

Income inequality (still) rules in explaining variations in homicide rates

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In cross-sectional analyses at various scales, income inequality has proven to be a consistent, and often the strongest, predictor of homicide rates (LaFree 1999; Daly *et al.* 2001; Messner *et al.* 2002; Fajnzylber *et al.* 2002; Jacobs & Richardson 2008; Wilkinson & Pickett 2009). Nevertheless, many analysts question its relevance, including Nisbett & Cohen (1996), Neumayer (2003), Pridemore (2008), and Minkov (2009). Here I refute these authors' critiques and counterclaims.

Is "culture" an alternative to explanations invoking economics?

Nisbett & Cohen (1996) maintain that regional differences in US homicide rates derive from the fact that the south, but not the north, embraces what anthropologists call a "culture of honor". They make a convincing case for the reality of cultural differences, showing that southerners differ from northerners in relevant attitudes and values, and even that they exhibit bigger testosterone and cortisol responses to a standard insult. Less convincing, however, is the proposal that these differences, including a difference in homicide rates, are *purely* cultural in the sense that they have no contemporary ecological / economic basis: that the southern culture of honor "maintains itself... for nonmaterial reasons". Nisbett & Cohen dismiss economic bases for north-south differences, but did not adequately assess the possible relevance of income inequality. In fact, income inequality is substantially higher in the south, and when one controls for it, regional differences virtually disappear; the same is true if one restricts the analysis, following Nisbett & Cohen, to "white" males (Daly & Wilson 2010; Figure 1).

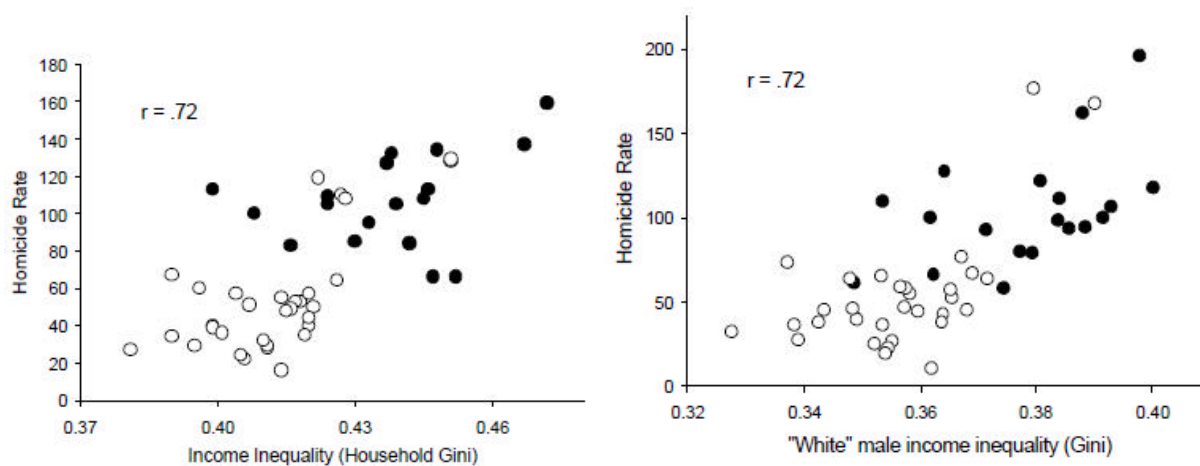


Figure 1. Homicides per million persons per annum in southern (?) and non-southern (o) states in 1990, as a function of income inequality. Left panel: all homicide victims and incomes of all households; right panel: "white" men only. From Daly & Wilson (2010).

