipoproteins anyway? We exercise regularly, get enough sleep, recreate appropriately, wear seat belts, don't engage in risky behaviors, don't smoke, don't drink,

except for that healthy single serving of red wine, see our doctor regularly for appropriate checkups and hope that our genes are good ones, i.e., long lived ones. We want long lives for our parents because we love them and also because it comforts us to think that we will live at least as long as they did. (From an individual perspective all of these behaviors are essential to health and nothing in this paper should make us think otherwise.)

Somehow we think that if everyone did these relatively simple things, everyone would be healthy or at least healthier. This would benefit all of us and reduce the cost of a health care system that seems out of control and leading inexorably toward a greater government role in provision and financing of health care. Given our American traditions of the rugged individual and our tendency to blame victims, this approach seems to make good common sense. If we could improve personal healthy behavior, we could have a healthier society.

Well, that would be one approach. However, we may be looking for health in all the wrong places. During a recent trip to England I had the pleasure of meeting and getting to know Richard G. Wilkinson. For many years, he was Senior Research Fellow at The Trafford Centre for Medical Research at the University of Sussex. He currently serves in a similar position at the University of Nottingham. He is the author of several scholarly articles and books dealing with the question of why some societies are healthier than others. I have been reading two of these on which the bulk of what follows is based.

Unhealthy Societies: The Afflictions of Inequality. New York: Routledge, 1996.

Mind the Gap: Hierarchies, Health and Human Evolution. New Haven: Yale University Press, 2001.

The following is my attempt to describe a few of the concepts and conclusions of his work. I must add that Richard and his writings are very scholarly in the sense that he uses research results and restricts his assertions to those that can be based on those findings. Richard does not do the empirical social science research—he could, of course, having been trained as an economist. Rather he seeks to bring his impressive mind to the task of discovering the larger, meta-meanings of this research. He is like a theoretical physicist using empirical observations to create concepts that help us better understand reality. In his case, however, his broad ranging and creative mind brings a powerful multidisciplinary perspective to bear as he uses economics, sociology, psychology, and biology in his work.

What is health and how to measure it?

The first issue is to define health and then measure it in a way that is robust across time and societies. This is no easy task, in fact, probably not feasible at all. Any direct measure of health either relies on individual self-assessments or the reciprocals of health, morbidity or illness. The first is highly subjective and subject to differing cultural notions of healthy. The second seems more useful although indirect but it is subject to differences in information gathering processes in different countries. In addition, societies that do systematically collect morbidity data tend to focus on those diseases that result in death and not on other illnesses that can have a material impact on health but not necessarily a fatal one,

e.g., arthritis, rheumatism, colds, gout, acid reflux disease, etc. However, all developed countries and, through the good work of the United Nations, most developing countries keep accurate and consistent death records. As a result it is possible to use death rates across different populations as a measures of health. Technically a single death rate for a population is actually built on death rates by age categories so that the different age distributions in a population is taken out of consideration. This is called an age-standardized death rate.

Socio-economic status and health/sickness

Using this measure all research from the 1970's on demonstrates a clear and strong relationship between socio-economic status and health. The higher the status, the lower the death rate and thus the higher level of health. Simply, rich people live longer than poor people. And rich people live longer than somewhat less rich people. Somewhat less poor people live longer than those who are poorer. This relationship is so firmly established as to no longer be in dispute. However, the search for the explanation of that relationship has come up with some surprising answers.

Possible socioeconomic explanatory variables

In one chapter, Richard reviews the four major categories of explanatory variables.

1. Social mobility: The relationship may actually be reversed. Healthy people do better economically and thus rise socially whereas sick people do less well and fall down the social ladder.
2. Genetics: Genetic predisposition to disease is associated with genetic factors that predispose to economic success.

3. Behavioral risk factors: Poor people who are generally less educated engage in more behaviors that place health at risk.
4. Medical care: Poor people do not have the opportunity or the means to access adequate health care.

Time does not permit me to go through the analysis of each of these factors. While the evidence is not always unambiguous, I agree with Richard's conclusions that none of these can be adequate explanations of health differences either within or between populations.

