

# Economic Inequality, Intergenerational Mobility, and Belief in Meritocracy in the United States\*

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## Abstract

How does the context in which people live affect their belief in meritocracy, the ability to get ahead through hard work? In a prominent recent study, Newman, Johnston, and Lown (2015) argue that higher levels of local income inequality lead people to become more likely to reject the dominant U.S. ideology of meritocracy, but this research suffers from many flaws and its results are not even reproducible, leaving the question open. The present work brings more and better data as well as an improved specification to examine how, if at all, local contexts shape Americans' beliefs that people can get ahead if they are willing to work hard.

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Meritocracy—that idea that if one works hard, one can get ahead—is a core tenet of the American Dream (see, e.g. Hochschild 1995, 21-23). How belief in meritocracy, and in turn the country’s dominant ideology, fares in the face of the stark economic inequality that has come to characterize life in the United States over the past three-and-half decades is therefore crucial to understanding not only support for redistributive policies to address this inequality but also the continuing legitimacy of the U.S. economic system as a whole. Not surprisingly, this question and related ones regarding the relationship between economic inequality and political attitudes and beliefs have attracted considerable scholarly attention of late.

In contrast to a range of earlier studies that found that greater inequality tends to be associated with attitudes that reinforce rather than challenge the status quo, Newman, Johnston, and Lown (2015) advanced the argument that inequality in the United States activates class conflict, leading poorer individuals in local contexts of higher inequality to reject meritocracy and become more class conscious.

However, due to misinterpretation of the interaction term (see, e.g., Brambor, Clark, and Golder 2006) in the paper’s model, its empirical results do not support its conclusions, and efforts to replicate its analyses revealed a number of additional severe problems, from unjustifiable pooling of incomparable observations to errors in merging together contextual and survey data to neglecting available data that do not support the preferred hypotheses (see Solt et al. 2016). The sanguine conclusion reached by Newman, Johnston, and Lown (2015), that mere exposure to high levels of inequality stimulates a rejection of meritocracy (and

so should generate increased demand for redistribution) among those with lower incomes, then, cannot be accepted without further investigation.

## **Economic Inequality and Meritocracy**

The relationship between economic inequality and system-supporting beliefs like meritocracy is the subject of two diametrically opposed theories: the conflict theory and the relative power theory. As mentioned above, Newman, Johnston, and Lown (2015) advocate the conflict theory. Based on the rational-actor perspective, this theory maintains that, for lower-income individuals, being confronted with high levels of inequality locally “increases the salience of their disadvantaged position within a conspicuous local economic hierarchy” (Newman, Johnston, and Lown 2015, 327). Greater class consciousness (and, in turn, increased demand for redistribution) then follows. Higher-income individuals in high inequality contexts, on the other hand, are expected to avoid the guilt and shame that their more obviously privileged position could prompt while simultaneously and self-interestedly protecting this position by becoming even more likely to believe in the importance of individual effort in the distribution of economic rewards.

The relative power theory starts with the proposition that money is a political resource: that is, that it can be used to influence others. Therefore, the theory contends, where the rich are richer relative to the poor, they will also be more powerful relative to the poor (Goodin and Dryzek 1980). With regard to attitudes and beliefs like meritocracy, this theory suggests that the greater power imbalance that results from higher levels of

economic inequality provides high-income people with more resources to spread their views in the public sphere, while depriving poorer people to a greater degree of the resources to resist these efforts. Their greater relative powerlessness leads to “a greater susceptibility to the internalization of the values, beliefs, or rules of the game of the powerful as a further adaptive response—i.e., as a means of escaping the subjective sense of powerlessness, if not its objective condition” (Gaventa 1980, 17). Patterns of religiosity (see Solt, Habel, and Grant 2011; Solt 2014) and respect for authority (Solt 2012) have been found to provide support for this theory, and the finding of Kelly and Enns (2010) that public opinion in the United States has shifted against redistributive policies when inequality increased is also consistent.

Relative power theory, in short, can be seen as a straightforward implication of “the usual assumption of sociology, political science, and anthropology . . . that social structures reproduce themselves,” while conflict theory is grounded in the implausible premise that social structures are self-negating (Huber and Stephens 2012, 37).

