Desegregation and Downward Intergenerational Mobility:
A Public-Value Approach to Analyzing the Effects of Social Constructions in the Segregated American South

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Abstract

This article offers a public-value justification for the use of the social construction framework in the study of race-based intergenerational income disparities. A longitudinal empirical application is presented in the behavioral analysis of Southern and formerly Border states post-\textit{Brown vs. Board of Education}. Focusing on pervasive persistence of school segregation in the region, I argue that this behavior is evidence of the continued perpetuation of deviant social constructions of African Americans at the state level despite the \textit{Brown} ruling. Using data from the U.S. Panel Study on Income Dynamics, the Southern Educational Reporting Service, and the U.S. Department of Education, I apply probit analysis to assess the longitudinal effect of these persisting social constructions on the likelihood of downward absolute intergenerational income mobility for White and African-American males. I find that historical resistance to school desegregation in one’s childhood state of residence increases the likelihood of earning less than his father in low-spending states, but not in high-spending states. An additional finding suggests that government spending decreases the likelihood of earning less than one’s father in high-spending states but not in low-spending states.

Introduction

Scholarly considerations of the intergenerational mobility concept are not novel; neither has their development been confined to a single discipline. Seminal contributions in economics (Becker & Tomes, 1979; Solon, 1992, 1999) have been primarily concerned with issues of income mobility, relying on the theoretical and empirical assumptions of the Becker (1964) model of human capital. Sociology approaches, however, have evolved along a different path—framing analysis in the context of occupational mobility (Blau & Duncan, 1967; Grusky, 1986).
Nonetheless, what both of these approaches have in common is their shared role in evidencing the continued salience of the idea of mobility fairness in the public consciousness.

Grusky (1986) recognizes the “growth of universal values” in the United States and the role this growth may have played in the promotion of increased “parity in mobility chances” (p. ii). More recently, in their analysis of the effect of government spending on intergenerational income mobility, Mayer and Lopoo (2008) classify the notion of “‘equal opportunity’” as a “recurrent goal of social policy” (p. 140; emphasis in original). Though thoroughly economistic in design, this work is intended as an extension of such efforts, explicitly considering the achievement of intergenerational income mobility as a matter of public value—and the lack thereof evidence of public-value failure. Relying on the Bozeman (2002) public-value-failure model, I make a case for the use of the social construction framework in the behavioral analysis of actors (institutional and non-) in the policy arena. More precisely, the model presented will offer methodology for estimating the effect of “actor behavior”—their perpetuation of negative social constructions associated with particular target groups—on the likelihood for public-value attainment or failure.

A longitudinal empirical example is presented, analyzing actor behavior in Southern and formerly Border states post-Brown vs. Board of Education\(^1\). Focusing on pervasive persistence of school segregation in the region, I argue that this behavior is evidence of the continued perpetuation of deviant social constructions of African Americans at the state level despite the Brown ruling. Using data from the U.S. Panel Study on Income Dynamics (PSID), the Southern Educational Reporting Service, and the U.S. Department of Education, I apply probit analysis to assess the effect of these persisting social constructions on the likelihood of downward absolute intergenerational income mobility for White and African-American males. I find that historical

resistance to school desegregation in one’s childhood state of residence increases the likelihood of earning less than his father in low-spending states, but not in high-spending states. An additional finding suggests that government spending decreases the likelihood of earning less than one’s father in high-spending states but not in low-spending states.

**Background and Theoretical Model**

Economic approaches to intergenerational income mobility estimation have most often estimated the relationship between parental economic status ($Y_p$) and the economic status of their child during adulthood ($Y_c$) as follows (Mayer & Lopoo, 2008):

$$\ln Y_c = \beta_0 + \beta_1 \ln Y_p + \varepsilon$$

(1)

$Y$ represents income as a proxy for economic status and $\beta_1$ is intergenerational income elasticity—the elasticity of a child’s income with respect to the income of their parents. Because this study is interested in the likelihood of downward absolute intergenerational income mobility, a slight modification is appropriate in order to properly conceptualize the relationship of interest:

$$Downward Mobility_c = \beta_0 + \beta_1 \ln Y_p + \varepsilon$$

(2)

$Downward Mobility_c$ is a dichotomized indicator of whether a child’s income during adulthood is less than their parents’—an example of downward absolute intergenerational income mobility.