Health is directly and powerfully related to income but in curious ways

With these variables not providing explanations for the variations in health as measured by death rates, one is left with the strong and persistent relationship between health and income. Can it just be that having more money makes one healthier than someone with less money? Some kind of explanation must lurk in the data. Richard points out a surprising difference. When one compares death rates by income levels in the U.S. or any other country, the pattern is clear as shown in the chart taken from **Unhealthy Societies**.

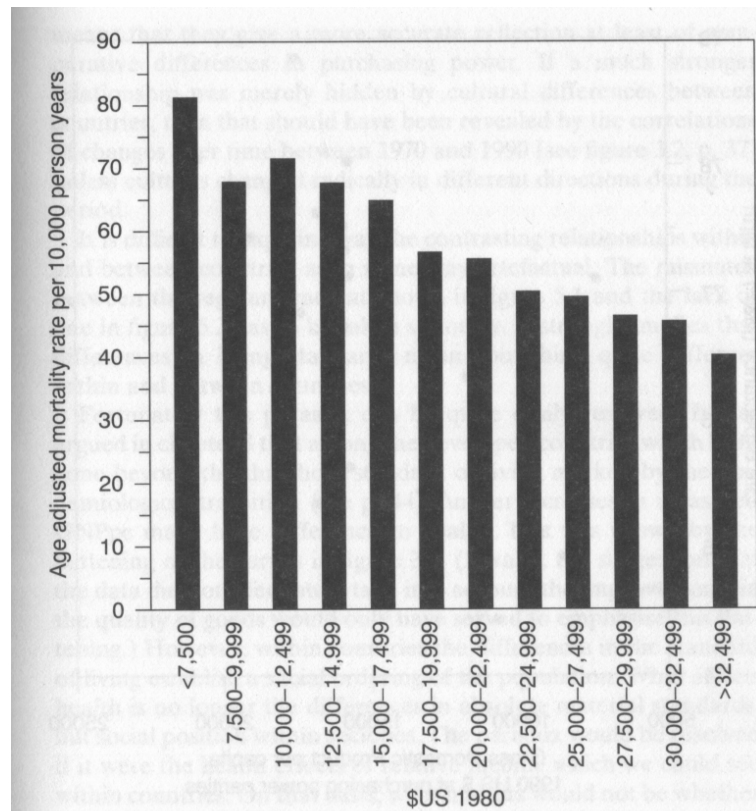


Figure 5.1: Income and mortality among white US men
 Source: MRFIT data from G. Davey Smith, J.D. Neaton and J. Stamler, Socioeconomic differentials in mortality risk among 305,099 white men

However if one compares life expectancy among a set of countries, there appears to be no relationship between GNP per capita and those expectancies. Here is a chart showing that relationship.