Objective levels of economic mobility have thus far been left out of the discussion of the causes of the belief that people can get ahead through their own hard work, but it is, of course, directly implicated. Less obvious, perhaps, is that because economic mobility tends to decline with rising inequality (see, e.g., Andrews and Leigh 2009), it provides a cognitive explanation for any relationship between inequality and beliefs in meritocracy that may challenge both of the theories described above. Rather than evincing a greater psychological need to protect self-esteem in the face of personal deficiencies as the conflict theory maintains according

to Newman, Johnston, and Lown (2015, 329) or the more complete cultural domination of the well-off as the relative power theory maintains (see, e.g., Solt 2012, 704), beliefs in meritocracy may instead simply reflect a correct recognition of the greater difficulty of advancing in a more sharply stratified society.

## Data and Method

To test the hypotheses provided by these two contending theories requires data both on individuals' belief in meritocracy and on the economic conditions of the contexts in which they live. The contextual unit of analysis used here is the commuting zone (CZ). CZs are aggregations of counties meant to represent the scope of local economic relationships both in metropolitan areas and across the rural United States. They are therefore preferable to the arbitrary borders imposed by counties; they were, in fact, explicitly designed to represent where people actually live and work and overcome the unrealistic assumption that counties are economically meaningful units (Tolbert and Sizer 1996).

Income inequality is measured using the Gini coefficient of the distribution of total family income within commuting zones for the years 1996 to 2000 as calculated by Chetty et al. (2014) from the IRS Databank, which provides de-identified income and location information for all individuals living in the United States whose names appear on any tax form.<sup>1</sup> Within

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<sup>1</sup>This measure is not perfect. Its welfare definition is income after government transfers but before taxes. Because much redistribution occurs through the tax code, an after-tax measure would be preferable; unfortunately, virtually no data on the distribution of income at any geographic scale below the national level is available for the United States Kelly and Witko (see, e.g., 2012, 420). Further, it examines differences

the sample examined here, this variable ranges from a low of .21 to a high of .85; the median value across individual respondents in the sample is .46.

For economic mobility, I use Chetty et al.’s (2014, 1554) data on relative intergenerational mobility, which provides the best available information of the extent to which “a person’s chances of success depend little on his or her family background.” It is measured as the relationship, in each CZ, between parents’ rank in the national income distribution when their children were in their late teens and the rank of those children when they are approximately age 30. The median respondent lives in a CZ with a score of .34 on this variable, that is, a 10 percentile increase in parents’ incomes is associated with only a 3.4 percentile increase in childrens’ incomes. Economic mobility ranges from .07 to .51 in this dataset.

Individual-level data are drawn from the U.S. Religious Landscape Survey (RLS) conducted by the Pew Forum on Religion and Public Life in 2007. The RLS surveyed over 35,000 individuals and was designed to provide a particularly fine-grained picture of geographic variation in attitudes and beliefs across the continental United States; it is therefore superior to the much smaller Pew surveys previously used to address the question examined here. Respondents were asked which of the following two statements came closest to their own view: “Most people who want to get ahead can make it if they’re willing to work hard”  

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in incomes across families, which means those without children are excluded. It is based on tax records, so it suffers from potential underreporting, particularly among those with very high incomes, though because the topcode for incomes is \$10 million dollars, the downward bias is likely smaller than that found in similar Census data which is topcoded at considerably lower amounts. Finally, it measures inequality about a decade before the Pew survey; though income distributions change only quite slowly over time, one might wish it were more temporally proximate. Despite these shortcomings, it remains the best data available on income inequality within commuting zones.

and “Hard work and determination are no guarantee of success for most people.” Those who chose the first statement were coded 1 and others coded 0, yielding a dichotomous variable of belief in meritocracy. In these data, 67% of respondents ascribed to this core element of the dominant U.S. ideology. The entire sample is analyzed, rather than only the subset of white non-Latino respondents, so as to make use of all of the available data, although Newman, Johnston, and Lown (2015, 330) note that this should be expected to bias the results toward the expectations of the conflict theory.

The other individual-level variable implicated in these theories is income. The RLS asked respondents to identify their total family income in the previous year on a nine-point scale ranging from less than 10,000 *to over* 150,000, with the median respondent reporting an income of 50,000 *to* 75,000.

A number of other factors might help explain people’s beliefs in meritocracy. At the contextual level, I follow Newman, Johnston, and Lown (2015) in controlling for average income, the black share of the population, the percentage of votes won by George W. Bush in 2004, and the total population size. At the individual level, the analyses include demographic controls for age, education, sex, race, and citizenship.