To the extent that the achievement of upward mobility can be classified as a public value, instances of downward absolute intergenerational income mobility may be classified as what Bozeman (2002) might describe as public-value failures. “Public (-value) failure occurs when core public values are not reflected in social relations, either in the market or in public policy” (p. 150). In observed cases of downward absolute intergenerational income mobility, neither the functioning of economic markets nor public policy has been sufficient enough to achieve the public-value goal of upward mobility.
Bozeman (2002) goes on to offer a list, though admittedly not exhaustive, of diagnostic criteria for identification of public-value failures (pp. 150-151). Those criteria include observance of inadequate political processes for the articulation and aggregation of public values; imperfect government monopolies in the provision of public goods and services; hoarding of benefits associated with public goods and services by a particular subset of the polity; scarcity of suppliers of public goods and services; failure of policy actors to account for long-run policy externalities that run counter to public value; policy practices that prescribe substitutability rather than resource conservation (despite the non-existence of adequate substitutes); and policy actions that are a threat to human dignity and subsistence. While Bozeman (2002) articulates these criteria as public-value failures in and of themselves (and in a broad sense I agree with this interpretation), the methodological framework I present treats these criteria as indicators that are theorized by the public-value-failure model to have a causal relationship with the occurrence of public-value failure. This relationship can be modeled as follows:

\[
\text{Public-Value Failure} = \beta_0 + \beta_1\text{Diagnostic Criterion}_1 + \ldots + \beta_k\text{Diagnostic Criterion}_k + \epsilon \tag{3}
\]

Public-Value Failure is a dichotomized indicator of whether an instance of public-value failure has occurred. Diagnostic Criterion\textsubscript{1-k} are conceptual variables that measure the degree to which the diagnostic criteria offered by Bozeman (2002) are observed.

The challenge with such an approach, however, is that Bozeman (2002) developed the public-value-failure model with the intention that it would serve primarily as a “diagnostic tool” to “promote deliberation about public value (and its relation to economic value)” (p. 150; insert

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\[\text{While the modified relational application of the public-failure criteria presented in this work does depart somewhat from Bozeman’s (2002) presentation, this departure is not a provocative one. In fact, Bozeman (2002) acknowledges that an observed manifestation of a public-failure criterion “is not necessarily a public failure” (p. 151; emphasis in original). Furthermore, the claim is made that in such instances “the diagnostic criterion at least serves as a red flag” (p. 152).} \]
in orginal). Although the theoretical development of the model is rich, limited advice is offered to aid in the operationalization of these criteria or their use in empirical analysis. Moreover, because the public-failure model is developed in response to “the limited (existence of conceptual) tools for analyzing public value and the execution of political authority” (p. 145; see also Wamsley & Wolf, 1996 cited in orginal), any such attempt must both recognize and operationalize explicitly this duality of concern. In order to operationalize these criteria—that can essentially be viewed as manifestations of (policy) actor behavior that are hypothesized to increase the likelihood of public-value failure—I rely on guidance provided by Schneider and Ingram (1993) in their development of the social construction framework.

Schneider and Ingram (1993) contend that “the social construction of target populations refers to the cultural characterizations or popular images of certain persons or groups whose behavior and well-being are affected by public policy” (p. 334). Moreover, “these characterizations” depict “groups in positive and negative terms” that are perpetuated by policymakers according to each group’s respective level of political authority and that are manifested by public policy that determines “what government is supposed to do (and) which citizens are deserving (and which not)” (p. 334; second insert in orginal). Accordingly, “there exists significant pressure for public officials to provide beneficial policy to powerful, positively constructed target populations and to devise punitive, punishment-oriented policy for negatively constructed groups” (p. 334).

This junction of social construction and political influence produces “four types of target populations” including the advantaged (high power, positive construction), contenders (high power, negative construction), dependents (low power, positive construction), and deviants (low power, negative construction). To the extent that the castigatory policy directed toward certain
target populations can be attributed to the existence of a negative social construction and characterized by one or more of Bozeman’s (2002) diagnostic criteria (or others for which argument for inclusion can be made), operationalization becomes more practical. The diagnostic relationship can be re-conceptualized as follows:

\[ \text{Public-Value Failure} = \beta_0 + \beta_1 \text{Negative Social Construction} + \epsilon \] (4)

Negative Social Construction is a conceptual variable that serves as a proxy for some undesirable (in the sense that it runs counter to some public value) actor behavior that is the result of a negative social construction. Applying this revised framework in the context of intergenerational income mobility, a public-value approach for estimating the effect of negative social constructions on the likelihood for downward absolute intergenerational income mobility can be derived as follows:

\[ \text{Downward Mobility}_c = \beta_0 + \beta_1 \ln Y_p + \beta_2 \text{Negative Social Construction} + \epsilon \] (5)

Downward Mobility\(_c\) is a dichotomized indicator of downward absolute intergenerational income mobility. When Downward Mobility\(_c\)=1, a child’s income during adulthood is less than their parents’—a representation of public-value failure. When Downward Mobility\(_c\)=0, upward mobility is achieved and the public-value goal is realized. I hypothesize that the existence of negative social constructions will increase the likelihood of downward absolute intergenerational income mobility (or public-value failure) for members of the affected target population.