I do not deny the reality of cultural differences between north and south, nor their likely relevance to violence. But greater inequity in the south is a *part* of its “cultural” distinctiveness, plausibly linked to southerners’ relative fondness for self-reliance, including “self-help justice”. What is gratuitous in Nisbett & Cohen’s discussion of their results is the suggestion that because “southern violence” is “cultural”, it is impervious to change. In fact, cultures change continuously and sometimes rapidly, and so, of course, do homicide rates. Nothing in Nisbett & Cohen’s data or discussion warrants the conclusion that policy must be impotent against southern violence, and yet many who have cited their work have interpreted it thus (see Daly & Wilson 2010).

Cross-sectional and longitudinal prediction

On the basis of multivariate fixed-effect analyses of cross-national data on homicide rates over an 18-year period, Neumayer (2003) provocatively claims to have demonstrated that “policies aimed at improving equity have no effect on violent crime” (p 619) and that “the... effect of income inequality found in many studies that rely purely on cross-sectional information, is likely to be spurious” (p 633). These strong conclusions are utterly unwarranted. Neumayer bases them on a method of analysis that deliberately removes all cross-national variability by the use of what amount to individual-country dummy variables, and by this and other devices, he restricts the range of potential “explanations” for the variability in homicide rates to those that can account for short-term temporal change by virtually simultaneous change in other measures. Any variation that depends on the effects of people’s cumulative experience over years is obliterated by such an approach.

It is worth noting that Jacobs & Richardson (2008), using a similar analytic approach that differs mainly by the inclusion of some different control variables, 21 years of data rather than 18, and the incorporation of several variable-specific lags into the models, obtained contrary results that affirmed the importance of income inequality. Whether Jacobs & Richardson’s choices of lag times were principled or arbitrary can be debated, but there is an important general point here. It is certainly true that income inequality generally predicts homicide rates less successfully in longitudinal analyses than in cross-sectional analyses, but this is only to be expected. Changes in income inequality could not possibly influence the behavior of potential homicide offenders instantaneously, and without explicit notions of exactly how inequality exerts its effects on individuals, we have no basis for saying what sort of lags one might expect. Perhaps childhood effects of growing up in a more or less equitable society influence adult behavior. Perhaps there are more direct effects of inequitable resource distributions experienced in adulthood, but even these require the cumulative effects of a series of experiences that collectively inform actors about that inequity. In short, a satisfactory theory of inequality and homicide cannot avoid the *psychological* question of how the social structural variable of inequality affects the actions of individuals. I return to this point in this paper’s concluding section.

Other components of mortality are not appropriately treated as predictors

Pridemore (2008) maintains that cross-national analyses that confirm the predictive power of income inequality have not adequately distinguished this construct from

poverty. His argument is that income inequality is a matter of "relative deprivation" whereas poverty is a matter of "absolute deprivation", and that violence might, in principle, be a response to either or both. Pridemore complains, correctly, that a given level of GDP per capita tells us nothing about how many people are impoverished; he is wrong, however, to imply that controls for GDP per capita are therefore meaningless additions to tests of the causal impact of inequality, because poverty remains an orthogonal and unexamined alternative causal factor. For a given level of GDP per capita, a reduction in the number of people living in poverty cannot be attained other than by a reduction in inequality; thus, when GDP per capita is controlled, poverty and inequality become almost synonymous. More generally, *contra* Pridemore, "poverty" cannot be characterized simply as "absolute deprivation". It is equally a matter of "relative deprivation". Consider the facts that people living in "poverty" in the developed world are not typically at risk of starvation, that most possess television sets, and so forth; people in such "absolute" material circumstances would have been considered *affluent* in many past societies, and would still be in certain present-day ones.

It is for this very reason that the United Nations uses distinct definitions and measures of "poverty" for developed *versus* developing nations. Pridemore himself notes this fact when explaining why, lacking any direct measure of poverty, he resorted to infant mortality as a putative proxy measure instead. Using infant mortality as a predictor of homicide eliminated the significance of income inequality in Pridemore's analysis, and it is on this basis that he concludes that "absolute deprivation" trumps "relative deprivation". But this is a very odd conclusion to draw from the fact that two components of overall mortality are highly correlated with one another! A more defensible approach would be to treat both as outcome variables - Wilkinson & Pickett (2009) consider them both to be indicators of "population health" - and to seek to elucidate what appears to be their substantial overlap in causation.

