Structure and Discretion:

Missing Links in Representative Bureaucracy

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Abstract

Studies of representative bureaucracy highlight both passive and active forms of representation. Passive representation refers to similarities in demographic characteristics between bureaucrats and client populations. Active representation refers to situations where bureaucracies work to further the needs of a particular group of people. In this study, we examine the role employee discretion plays in linking passive and active forms of representation in a sample of 600 school districts in Texas. Specifically, we argue that active representation is enhanced in organizations that vest greater discretion in their employees. The results of our study reveal that minority student performance rises under organizational structures that promote, rather than limit, minority teacher discretion.

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Bureaucracies are political institutions capable of representing the interests of citizens just as legislatures or executives do (Mosher 1969; Rourke 1984). Some bureaucracies are designed to be active representatives, to seek out and further the interests of a particular group of people (e.g., the original Department of Agriculture; the Department of Veteran's Affairs; the Office for Civil Rights, see Romzek and Hendricks 1982). While most bureaucracies are not designated as active representatives, they still can perform representation functions. The theory of representative bureaucracy links passive representation (that is, similar demographic origins) to active representation. This paper extends the literature on representative bureaucracy by focusing on the key element of discretion. First, the general theory of representative bureaucracy will be briefly outlined. Second, a structural measure of discretion will be presented and defended as reliable under certain specified conditions. Third, the hypothesis that representation will be more effective in organizations that vest greater discretion in their employees will be tested using a large set of public organizations. Fourth, the implications of these results for a general theory of organizations will be noted.

The Theory of Representative Bureaucracy

Until ten years ago, the theory of representative bureaucracy was relatively simple (see Long 1952; Selden 1997). In every organization, individuals who make decisions exercise discretion because organization rules cannot cover every contingency and because organizational socialization is rarely total (Downs 1967; Thompson 1967). If individuals are assumed to be utility maximizers, then individual bureaucrats with discretion are likely to use that discretion to

make decisions that reflect their own values. One source of these values is the socialization process, and one of the most enduring relationships in the U.S. is the impact of race and ethnicity on values (Carmines and Stimson 1989). Representative bureaucracy, thus, suggests that if a bureaucracy is broadly representative of the public it serves, then it is more likely to make decisions that benefit that public (Thieleman and Stewart 1996).

In general the ability of bureaucrats to translate their values into public policy is affected by a wide variety of other factors (Saltzstein 1979). Because the limits on representative bureaucracy in many cases are substantial (e.g., organizational socialization, structured jobs, lack of relevant decisions, location in the hierarchy, legal constraints, etc. see Saltzstein 1979, 470; Selden 1997), research on the topic has shifted its focus to specifying the precise ways representative bureaucracies perform their functions and to assessing relevant policy impacts. For a representative bureaucracy to translate from active to passive representation, bureaucrats need to have policy discretion over an area that is directly linked to their values. