

INCOME INEQUALITY AND PREJUDICE IN THE US

BY

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Abstract

How does income inequality impact intergroup relations in the US? I used a multilevel modeling approach to test the effects of income inequality on attitudes toward US minority groups from the American Election Studies, from 1970-2008. Rising income inequality as measured by Gini predicted prejudice towards African Americans by White Americans across states and time. Rising income inequality did not predict prejudice towards other racial groups, and neither did it predict prejudice among mixed-race Americans towards non-racial low-status groups (homosexuals and illegal immigrants). The results are discussed in the context of group position theory (Blumer, 1958) and the Black exceptionalism hypothesis (Sears & Savalei, 2006). Whites' attitudes towards Blacks are deeply embedded into American political and socio-economic structure; they shift with changes that income inequality brings into the structure.

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Table of Contents

| | |
|------------------------|-----|
| Title Page..... | i |
| Acceptance Page..... | ii |
| Abstract..... | iii |
| Acknowledgements..... | iv |
| Table of Contents..... | v |
| Introduction..... | 1 |
| Method..... | 14 |
| Results..... | 18 |
| Discussion..... | 21 |
| References..... | 29 |
| Figure 1..... | 40 |
| Figure 2..... | 41 |
| Figure 3..... | 42 |
| Table 1..... | 43 |
| Table 2..... | 44 |
| Table 3..... | 45 |

Income Inequality and Prejudice in the US

Income inequality is an indicator of the overall prosperity and well-being of a society. When income disparity between the rich and the poor is large and wealth is concentrated in the hands of few, many members of the society experience feelings of injustice. Substantial evidence from social science indicates that high income inequality harms all areas of social interaction.

Consequences of Income Inequality. In organizational settings, the widening income gap between top managers and their employees contributes to an increase in concentration of power at the top, resulting in dysfunction within organizations. Lower level employees in these organizations are treated as inferiors and viewed less favorably (Desai, Brief, & George, 2010).

Wilkinson and Pickett (2010) found that mental and physical health problems were significantly related to higher levels of income inequality in developed countries and across the U.S. states with more income disparity. More people suffer from mental illnesses such as anxiety disorders, mood disorders, impulse-control disorders, addictions, and severe mental disorders in the unequal countries. Child well-being is lower in rich countries with higher income inequality, and there is a weak but quite significant relationship between higher income inequality and impaired mental health among women and children in the U.S. Americans in more unequal states are more likely to suffer from depression, be addicted to illegal drugs, and die from drug overdose. In addition, greater income inequality affects physical health. Lower life expectancy, higher rates of infant mortality, poor self-reported health, higher teenage pregnancy rates, lower birth weight, shorter height, obesity, AIDS, and depression are more prevalent in rich countries and the U.S. states with higher income inequality.

At the cross-national level, countries with more income inequality and economic instability experience higher rates of school bullying (Elgar et al., 2009) and stronger negative

attitudes and intolerance toward homosexuals (Andersen & Fetner, 2008). Greater income inequality predicts higher homicide and imprisonment rates in America (Krahn, 1986; Krohn, 1976; Messner, 1982; Wilson & Daly, 1997; Wilkinson & Pickett, 2010) and in the other developed countries (Wilkinson & Pickett, 2010). People in rich countries and the U.S. states with higher income disparity are less likely to trust others (Wilkinson & Pickett, 2010). Finally, greater income inequality undermines one's trust and perceived fairness in the system, leading to decreased happiness (Oishi, Kesebir, & Diener, 2011). The current study facilitates a better understanding of how rising income disparity in the U.S. has impacted intergroup relations, and, specifically, Black-White relations.

Income Inequality in the USA

After several decades of stability, income inequality has grown significantly since the early 1970s (Piketty & Saez, 2003; Shapiro, 2005; Weinberg, 1996). As shown in Figure 1, 32.6 percent of the total income in 1970 went to the top 10 percent wealthiest Americans while in 2002 this fraction constituted 49.7 percent in 2002 and 48.2 percent in 2011. The share of the total income going to the top 1 percent of American households increased from 9 percent in 1970 to 23.5 percent in 2003 and then slightly declined to 19.8 percent in 2011 (see Figure 2). The largest rise in income inequality took place in 1980s and 1990s.

The waging gap between the middle and lower classes has been increasing at a consistent rate since 1973. The average earnings of an American were progressively increasing before 1970 and stayed more or less stagnant after that with distribution of earnings becoming increasingly unequal. By contrast, the average earnings of a CEO increased by over 600 percent from 1980 to 2000 (Gilbert, 2003). Increased income inequality in the US and other countries led to increased economic segregation of rich and poor (Berube, 2005; Kawachi, 2002; Mayer, 2001) with

residential or neighborhood concentration of poverty increasing from 1970 through 1990 (Jargowsky, 1996; Jargowsky, 1997).

Although there was a drop in upward mobility and a corresponding increase in downward social mobility between the 1970s and 1980s, upper mobility was still more common than downward mobility. However, in general, intergenerational mobility has dropped since 1960s (Gilbert, 2003) declining rapidly after 1980s (Mishel et al., 2007). At the cross-national level, the USA has the lowest social mobility among the eight developed countries including UK, Germany, Canada, Denmark, Norway, Sweden, Finland (Wilkinson & Pickett, 2007).¹ People in the same comparable social class and at the same level of income and education on average do better economically in more equal countries (Wilkinson & Pickett, 2010).

How Income Inequality Leads to Intergroup Conflicts

Realistic Conflict. Several prejudice theories led me to believe that rising income inequality affected intergroup relations in the U.S. In early 50s, Sherif and Sherif (1953) identified intergroup conflicts as “products of interaction between groups in which vital interests, goals, values of the groups come into conflict” (p. 114). An unequal distribution of resources and interests within a society leads to an increased social stratification and, thus to increased perception of comparative deprivation of economic resources. As perceived scarcity of resources increases with an increased income disparity, the competition among social groups for these resources increases as well (Sherif et al., 1961). Groups may compete for actual or perceived scarcity of power or resources (land, money, natural resources) as well as for differences in values, beliefs, and norms (Stephan & Stephan, 1996, p. 144; see also Katz, 1965; Taylor & Moghaddam, 1987).

The original realistic group conflict theory implied the conflict between groups of equal status with unequal distribution of resources diminishing social status of one group at the expense of the other group. Duckitt (1994) extended realistic group conflict theory to competition between groups of unequal status. In this conflict, ingroup members of the majority group dominates outgroup members of a minority group. The minority group can either resist the oppression or do nothing. The minority group resistance is viewed by majority members as either justified or not. When the ingroup members perceived outgroup demands as unjustified, they are more likely to develop more hostile attitudes toward the outgroup. During times of greater income inequality, ingroup members are more likely to view the policies that improve position of minorities as unjustified or threatening as those policies are directed to advance social status of these outgroups and, thus, to increase competition for the scarce resources.

Relative Deprivation. Allport (1954) pointed out that it is not one's position in society that determines their prejudice, but one's motion—when moving down relative to others, people will be more prejudiced. When groups are thus put in a competing position, the prevailing ingroup disposition will be hostile actions and attitudes in relation to outgroups. The concept of relative deprivation used by Stouffer et al. (1949) to explain his unexpected findings and proposed as a theory by Davis (1959) argues that perceiving relative deprivation can lead to intergroup conflicts if members of one group perceive themselves relatively deprived compared to members of another group. Relative deprivation is defined as feeling or lacking something in comparison with a hypothetical situation, group, or another individual. A sense of inequality within a society and whether one feels deprived within it relies upon the choice of the reference group (Runciman, 1966). Either a situation, group, or individual may serve as a reference group (Levine & Moreland, 1987), and is a starting point with which one compares himself

(comparative reference group) or from which one derives his standards (normative reference group). Multiple reference groups, sampling from a larger domain of attitudes and beliefs, may simultaneously influence the individual's judgment (Masters & Keil, 1987).

Feelings of relative deprivation which result from these social comparisons may lead to increased prejudice towards outgroups. Pettigrew and Meertens (1995) found that relative deprivation predicted prejudice across seven samples from four countries. In fact, relative deprivation might be essential in explaining most forms of social prejudice (Fiske, 1998).

Runciman (1966) made a distinction between two major types of relative deprivation: egoistical and fraternal. Whereas the former refers to an individual's personal sense of deprivation compared to other individuals, the latter concerns an individual's sense of deprivation of his/her group compared to another group. Levine & Moreland (1987) distinguished another type of relative deprivation, temporal. Temporal deprivation is based on a comparison of two outcomes during different periods of time. A combination of fraternal and temporal group comparisons may be the most powerful predictor of outgroup prejudice (Guimond & Dambrun, 2002).

The concept of relative deprivation is important in understanding how increased income inequality can affect intergroup relations because temporal and fraternal comparisons take place when income inequality increases. Yitzhaki (1979) has shown mathematically that the Gini coefficient, a measure of income inequality, is a quantification of Runciman's theory of relative deprivation. In his approach, each unit of income represents an ability to consume a bulk of goods. The value of having a specific bulk or unit of income is a function of the scarcity of this bulk in the reference group. The relative deprivation felt by individual would be the sum of the values of the bulks in the reference group he/she is not able to consume.

When economic resources are scarce, dominant² group members may feel or perceive relative deprivation while upwardly comparing their group's present social and economic status with their group's past social status. Crosby (1982), for example, posited that upward comparison increases chances of experiencing the feelings of relative deprivation. Economic improvements followed by an economic depression generates a feeling of relative deprivation and subsequent intergroup conflicts since people might feel a larger difference between their anticipated outcomes and the outcomes to which they feel entitled (Davies, 1962). When expectations are rising rather than declining, people are more likely to experience relative deprivation (Gurr, 1970).

Specific emotions such as frustration, anger, and resentment can arise from this type of social comparison and become directed at an outgroup that is perceived as "outdoing the perceiver's in-group" (Smith & Ho, 2001, p.337). Psychology students who were told that job opportunities for students in psychology were going to decline sharply while job opportunities for students in economics/law were going to increase considerably were more likely to increase their prejudice towards local racial minority groups than those who were not (Guimond & Dambrun, 2002). Students in this experiment were not specifically made believe that the racial minorities were somehow responsible for the scarcity of the jobs, but the perception of threat from these outgroups was clearly experienced by the participants.

Although experiencing relative deprivation due to an upward comparison is more common, when the ingroup's current social position is worse off compared to the past, minority groups' slight economic advances may be experienced as more threatening by the members of the dominant group. Vanneman and Pettigrew (1972) found that downward social comparison was a basis for the relative fraternal deprivation experiencing by American Whites who

perceived Blacks' advances as a competition. Whites felt more deprived during the civil rights movements because programs aimed to improve position of Blacks were providing advantages that Whites did not receive (Begley & Alker, 1982). "Thus fraternal deprivation on a part of a dominant group vis-à-vis a subordinate group can be a particularly powerful phenomenon" (Taylor, 2001, p.17).

When income inequality increases, society members may consider several comparisons at the same time to evaluate their current position. They can make simultaneous upward and downward temporal comparisons of their ingroup's socio-economic achievements with the outgroup's socio-economic achievements when income inequality was low vs. high. Such comparisons generate a feeling of relative deprivation and subsequent prejudice towards minority groups.

Group Identity. Realistic group conflicts increase ingroup solidarity, coherence, awareness of own group identity, and the tightness of group boundaries (LeVine and Campbell, 1972). In the initial stages, intergroup relations might be characterized by conflict over tangible resources (e.g., earning money), but, in subsequent stages, both tangible and relativistic (e.g., earning more money or winning) may become a base for intergroup rivalries (Insko et al., 1992). While realistic group conflict theory is predominantly seeking to explain "real" group conflicts over power or resources, social identity theory (Tajfel & Turner, 1979) is more concerned with "social" competition over status and prestige (Duckitt, 2003). Social identity theory seeks to explain the concept of social identity in which individual's self is derived from perceived membership in a pertinent social group. The intergroup behavior is predicted based on experienced differences in the alleged group status, its legitimacy and stability, and perceived mobility between groups (Tajfel & Turner, 1979; Turner, 1999).

The tendency to positively differentiate ingroup from outgroup and to establish a positive group identity increases when intergroup distinctions become more pronounced (Tajfel & Turner, 1979). Realistic competitions lead to the perception of intergroup threat, and, thus, to a desire to establish ingroup superiority through viewing the outgroup as relatively inferior, less worthy, less competent, or less deserving than the ingroup (Duckitt, 2003). For instance, women who perceived themselves as being discriminated against were more likely to attend to cues that threatened their gender identity (Kaiser, Vick, & Major, 2006).

There is also evidence to suggest that when social identity of high-status group members is under the threat, high-status group members may validate their positive group identity through derogating other stigmatized low-status groups that are irrelevant to this threat (Branscombe, et al., 1999; Cadinu & Reggiori, 2002; Leach et al., 2003). That is, exposure of ingroup members to discrimination leads to greater intergroup bias and outgroup derogation towards stigmatized groups. For example, women who were primed with sexism defended their ingroup identity through expressing more negative attitudes towards racial minorities such as Blacks and Latinos (Craig, et al., 2012). When such discrimination is perceived through unequal distribution of incomes in the society, the members of the dominant group who suffer economically and socially develop ethnocentric attitudes and antagonism towards outgroups (LeVine and Campbell, 1972).

Symbolic Racism. Social identity theory also highlights the political influence of symbolic concerns pertaining to group status (Huddy, 2003). Political cohesion straightens group-based solidarity and gives political meaning to the group members' desire to protect the group's self-interest. Huddy (2003) distinguishes between realistic concerns, which emphasize a threat to the group's power and wealth, and symbolic concerns, which stresses a threat to group's esteem. When pursuing realistic concerns group members feel like they share a common fate of

economic outcomes, while when pursuing symbolic self-interests group members are more concerned with the respect ingroup members received from outgroup members.

In the historical context of Black-White relations in America, Kinder and Sears (1981; see also Kinder, 1986; Sears, 1988; Sears & Henry, 2002) called this kind of ingroup hostility symbolic racism and defined it as “a blend of antiblack affect and the kind of American moral values embodied in the Protestant Ethic” (p. 416). Symbolic racism reflects beliefs that Blacks are responsible for their socio-economic problems and that these problems largely result from lack of ambition and effort on a part of Blacks. After civil rights movement of the 60s, symbolic racism replaced the traditional or “Jim Crow” racism, which reflected Whites’ beliefs about the biological inferiority of Blacks and support for official discrimination and segregation. African Americans became more than just a threat to the economic self-interests of Whites; they became a threat to White’s traditional values, particularly individualist protestant-work ethic values. With historical development of relations between two groups, symbolic racist attitudes become embedded in the culture and, thus, can be transferred and developed in the early stages of socialization.

Symbolic attitudes mainly persist throughout the life while realistic group conflict attitudes (or a sense of intergroup competition) are more likely to be experienced in adulthood life with changing socio-economic structure. Even though Whites’ mindset became substantially liberalized when it came to the old-fashioned racism, White’s resistance to racially-targeted policies to preserve racial inequality through political participation remained intact.

Group Position. Blumer (1952) argued that prejudice involves a commitment to a relative status positioning of groups in hierarchical and racialized social orders. According to Blumer, the relative status that is perceived as a challenge or threat to the sense of group position

underlines racial prejudice. “Sociologically it is not a mere reflection of the objective relations between racial groups. Rather, it stands for “what ought to be” rather than for “what is.” It is a sense of where the two racial groups belong” (Blumer, 1952, p. 5). Similarly to Sears (1988), Blumer argued that sense of group position come from well-established norms, culture, mentality, or abstract idea that is prominently seated in individuals’ minds.

Four important elements underline Blumer’s theory of prejudice (Blumer,1952). These elements compromised four feelings that the dominant group experiences towards subordinate groups in order for prejudice to develop. They are: (1) a feeling of superiority or belief about dominant group’s ethnocentrism. (2) a feeling of racial alienation or a view of outgroup members as distinct, different, or alien. (3) a feeling of entitlement or assumptions made on the part of the dominant group to being entitled to posses exclusive rights on resources, statuses, or privileges to which the ingroup feels duly entitled. (4) a feeling of threat imposed by outgroup members’ desire to share those rights, resources, statuses, or privileges.

The feelings of proprietary claim about the rights, resources, statuses, or privileges assumed by the members of dominant racial group give a rise to the perception of realistic threat from the subordinate racial group. Having false perception of losing relative position to members of the subordinate group is crucial in applying Blumer’s concept of prejudice (Bobo, 1999).

Thus, Blumer’s theory of prejudice is particularly concerned with positional relations between dominant and subordinate racial groups in the existing racial order:

The feeling of superiority places the subordinate people *below*; the feeling of alienation places them *beyond*; the feeling of proprietary claim excludes them from the prerogatives of position; and the fear of encroachment is an emotional recoil from the endangering of group position. As these features suggest, the positional relation of the two racial groups is crucial in race prejudice. The dominant group is not concerned with the sub-ordinate group as such but it is deeply concerned with its position *vis-a-vis* the subordinate group. This is epitomized in the key and universal expression that a given race is all right in "its place" (Blumer, 1952, p.4).

The sense of group position takes root in the historical development of the intergroup relations and is affected by the interactive experiences between two racial groups, particularly in the area of claims, opportunities, and advantages. Racial alienation, perhaps, is the most intriguing ingredient of the group position theory that sets this prejudice theory apart from the others. Feelings of racial alienation or viewing outgroup members as distinct and different are derived from the well-established culturally shared beliefs, historical experiences, and relative status in the ongoing social, political, and economic order. Historical position in the social structure is proportionally related to the degree of racial alienation. The longer the history of relations between the dominant and subordinate racial groups, the more firm is the sense of relative group position (Bobo & Hutchings, 1996).

Once a hierarchical and racially stratified social order is established and institutionalized, the dominant racial group seeks to maintain superior status within a society, which increases non-egalitarian attitudes towards other racial groups. A more drastic shift in prejudiced attitude takes place when one's positioning in a social order is under a threat and members of a dominant group are at risk of losing their social status. "Where adverse sense impressions are combined with fear of attack on status, or where antipathy is joined with prejudice, a relatively stable form of behavior reaction is established" (Bogardus, 1928). Greater income inequality increases perception of competitive threat for the most members of the society through a decrease in economic opportunities and social mobility. Whites' sense of group position relative to other racial groups or their sense of privilege and entitlement can become threatened, which would lead to an increase in negative attitudes towards other racial outgroups.

Hypothesis and Overview of the Current Study

Increased income inequality leads to a more rigid socio-economic structure and decreases in social mobility. When wealth is concentrated in the hands of only a few society members, other members of the dominant group experience relative deprivation by upwardly comparing their current social status with their social status before income inequality was higher. In addition, when ingroup's current socio-economic position is worse compared to the past, members of the ingroup are more likely to make a downward comparison and perceive minor economic advances on behalf of a minority group as being more threatening. In a society where unequal distribution of incomes increases, members of the dominant group perceive a greater competitive threat to their social status and economic self-interest.

Larger differences in wealth and income make status disparities more salient and lead to a desire to preserve their position and status in social hierarchy, especially on the part of the dominant group. When intergroup distinctions become more pronounced, group identity of the dominant group members is under threat and they seek to positively differentiate their ingroup from outgroups. Consequentially, tendency to negatively evaluate the outgroups and to express more prejudiced attitudes towards other stigmatized low-status groups on the part of the dominant group members increases. These attitudes may surface in the form of political resistance to racially-targeted policies to maintain racial and social inequality.

When both realistic and symbolic threats are perceived on the part of the dominant racial group from other racial outgroups, members of the dominant group are more likely to develop antagonistic attitudes towards the outgroups. The magnitude of ingroup animosity directed toward the racial outgroup depends on outgroup's relative position in the historically- and culturally-established hierarchical and racialized social orders. An increased threat of losing

status on the part of Whites in the racialized social order in the USA manifests itself in increased negative attitudes towards other racial minority groups such as Blacks, Hispanics, and Asians, which are considered “less privileged” racial groups in the U.S.

I hypothesize that increased income inequality leads to increased prejudice of the majority towards minority groups. To test this hypothesis, I chose a database with respondents from United States, the American Election Studies (ANES). The ANES, which is biennially conducted for presidential and congressional elections in the United States, contains the necessary measures of prejudice towards major racial and non-racial minority groups³ in the USA, collected from as early as the year of 1968. In addition, the ANES questionnaire contains demographic information such as state postal abbreviations for each individual. To measure income inequality, the Gini coefficient (Gini, 1912), which has been consistently used in the scientific community as a measure of income and wealth inequality, was used for each individual year and state in which data was collected.

To facilitate a comparison of the impact of income inequality on prejudice towards outgroups a hierarchical linear or multilevel modeling approach was employed with income inequality as the independent variable and prejudice towards outgroups as the dependent variable. Multilevel models are specifically useful for research designs where the data could be arranged at more than one level. The individuals are treated as within-subject variation at a lower level (Level 1) and are grouped into (or nested within) a higher aggregate level (Level 2), which is treated as between-subject variation. In this model, the individual responses on prejudice were grouped into different levels of years and states.

The level of income inequality was classified by the year the prejudice measures were collected and by the state in which respondents lived. Such cross-classification allowed for more

variability and better prediction since level of income inequality in the US varies not only across time and but also across states. By cross-classifying the aggregate level of my model between time and state, it is also possible to detect what proportion of variance in prejudice is attributed to time differences *vs.* state differences. I expect that increases in income inequality will lead to an increase in outgroup derogation among members of the dominant group. The higher the Gini—across time or/and across states—the higher the level of prejudice will be observed.

Method

To support the hypothesis, I used the ANES 2008 Time Series Study file from American National Election Studies (ANES) that contains cumulative data from combined biennial election studies conducted since 1948 through 2008. Because each measure of prejudice contained its own sample size, number of years (waves), and number of states, multiple data sets were constructed for each measure based on available sample size, number of waves and states. Sample sizes and demographic information for each data set are listed in Table 1. Sample sizes ranged from 4,012 to 19,961. Data sets to analyze prejudice towards homosexuals and illegal immigrants included responses from 70% Whites, 15% Blacks, 2% Asians, 3% Native Americans, 9% Hispanics, and 1% others. Data sets to analyze prejudice towards racial minority groups included responses from White respondents only. The data starting with the year of 1970 or later and ending with the year of 2008 was available for each measure of prejudice.⁴

Measure of Income Inequality

The Gini coefficient (Gini, 1912) was used for each cycle year and for each state to assess the income gap in the USA. The Gini coefficient is defined as a ratio with values between 0 and 1, where 0 indicates perfect income equality (everyone has the same income) and 1 indicates perfect income inequality (one person has all the income and everyone else has

zero income). The Gini coefficient is defined as a ratio of the areas on the Lorenz curve diagram (see Figure 3). If the area between the line of perfect equality and Lorenz curve is A, and the area under the Lorenz curve is B, then the Gini coefficient is $A/(A+B)$. Since $A+B = 0.5$, the Gini coefficient, $G = 2A = 1-2B$. If the Lorenz curve is represented by the function $Y = L(X)$, the value of B can be found with integration and: $G = 1 - 2 \int_0^1 L(X)dx$ (Rosales, 2007).

State data from 1970 through 2008 was available and applied in the multilevel model as a Level-2 predictor. Annual measures of income inequality by state starting with 1970 and ending with 2004 were borrowed from Galbraith and Hale (2008), who used high-quality data source to estimate the Gini coefficient by state to predict presidential election turnout at the state level. The state Gini for 2008 was obtained from the US Census Bureau (Noss, 2010).⁵

Measures of Prejudice

Measures of prejudice towards outgroups compromised all the possible continuous variables introduced in the ANES, which were taken at the individual level. These measures reflected either negative attitudes towards major racial minority groups such as African Americans, Hispanics, and Asians or negative attitudes towards non-racial minority groups such as homosexuals and illegal immigrants.

Prejudice towards African Americans. Negative affect towards African Americans was measured by “feeling thermometers” on a scale from 0 (feeling “cold” about a minority group), to 50 (feeling “neutral” about a minority group), to 100 (feeling “warm” about a minority group). Ingroup bias towards African Americans was calculated by subtracting the scores of “feeling thermometers “ towards African Americans from the scores of “feeling thermometer “ toward Whites.

Resistance to government aid for African Americans was measured by the Aid-to-Black Scale on a 5-point scale ranging from 1 – *Government should help minority groups/blacks* to 7 – *Minority groups/blacks should help themselves*. Opposition to government’s intervention to guarantee African American fair treatment in jobs was measured by the following item: “Should the government in Washington see to it that black people get fair treatment in jobs or is this not the federal government's business?” on a 5-point scale from 1 – *See to it that black people get fair treatment* to 5 – *Not the federal government's business*.

Finally, negative attitudes towards African Americans were measured by four symbolic racism items on a 5-point Likert scale from 1 – *strongly agree* to 5 – *strongly disagree*: 1). Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class. 2). Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors (reversed item). 3). It is really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as whites (reversed item). 4). Over the past few years blacks have gotten less than they deserve. Cronbach’s alpha of the sample was .75.

Opposition to Affirmative Action. Opposition to affirmative action was measured on a 5 – point scale ranging from 1 – *favor strongly* to 5 – *oppose strongly*.

Prejudice towards Hispanics. Negative affect towards Hispanics was measured by “feeling thermometers” on a scale from 0 (feeling “cold” about a minority group), to 50 (feeling “neutral” about a minority group), to 100 (feeling “warm” about a minority group). Ingroup bias towards Hispanics was estimated by subtracting scores of “feeling thermometers” towards African Americans from scores of “feeling thermometer “ toward Whites.

Prejudice towards Asians. Negative affect towards Asians was measured by “feeling thermometers” on a scale from 0 (feeling cold” about a minority group) to 50 (feeling “neutral” about a minority group) to 100 (feeling “warm” about a minority group). Ingroup bias towards Asians was calculated by subtracting scores of “feeling thermometers“ towards African Americans from scores of “feeling thermometer “ toward Whites.

Prejudice towards Homosexuals. Negative affect towards homosexuals was measured by “feeling thermometers” on a scale from 0 (feeling cold” about a minority group) to 50 (feeling “neutral” about a minority group) to 100 (feeling “warm” about a minority group). In addition, negative attitudes toward homosexuals were measured by the opposition to law to protect homosexuals on a 5 – point scale ranging from 1 – *favor strongly* to 5 – *oppose strongly*.

Prejudice towards Illegal Immigrants. Negative affect towards illegal immigrants was measured by “feeling thermometers” on a scale from 0 (feeling cold” about a minority group) to 50 (feeling “neutral” about a minority group) to 100 (feeling “warm” about a minority group).

Demographics

I also used several individual level variables that constituted demographic information:

- 1). Age and gender as reported by respondents;
- 2). Church attendance (1 = every week; 2 = almost every week; 3 = once or twice a month; 4 = a few times a year; 5 = never; 6 = no religious preference);
- 3). Family income (1 = 0 to 16 percentile; 2 = 17 to 33 percentile; 3 = 34 to 67 percentile; 4 = 68 to 95 percentile; 5 = 96 to 100 percentile)⁶;
- and 4). Education (1 = 8 grades or less; 2 = 9-12 grades and high school or less; 3 = 12 grades, diploma or equivalency; 4 = 12 grades, diploma or equivalency plus non-academic training; 5 = some college, no degree, junior/community college level degree; 6 = BA level degrees; 7 = advanced degrees incl. LLB).

Results

To analyze the impact of income inequality on prejudice towards outgroups, a cross-classified model with a random intercept and fixed slopes where individuals (Level 1) are nested within the years and also within the US states (Level 2) was used for each measure of prejudice. The Gini coefficient was included in the model as Level-2 predictor and demographic items as Level-1 predictors. The model equation is presented below:

$$Y_{i(jk)} = \gamma_{00} + \gamma_{01}\omega_1 + \dots + u_{0j} + u_{0k} + e_{i(jk)}$$

In this model, $Y_{i(jk)}$ is the prejudice score for respondent i in state j and at time k ; γ_{00} represents the expected average prejudice score across all states and across all years when income inequality is 0; γ_{01} represents the expected change in prejudice score across all states and across all years when income inequality increases by 1; ω_1 is the income inequality score of respondent i in state j at time k ; u_{0j} is the deviation of the adjusted prejudice score average of state j from the mean across states; u_{0k} is the deviation of the adjusted prejudice score average of year k from the mean across years; $e_{i(jk)}$ represents the difference between the actual prejudice score and the predicted prejudice score respondent i in state j at time k . Because I also controlled for lower-level units such as demographic information, the effect of lower level variables was fixed assuming that the mean of respondents' demographic information did not vary across years and states. The ellipses represent the part of equation that includes these lower-level units.

Table 2 shows the results of the model predicting prejudice toward the minority groups of income inequality for the various measures of prejudice. The second column of the table represents a regression coefficient estimate of income inequality (Level-2 predictor) predicting prejudice towards outgroups across years and states (γ_{01}). The third column represents 95% confidence interval of a parameter estimate of income inequality. The fourth column represents

the chi-square statistic of the deviance test that compares two nested models: the model with the Level-2 predictor (income inequality) and the controlled demographic items and the model with the Level-2 predictor without controlled demographic items. Thus, the fourth column indicates whether demographic information significantly contributes to the overall model. The fifth and sixth columns exhibit proportion of income inequality variance explained in the model by time and state, respectively.

Prejudice towards African Americans. There was a significant negative relationship between income inequality and feeling thermometer toward Blacks, $\gamma_{01} = -31.08, p < 0.01$, indicating that Whites' affect towards Blacks was significantly more negative at times and in states with higher income inequality.

Ingroup bias, as calculated by subtracting the Black feeling thermometer rating from the White feeling thermometer rating for White respondents, had a positive relationship with income inequality, $\gamma_{01} = 45.91, p < 0.001$, indicating more favorable feelings toward their ingroup relatively to Blacks, when income inequality was greater.

Whites were significantly more likely to oppose government's aid to Blacks when income inequality was greater as indicated by positive relationship between Aid-to-Blacks Scale and inequality, $\gamma_{01} = 3.31, p < 0.001$.⁷ Whites were also significantly more likely to think that it is not government's business to ensure fair jobs for Blacks when income inequality was greater as indicated by positive relationship between Fair-Job-to-Blacks Scale and inequality, $\gamma_{01} = 2.35, p < 0.01$.⁸ That is, Whites' resistance to government's intervention to improve position of African Americans was greater when income inequality was higher.

Income inequality significantly predicted negative attitudes toward African Americans as measured by symbolic racism among those who identify themselves as Whites, $\gamma_{01} = 2.05, p <$

0.01, indicating that symbolic racism was more common among Whites at times of and in states with greater income inequality.

Since symbolic racism scale has been criticized for being confounded with conservative political values (e.g., Carmines & Merriman, 1993; Peffley & Hurwitz, 1998; Sniderman & Tetlock, 1986), to address it, we separately analyzed the same data while controlling for political ideology and received similar results, $\gamma_{01} = 2.94, p < 0.001$.⁹ Thus, taking conservative political values in consideration did not change relationship between income inequality and symbolic prejudice towards African Americans. On the contrary, controlling for political conservatism increases the amount of variance in years compared to the amount of variance in states that was explained by income inequality.

Opposition to Affirmative Action. Opposition to affirmative action among Whites had positive relationship with income inequality, $\gamma_{01} = 1.46, p < 0.01$, indicating that income inequality significantly predicted opposition to affirmative action among Whites at times of and in states with greater income inequality.

Prejudice towards Other Minority Groups. There was no relationship between income inequality and feeling thermometers toward Hispanics and Asians, $\gamma_{01} = 1.72, n.s.$ and $\gamma_{01} = -.66, n.s.$, respectively, indicating that Whites' feelings towards Hispanics and Asians were not affected by greater income inequality. Neither did I find that Whites' indicated more favorable feelings toward their ingroup than towards Hispanics and Asians when income inequality was greater, $\gamma_{01} = 11.16, n.s.$, and $\gamma_{01} = 25.23, n.s.$, respectively.

No relationship between income inequality and prejudice towards homosexuals as measured by feeling thermometer, $\gamma_{01} = .76, n.s.$, and as measured by opposition to law to protect homosexuals, $\gamma_{01} = -.28, n.s.$, were found, indicating that respondents did not have

significantly more negative attitudes toward homosexuals across times and states with greater income inequality. There was also no significant relationship between feeling thermometer toward illegal immigrants and the Gini coefficient, $\gamma_{01} = 33.90$, *n.s.*, indicating that negative attitudes toward illegal immigrants did not increase with rising income inequality. In sum, I found no evidence that discrimination or negative attitudes toward Hispanics, Asians, homosexuals and illegal immigrants increased with greater income inequality.