What is *not* included in these models is perhaps equally worthy of comment. Although measures of party identification, ideology, and church attendance are often reflexively added to analyses, they are inappropriate in a study of the relationship between income inequality and meritocratic beliefs. In both the conflict and relative power theories, the relationship between inequality and belief in meritocracy is mediated by just these sorts of variables. Of

course, it is well understood that controlling for variables that are causally downstream from an independent variable “messes up” the estimates of that independent variable’s effect on the dependent variable Gelman and Hill (2007, 188).<sup>2</sup> For the insistent, models including these variables can be found in the appendix. They do not evince substantially different patterns, although as one would expect the estimated coefficients for income inequality are somewhat attenuated.

The models are estimated using multilevel logistic regression of individuals nested in CZs, with both the intercept and the coefficient for income allowed to vary across the CZs. Because both the conflict and relative power theories suggest that the effect of the context income inequality on meritocratic beliefs depends on an individual’s income, a cross-level interaction between these two variables is included. For individual  $i$  in commuting zone  $j$ , then, the model of the logged odds of believing in meritocracy can be expressed as:

$$\begin{aligned} \text{Meritocracy}_{ij} = & X\gamma + \gamma_{10}\text{Income}_{ij} + \gamma_{01}\text{Inequality}_j \\ & + \gamma_{11}\text{Inequality}_j \times \text{Income}_{ij} \\ & + r_{1j}\text{Income}_{ij} + u_{ij} \end{aligned}$$

The conflict theory argues that lower-income individuals will become disillusioned with the dominant ideology of meritocracy where inequality is greater but that higher-income individuals will become more likely to uphold it. This yields the predictions that  $\gamma_{01}$ , the

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<sup>2</sup>On the powerful relationship between rising income inequality and greater religiosity, for example, Solt, Habel, and Grant (see 2011); Solt (see 2014).

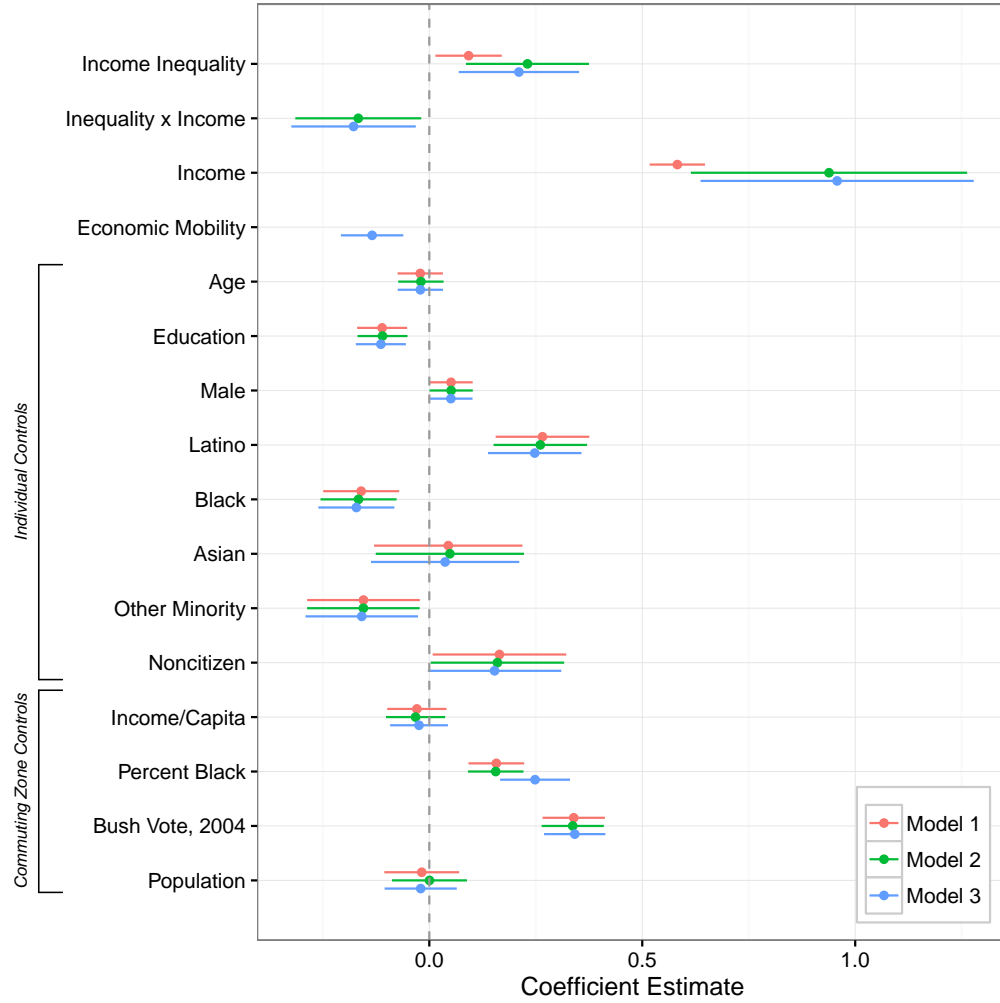


coefficient of income inequality, will be negative and  $\gamma_{11}$ , the coefficient of the interaction term, will be positive. Relative power theory maintains that lower-income individuals will be especially more likely to be instilled with the belief in meritocracy in contexts of higher inequality, but that higher-income individuals' beliefs will be less sensitive to this aspect of context. Its predictions, then, are just the opposite of those of the conflict theory: that  $\gamma_{01}$  will be positive and  $\gamma_{11}$  will be negative.

## Analysis and Results

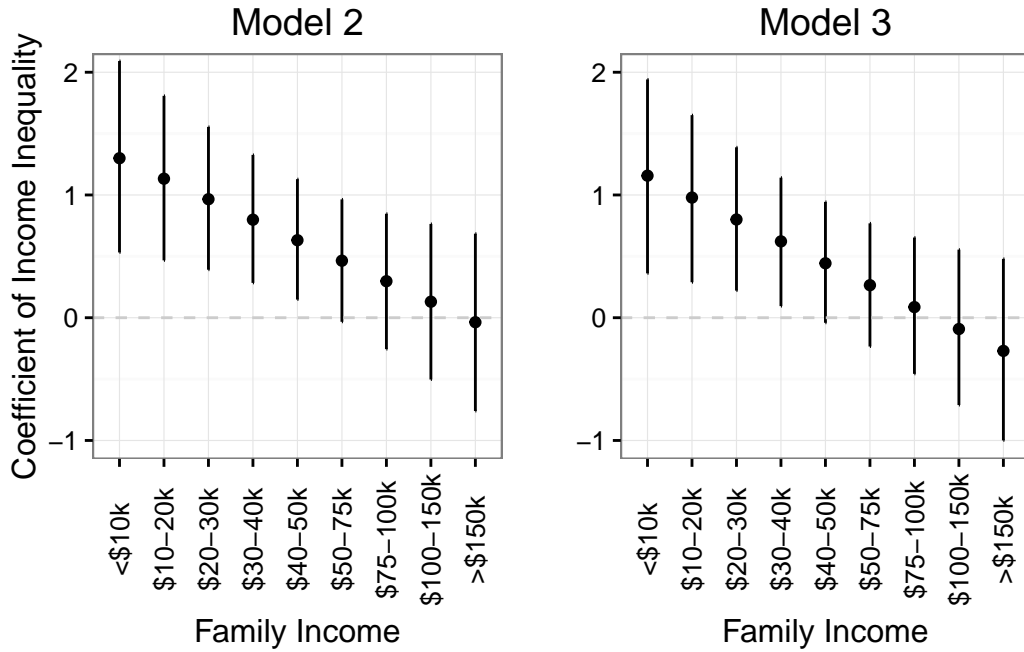
Despite significant effort, I have yet to succeed in getting these models to run using multiple imputations of the missing data in the RLS: no matter what I've tried, `glmer` chokes when passed even one of the imputed datasets. My choices appear to be down to either exporting all of the imputed data frames to HLM, running them each separately there, and reimporting the results to R and then combining them with Rubin's Rules, or setting up a Bayesian analysis using Stan. (I'm leaning toward the latter.) Neither is a trivial exercise, though, so I have reluctantly proceeded with pairwise deletion, reducing the sample by about a fifth, with much of the losses due to missing income data. Results should therefore be considered VERY PRELIMINARY; I'm not even going to write them up. With that warning in mind, feel free to check out the pretty plots. *If* they hold up when the missing data are adequately taken into account, the results would provide support for the relative power theory. Again: *if*.

Figure 1: Predicting Belief in Meritocracy



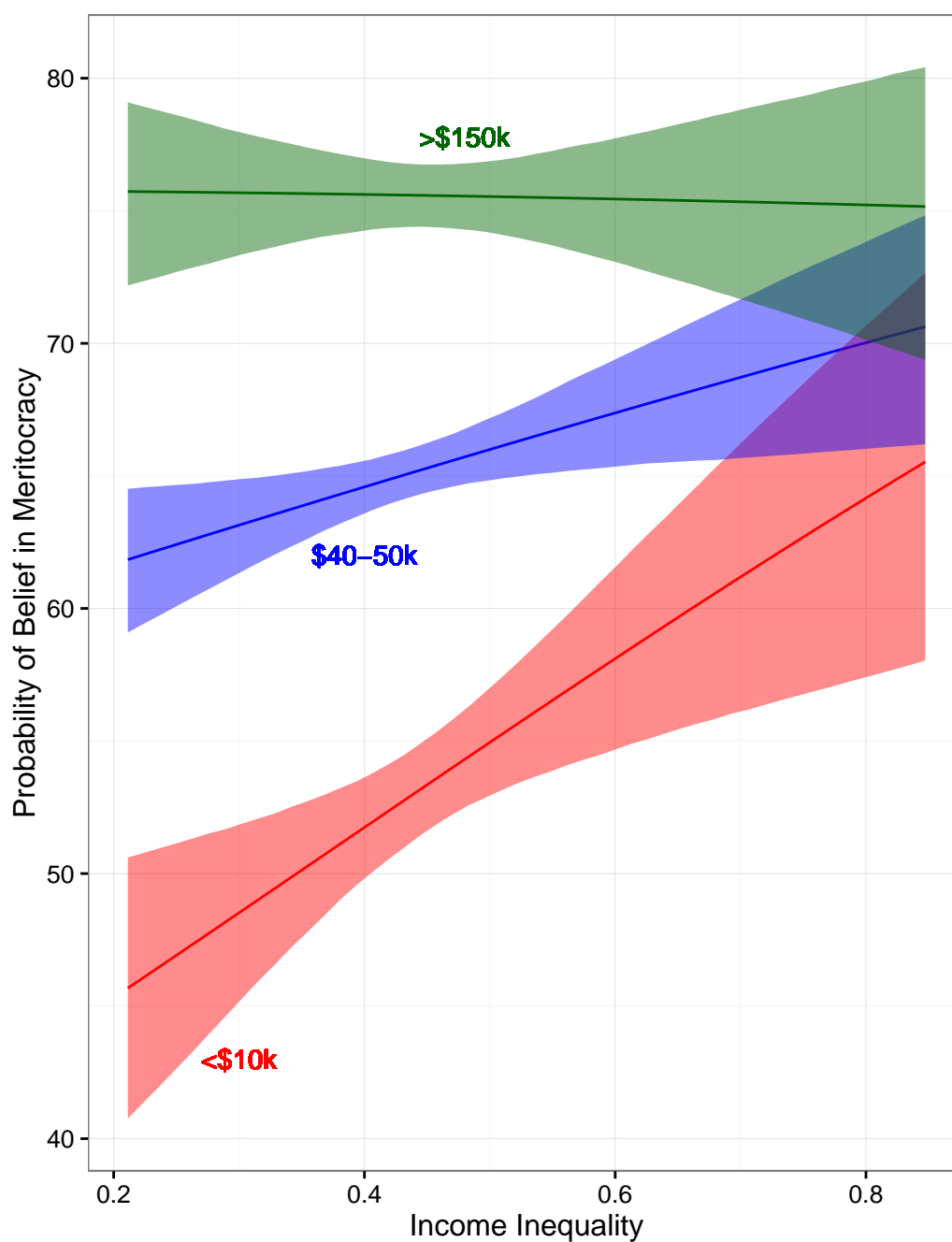
*Note:* The dots represent estimated change in the logged odds of believing in meritocracy for a change of two standard deviations in the independent variable; the whiskers represent the 95% confidence intervals of these estimates. Multilevel logistic regression analyses of 28,633 individual respondents living in 691 commuting zones.

