

Economic Inequality and Belief in Meritocracy in the United States Appendix

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Appendix A: Analysis of the Three NJL Meritocracy Measures

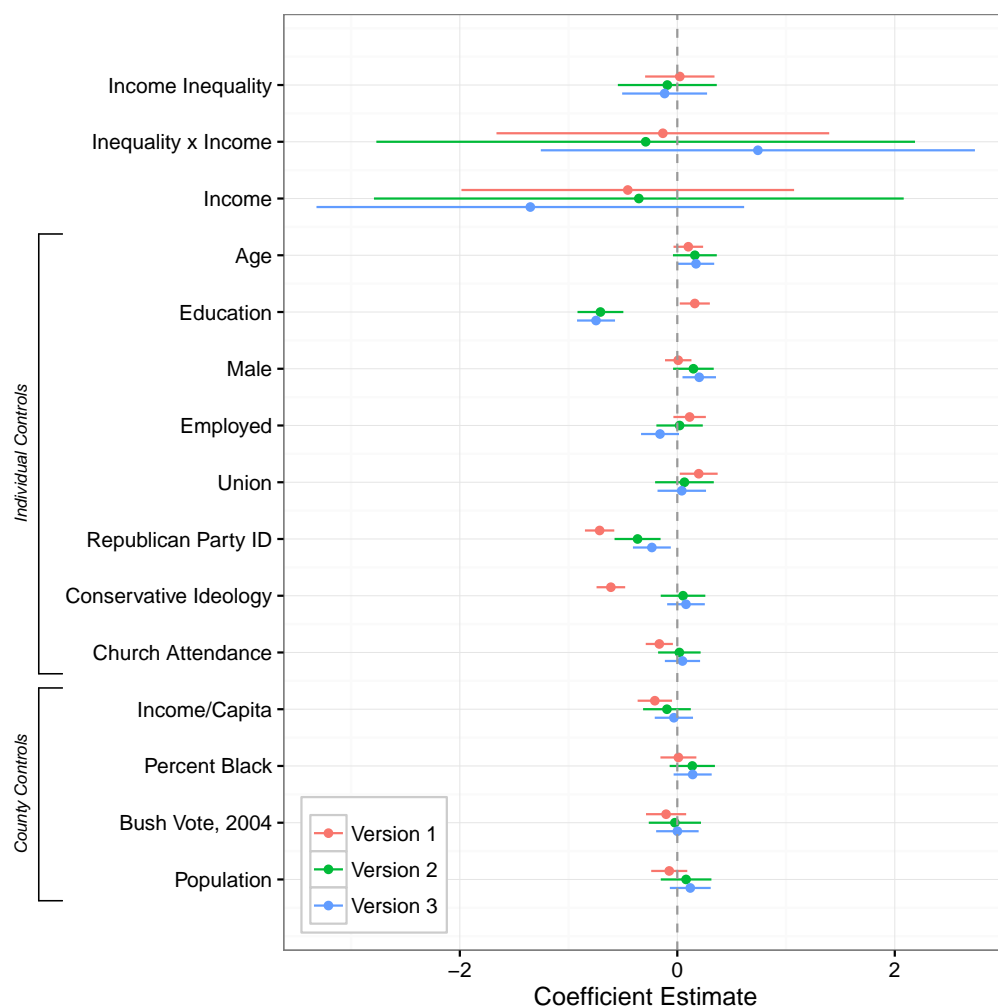
Beyond the readily evident lack of comparability displayed in Figure 2 of the main text, the three different measures that were pooled together in the analysis presented in NJL yield very different results when analyzed separately.

For these analyses, we could not rely on the NJL replication materials because they only include the data as analyzed in the article. The number of observations available for Version 2 of the dependent variable in this dataset is smaller than the number of parameters in the model, rendering the model impossible to estimate. But, as the questions needed for Version 2 and for Version 3 were asked in both the 2007 and 2009 Pew surveys examined in NJL, we are able to generate these variables from the original Pew datasets and pool them together to provide an adequate number of observations. We opt for a straightforward coding of all variables, with the categories of ordinal variables assigned consecutive integers beginning at 1, although because the results displayed below are rescaled to represent the estimated change in the logged odds of rejecting meritocracy for a change of two standard deviations in each predictor, this choice makes little difference. Our approach is otherwise identical to that of the core analysis of NJL: Model 1, Table 1.

Figure A.1 displays the results obtained by separately analyzing each of the three versions of the dependent variable that were pooled together in the NJL analysis. It reveals considerable differences. More educated respondents, for example, are estimated in these data to be statistically significantly *more* likely to reject Measure 1 of meritocracy, but they are much *less* likely to reject Measures 2 and 3. Conversely, in these surveys, conservative ideology and church attendance are strongly and statistically significantly associated with less rejection of meritocracy by Measure 1, but with Measures 2 and 3, these characteristics

are estimated to have small positive associations that fail to reach statistical significance. It would appear that the results presented in NJL—strong negative associations of rejection of meritocracy with all three of these predictors—are an artifact generated by pooling the three different measures together.