I also calculated regression coefficients for each prejudice measure of the bottom 95% of income earners in the ANES and compared them with the regression coefficients estimated above (or for 100% of respondents). Table 3 introduces the comparison of these regression coefficients. The first and third columns of the table represent regression coefficients estimated based on 100% of respondents and the bottom 95% of income earners, respectively. The second and fourth columns represent their corresponding sample sizes. As seen in Table 3, prejudice towards Blacks as measured by ingroup bias, Aid-to-Blacks Scale, Fair-Job-to-Blacks Scale, and symbolic racism were slightly higher among the bottom 95% of White income earners than among the 100 % of White respondents. Prejudice towards Blacks as measured by feeling thermometer and opposition to affirmative action went slightly down for the bottom 95% of White income earners. Overall, the results indicate that there were no substantial differences in prejudice towards African Americans when top 5% of income earners were not included in the samples.

Discussion

The results indicate that rising income inequality in the U.S. has increased outgroup prejudice but only towards one minority group, African Americans. Whites had less positive feelings towards Blacks when income inequality was greater, but their affect towards other

minority groups such as Hispanics, and Asians stayed relatively stable across years and states with higher income inequality. In addition, respondents (whether they identified themselves as European Americans or any other ethnical identity) experienced no negative affect towards homosexuals and illegal immigrants, nor were they resistant to the law that prohibits discrimination against homosexuals when income inequality was greater.

Whites' symbolic concerns about Blacks have also been rising with rising income inequality as indicated by the positive relationship between symbolic racism and the Gini coefficient. Whites perceived more threat from African Americans to their traditional values across times and states with greater income inequality. In addition, resistance to government's initiative to advance position of African Americans was greater when income inequality was higher as indicated by opposition to federal aid for Blacks and to federal intervention to ensure fair jobs for Blacks. In addition, Whites were more likely to oppose affirmative action when income inequality was greater.¹⁰

I also looked at ingroup bias that Whites might experience towards their group relative to the free racial minority groups, African Americans, Hispanics, and Asians. When a social identity threat is perceived, members of the dominant group seek to restore positive group esteem by either viewing their own group as more superior or by derogating the subordinate group (Tajfel & Turner, 1979). Outgroup and ingroup evaluations usually have an inverse relationship. More positive ingroup evaluation leads to more negative outgroup evaluation. (Stephan & Stephan, 1996). When income inequality was greater, Whites expressed more favorable feelings toward their ingroup relative to Blacks but not relative to Hispanics and Asians. Since I found no significant trend of Whites evaluating their ingroup more positively with rising income inequality¹¹, it is plausible to assume that Whites' attempt to reestablish

positive group identity was mostly achieved through derogating or viewing African Americans—and, specifically, African Americans—as inferior relative to Whites.

Why African Americans?

Bobo (1988) suggested that in spite of the improved relationship between Whites and Blacks, the White opposition to policies is a result of a perceived economic threat from African Americans, since the policies are aimed to improve economic and political power of Blacks. Blumer (1958) argued that sense of ingroup position relative to outgroups defines ingroup status within a society. Feeling of racial alienation, which comes from historically established norms, is one of the most important elements in defining relative group position.

Bobo & Hutchings (1996) found that racial alienation was the most important predictor of perceived competitive threat from African Americans for Whites. While Whites perceived more competitive threat from Asians and Hispanics, once racial alienation was entered into the regression model with competitive threat as the dependent variable, racial alienation explained most of the variance in Whites' perception of competitive threat from African Americans. Racial alienation was not a significant predictor of competitive threat from Asians or Hispanics. This result led to the conclusion that feelings of competitive threat from racial minority groups have complex determinants, elements of which depend on the historical background of racial groups. The dissimilar responses of Whites to African Americans as opposed to Latinos and Asian Americans are rooted in the historical development of the current relative position of these minority groups in the U.S. "Whites' sense of group position relative to Black Americans is more firmly psychologically and culturally grounded; it is more fully crystallized" (Bobo, 1999, p. 462).

Relations between Whites and African Americans in the U.S. have changed over several decades and shifted from battles over basic civil rights to conflict over educational, political, and socio-economic resources (Bobo, 1988). Wilson (2012) argued that the civil rights movement has produced significant changes in the socio-economic structure of the USA. Class took over race in establishing access to status and power (socio-economic and political resources) for African Americans. Pettigrew (2005) also acknowledged the role of social class in modern race relations but argued that the race-class interaction model captures the trend of modern Black-White relations more precisely than the Wilson's zero-sum model of race and class.

In 2000, a national poll revealed that 34 percent Whites thought that racial equality had been achieved already compared to 6 percent of Blacks (Bobo, Dawson, & Johnson, 2001). In 2008, a national poll conducted by CNN (Mooney, 2008) revealed that 85 percent of Whites and only 58 percent of Blacks believed that conditions had been improved for African Americans since 1968. Sixty percent of Whites believed that in the last 10 years conditions for African-American males had improved, while only 35 percent of Blacks thought so. More than a third of African Americans thought that conditions for African American males had worsened while only 9% White Americans thought so. Moreover, Whites view Black-White relations as a zero-sum game and feel that while perceived discrimination against Blacks by Whites have gone substantially down over the past six decades, perceived discrimination against Whites by Blacks have gone significantly up (Norton & Sommers, 2011).

Sears (2008) also defined Blacks as the most politically controversial racial minority group. African Americans are a unique minority group that has gone through different migration and assimilation processes than two other largest minority groups, Asians and Hispanics. Black exceptionalism hypothesis (Sears, 2008; Sears & Savalei, 2006) postulates that the assimilation

model of Blacks reflects “residues of African slavery” (Sears, 2008, p. 136); Black-White relations have a unique and long political history, and, consequentially, has a distinct political meaning in the history of the USA. Individuals of African descent are native born speakers, whose second-class citizenship in 19th and 20th century slowly progressed from the earlier slavery, while Latinos and Asians are true immigrants who are substantially better assimilated into all aspects of the society (Lichter & Qian, 2005; Saenz, 2005; Stoll, 2005; Xie & Goyette, 2005).

African Americans are perceived as a particularly distinct from the other non-caucasian groups. Even though this racial minority is, by far, the least assimilated ethnic minority group in America and far more stigmatized than any other racial groups, yet this group that has its own cultural roots in American political and socio-economic structure. “In short, the Black exceptionalism hypothesis suggests that the color line separating Blacks and Whites is more rigid and impermeable than the category lines separating Whites from any other minority groups” (Sears, 2008, p. 141). Thus, Whites’ attitudes towards Blacks are more crystallized, politicized, and visible than towards any other racial minority group.

I found that rising income inequality in the U.S. predicted prejudice towards African Americans among Whites. However, rising income inequality did not predict prejudice among Whites towards other racial minority groups, and neither did it predict prejudice among mixed-race respondents towards non-racial low-status groups such as homosexuals and illegal immigrants. These findings can be explained by the unique nature of Black-White relations. Due to historical developments in the USA and the influence of social class in Black-White relations, attitudes towards African Americans are deeply embedded into its political and socio-economic structure. Since increased income inequality brings changes to the socio-economic structure, the attitudes among Whites towards Blacks shift with it. As changes in the socio-economic structure

disadvantage members of the dominant group, the antagonism towards the most racially alienated group in the US, which has the lowest position in the American racial and socio-economic hierarchy, is more likely to develop.

Advantages and Disadvantages of MLM

I used multilevel modeling approach to analyze clustered or grouped data because of its several advantages. Multilevel method approaches clusters as if they are sampled from a larger population of clusters, enhancing the generalizability of results. Because the effects can be treated as random rather than fixed (e.g., OSL regression) at the aggregate levels, the results can be generalized to the population of Level-2 units than only to those who are sampled. Group-level effects are not estimated separately for each group. Instead, regression weights are assumed to have a particular distribution across groups, summarized by a limited set of parameters (e.g., mean and variance). Consequentially, multilevel modeling approach addresses my data better and conform more closely to theoretical predictions than do other approaches. In addition, multilevel modeling framework allows for flexibility and parsimony in working with clustered data. Rather than approaching groups as nuisances that violate assumptions, by modeling grouping lower-level units into aggregate levels I could examine both Level-1 and Level-2 effects.

However, future research needs to address some of the barriers that I faced in the current analysis. To calculate R squared or proportion of variance explained for the multilevel model, I used the method offered by Sniders & Bosker (1994). In accordance with their method, negative R squared of 0.05 or more *might possibly* indicate model misspecification. I used the same model for negative affects towards all racial minority groups, but obtained extreme negative values of R squared for the dependent variable measuring negative affect towards African Americans only.

