Population Review

Volume 51, Number 2, 2012

Type: Article pp.127-150

Contextual Effects on Attitudes toward Inequality

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Abstract

Although the U.S. has a very high level of socio-economic inequality, when surveyed about attitudes toward inequality in our society, respondents are not sharply critical. Many individuals express dissatisfaction with the high level of stratification in our society, but at the same time, they hold out the possibility that they themselves will one day rise to the top. Previous research has often focused on cultural explanations for American tolerance of inequality. While there is much support for this characterization of Americans' attitudes towards inequality as being rooted in a deep cultural ambivalence, we hypothesize that tolerance is also affected by structural conditions. Attitudes towards inequality are affected by local reference groups, and thus, individuals do not experience the full extent of inequality in society in their daily lives. Using the General Social Survey data, we investigate attitudes towards inequality within and between counties. We find that individuals' attitudes towards inequality are strongly affected by their relative, county-mean centered income, and that the relationship between relative income and tolerance for inequality is stronger in high-income counties. We infer that high levels of socio-economic segregation in the U.S. increase tolerance for inequality.

Keywords

Public opinion, inequality, reference groups, tolerance, multilevel models

Note: This is a revised version of a paper presented at the annual meeting of the International Sociological Association Research Committee on Social Stratification (RC28) in Iowa City, IA (August, 2011). The authors would like to thank Omar Lizardo and the seminar participants at the Center for Research on Educational Opportunity at the University of Notre Dame for their helpful comments on earlier versions of this paper.

Introduction

Although the U.S. has a very high level of socio-economic inequality, when surveyed about attitudes toward socio-economic inequality in our society, respondents are not sharply critical; Americans are generally tolerant of the high level of inequality (Kluegel and Smith 1986). Indeed, most Americans have clearly not risen anywhere near the top of the status attainment ladder, and should therefore be self-interestedly appalled by the level of inequality in our society, and yet they are not. For example, when asked whether "differences in income in America are too large," only about 25 percent of respondents strongly agree (McCall and Kenworthy 2009;Table A1; Osberg and Smeeding 2006:Table 1), compared with about 50 percent or more in many other countries (Osberg and Smeeding 2006). While some social scientists are beginning to challenge this characterization of America's exceptionalism, (McCall and Kenworthy 2009; Osberg and Smeeding 2006), we maintain that a substantial amount of tolerance *within* the U.S. remains to be explained.

Stratification researchers often attribute this tolerance—which extends even to those of low socioeconomic status—to widespread American cultural beliefs. Although many respondents report dissatisfaction with the high level of stratification in our society and express a deep ambivalence towards the wealthy, they also hold out the possibility that they themselves will one day rise to the top (APSA 2004; Kenworthy and McCall 2008; Kluegel and Smith 1986; Krueger 2003). Moreover, in general, Americans largely attribute unequal attainment outcomes to differences in talent and effort, and therefore view most inequality as legitimate (APSA 2004; Krueger 2003). While there is much support for this characterization of Americans' response to inequality, we question whether American tolerance might be more structural in nature, and seek additional explanations for why even those individuals at the bottom of the status attainment ladder are not more disenfranchised by the American occupational structure?

Reference group theories of evaluation suggest that in addition to widespread cultural models of success—such as the "American dream"—tolerance for inequality is also affected by local socio-economic context. Due to high levels of socio-economic segregation, a significant amount of the total inequality in America may not actually be felt by the average respondent in their daily lives. We examine these contextual effects using data on individuals nested within counties of varying levels of socio-economic attainment. Our findings suggest that tolerance for inequality in the U.S. is indeed influenced by socio-economic segregation; Americans are tolerant of high levels of inequality because many do not experience glaring socio-economic disparities in their daily lives.

Socio-Economic Inequality in the U.S.

The level of income inequality in the U.S. is already extreme and has become even more so in recent decades (Morris and Western 1999). In 1973, the top 20% of households accounted for 43.6% of total family income, by 1996 that percentage had grown to 49% (Ryscavage 1999; see also Piketty and Saez 2006). Levels of inequality have changed even more dramatically at the very top of the income distribution. Over the same period, the income share of just the top 5% of households increased from 16.6% to 21.4% (Ryscavage 1999). Summarizing the overall distribution of household incomes, the Gini coefficient increased from just less than .400 in the early 1970s to .468 by 2009 (U.S. Census Bureau CPS 2009).

Changes in the occupational structure and status-attainment process may also affect attitudes toward inequality. While there have been some positive changes that have made the process of status attainment in the U.S. more equitable, social origins are still a strong determinant of one's educational, occupational, and income destination in America. For example, expansion of higher education has decreased disparities in college attendance associated with family background (Grusky and Diprete 1990; Hout 1988; Harding et al. 2005), but large gaps still remain. In the 1990s, only 26.9% of students whose parents' highest educational level was a high school diploma or less enrolled in a four-year college within two years of graduation, while 70.8% of students whose parents graduated college did so (Choy 2001). In tandem with the rise in educational attainment, the post-industrial era has seen a dramatic rise in the proportion of jobs in white collar occupations. White-collar work now represents well over 50% of all jobs, so this trend has equalized levels of occupational status in the most basic sense (Gilbert 2008). Yet, at the same time the prospects for the low-skill workers left behind by labor-market changes have declined precipitously, such that the disparity between low- and high-skill workers has increased on a wide-array of job quality indicators (Kalleberg 2006; Morris and Western 1999; Sorensen and Kalleberg 1981; Weeden et al. 2007). Finally, while individuals with parents in the bottom half of the income distribution often experience some amount of upward income mobility (Mazumder 2008), there is still a great deal of intergenerational transmission of income status. Bowles and Gintis (2002) estimate that the probability of an individual who is born into the poorest decile themselves reaching the richest decile is only around 1%, while that of someone born into the richest decile is 22%. The odds differential of ending up in the poorest decile based on social origins is similarly discrepant, around 19% for someone born into the poorest decile but well less than 1% for someone born into the richest decile (Bowles and Gintis 2002 Figure 1).