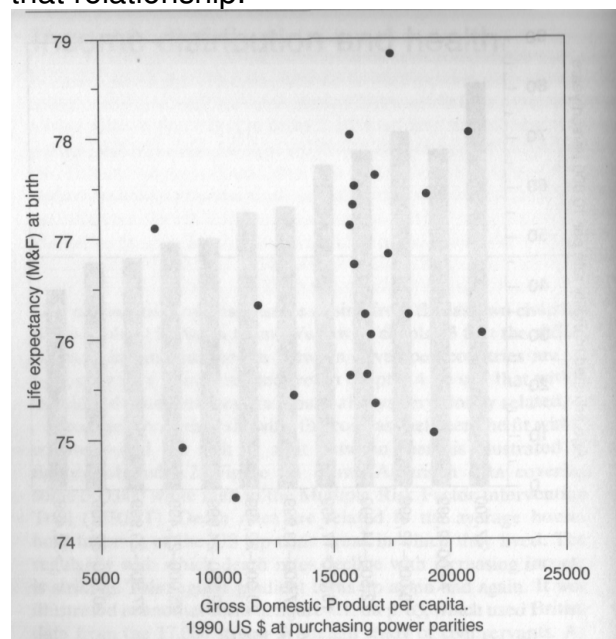


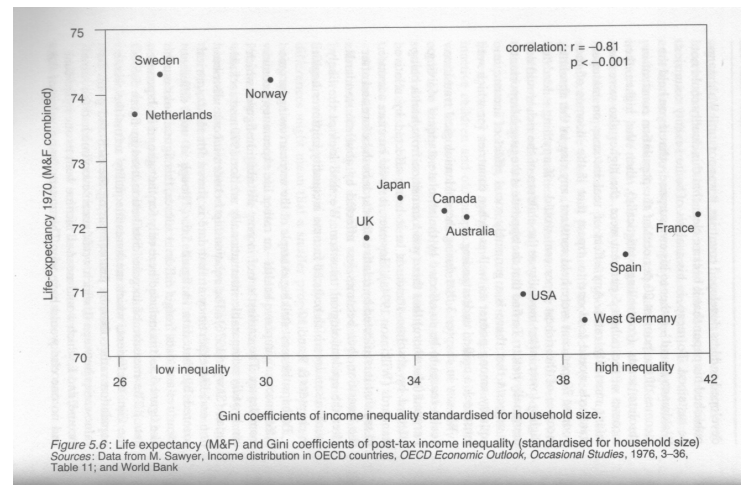
Figure 5.2: GDP per capita and life expectancy in OECD countries in 1990

How does one account for this seeming contradiction? Being rich in America

provides health advantages compared to other Americans but being an American and thus richer on average than citizens of other countries confers no health benefit. One can begin to sort through this by looking at the distribution of income rather than absolute or average levels.

For example, using the percentage of total post-tax and benefit income received by the least well-off 70 per cent of families accounts for 74 percent of the variation in life expectancy among nine countries: USA, UK, Germany, Sweden, Australia, Canada, Switzerland, Netherlands, and Norway. The lower the percentage of total income received by the poorest 70 percent, the higher the mortality rate. A similar analysis for the fifty US states yielded similar results even after controlling for average incomes, absolute poverty, racial differences and smoking. Using the annual change in the percent of population in relative poverty explains 53 percent of the annual change in life expectancy in 12 European Communities. Again an increase in the proportion in poverty is associated with an increase in the overall mortality rate. It appears that when looking across populations whether in countries or in U.S. states it is the distribution of income that is the salient factor.

The more egalitarian the distribution of income, the healthier the population is. The bigger the gap between rich and poor, the sicker it is. There is a statistic that helps make this clearer. The Gini coefficient measures the distribution of income in a population. It ranges from 0 if every household receives an equal amount of income to 1 if one household receives all income. The following chart shows the relationship between the Gini coefficient and life expectancy for a set of developed countries.



Richard summarizes well:

That we are indeed dealing with the effects of relative rather than absolute income within countries can be clearly demonstrated. Although we cannot look at people's income and health and distinguish between the effects of absolute and relative income individually, we can distinguish between countries with more or less relative poverty. Countries in which the income differences between rich and poor are larger (meaning more or deeper relative poverty) tend to have worse health than countries in which the differences are smaller. It is...the most egalitarian rather than the richest developed countries which have the best health.

Psycho-social pathways

As Richard has said, it turns out that an effort to understand health by looking as socio-economic conditions becomes a powerful method for understanding society. Once one controls for all the obvious variables, it is income distribution that appears to have a decisive impact on the health of a society. What might be the mechanism by which that happens?

In subsequent work including a book to be published this fall, Richard has

reviewed research that indicates that this is far broader than simply death rates and life expectancies. It turns out that income distribution is also related to levels of violence, social distrust, hostility, and social disengagement. In much the same way that he uses the death rate as a measure of the health of population, he uses the murder rate as a measure of the level of violence in a population. He views murders not as aberrant behaviors arising from special causes in a society but as the extreme of the normal distribution of violence in a society.

Thus an increase in the rate or number of murders indicates an increase the overall level of violence, i.e. a shift to the right of the overall level of violence. (This way of thinking may be particularly relevant to us in Rochester where the murder rate is higher than other cities and where the rate has recently increased dramatically. Rather than see the high murder rate as an indicator that a small and isolated population has become more violent as the result of special circumstances, i.e., drug trade and wars, we might better see it as an indication of an increase in the overall level of violence. The solution is not to simply constrain the special causes but to shift the overall violence curve to the left. In other words, the murders are part of a behavior pattern in which we all participate.) Using this measure, income distribution is related powerfully to murder rates and thus levels of violence in a population.

In other words, it may not simply be income distribution but the social structures and organization that are symbiotically related to income distribution and socio-economic status. Societies characterized by wide income gaps are characterized by greater social distance and by a reliance on “structures of dominance and subordination.”