Since negative R squared was only obtained for proportion of income inequality variance explained in the model by time. There is a possibility that changes independent of income inequality that affected prejudice level of participants occurred during the time. In general, the ANES participants who identified themselves as Whites reported an increase in positive affect towards Blacks over the time. The changes can be attributed to historical and political events that took place from 1970 through 2008. Including time in the model might help to control for the changes and improve the model fit.

Another possible explanation for the obtained negative R squared is offered by to Gelman & Hill (2007). According to Gelman and his colleague, it is not unusual to have an increase in variation (with a consequential decrease in R squared) at the aggregate level after adding a Level-2 predictor. The increased between-group variance in the model with predictors indicates true variation masked by the null model without predictors. This pattern is caused by a correlation between individual-level variables and group-level errors. The model fit can be improved by including the averages of individual level variables as group level predictors in the model. Future statistical research is needed to address this issue.

Envoi

The results of this study indicate that income inequality creates a nourishing environment for intergroup conflicts and racial discrimination. Blumer anticipated that civil rights movements would fail to bring fundamental change in racial order. He argued that race has a powerful capacity to influence and shape socio-economic structure of a society. Thus, he expected components of the old existing racial order to be embedded into the newly transformed economic structure. Racial minorities would be precluded from high-status job positions and locked into

low-status job positions by having highly constrained mobility opportunities in a transformed economic order.

In 1967, Luther Martin King addressed this issue in his speech *Where Do We Go from Here: Chaos or Community?* Even though Blacks had legal equality, he argued, they had not reached economic equality:

“He (the Negro) is still at the bottom, despite the few who have penetrated to slightly higher levels. Even where the door has been forced partially open, mobility for the Negro is still sharply restricted. There is often no bottom at which to start, and when there is, there’s almost no room at the top. In consequence, Negroes are still impoverished aliens in an affluent society. They are too poor even to rise with the society, too impoverished by the ages to be able to ascend by using their own resources. And the Negro did not do this himself; it was done to him. For more than half of his American history, he was enslaved. Yet, he built the spanning bridges and the grand mansions, the sturdy docks and stout factories of the South. His unpaid labor made cotton “King” and established America as a significant nation in international commerce. Even after his release from chattel slavery, the nation grew over him, submerging him. It became the richest, most powerful society in the history of man, but it left the Negro far behind (quoted in Zinn& Arno, 2004, p. 417).”

In 1968, King shifted his effort from the civil rights movement to an effort to gain economic justice for poor people. By organizing the Poor People’s Campaign, King hoped to address poverty through income and housing (Bishop, 1971). Forty-six years later, my research findings indicate that the battle for economic equality is far from over for African Americans, and rising income inequality is one of the major barriers to their victory.

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Endnotes

¹ Compatible data on inter-generational social mobility was only available for these eight countries.

² I refer to a major ethno-racial group (e.g., American Whites) or a major non-racial high-status group (e.g., straight people) in a society as dominant group. To avoid confusion, I avoid referring to the top percent of rich people as dominant group in this thesis.

³ Since the ANES does not contain enough data for minority group such as Asians and Hispanics in order to perform multilevel modeling analyses, I was not able to investigate how attitudes of minority groups towards each other have changed with rising income inequality.

⁴ The data sets for feeling thermometer towards African Americans and Fair Jobs to Blacks were available starting with 1968. However, since our measure of income inequality across states was only available starting with 1970, we have excluded 1968 from this data set. Other measures of prejudice were collected by ANES starting with 1970 and later; thus, their data sets stayed unaffected.

⁵ Since the Gini data for 2008 was taken from a different source, which increased the margin error and decreased the reliability of estimates, we first analyzed our data sets without including the data from 2008 in our analyses. However, identical statistical results were obtained whether we include 2008 in our data sets or not.

⁶ Each biennial year the ANES assessed household income by introducing participants to income categories on a scale of 1 to 25 ranging from 1 – *making less \$2,999 a year* and 25 – *making over \$150,000 a year*. The income percentiles in the cumulative ANES 2008 Time Series Study file were calculated based on these income categories.

⁷ While controlling for political conservatism in addition to demographic information, the relationship between the Gini coefficient and the Aid-to-Blacks Scale, $\gamma_{01} = 3.16$, $z = 3.50$, $p < .001$, remained unchanged.

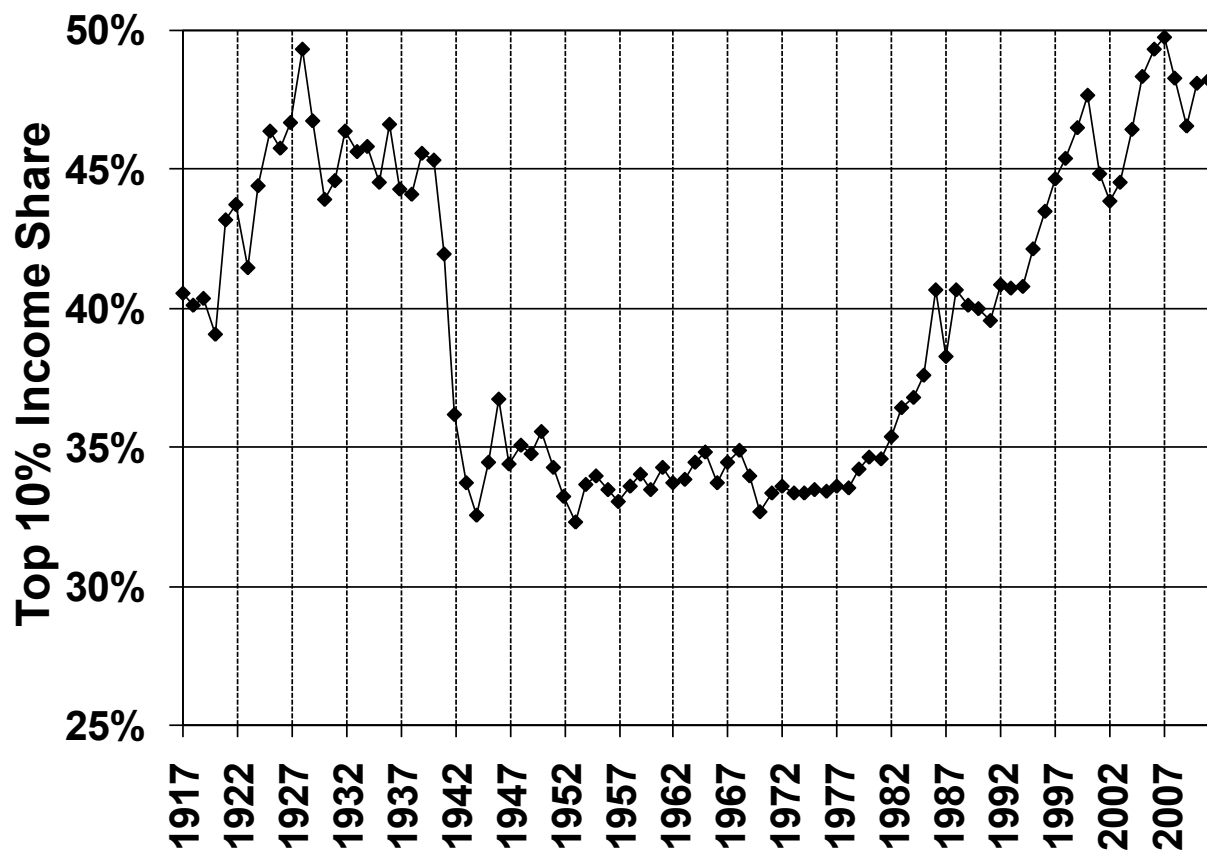
⁸ While controlling for political conservatism in addition to demographic information, relationship between the Gini coefficient and the Fair-Job-to-Blacks Scale, $\gamma_{01} = 2.06$, $z = 2.24$, $p < 0.01$, remained unchanged.

⁹ Controlling for political conservatism would decrease our sample size by 2,071 respondents, since many ANES respondents would think of themselves as apolitical or were not sure of their political orientation. Thus, we did not include political conservatism in the main model.

¹⁰ I ran a separate multilevel analysis with negative affects towards Blacks, Hispanics, and Asians as predictors controlling for demographics and political conservatism and opposition to affirmative action as an outcome. In the ANES sample, only negative affect towards Blacks predicted opposition to affirmative action.