An Empirical Application: Southern and formerly Border States post-Brown

Empirical analysis of income inequality between African Americans and Whites in the United States, much like the broader concept of intergenerational mobility itself, has a long and multidisciplinary history. The example presented here, applies the downward mobility framework derived above in a panel analysis of African-American and White men and their sons who grew up in Southern and formerly Border States post-Brown. At issue here, is whether
persisting resistance to school desegregation in these states after the *Brown* ruling—actor behavior that perpetuated deviant social constructions of African Americans—has increased the likelihood for downward absolute intergenerational income mobility for African-American males. The model is estimated as follows:

\[ \text{Downward Mobility}_c = \beta_0 + \beta_1 \ln Y_p + \beta_2 \text{BlackEnrollment}_{64} + \epsilon \] (6)

Again, *Downward Mobility* \( _c \) is as dichotomous variable coded as 1 for observations of downward absolute intergenerational income mobility (and 0 otherwise) for African-American and White sons captured in the sample. \( Y_p \) is father’s income during adulthood—a proxy for parental economic status. \( \text{BlackEnrollment}_{64} \) is an interval-level measure of the percentage of a state’s African-American, school-aged population still attending formerly “all-Black schools” in 1964\(^3\)—a proxy for the level of discrimination in the son’s state of residence during school-aged years and a manifestation of deviant social constructions of African Americans at the state level. I hypothesize that the enrollment share has a positive and significant effect on the likelihood for downward absolute intergenerational income mobility for African-American sons.

On the advice of previous scholarship that finds that government spending may increase intergenerational mobility (Mayer & Lopoo, 2008), a control variable for government spending on education is also added. The revised model is estimated as follows:

\[ \text{Downward Mobility}_c = \beta_0 + \beta_1 \ln Y_p + \beta_2 \text{BlackEnrollment}_{64} + \beta_3 \ln \text{Government Spending}_s + \epsilon \] (7)

*Government Spending* \( _s \) is the historical average of government expenditures per pupil on education in each son’s childhood state of residence.

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\(^3\) Cascio, Gordon, Lewis, and Reber (2008) also use this measure, finding it to be predictive of aversion to school desegregation for Southern states.
A Few Comments on the Use of Social Constructions and the Post-Brown Decision

There exists little debate concerning the history of social, economic, political, and institutional disenfranchisement of African Americans in the United States. Furthermore, the scholarly examination of this history via the lens of the social construction framework is not unprecedented (see Delgado & Stefancic, 1995; Link & Oldendick, 1996; Pride, 1999). While (in theory) any time period since the arrival of the first African slaves to the continent could serve as the period of analysis for such a study, narrowing the focus of this study to the period post-Brown has distinct empirical and theoretical advantages. Namely, panel data are available during this period for American families across generations—making empirical intergenerational analysis possible. Also, because operationalization of negative social constructions requires an ability to show a reasonable level of intentionality behind policy decisions to be punitive in nature towards a particular target population, post-Brown analysis is ideal.

Although Brown establishes a new national legal precedent in 1954, outlawing racial segregation in public schools, varying levels of compliance are observed across Southern and formerly Border states. In 1964, for example, 100% of Mississippi’s African-American school-aged population remained in formerly segregated schools while concurrently the same measure for the state of West Virginia was only 12%\(^4\). In light of such evidence, I argue that exaggerated levels of school segregation—as observed in Mississippi—are clear indicators of discriminatory preference resulting from persisting deviant social constructions of African Americans. Furthermore, this persisting segregation represents several manifestations of public-failure criteria—among which are benefit hoarding of public education, direct threats to the dignity and subsistence of African-American communities in the South, and the (at least temporary) inability

\(^4\) Per the Southern Education Reporting Service (see references for detailed citation).
of the federal government to maintain its monopoly in the enforcement of constitutional law. The availability of school segregation data during this period makes operationalization possible.

Capturing this measure of discrimination for states in 1964 is necessary, however, given that beginning in 1964 with The Civil Rights Act, “federal legislation of the mid-1960’s changed the costs and benefits associated with maintaining segregation, generating new sources of pressure on school districts to desegregate” (Cascio et al., 2008, p. 298). By controlling for school desegregation measures during the academic year prior to the implementation of federal legislation, I avoid the capture of spurious influences on school desegregation that might have resulted from this new federal pressure on the states.