Social Policy and Redistribution

Among OECD nations, the U.S. has by far the highest level of individual income inequality, and in absolute terms, the greatest growth in inequality in roughly the period from 1980-2000 (Kenworthy and Pontusson 2005; see also Korzeniewicz and Moran 2009). At the same time, among a set of sixteen countries, the U.S. contributes by far the lowest proportion of its GDP on public social expenditures (Kenworthy and Pontusson 2005: Figure 5; see also Esping-Anderson 1999; Smeeding 2008). Examining change over time, the United States and the Netherlands are the only nations out of the 11 countries analyzed by Kenworthy and Pontusson (2005) that did not have a greater extent of redistribution in 2000 compared to the early 1980s (Figure 4). However, Americans benefit from a wide array of other government programs which, broadly defined, promote economic mobility. Using an inclusive definition of federal direct spending and tax subsidies, Carasso, Reynolds, and Steuerle (2008) find that federal spending to promote economic mobility increased from 1980 to 2006 (from 5.2% of GDP to 5.7%), although much of this spending benefits middle rather than low income households. Unfortunately, direct international comparisons to Carasso et al.'s analysis are not available. Finally, the United States workforce is not well protected by union membership. Union membership exerts a strong positive effect on earnings among low-income workers, and thus a negative effect on income inequality (Nielsen and Alderson 1997). In the United States, however, only about 20% of workers are covered by collective bargaining agreements, as compared to 60% or more in many affluent countries (Traxler, Blaschke, and Kittel 2001).

Attitudes towards Inequality

In Kluegal and Smith's (1986) influential *Beliefs about Inequality: Americans' Views of What is and What Ought to Be*, they argue that the average American citizen maintains the traditional perspective of the "American dream;" success is seen as being individually determined and primarily the result of an individual's skill and effort. Thus, despite living in a social world characterized by a high degree of inequality, and one that increasingly recognizes the need for social policies which promote opportunity (e.g. job training programs), Americans are not generally supportive of increasing redistributive welfare policies. The "median voter hypothesis," advanced by Meltzer and Richard (1981), is useful for describing expected attitudes towards inequality under assumptions of self-interest. In unequal societies such as the United States, where the mean income is well above the median, at least 50% of voters ought to be proponents of redistributive policies.[1] Departures from this pattern, for example, where many individuals at or below the median do not support redistribution, must be explained by some other set of mechanisms.

More recently Leslie McCall, Lane Kenworthy, and others have published a series of works updating and advancing the literature on Americans attitudes about inequality (Kenworthy and McCall 2008; McCall 2006; McCall and Kenworthy 2009; Osberg and Smeeding 2006). Kenworthy and McCall draw on data collected in the General Social Survey to examine changes in Americans' perceptions about inequality from 1987-2008. Kenworthy and McCall find a trend toward greater concern about income inequality from the late 1980s (1987) to the mid-1990s (1996), with strong opposition to inequality doubling over this period and the mean level of opposition increasing by nearly 10%. Similarly, following the economic recession which began in 2007, Americans' assessments of their own financial situation, and the prospects for their children's financial future, became much more negative (Pew 2011).

McCall and Kenworthy trace the trends they observed to important changes in the economy in recent decades. Opposition to inequality increased during periods in which a major concentration of wealth occurred in tandem with declining wages among blue-collar workers. Opposition to inequality was stable or declining when growing inequality in income and wealth was accompanied by more widespread growth in wages and economic opportunity. In essence, the average American appears to be less concerned with increasing inequality in economic outcomes (i.e. measures of income and wealth) if he believes that the elites, who are driving this increase in inequality, are generating additional economic opportunities for average Americans in the process (i.e. "a rising tide lifts all boats"). In addition to being sensitive to how the economy affects the "average working person," Americans appear to be somewhat more sensitive to extreme wealth than extreme poverty. Among those Americans who are becoming more critical of inequality, they are critical of excesses at the top, rather than shortages at the bottom (Osberg and Smeeding 2006). This finding is consistent with Gilens' (1999) analysis of attitudes towards welfare; the very poor are often seen as undeserving of government assistance, and welfare is not seen as the best social policy to address poverty.

It is important to trace how Americans have responded, as a whole, to the large-scale changes in our economy and society as McCall and Kenworthy have done, because it shows our society is more responsive to inequality than simple cross-sectional studies would imply. Yet, consistent with prior research, even during periods of rapid expansion in inequality, and where there is an explicit

acknowledgment and public debate concerning these trends, Americans, we argue, are not sharply critical of the overall level of inequality or of the process of status attainment in America. For example, even in the wake of an extreme economic recession, 68% of Americans believe they have, or will achieve "the American dream" (Pew 2011).

American tolerance for inequality is revealed both in international comparisons of attitudes towards inequality and in the absolute level of tolerance exhibited by low-income respondents. A recent study by Osberg and Smeeding illustrates that if the United States is not a clear outlier in the statistical sense; Americans are nonetheless very tolerant given the high level of socioeconomic inequality in the U.S. For example, in terms of the question, "Are income differences too large?" only 25% of Americans strongly agree, compared to 50% or more in many countries (the U.S. ranks 21 out of 27 in agreement on that question). On the question, "inequality continues to exist because it benefits the rich and powerful," the U.S. ranks almost dead last in agreement (26/27). Osberg and Smeeding also report cross-national results concerning respondents' awareness of pay differences across occupations using a method similar to Kelley and Zagorski (2005)—a ratio measure is constructed from estimates of what different workers earn, revealing how much inequality people think exists compared to what they think ought to exist. On this measure the U.S. is right in the middle of the pack internationally. Not surprisingly, the U.S. is at the very bottom of the scale of preferences for redistributive social policies (Brooks and Manza 2006, 2007). In summary, despite having far higher levels of inequality than most countries in cross national databases, the U.S. has about average (or far higher depending on the measure) levels of tolerance. Our conclusion concerning the general tolerance towards inequality in the U.S. is further supported by examining attitudes among low-income respondents in the GSS. For example, among individuals who self-identify as having incomes below or far-below average, only 37% strongly agree that income differences are too large.

Reference Group Perspectives on Attitudes towards Inequality

American attitudes towards inequality, we argue, might best be understood using reference group theory (Bygren 2004; Campbell et al. 1976; Merton 1957), that is, as a process of social comparison dependent on a reference level salient to the individual. Self assessments of socio-economic position are inherently relative, involving a process of social comparison (Frank 1985; Jencks et al. 1972; Rosenberg 1979 [1986]; Schor 1998). But what is the most salient reference group for these social comparisons? Is this social comparison a highly generalized process, or is it heavily dependent on the individuals' immediate social context? One extreme on this continuum of social comparison is found in sociophysiological studies of status differentials in face-to-face social interactions (Long et al., 1982). Likewise, research in the social psychology of education shows that in forming self-assessments of ability, students are highly sensitive to their local context (Ruble and Frey 1987; Marsh and Yeung 1997). At the other end of the spectrum, consumption behavior (i.e. "keeping up with the Joneses") is affected by a broad array of reference groups, including friends, relatives, coworkers, and exposure to television and other media (Schor, 1998). Although attitudes towards inequality are likely to be influenced by multiple references groups, in this analysis we consider the county as a geographic context which determines, at least partially, contacts and social interactions among individuals of different socioeconomic standing. Firebaugh and Schroeder (2009) provide an example of the possible effect of counties as reference

groups; the average income in a county appears to act as an important frame of reference in evaluating one's own income.

Attitudes towards inequality are affected not only by an individual's own level of status attainment, but his or her level of attainment relative to the local context. Socio-economic segregation produces local reference groups with lower levels of inequality than in society as a whole. Thus, a reference group perspective on attitudes towards inequality suggests that the reason Americans are not more sharply critical of the high level of inequality in our society is that most Americans simply do not experience the full spectrum of socio-economic inequality in their daily lives.

Segregation and Tolerance

Reference group effects are typically investigated in a multilevel modeling framework, where an attribute might positively affect an outcome at the level of the individual, but have the opposite effect at the group level (Marsh et al. 2007). For example, students with higher achievement levels generally have positive self-assessments of their own scholastic ability (an individual level effect), but holding individual achievement constant, a student might actually have a more positive self-assessment of ability in a low-achieving class than a high-achieving class (a negative effect of class-mean achievement). This suggests that measures of *relative* position are more highly predictive of outcomes than absolute measures of position. Moreover, the average level of an attribute in a given reference group may influence the salience of that attribute, increasing the disparity in outcomes among individuals within the group (Mullen, Brown, and Smith 1992). For example, the effect of achievement on self-assessments of ability may be stronger in high-achieving classrooms than in low-achieving classrooms, where students are less focused on achievement as a whole. In other words, a multilevel interaction may exist between the effect of an attribute at the individual level and the mean level of an attribute at the reference-group level. Thus, in this analysis we advance two specific hypotheses concerning individuals' attitudes towards inequality.

> (1) Measures of *relative* position based on local context should be important predictors of attitudes towards inequality, with relatively higher status individuals being more tolerant.
>
> (2)The relationship between an individual's relative position and his/her attitude towards inequality should be stronger in high status contexts, because there is a larger total share of income at stake and the salience of the distribution of goods is enhanced.

In the context of the present study then, we expect to find that an individual's income, expressed as a deviation from the county-mean income level, is a strong predictor of attitudes towards inequality, and that an individual's relative income will have a stronger effect on their attitudes in a high-income county than an individual's relative position in a low-income county. A low-status individual will be less tolerant towards inequality in high-status contexts then, both because they are, relative to others, even lower status in high-status contexts, and because the effect of status on attitudes is stronger in those contexts. These hypotheses are consistent with recent research on the contextual effects of income on happiness (Firebaugh and Schroeder 2009).

In addition to the basic theoretical mechanisms (changing reference groups and total shares of status), an additional theoretical mechanism may explain why high-status individuals begin to have some reservations about inequality in low-status contexts; greater exposure to the negative social and individual effects of poverty and inequality may enhance the motivation to help others. For example, Lee, Farrell, and Link (2004) find that greater exposure leads to more positive attitudes towards the homeless. Tight-knit status enclaves in high-status contexts may prevent high-status individuals from acquaintanceships with low-status individuals.

In all, these analyses may shed some light on the possible effects of socio-economic segregation. If there is a strong relative effect of income within counties on attitudes towards inequality, yet much of the total inequality in income lies between, not within counties, then this may mean that much of the between-individual differences in income do not affect attitudes towards inequality because they are "hidden" between counties. However, we should note that this analysis does not constitute a direct test of the effects of socio-economic segregation since we do not actually observe variation in socio-economic segregation at the county level (perhaps over time or across countries).

Data and Measures

Data

We used data primarily from the 1998, 2000, and 2008 General Social Surveys, including the restricted-use data files,[2] to identify contextual effects on individuals' attitudes towards inequality. Our decision to use these particular datasets was driven by availability of key survey questions and availability of county-level geographic data.[3] The GSS is the only dataset which contains questions involving multiple dimensions of income inequality specifically, rather than inequality in general, which respondents might conflate with issues such as race or gender (McCall and Kenworthy 2009). Unfortunately, the GSS did not begin covering income inequality issues until 1987—and then only periodically, with some inconsistencies due to the introduction or removal of certain questions in certain years—and county-level geographic data is only available from 1993 onward, so we have limited our analysis to years in which all key variables were included. We pooled the data from 1988, 2000, and 2008 in order to maximize the number of cases available for analysis, giving us an individual-level dataset comprised of 2,802 total respondents.[4]

The GSS uses a multistage sampling method, with respondents clustered within a relatively small number of counties or Standard Metropolitan Statistical Areas. Using this geographic identification data, we aggregated individual responses to create many of our county-level variables; the remainder were taken from the 2000 Census. Since we pooled data across three years, our level-2 grouping unit is the "county-year," rather than simply counties. After accounting for missing data[5], our working database included 555 county-years, spanning 294 counties. Sample sizes of individuals nested within county-years ranged from 1 to 31, with an average of approximately 5 individuals per county. Where the number of level-1 units nested within each level-2 unit differs, the reliability of the estimated level-2 coefficients varies. We account for the unbalanced nesting of individuals within counties using a multilevel modeling approach (see methods section).

Dependent Variable: Tolerance of Inequality

To get at individual attitudes toward inequality, we re-created McCall and Kenworthy's (2009) attitude index. The index is based on the following survey items: agreement with the statements that "differences in income in America are too large," that "inequality continues to exist because it benefits the rich and powerful," and that "large differences in income are necessary for America's prosperity" (this final item was reverse coded in the analysis to match the direction of the other questions). Each item had five response categories, ranging from strongly agree to strongly disagree, and was scaled and added together with the other items to produce the final index. The index ranges from negative three to positive three, with more negative values indicating intolerance toward inequality and more positive values indicating tolerance toward inequality. In our sample, the mean tolerance score is -.79, indicating that on average, respondents are only somewhat intolerant of inequality. The index has an alpha reliability of .49 in these data (see McCall and Kenworthy 2009, endnote 16 for a discussion of these items).

Independent Variables

Our primary individual-level predictor, relative income, was measured using respondents' inflation-adjusted logged family income, centered around the average income for the county.[6] A log-transformation produces a more normally distributed income measure. Consistent with other studies of income inequality (e.g. Mazumder 2008), we used family income instead of the respondent's individual income under the assumption that family income more closely determines an individual's financial well-being and experience with poverty and inequality. Centering the income variable around county-mean income results in a relative, rather than absolute, measure of income (see Methods section). In other words, centering provides information about an individual's position within the *county's* income distribution, or about the position of the respondent in relation to his or her reference group.

In terms of control variables, we include several variables which are likely to be related to either experience with or awareness of inequality, and which also are known to be important factors shaping attitudes about inequality. At the individual level, this included education (measured as highest year of school completed and ranging from 0 to 20), conservativeness (from 1= extremely liberal to 7= extremely conservative), a dummy variable for females, a dummy variable for minorities (with whites as the reference group and minority status denoting blacks and other races)[7], and dummy variables indicating whether the respondent's financial situation had improved or gotten worse in the past few years (with stayed the same as the reference category for each). At level-2 we included county-year means for each of the individual level variables mentioned, as well as a measure of income inequality (Gini coefficient) for each of the counties, computed from the 2000 Census. Descriptive statistics for all variables used in our main analysis are presented in Table 1. Table 2 presents the reduced-form relationship among the group level variables in the form of a correlation matrix. County-mean income is negatively correlated with income inequality (-.303) and with the proportion of respondents reporting worsening financial situations (-.303). The county-mean tolerance for inequality is not strongly related to any of the county-level variables, with the exception of political conservativeness (.348). The weak correlations at level-2 between county-mean tolerance and the other variables reflect in part the relatively low reliability of the tolerance measure at the county level (an estimated reliability of .187 for a county with the sample mean of 5 respondents).

TABLE 1
DESCRIPTIVE STATISTICS AT THE INDIVIDUAL AND COUNTY-LEVEL

	Percent	Mean	SD	Minimum	Maximum
Pooled Sample (N=2,802)					
Inequality Index Score*		-0.79	1.23	-3.00	3.00
Education		13.61	2.82	0.00	20.00
Grand Mean % Minority	19				
Grand Mean % Female	54				
Family income (logged)		10.44	1.00	6.03	12.08
Conservativeness		4.13	1.38	1.00	7.00
Financial Situation Improved	42				
Financial Situation Worsened	21				
Level 2 Variables (N=555)					
Inequality Index Score		-0.77	0.78	-3.00	2.50
Education		13.66	1.83	8.00	20.00
County Mean % Minority	20				
County Mean % Female	55				
Family Income (logged)		10.49	0.69	6.25	12.08
Conservativeness		4.14	0.85	1.00	6.50
Financial Situation Improved	43				
Financial Situation Worsened	19				
Gini		0.41	0.04	0.30	0.53

Note: *Inequality Index ranges from -3 (intolerant) to 3 (tolerant). Level 1 N= 2,802 individuals; Level 2 N= 555 county-years.

TABLE 2
CORRELATIONS AMONG LEVEL-2 VARIABLES

	Female	Educ	Minority	Inc	Gini	Conserv	Fin. Imp	Fin. Worse	Inequality Index
% Female	1.000								
Mean Education	-0.050	1.000							
% Minority	0.044	-0.115	1.000						
Mean Family Income (logged)	-0.137	0.372	-0.276	1.000					
Gini	0.055	-0.340	0.125	-0.303	1.000				
Conservativeness	-0.029	-0.098	-0.156	0.009	0.060	1.000			
% Financial Situation Improved	0.001	0.164	-0.025	-0.151	0.230	-0.106	1.000		
% Financial Situation Worsened	0.030	-0.060	0.064	-0.303	-0.151	-0.049	-0.473	1.000	
Mean Inequality Index Score	-0.132	-0.014	-0.106	0.110	0.080	0.348	0.088	-0.209	1.000

Finally, several additional variables were included as controls in preliminary analyses but were omitted from the final models because they failed to produce significant effects beyond that associated with variables already in the model. At the individual level, we investigated the effects of age[8] and geographic mobility, as indicated by whether the respondent had moved cities since s/he was sixteen years of age. At

the group level, we considered the effects of variables that might indicate levels of economic decay in a county, including percent manufacturing and percent unemployed. We also examined measures related to anomie and collective efficacy, including residential stability and percent of homes owner-occupied. Several indicators of diversity and diversity-related problems were also explored, including Census region, ethnic heterogeneity, occupational sex and race segregation, and black-white income inequality.[9] Each of these additional variables at the county level were derived from the 2000 Census.