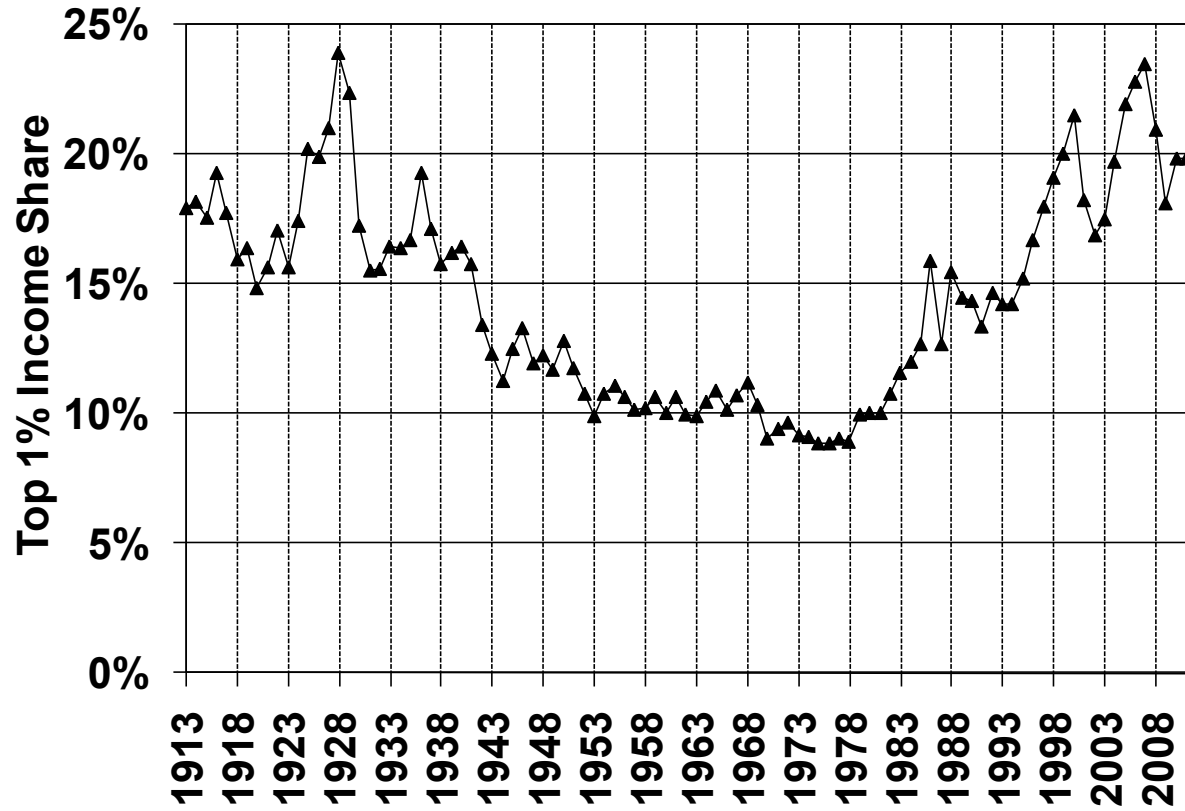
¹¹ Although Whites' favorable evaluation of their ingroup when income inequality was greater showed a general trend in a positive direction, the relationship between increased income inequality and positive affect for their own ingroup did not reach statistical significance, $\gamma_{01} = 11.43$, $z = 1.20$, n.s.

Figure 1. Top 10% Pre-tax Income Share in the US, 1917-2011



Source: Piketty and Saez, 2003 updated to 2011. Series based on pre-tax cash market income including realized capital gains and excluding government transfers.

Figure 2. *Top 1% US Pre-Tax Income Share, 1913-2011*



Source: Piketty and Saez, 2003 updated to 2011. Series based on pre-tax cash market income including realized capital gains and excluding government transfers.

Figure 3. Gini coefficient represented by Lorenz curve.

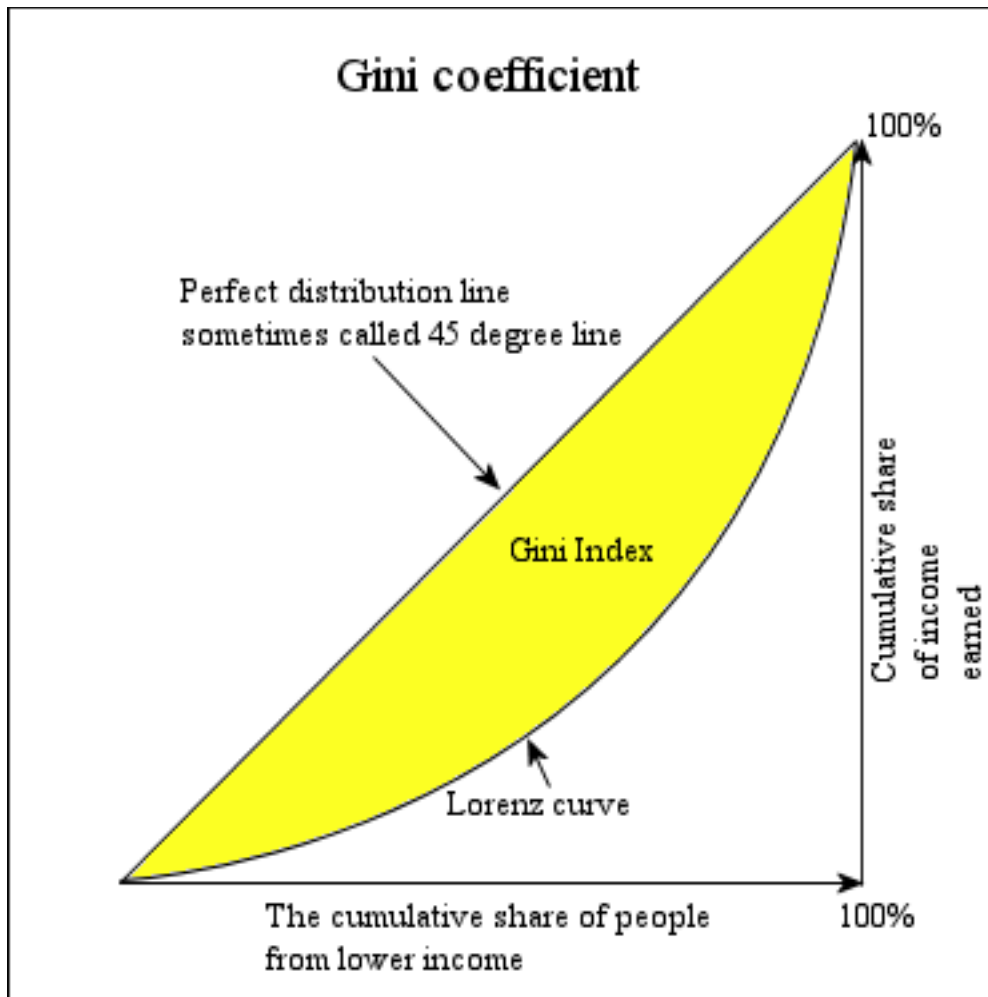


Table 1. Sample sizes and means (and standard deviations) of demographic information for data sets pertaining to each measure of prejudice.

| Measures of Prejudice | | N | Years | States | Waves | Males | Females | Age | Income | Education | Church Attendance |
|---|--|--------|-------|--------|---|-------|---------|--------------|------------|------------|-------------------|
| Prejudice towards African Americans | | | | | | | | | | | |
| Symbolic Racism* | | 7,954 | 8 | 47 | 1986 1988 1990 1992 1994 2000 2004 2008 | 3,713 | 4,241 | 46.6(17.30) | 2.99(1.10) | 4.29(1.67) | 3.25(1.63) |
| Feeling Thermometer* | | 19,961 | 17 | 48 | 1970 1972 1974 1976 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2004 2008 | 9,169 | 10,792 | 45.85(17.46) | 3.00(1.10) | 4.02(1.73) | 3.17(1.63) |
| Aid to Blacks* | | 20,616 | 18 | 47 | 1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2004 2008 | 9,621 | 10,995 | 45.41(17.28) | 3.05(1.10) | 4.09(1.71) | 3.18(1.63) |
| Fair Jobs to Blacks* | | 6,241 | 8 | 47 | 1972 1986 1988 1992 1996 2000 2004 2008 | 3,020 | 3,221 | 46.47(17.07) | 3.06(1.11) | 4.25(1.75) | 3.21(1.62) |
| Ingroup Bias* | | 17,185 | 15 | 48 | 1970 1972 1974 1976 1980 1982 1984 1988 1992 1994 1996 1998 2000 2004 2008 | 7,896 | 9,289 | 45.49(17.36) | 3.00(1.10) | 4.02(1.73) | 3.16(1.63) |
| Opposition to Affirmative Action | | 8,485 | 9 | 48 | 1986 1990 1992 1994 1996 1998 2000 2004 2008 | 4,021 | 4,464 | 46.98(17.32) | 3.00(1.11) | 4.38(1.66) | 3.25(1.62) |
| Prejudice towards Hispanics | | 10,867 | 10 | 48 | 1976 1980 1984 1988 1992 1994 1996 2000 2004 2008 | 5,085 | 5,782 | 45.90(17.20) | 3.03(1.09) | 4.29(1.64) | 3.22(1.63) |
| Feeling Thermometer* | | 10,808 | 10 | 48 | 1976 1980 1984 1988 1992 1994 1996 2000 2004 2008 | 5,059 | 5,749 | 45.46(17.17) | 3.03(1.09) | 4.29(1.64) | 3.23(1.63) |
| Ingroup Bias* | | | | | | | | | | | |
| Prejudice towards Asians | | | | | | | | | | | |
| Feeling Thermometer* | | 4,038 | 4 | 46 | 1992 2000 2004 2008 | 1,918 | 2,120 | 47.46(17.16) | 2.99(1.11) | 4.48(1.61) | 3.29(1.63) |
| Ingroup Bias* | | 4,012 | 4 | 46 | 1992 2000 2004 2008 | 1,908 | 2,104 | 47.42(17.15) | 2.99(1.11) | 4.48(1.62) | 3.30(1.63) |
| Prejudice towards Homosexuals | | | | | | | | | | | |
| Feeling Thermometer** | | 8,833 | 6 | 49 | 1988 1992 1996 2000 2004 2008 | 3,990 | 4,843 | 46.03(17.02) | 2.84(1.14) | 4.24(1.69) | 3.20(1.60) |
| Law against Discrimination** | | 9,212 | 6 | 49 | 1988 1992 1996 2000 2004 2008 | 4,173 | 5,039 | 46.26(17.10) | 2.83(1.14) | 4.21(1.69) | 3.19(1.60) |
| Prejudice towards Illegal Immigrants | | | | | | | | | | | |
| Feeling Thermometer** | | 7,835 | 5 | 44 | 1988 1992 1994 2004 2008 | 3,610 | 4,225 | 45.46(16.97) | 2.86(1.13) | 4.17(1.68) | 3.19(1.61) |

* Samples that included responses from White respondents only.

** Samples included 70% Whites, 15% Blacks, 2% Asians, 3% Native Americans, 9% Hispanics, and 1% Others

Table 2. Model estimates, nested model deviance tests, and random variance components of the model predicting prejudice of income inequality throughout the years and across the U.S. states.

| Measures of Prejudice | Model Estimate | 95% Confidence Interval | Nested Model Deviance Test [†] | Proportion of Variance Explained by Income Inequality |
|---|----------------------|-------------------------|---|---|
| | γ_{0i} (S.E.) | CI | χ^2 (df) | R ² year R ² state |
| Prejudice towards African Americans | | | | |
| Feeling Thermometer | -31.08(10.04)** | -49.76 to -10.40 | 606.47(10)*** | -.35 [‡] .07 |
| Ingroup Bias | 45.91(12.61)*** | 21.19 to 70.63 | 757.76(10)*** | -.35 [‡] .23 |
| Aid to Blacks | 3.31(0.86)*** | 1.62 to 4.99 | 667.35(10)*** | .29 .21 |
| Fair Jobs to Blacks | 2.35(0.80)** | 0.78 to 3.92 | 224.45(10)*** | .22 .08 |
| Symbolic Racism | 2.05(0.71)** | 0.65 to 3.44 | 721.68(9)*** | .21 .24 |
| Opposition to Affirmative Action | 1.46(0.56)** | 0.36 to 2.56 | 358.37(9)*** | .37 .05 |
| Prejudice towards Hispanics | | | | |
| Feeling Thermometer | 1.72(13.29) | -24.33 to 27.77 | 350.79(10)*** | .17 .04 |
| Ingroup Bias | 11.16(16.43) | -21.04 to 43.36 | 665.8(10)*** | -.05 .12 |
| Prejudice towards Asians | | | | |
| Feeling Thermometer | -0.66 (1.28) | -3.17 to 1.84 | 158.81 (9)*** | .19 .05 |
| Ingroup Bias | 25.23 (20.34) | -14.63 to 65.09 | 272.14 (9)*** | -.03 .17 |
| Prejudice towards Homosexuals | | | | |
| Feeling Thermometer | 0.75 (1.37) | -1.94 to 3.44 | 367.87 (9)*** | .05 .13 |
| Law against Discrimination | -0.28 (1.28) | -2.78 to 2.23 | 469.96 (9)*** | .14 .16 |
| Prejudice towards Illegal Immigrants | | | | |
| Feeling Thermometer | 33.90 (22.65) | -10.49 to 78.29 | 202.04 (9)*** | .33 .07 |

*** $p < .001$ ** $p < .01$

[†]Represents nested model comparison of the full model with the model without demographic variables.

[‡]To calculate R squared, I used the method offered by Snijders & Bosker (1994). In accordance with this method, negative R squared of 0.05 or more *might possibly* indicate model misspecification. However, according to Gelman & Hill (2007), it is not unusual to have an increase in variation (with a consequential decrease in R squared) at the aggregate level after adding a Level 2 predictor. The increase between-group variance in the model with predictors indicates true variation masked by the null model without predictors. This pattern is caused by correlation between individual-level variables and group-level errors. The model fit can be improved by including the averages of individual level variables as group level predictors. More statistical analysis is needed to make a definite conclusion. Since formula for estimating ingroup bias towards Blacks is calculated by subtracting the Black feeling thermometer rating from the White feeling thermometer rating for White respondents, I obtained an identical negative pattern for R squared.

Table 3. Comparison of regression coefficients of the bottom 95% of White income earners and 100% of respondents estimated from the samples corresponding to each prejudice measure.

| Measures of Prejudice | 100% | | Bottom 95% | |
|---|----------------------|--------|----------------------|--------|
| | γ_{01} (S.E.) | N | γ_{01} (S.E.) | N |
| Prejudice towards African Americans | | | | |
| Feeling Thermometer | -31.08(10.04)** | 19,961 | -30.83(10.37)** | 18,789 |
| Ingroup Bias | 45.91(12.61)*** | 17,185 | 48.43(13.00)*** | 16,153 |
| Aid to Blacks | 3.31(0.86)*** | 20,616 | 3.75(0.86)*** | 19,269 |
| Fair Jobs to Blacks | 2.35(0.80)** | 6,241 | 2.48(0.87)** | 5,814 |
| Symbolic Racism | 2.05(0.71)** | 7,954 | 2.31(0.71)** | 7,489 |
| Opposition to Affirmative Action | 1.46(0.56)** | 8,485 | 1.43(0.60)** | 7,928 |
| Prejudice towards Hispanics | | | | |
| Feeling Thermometer | 1.72(13.29) | 10,867 | 3.35(13.70) | 10,182 |
| Ingroup Bias | 11.16(16.43) | 10,808 | 10.12(17.00) | 10,128 |
| Prejudice towards Asians | | | | |
| Feeling Thermometer | -0.66 (16.75) | 4,038 | 1.47 (17.36) | 3,753 |
| Ingroup Bias | 25.23 (20.34) | 4,012 | 17.86 (20.75) | 3,731 |
| Prejudice towards Homosexuals | | | | |
| Feeling Thermometer | 0.75 (1.37) | 8,833 | 0.42 (1.39) | 8,367 |
| Law against Discrimination | -0.28 (1.28) | 9,212 | -0.35 (1.30) | 8,737 |
| Prejudice towards Illegal Immigrants | | | | |
| Feeling Thermometer | 33.90 (22.65) | 7,835 | 41.14 (22.61) | 7,450 |

*** $p < .001$ ** $p < .01$ * $p < .05$