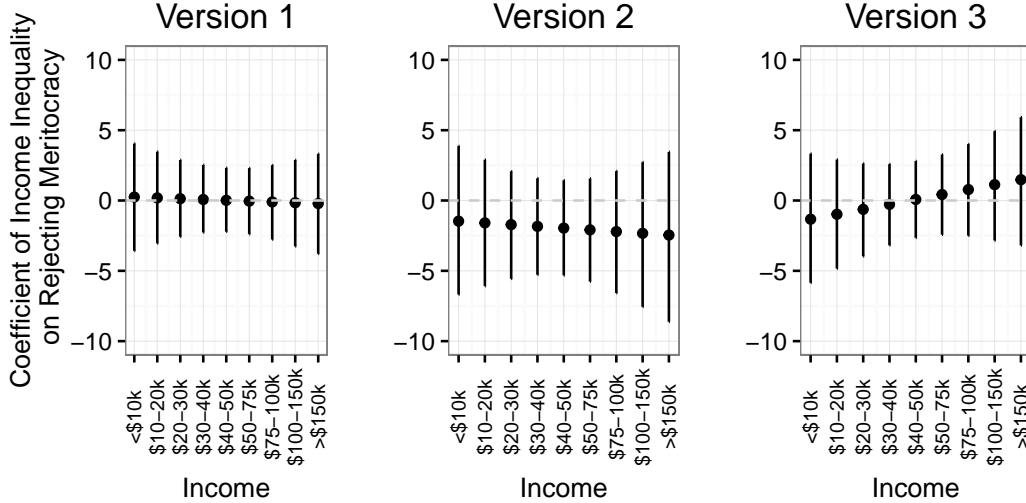
Figure A.1: Three Measures



Note: The dots represent estimated change in the logged odds of rejecting meritocracy for a change of two standard deviations in the independent variable; the whiskers represent the 95% confidence intervals of these estimates.

Returning to the focus of our inquiry, these results also confirm that there is no support for the conflict theory in the NJL data, regardless of how the dependent variable is measured. As shown in Figure A.2, the conditional coefficients of income inequality do not reach statistical significance at any observed level of income for any of the three measures of meritocracy.

Figure A.2: Estimated Coefficients of Income Inequality by Income, Three Measures



Source: Analyses presented in Figure A.1. The dots represent estimated coefficient of income inequality within respondents' counties on their belief in meritocracy for all values of respondent family income; the whiskers represent the 95% confidence intervals of these estimates. For all three measures of the dependent variable, none of estimates reach statistical significance. There is no evidence in support of the conflict theory in the NJL data.

Appendix B: Additional Controls

Objective levels of economic mobility are an additional control variable that has thus far been left out of the discussion of the causes of meritocratic attitudes, 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 in the text. Rather than evincing a greater psychological need to protect self-esteem in the face of personal deficiencies as the conflict theory asserts (see, e.g., 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 in more unequal contexts may instead simply reflect a correct recognition of the greater difficulty of advancing in a more sharply stratified society.

For economic mobility, we 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.

Local income inequality is measured using the Gini coefficient of the distribution of total family income within each CZ 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 who appear on any tax form.¹

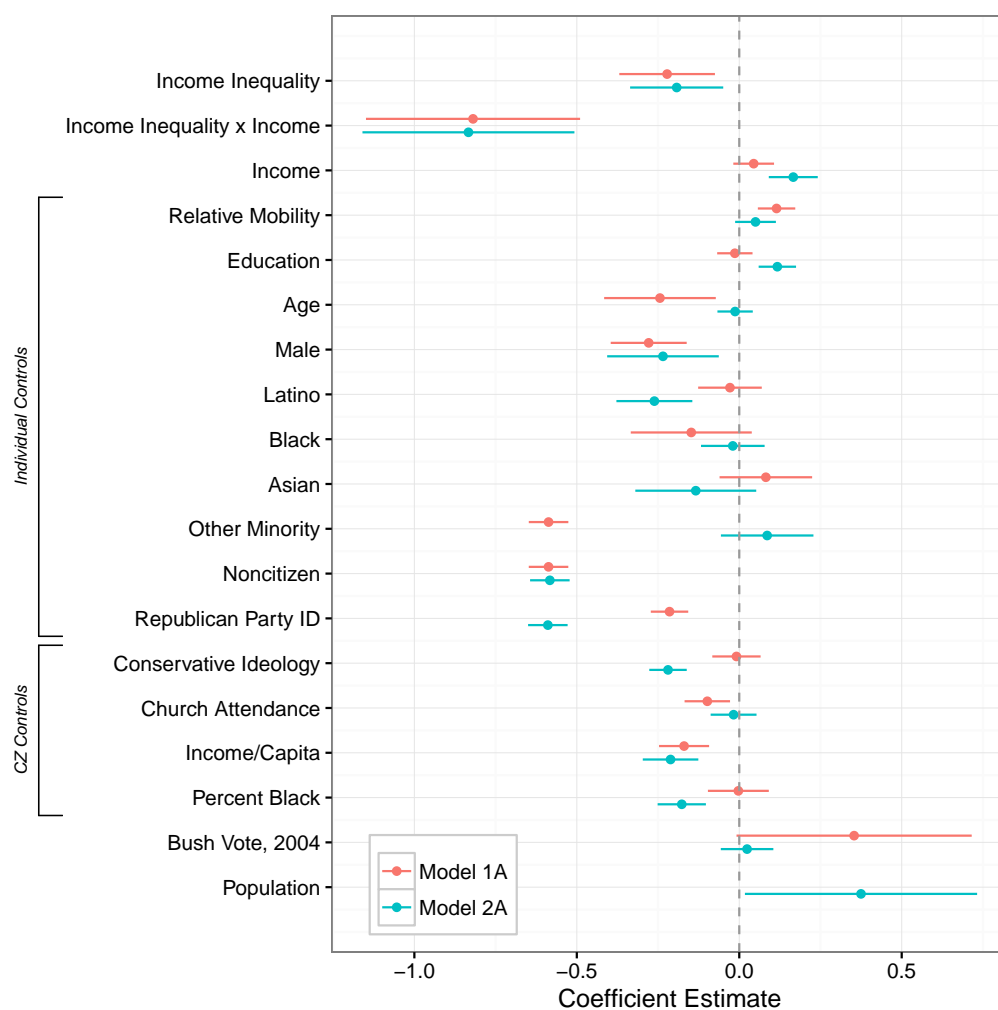
The results of Model 2A, which adds relative mobility to Model 2, and Model 3A, which adds relative mobility and the causally-downstream attitudinal controls included NJL, lend no support to cognitive hypothesis suggested above: it is those living in context of *greater* relative mobility who are more likely to reject meritocracy, and the results regarding the effect of income inequality are essentially unchanged.

The extent to which people are segregated by income in a locality may also be thought to affect the relationships tested here. The Chetty et al. (2014) data include three measures of income segregation: overall segregation, the segregation of poverty, and the segregation of affluence. Regardless of the measure employed, income segregation has no discernable effect on meritocratic beliefs. As greater residential segregation by income is an well-known result of higher income inequality, with the higher income households increasingly moving away from those with lower incomes and poorer households being increasingly unable to afford to live in those neighborhoods considered most desirable by richer ones, it is not surprising that the estimated effects of income inequality are somewhat smaller when this variable is included. The conclusions reached in the text, however, are still supported.

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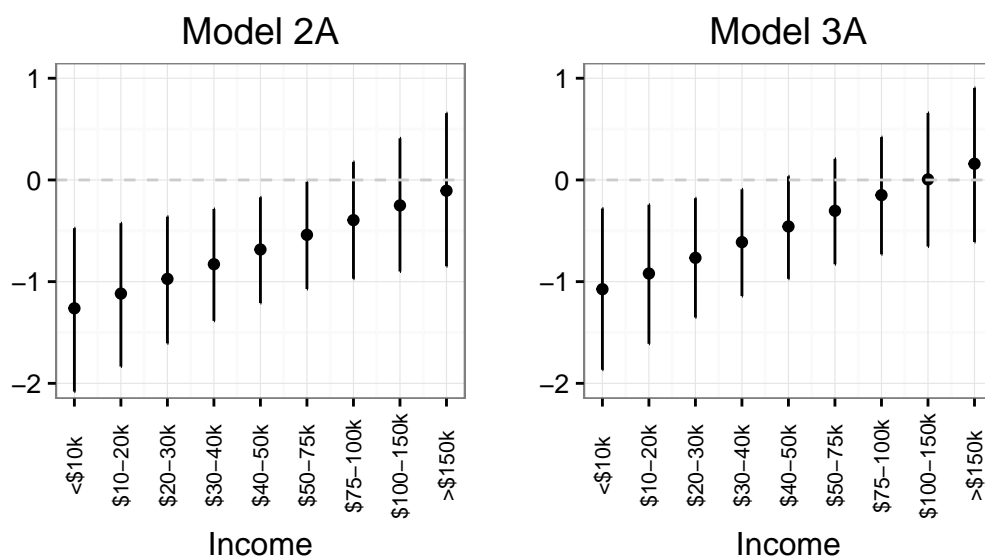
¹This measure is not perfect. Its welfare definition is income after government transfers but before taxes. Because much redistribution occurs through the tax code, an after-tax measure would be preferable; unfortunately, virtually no data on the distribution of after-tax income at any geographic scale below the national level is available for the United States (see, e.g., Kelly and Witko 2012, 420). Further, it examines differences 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; income distributions change only quite slowly over time, but nevertheless one might wish it were more temporally proximate. Despite these shortcomings, it remains the best data available on income inequality within commuting zones.

Figure A.3: Predicting Rejection of Meritocracy Controlling for Relative Mobility



Note: The dots represent estimated change in the logged odds of rejecting 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 28,615 individual respondents living in 676 commuting zones.

Figure A.4: Estimated Coefficients of Income Inequality by Income on Rejection of Meritocracy, Controlling for Relative Mobility



Source: Analyses presented in Figure A.3. 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 negative—indicating a lower probability of rejecting meritocracy—and statistically significant for those with lower incomes, while the coefficients for those with higher incomes are not distinguishable from zero. The conclusions reached in the text are still supported even when controlling for relative mobility.

References

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