Figure 2: Estimated Coefficients of Income Inequality by Income



*Source:* Analyses presented in Figure 1. The dots represent estimated coefficient of income inequality within respondents' commuting zones on their belief in meritocracy for all values of respondent family income; the whiskers represent the 95% confidence intervals of these estimates. In both models, these estimates are positive and statistically significant for those with lower incomes, while the coefficients for those with higher incomes are not distinguishable from zero.

Figure 3: Predicted Probability of Belief in Meritocracy by Income and Level of Inequality



*Source:* Analyses presented in Figure 1. Solid lines represent predicted probabilities and shaded regions represent the 95% confidence intervals of these predictions. The predicted probabilities were generated by fixing all other variables at their median values.

## References

- Andrews, Dan, and Andrew Leigh. 2009. “More Inequality, Less Social Mobility.” *Applied Economics Letters* 16(15):1489–1492.
- Brambor, Thomas, William Roberts Clark, and Matt Golder. 2006. “Understanding Interaction Models: Improving Empirical Analyses.” *Political Analysis* 14(1):63–82.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez. 2014. “Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States.” *Quarterly Journal of Economics* 129(4):1553–1623.
- Gaventa, John. 1980. *Power and Powerlessness: Quiescence and Rebellion in an Appalachian Valley*. Urbana: University of Illinois Press.
- Gelman, Andrew, and Jennifer Hill. 2007. *Data Analysis Using Regression and Multi-level/Hierarchical Models*. Cambridge: Cambridge University Press.
- Goodin, Robert, and John Dryzek. 1980. “Rational Participation: The Politics of Relative Power.” *British Journal of Political Science* 10(3):273–292.
- Hochschild, Jennifer L. 1995. *Facing Up to the American Dream: Race, Class, and the Soul of the Nation*. Princeton, N.J.: Princeton University Press.
- Huber, Evelyne, and John D. Stephens. 2012. *Democracy and the Left: Social Policy and Inequality in Latin America*. Chicago: University of Chicago Press.

- Karakoç, Ekrem, and Birol Başkan. 2012. "Religion in Politics: How Does Inequality Affect Public Secularization?" *Comparative Political Studies* 45(12):1510–1542.
- Kelly, Nathan J., and Christopher Witko. 2012. "Federalism and American Inequality." *Journal of Politics* 74(2):414–426.
- Kelly, Nathan J., and Peter K. Enns. 2010. "Inequality and the Dynamics of Public Opinion: The Self-Reinforcing Link Between Economic Inequality and Mass Preferences." *American Journal of Political Science* 54(4):855–870.
- Newman, Benjamin J., Christopher D. Johnston, and Patrick L. Lown. 2015. "False Consciousness or Class Awareness? Local Income Inequality, Personal Economic Position, and Belief in American Meritocracy." *American Journal of Political Science* 59(2):326–340.
- Solt, Frederick. 2008. "Economic Inequality and Democratic Political Engagement." *American Journal of Political Science* 52(1):48–60.
- Solt, Frederick. 2010. "Does Economic Inequality Depress Electoral Participation? Testing the Schattschneider Hypothesis." *Political Behavior* 32(2):285–301.
- Solt, Frederick. 2012. "The Social Origins of Authoritarianism." *Political Research Quarterly* 65(4):703–713.
- Solt, Frederick. 2014. Reversing the Arrow? Economic Inequality's Effect on Religiosity. In *Religion and Inequality in America: Research and Theory on Religion's Role in Stratification*. Cambridge University Press pp. 337–353.

- Solt, Frederick. 2015. “Economic Inequality and Nonviolent Protest.” *Social Science Quarterly* 96.
- Solt, Frederick, Philip Habel, and J. Tobin Grant. 2011. “Economic Inequality, Relative Power, and Religiosity.” *Social Science Quarterly* 92(2):447–465.
- Solt, Frederick, Yue Hu, Kevan Hudson, Jungmin Song, and Dong Yu. 2016. “Protect Yourself from  $p$ -Hacking: 7 Things to Do to Avoid Committing Scientific Malpractice.” <https://github.com/fsolt/meritocracy-rep/blob/master/doc/paper/avoid.pdf>.
- Tolbert, Charles M., and Molly Sizer. 1996. “U.S. Commuting Zones and Labor Market Areas: A 1990 Update.” Economic Research Service Staff Paper 9614.