Methods

In order to investigate how relative differences in income within counties affect individuals' attitudes, and how this relationship might vary across county contexts, we used multivariate, multilevel models (Raudenbush and Bryk 2002). Multilevel models are useful in addressing statistical challenges in the presence of nested data, such as the correct estimation of standard errors, and are conceptually useful in making explicit the need to determine whether the effects of individual-level factors are conditioned by organizational factors. In this case, our primary goal was to estimate a variance component associated with the level-1 income effect (county-mean centered income) and seek to explain the county-to-county variation in that effect. In other words, are the attitudes of individuals with a given income affected by the county context? The Empirical Bayes estimation method used here (all results are generated using HLM6.06 software) is particularly useful in accounting for the differential reliability of county-level estimates produced by the unbalanced nesting of individuals within counties. Our models are specified as follows:

At level 1, the individual level:

$$\text{Predicted Tolerance} = \beta_0 + \beta_1(\text{X1}) + \beta_2(\text{X2}) + \ldots$$

where variables X1, X2, etc. are group-mean centered individual-level variables.
At level 2, the county-year level:

$$\beta_0 = \gamma_{00} + \gamma_{01}(\text{W1}) + \gamma_{02}(\text{W2}) + \ldots + \mu_0$$

$$\beta_j = \gamma_{j0} + \mu_{j,\ j=1\ldots6}$$

where variables W1, W2, etc. are between county-year variables.

All level-1 variables are group-mean centered within county-years, such that the level-1 coefficients refer to relative changes in income, etc, within counties, and the level-2 coefficients are unadjusted for level-1 variables. In Model 2 (Table 4) we present models using grand-mean centering at level-1, such that compositional effects are directly estimated at level-2 (see Raudenbush and Bryk 2002:139-142).

In addition to the final regression models in Table 4, we conducted two supplementary analyses. First, we examined two sets of models separately, one for respondents at or below the median income and one for respondents above the median income, focusing on the effect of county-mean income. Second, we

considered an alternative specification of income using quintiles rather than the continuous measure, in order to identify any nonlinearity in the effect of income.

Results

Table 3 reports the basic relationship between measures of respondent's social position and attitudes towards inequality. Respondents' reported incomes, as well as their subjective assessment of their relative incomes, are strongly related to tolerance of inequality. Respondents one SD below the mean on income have a mean tolerance of -.814 while respondents one standard deviation above the mean are much more tolerant (-.354), a difference of .37 standard deviations on the tolerance scale (using the SD reported in Table 1). Likewise, those reporting that their incomes are "below" or "far below" average are much less tolerant of inequality (-1.013, -1.188) than those whose incomes are above or far above average (-.569, -.525). Respondent's subjective class position has an even stronger relationship to tolerance than does income alone, lower class respondents have a mean level of tolerance .83 standard deviations lower than upper class respondents. In contrast, In Table 3 respondents with higher levels of educational attainment are less, not more tolerant of inequality, despite the positive association between educational attainment and other measures of social position. To reinforce these basic findings, in the bottom panel of Table 3 we also report the frequency of agree and strongly agree responses to one of the individual measures included in the tolerance scale among individuals with high and low subjective reports of income and social class. Low status individuals are generally about twice as likely to strongly agree that income differences are too large.

Table 4 reports the results of our final multilevel regression models. Model 1 and 3 use group-mean centered level-1 coefficients in order to report the within-county effects of social position at level-1, along with the total effect of county-mean income and other factors at level-2. Model 2, which uses grand-mean centered coefficients at level-1, can be compared to Model 1 in order to evaluate the extent to which level-2 effects are compositional in nature, as opposed to merely capturing the aggregate effect of individual level differences across counties.

At the individual level, Model 1 shows that family income and political conservativeness increase tolerance towards inequality, while educational attainment and minority status decrease tolerance towards inequality. As predicted, measures of relative position within counties, in particular, the respondent's relative family income, are strong, statistically significant predictors of attitudes towards inequality. Moreover, respondents who report that their financial situation has recently improved are more tolerant of inequality. In supplementary analyses we used a non-linear specification of individual income (quintiles) and found a somewhat stronger effect of income differences at the upper end of the income scale. However, due to the small number of respondents nested within-each county, nonlinearity in the income effect cannot be estimated with much precision. At the county-level, political conservativeness increases tolerance, as does the county-level measure of income inequality, while counties with higher proportion of female residents and those where a higher proportion of financial situations have worsened are less tolerant of inequality.

TABLE 3
REDUCED FORM RELATIONSHIP BETWEEN POSITION AND TOLERANCE TO INEQUALITY

Class:	Mean Tolerance	St. Dev	Freq
1 lower	-1.177	1.210	155
2 working	-0.926	1.172	1302
3 middle	-0.664	1.228	1235
4 upper	-0.150	1.436	110
Chi^2	129.117***		

Education:	Mean Tolerance	St. Dev	Freq
< HS	-0.649	1.238	390
HS grad	-0.827	1.181	809
Some College	-0.820	1.201	789
College grad +	-0.806	1.284	814
Chi^2	57.230*		

Subjective Income	Mean Tolerance	St. Dev	Freq
1 far below	-1.188	1.101	160
2 below	-1.013	1.227	690
3 average	-0.747	1.159	1290
4 above ave	-0.569	1.308	581
5 far above	-0.525	1.412	81
Chi^2	128.727***		

Income:	Mean Tolerance	St. Dev	Freq
1 SD below	-0.814	1.168	352
Mean	-0.865	1.206	2095
1 SD above	-0.354	1.307	355
Chi^2	85.753***		