Data

Estimating whether resistance to school desegregation increases the likelihood for downward absolute intergenerational income mobility requires the collection of income data for parents and their biological and/or adopted offspring. Data on state-level segregation rates and historical education spending are also required. For individual-level data, the PSID is used. Since 1968, the PSID data have been collected from an ongoing longitudinal survey of a representative sample of families in the United States. Successive generations of children belonging to families that were a part of the original sample are added to PSID as separate families (along with their offspring) once they become adults, increasing sample size and enabling intergenerational comparisons and across time.

Using data from the PSID between 1968 and 2003, I collect income data on fathers and their sons that self-reported as present heads of household and reported positive income between
the ages of 30 and 45\textsuperscript{5}. I then averaged the yearly income of both fathers and their sons for years of non-missing data during this age range in order to derive a proxy for economic status during prime earning years. This technique, known as life-stage matching, allows for comparison of fathers’ and sons’ income during identical age ranges. A key assumption built into this approach is that due to the variability of individual characteristics that affect earnings as one ages, the relationships between fathers’ and sons’ incomes are incommensurable unless captured over identical age ranges\textsuperscript{6}. All income variables were also converted to 2012 dollars using conversion data acquired from the Bureau of Labor Statistics (BLS). Downward absolute intergenerational income mobility is coded as 1 (and 0 otherwise) for sons whose average income between the ages of 30 and 45 was less than their fathers’ during the same age range\textsuperscript{7}.

I merge state-level measures of school segregation in 1964 and measures of government spending with the PSID sample. Segregation measures are calculated from data published in a report by the Southern Educational Reporting Service on school desegregation in Southern and Border states. In order to approximate historical government spending on education, I averaged reported spending provided by the U.S. Department of Education on public primary and secondary education by state per pupil at the end of the decade for the 1960’s, 1970’s, and 1980’s\textsuperscript{8}. Primary childhood states of residence were determined to be the mode of reported states of residence for the father during the income collection period from age 30 to 45.

\textsuperscript{5} Wage income measures are utilized to account for the labor-market effects of human capital.

\textsuperscript{6} Other scholars have pursued alternate approaches; for example, Mayer and Lopoo (2008) measure parental economic status as family income in two-parent households during the years children were between ages 15 and 17 while measuring the child’s economic status during adulthood as family income at age 30. See also Chitej, Gouskova, and Stafford (2012) for an overview of life-stage matching methods and alternatives.

\textsuperscript{7} Prior to generating measures of downward intergenerational income mobility, intergenerational income elasticities were estimated as an additional robustness check to ensure the integrity of the data set. Solon (1992, 1999) suggests the intergenerational income elasticity in the U.S. is about .4; the calculated elasticity for the full, weighted sample is approximately .41.

\textsuperscript{8} These amounts were also converted to 2012 dollars per BLS data prior to averaging in order to ensure consistency with converted income data.
Table 1
Means and (standard deviations) for variables used in the analysis

<table>
<thead>
<tr>
<th></th>
<th>Full Sample</th>
<th>Low-Spending States</th>
<th>High-Spending States</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Spending &lt;$6000)</td>
<td>Spending &gt;$6000)</td>
</tr>
<tr>
<td>Downward Mobility</td>
<td>.571 (.495)</td>
<td>.521 (.500)</td>
<td>.594 (.492)</td>
</tr>
<tr>
<td>Fathers Income (ln)</td>
<td>10.942 (.643)</td>
<td>10.730 (.751)</td>
<td>11.041 (.559)</td>
</tr>
<tr>
<td>% of African Americans in Segregated Schools ('64)</td>
<td>25.799 (40.348)</td>
<td>61.224 (39.554)</td>
<td>9.127 (28.110)</td>
</tr>
<tr>
<td>Average State Education Spending Per Pupil (ln)</td>
<td>8.774 (.212)</td>
<td>8.539 (.087)</td>
<td>8.884 (.157)</td>
</tr>
<tr>
<td>N</td>
<td>911</td>
<td>345</td>
<td>566</td>
</tr>
</tbody>
</table>

Note: all dollar amounts are price-adjusted to year 2012 dollars

Results

Table 2 shows separate probit estimates of the full model (7) for African-American and White father-son pairs and according to average state-level spending on education⁹. In low-spending states, fathers’ income is highly significant and positively correlated with the likelihood of his son earning less than him for both African Americans and Whites. For African-American sons, however, this effect is larger than for Whites. Segregation measures are also found to be significant and positively correlated with the likelihood for downward absolute intergenerational income mobility for African-American sons in the sample, offering support for my primary hypothesis. Unexpectedly, there is also a significant and positive effect for White sons, though smaller. The effect of government spending is found to be insignificant for both groups.

⁹ PSID was also used to capture race information for individuals included in the sample.
Estimates for African-American sons in high-spending states suggest that fathers’ income appears to have a positive effect on the likelihood for downward absolute intergenerational income mobility just outside of the 10%-level of significance. Segregation measures, however, appear to be highly significant and negatively correlated with the likelihood for downward mobility. The effect of government spending on the likelihood for downward mobility for African Americans in high-spending states is also negative but just outside of the 10%-level of significance.

For Whites in high-spending states, the effect of fathers’ income is highly significant and positively correlated with the likelihood of downward mobility. Segregation measures are insignificant and the effect of government spending is highly significant and negatively correlated with the likelihood of downward mobility.

Mostly significant and positively correlated estimates for the effect of fathers’ income on the likelihood for downward mobility in all model specifications are consistent with the
expectation that the higher one’s father’s income becomes, the more likely one is to earn less than his father (despite the possibility of earning a high income in his own right). Findings suggesting that increased levels of historical segregation in sons’ childhood state of residence have a significant effect on increasing the likelihood of downward mobility for African Americans in low-spending states are consistent with expectations associated with the influence of negative social constructions on the likelihood for occurrences of public-value failure. Similarly significant, yet smaller, estimates for Whites suggest that persisting discriminatory practices towards African Americans also had a negative impact on the income of future generations for White males. This interpretation, given that the social construction approach theorizes discrimination to be evidence of the propensity to implement a broad swath of punitive public policy toward African Americans, is consistent with urban economics literature suggesting that segregation is damaging to economic growth in a manner not confined to affecting only those who are members of the targeted race group (see Li, Campbell, & Fernandez, 2013 for recent example).

Highly significant estimates for African Americans in high-spending states suggesting that sons who grew up in states with higher levels of segregation are less likely to experience downward mobility, though they seem to contradict with the social construction hypothesis presented in this paper, are less damaging to the model when placed in the context of the limitations of the PSID sample used for this study. Only two Southern states—Virginia and Florida—had historical education spending above $6000, with the overwhelming majority of African Americans in the sample for high spending Southern and Border states growing up in Virginia. Given the low variability in observed discrimination and the fact that historical per capita incomes for Virginia (and surrounding areas) are among the highest in the country due to
government demand for high-skilled labor in this region, this result is not a major cause for concern. Results also indicate that higher levels of government spending may decrease the likelihood of downward mobility for both Blacks and Whites.

**Conclusion**

Public-value discourse does not suffer from a lack of legitimacy; rather, the positions it espouses often suffer from the lack of appropriate conceptual structures on which they can rely (Kuttner, 1997; later Bozeman, 2002). Furthermore, (it is worth restating that) the policy scholar’s toolbox, while adequate to confront issues of market performance, is still deficient in its means for “analyzing public values and the execution of political authority” (Bozeman, 2002, p. 145; see also Wamsley & Wolf, 1996 and Wolf, 1988 cited in orginal). Thus, the development of empirical techniques containing both political-power and public-perception dimensions is non-trivial. The social-construction approach advocated in this work is an important step in the process of advancing the utility of the public-failure model beyond diagnostics and closing the existing gaps in theory and technique.

Though the approach presented holds much potential, the estimates presented here are not free from theoretical or empirical limitations. Certainly, the operationalization of social constructions (especially those that do not rely on public opinion survey data) is a difficult task and I concede that this effort does little to provide an applicably replicable methodology for doing so. While the results evidence levels of significance, this work and future endeavors modeled in its likeness should attempt to develop an indexed measure of social construction that includes a multitude of elements—both empirical and interpretivist—across time. I expect future work of my own to offer methodological guidance in that respect. Also, further iterations of this

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10 See Bureau of Economic Analysis Regional Data File for detailed historical per capita income and industry growth by state: [http://www.bea.gov/iTable/index_regional.cfm](http://www.bea.gov/iTable/index_regional.cfm)
work need not limit the definition of downward mobility to an income-based context and should extend empirical consideration beyond the scope of men only.

The results of the empirical application, however, do suggest that the existence and perpetuation of negative social constructions may increase the likelihood of public-value-failure outcomes for affected groups. That is, deviant social constructions of African Americans in Southern and formerly Border states may have proven to be seriously detrimental to the income of future generations and inherently preventative to the public-value- and equity-promoting intentions of U.S. social policy post-\textit{Brown}. Results also imply that increased government spending may play a significant role in reducing the likelihood for downward mobility.

References:


Panel Study of Income Dynamics, public use dataset. Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI (2012).