Minkov (2009) makes a better argument than Pridemore, but ultimately commits the same mistake. This author created a compound measure of what he calls "risk-taking reproductive competition" from three components: income inequality, traffic deaths, and adolescent pregnancies. He then finds that this curious amalgam is an excellent predictor of homicide rates in cross-national analyses and, perhaps more surprisingly, that income inequality is its most expendable component, predicting homicide rates less well than traffic deaths alone. I endorse the notions that accidental deaths and homicides both index local levels of competition, and that competition is ultimately about reproduction; I have made similar arguments myself (Daly & Wilson 2001). But traffic deaths constitute yet another component of total mortality that evidently shares substantial causation with homicide, and the arguments I just made about infant mortality apply to it, too: rather than treating traffic deaths as an (implicitly prior) predictor of homicide, one should be seeking to illuminate their common causes. And of course, inequitable access to resources is a leading candidate.

Inequality, competition, and disciplinary parochialism

Even those who champion the relevance of income inequality often fail to grasp how and why it is so important, arguably because disciplinary parochialism has blinded social scientists to the psychology of competition and relative position.

Most homicides arise from competitive conflicts between unrelated men, and such cases furthermore constitute the most variable component of homicide rates (Daly & Wilson 1988). If one's current life trajectory promises abject failure, a "reckless" escalation of competitive tactics may become attractive, and men at the bottom of the social and economic ladder may become dangerous in their competitive interactions with one another.¹ Thus, to understand why homicide rates vary between times and places, we need to understand what makes social milieus more or less competitive. It is an obvious hypothesis that variations in income inequality will prove relevant, and if that be so, then we also need to understand exactly how the fact that resources are inequitably distributed works its way into the minds and actions of men in competition with one another.

Knowledge about the psychology, endocrinology, and neurobiology of competitive and aggressive responses is growing rapidly, and will play an essential role in the development of a full understanding of the impacts of inequality (Daly & Wilson 2001; Wilson *et al.* 2010). Unfortunately, some social scientists seem to view these developments as a threat rather than an opportunity, and defend their turf by disregarding and dismissing insights from other fields. Pridemore (2008: 147) provides an unabashed display of such parochialism when he writes "Unfortunately, what are claimed to be structural-level theories too often resort to reductionist explanations about individual behavior". Well, of course they do! If "structural-level" variables affect phenomena like homicide, they do so through their effects on individuals, and no theory can be complete - or even plausible - if it avoids the "reductionism" of considering how such effects might work. In practice, of course, relevant "sociological" theories such as "strain theory" are usually highly psychological, which is what so exercised Pridemore. Regrettably, such theoretical treatments often maintain their disciplinary purity by avoiding citation of psychologists' findings; they thereby risk reinventing the wheel, and often an obsolete wheel (such as the tired old "frustration-aggression" hypothesis) at that. There is nothing shameful about synthesizing the contributions of complementary disciplines. To the contrary, such synthesis is desperately needed.

A final point is that it is remarkable that homicide researchers have found income inequality to be of such consistent and substantial relevance, given how it has been measured. There is nothing about the Gini index that makes it a uniquely apt measure other than its availability (see, e.g. Babones 2008), much less a Gini index based on household incomes, and yet this is what has usually been used. There are a number of other measures of inequality, some of which can be parameterized to be differentially sensitive to inequality at different levels of the income distribution, and researchers interested in inequality and health have begun to explore their utility. Those of us who are interested in inequality and homicide might usefully do likewise.

1. This claim about "men at the bottom" concerns modern nation states, especially developed countries. Where strong institutions of dispassionate third-party justice are lacking, men at the top must also rely on their personal powers of intimidation, and may resort to violence as much as or more than those at the bottom.

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