% Who **Strongly Agree or Agree** That Income Differences are Too Large

Group	Percent
poor, self identify	77.88
poor, one sd below mean	65.63
lower class, self identify	72.90
rich, self identify	56.80
rich, one sd above mean	52.11
upper class, self identify	50.91

% Who **Strongly Agree** That Income Differences are Too Large

Group	Percent
poor, self identify	37.06
poor, one sd below mean	34.94
lower class, self identify	48.39
rich, self identify	23.11
rich, one sd above mean	17.75
upper class, self identify	19.09

Note: Mean Class = 2.45, between working and middle class. Mean Education = 13.56 years. Mean Subjective Income Level = 2.89, slightly less than "average." Mean logged income = 10.42.
*** p<.001; *p<.05; both using two tailed test of significance

TABLE 4
RESULTS FROM MULTILEVEL SLOPES-AS-OUTCOMES MODELS
USING TOLERANCE TO INEQUALITY AS DEPENDENT VARIABLE

	Model 1 Base	Model 2 Grand Centered for Compositional Effect	Model 3 Base With Slope Predictors
Intercept (County mean tolerance to inequality)			
Base Intercept	-2.107***	-0.796***	-2.328**
	(0.516)	(0.024)	(0.398)
--County-year mean education	-0.005	0.021	-0.005
	(0.017)	(0.020)	(0.017)
--% Minority in county-year	-0.008	0.168	-0.017
	(0.103)	(0.125)	(0.103)
--% Female in county-year	-0.201	-0.129	-0.207*
	(0.104)	(0.116)	(0.103)
--County mean family income (logged)	0.043	-0.052	0.081
	(0.048)	(0.057)	(0.050)
--County-year Conservativeness	0.270***	0.076	0.262***
	(0.035)	(0.041)	(0.035)
--% Financial Situation Improved	0.117	-0.013	0.102
	(0.112)	(0.128)	(0.111)
--% Financial Situation Worsened	-0.543***	-0.418*	-0.565***
	(0.146)	(0.162)	(0.145)
--County-year gini score			1.761*
			(0.690)
Individual (individuals' deviation from county mean)			
Education	-0.030**	-0.030**	-0.033**
	(0.011)	(0.010)	(0.011)
Minority	-0.167*	-0.167*	-0.169*
	(0.070)	(0.071)	(0.070)
Female	-0.065	-0.066	-0.062
	(0.050)	(0.050)	(0.050)
Conservativeness	0.188***	0.187***	0.190***
	(0.020)	(0.020)	(0.020)
Financial Situation Improved	0.128*	0.124*	0.103
	(0.061)	(0.060)	(0.060)
Financial Situation Worsened	-0.125	-0.126	-0.130
	(0.069)	(0.068)	(0.068)
Family Income (logged)	0.100***	0.101***	0.171***
	(0.030)	(0.030)	(0.033)
--County mean Income (grand centered)			0.226***
			(0.048)

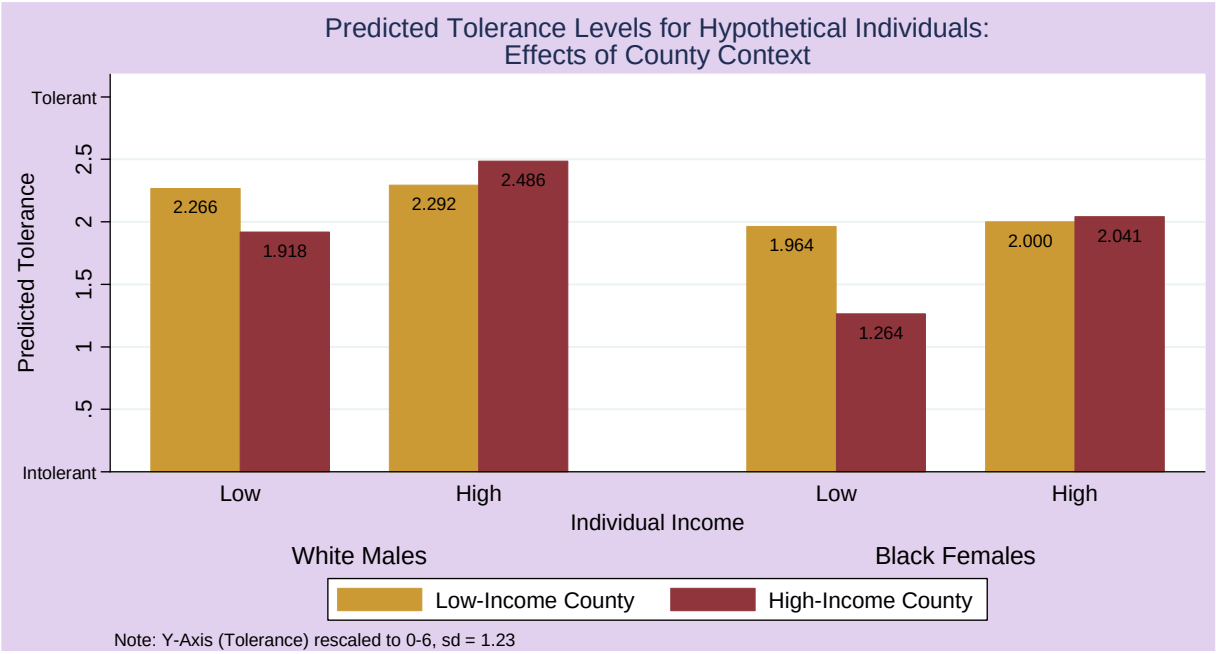
*p<.05; **p<.01; ***p<.001; two tailed test of significance
N=2,802
Note: Standard errors in parentheses

Model 2 is useful for evaluating which of the level-2 effects are compositional in nature (i.e. represent an effect above and beyond the aggregate effects of individual level variables), and which are entirely due to individual-level effects. The proportion of respondents who report their financial situation has worsened remains significant in Model 2 as a compositional effect (a county-level phenomenon affecting all individuals). A general perception of a worsening financial situation in a county reduces tolerance for inequality on average. There is no statistically significant compositional effect of county-mean income itself in Model 2, a finding that held in our subset analyses looking separately at individuals above and below the median income. However, the county-mean income effect in Model 2 is still approximately half the size of the individual effect, a large effect. Thus, the lack of statistical significance of this effect may be due to the relatively low statistical power of tests associated with those coefficients. As the subsequent simulations reveal, the overall effect of the county context does have a powerful effect on individual attitudes. Finally, we should note that because of potential measurement-error at level-1, researchers should always be cautious about conclusions concerning compositional effects (Blalock 1984; Diprete and Forristal 1994; Hauser 1974).