These principles go to the heart of the two distinct types of social organization found among both human and non-human primates: those based on power and dominance (agonic) and those based on more egalitarian cooperation (hedonic). Since class societies have been predominant throughout human history, we tend to take the agonic forms of social organization as the human norm. But this overlooks the evidence that during our hunter-gatherer prehistory—the vast majority of human existence—we live in hedonic groups. Anthropologists have described modern hunter-gather societies as “assertively” egalitarian. In a review of more than a hundred anthropological accounts covering twenty-four recent hunter-gatherer societies spread over four continents, David Erdal and Any Whiten concluded that these societies were characterized by “egalitarianism, co-operation and sharing on a scale unprecedented in primate evolution.”

Richard points out that “the statistical relationships suggest that the pathway from income inequality to health goes from income distribution, through the social environments, to mortality.” What are the mechanisms of this pathway? He identifies a social and a psychobiological pathway.

The social pathway seems to operate through the hierarchical social structures created by or emphasized by unequal distribution of income. Hierarchical systems are structured in levels with the highest level having an unequal share of the power and resources and the lowest having very little of either. Each level

has less that one above and more than the one below. One's position in that structure is determined largely by the resources controlled. Thus getting more resources means that one can move higher in the structure. The higher in the structure one is the more power one has over those lower. Such a social system tends to value social position and is based on "dominance and submission." The wider the income differences, the more powerful these social variables become.

After a review of the research and literature on criminal violence, Richard concludes that levels of violence are related to social respect and disrespect. All other things being equal, the more a person feels disrespected by others, the more likely that person is to use violence in response to the social environment.

The psychobiological pathway is based on the impact on health and thus mortality of chronic states of anxiety and accompanying physical changes. He describes the fight or flight response to a potential threat in one's environment. While the physiological changes caused by this response facilitate quick and immediate responses: stand and fight (and prepare to be injured) or run...fast. Problems arise when the threat is chronic rather than immediate. The body stays in the fight or flight condition for long periods of time thus subjecting the body and especially the immune system to gradual weakening and thus increased susceptibility to diseases that lead to death. "So broad is the range of possible health consequences that the costs have been likened to rapid ageing..."

Social policy implications

If Richard's analysis is correct, and I believe that is, we have been looking for health in all the wrong places or at least we haven't been looking in all the right

places. No matter how much we spend on health care and medical research, we will remain relatively less healthy than other developed countries as long as the US income distribution continues to be more unequal than those other countries. Attempts to reduce morbidity and violence through special programs targeted at high risk groups will be inherently ineffective as long as the income differential remains as extreme as it is now.

The implications of this research for public policy are not unambiguous. For one thing the level of government expenditures on non-military activities does not seem to be a relevant factor since the proportion of GNP consumed by government varies across the countries studied and does not reduce the explanatory power of income distribution. However any government policy that tends to further concentrate income toward the top of the pyramid and thus increase the range of distribution (reducing the Gini coefficient) will tend to decrease health and increase violence. Any attempt to change the healthcare system that unintentionally or intentionally further widens the socio-economic gap will have the opposite effect of reducing health and increasing violence.

Conclusion

Let me conclude with the final two paragraphs from Richard's **Mind the Gap**.

At every level, hierarchies are characterized by social exclusion rather than inclusion. That is why greater inequality is associated with a deterioration in the quality of social relations. But by understanding how inequality rules through its divisiveness, we can perhaps see how to reduce it and so begin to realize our common humanity.

The idea that the reduction in inequality would lead to slower economic growth is almost certainly false. There are now a number of empirical studies that show that greater equality is associated with faster, rather than slower, economic growth. One of the reasons why this relationship exists is, appropriately enough, that social capital is thought to improve economic efficiency. Excuses for governments to drag their feet over the reduction of inequality are thin on the ground. If we are to improve health and social capital, if we are to free ourselves of antisocial prejudices and create a more inclusive society, the reduction of inequalities must surely be a key political objective.

After I had finished the second draft of this paper, I read it to Marilyn and we discussed it a good bit. We concluded with this question. If our lives had played out exactly as they had to this point but we had lived in Japan, England, Sweden, or Netherlands, we would have less money (lower lifetime income) but we would live longer, be healthier, live in a less violent society, and experience greater levels of community engagement and trust and so would everyone else in our society. Would it be worth it?