In Model 3 we investigate our second hypothesis that the relative effect of income depends on the aggregate income in the county such that an individual's relative income has a stronger effect in high-income counties. As hypothesized, the effect of county-mean income on the slope coefficient for the level-1 slope coefficient for family income (a multilevel interaction effect) is positive and statistically significant in Model 3 (.226***).[10] Surprisingly, the Gini coefficient is positively related to tolerance in Model 3.

In order to illustrate the combined effects of relative income and county-level income on attitudes towards inequality, which is captured by three separate coefficients in Model 2, we generated predicted values for tolerance towards inequality. These predicted values can be used to contrast the effect of context on individuals with differing absolute incomes, where lower predicted values equate to reduced tolerance of inequality. For an individual with a given income, Model 3 suggests that attitudes towards inequality may be affected by the county-level context in two ways; the county-level income determines in part (1) the individual's relative, within-county income itself, as well as (2) the importance of that relative income.[11] Figure 1 shows two sets of predicted values for tolerance, one for white males and one for black females (who are on average, much less tolerant of inequality than white males). In both sets of simulations, county-mean income has an important contextual effect on attitudes towards inequality. For example, for white men, a poor man (1 sd below the mean) has lower levels of tolerance in any county than a rich man. Yet, they are much less tolerant in high-income counties than in low-income counties (2.266 vs. 1.918, a difference of about .28 of a pooled standard deviation).[12] This occurs both because in the relative sense, the individual is subjectively even more poor in a rich county (an important component of the simulations), and because income differences matter more in such contexts. In contrast, a rich man becomes *less* tolerant in poorer counties than in high-income counties. In this case, it is the reduced effect of income in poor counties that matters most, although a high-income man is in the relative sense even richer in a poor county, they are actually less tolerant of inequality. These simulations suggest that social context has a substantial effect on individuals' attitudes towards inequality. Extrapolating from these results, we might infer that socio-economic segregation tends to increase tolerance for inequality, because segregation will tend to concentrate the poor in low-income contexts and the wealthy in high-income contexts—the contexts where both low and high income individuals are most tolerant.

Figure 1



Discussion

Attitudes towards inequality are a complex dimension of American sentiment. Certainly, it seems that the generally tolerant nature of American attitudes has deep cultural roots. Social commentators at the turn of the 20th century—another period of growing inequality—noted Americans' ability to overlook inequality. In reflecting on his crowning literary achievement *The Jungle*, which was intended to be a compelling portrait of economic exploitation but which was primarily interpreted as an expose of unsanitary conditions in food processing industries, Upton Sinclair remarked, "I aimed at the public's heart, and by accident I hit it in the stomach." Americans have a long history of tolerance of inequality.

An understanding of attitudes towards inequality is affected by deep seated cultural norms and tendencies, but also complicated by the multidimensional nature of social inequality and responses to that inequality. In this analysis we utilized attitudinal measures that were as generic as possible, which most closely captured, we hoped, attitudes towards the dispersion of income itself. Yet, in addition to the distribution of income, attitudes towards inequality and social stratification are likely affected by perceptions of: patterns of economic mobility from the previous generation to the next; the absolute level of living standards and changes over time in living standards, perceptions of opportunity for subsequent generations, and perceptions of the governments' role in affecting social inequality, which is an exceedingly complex package of laws and regulations. Recent studies of intergenerational income mobility have found that among individuals whose parents were in the bottom half of the income distribution, 71 percent experienced some amount of upward mobility (Mazumder 2008). Other research indicates that the material well-being of many poor families has improved over recent decades (Meyer & Sullivan, 2008). Thus, as these examples illustrate, in addition to growing income inequality and other

negative trends in social stratification, there have also been some positive socioeconomic trends affecting low-income individuals.

Moreover, it is important to reiterate McCall and Kenworthy's (2009) findings. Drawing on attitudinal questions in the GSS beyond our core analysis, there is evidence that in the most abstract sense, Americans are not only aware of high levels of inequality, but also hold preferences for redistribution. For example, in 2000, 16.5% of respondents identified America as being a society where there was "a small elite at the top, very few people in the middle, and the great mass of people at the bottom," while another 31.6% of respondents identified America as "A society like a pyramid with a small elite at the top, more people in the middle, and most at the bottom." Also in 2000, respondents estimated that corporate heads earned approximately $415,000 on average, but thought they *should* make only $238,000. Yet, these attitudes are likely offset in part by positive assessments of economic mobility and evaluations of how the rich get rich. For example, averaging over the years 1994-2008, only 13.2% of respondents reported that their standard of living was worse than their parents. Over the period 1973-2008, 65.9% of respondents reported that people generally get ahead not by luck or help, but by hard work.

Beyond widespread cultural sentiments, some of which are clearly rooted in actual socio-economic outcomes and trends, we sought to investigate an explanation for tolerance that was both structural and social-psychological in nature. Using a reference group perspective, we posited that an individuals' local context serves as a framework of comparison for their own status attainment. We found that indeed, an individuals' relative income within a county is a strong predictor of their attitudes towards inequality, and that an individuals' income is a stronger determinant of attitudes in high-income than in low-income counties. It appears that one explanation for tolerance is simply that most Americans do not experience the full extent of socio-economic inequality in society on a day-to-day basis.

Unfortunately, the GSS data have some important limitations which affect our overall conclusion. First, while the restricted-use data do allow the analyst to examine the contextual effects of counties, with relatively small numbers of respondents in many counties, the nesting structure is not ideal for such an analysis. Nor was the sampling procedure designed to produce maximum variability in the particular county context (mean-income) investigated here. Second, while we use the county (technically the county-year) as a measure of local context, it is not clear to us that this is the most important contextual frame affecting attitudes towards inequality. It is possible that a smaller unit (the neighborhood), or more likely a combination of units (including the family, workplace, etc), constitute more relevant frames of reference. Certainly, household income is more unevenly distributed across neighborhoods than counties.[13] Further studies are needed to understand how reference groups affect attitudes towards inequality. Finally, it is possible that the observed relationship between social context and attitudes may be due to selection effects (e.g. high-income individuals who choose to live in low-income counties may be particularly concerned with inequality), and it is difficult to rule out that possibility in this research design.

Beyond our overall conclusion concerning the effect of social context on attitudes towards inequality, what implications might these findings have for understanding trends in tolerance for inequality? As an extension of our basic hypothesis, we argue that socio-economic segregation will tend to increase tolerance for inequality among both the poor and the rich, although we do not test this hypothesis directly

in this analysis. Relative to racial segregation, economic segregation in the United States is relatively modest. In 1990, neighborhood-level segregation (variance between neighborhoods) accounted for only about 14% of the total variance in household income (Jargowsky 1996), although levels of economic segregation between the very-poor and wealthy are higher (Dwyer 2000; Fischer et al. 2004). Yet, unlike race/ethnic segregation (Reardon et al. 2009), economic segregation increased notably in the 1970s and 80s. Among whites for example, during the 1980s neighborhood economic segregation increased in nearly 80% of metropolitan areas (Jargowsky 1996). More recently, overall economic segregation appears to have declined in the 1990s (Yang and Jargowsky 2006), although the segregation of the poorest from the highest earners continued to increase (Fischer et al. 2004).[14] Future trends in segregation may impact attitudes towards inequality, but it seems impossible to predict whether the overall declines in economic segregation of the 1990s will continue, leading possibly to lower levels of tolerance of inequality.

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Endnotes

[1] Several recent studies find attitudes towards redistribution are inconsistent with the median voter hypothesis; in cross-national comparisons and trend analyses, the level of inequality in a country does not predict attitudes towards redistribution (see Kenworthy and McCall 2008). We reference this often-cited theory only as further articulation of an important research question: why aren't American's more concerned about inequality?

[2] Some of the data used in this analysis are derived from Sensitive Data Files of the GSS, obtained under special contractual arrangements designed to protect the anonymity of respondents. These data are not available from the authors. Persons interested in obtaining GSS Sensitive Data Files should contact the GSS at GSS@NORC.org.

[3] Other researchers have chosen these years for similar reasons. See, for example, McCall and Kenworthy 2009.

[4] For our ancillary analyses, which we discuss more below, our sample sizes were slightly less due to listwise deletion of missing data on the additional variables.

[5] Missing data was removing using listwise deletion, and resulted in approximately 200 fewer cases than the full sample.

[6] Analyses were also run using subjective class identification and subjective relative income (measuring whether the respondent feels s/he is below average, average, above average, etc.) with consistent results.

[7] Racial categories on the GSS are coded as "white", "black", and "other." Our decision to combine the "black" and "other" categories was based in part on the fact that analyzing them separately would result in very small sample sizes within counties for those categories, but also on the fact that preliminary analyses did not reveal significant differences on our variables of interest.

[8] Age was insignificant when specified both linearly and nonlinearly.

[9] Each of these variables were calculated from the 2000 Census data. Heterogeneity is denoted by the formula $1 - \Sigma Pi2$, where Pi represents the proportion of people in the population with some racial/ethnic category i. Race and ethnicity categories in this instance include: White; Black; American Indian, Eskimo, Aleut; Asian or Pacific Islander; and other. Occupational race segregation is calculated using occupational segregation by race (white, non-Hispanics vs. non-whites) was calculated similarly, this time with a dissimilarity index given

$$D = \sum_{i=1}^{n} \frac{t_i \left| p_i - P \right|}{2TP(1-P)}$$

where t is the total number of individuals in occupational category i, pi is the proportion of whites in occupational category i, T is the number of individuals in the county's labor force, and P is the proportion of the labor force composed of whites; occupational sex segregation is calculated similarly. Black-white income inequality was calculated using Nielson and Alderson's (1997) racial dualism measure.

[10] Note that the slope coefficients in Model 1 and 2 should not be directly compared, as the introduction of the level-2 county mean income predictor changes the meaning of the level-1 coefficient (the family income coefficient now refers to the effect of family income in a county with grand mean centered income).

[11] Note that authors often use the terms "compositional" and "contextual" interchangeably (e.g. Raudenbush and Bryk 2002: 139). In this paper we use the term "compositional" to refer explicitly to when the aggregate of a person-level characteristic (e.g. county-mean income) is related to the dependent variable even after for controlling for the individual-level effect (i.e. the level-2 effect of income in Model 3, Table 4). We use the term "contextual" in the more general sense of an effect of county-context on individuals, which includes possible compositional effects, but also how county level variables impact the effect of that income on attitudes within counties.

[12] The predicted values in Figure 1 have been rescaled to range from 0-6 for display purposes. The raw predicted values in this example calculation are -1.082 and -.734 respectively.

[13] Economic segregation is not typically reported at the county level, but Fischer et al.'s (2004) decomposition of segregation across different levels suggests that segregation between metropolitan areas and regions (perhaps roughly equivalent to counties) accounted for approximately 20% of the total between-tract economic segregation (Table A1, top quintile of income versus others, data for 2000).

[14] The decline in overall economic segregation during the 1990s is more pronounced in Yang and Jargowski's (2006) analysis than in the Fischer et al. (2004) analysis.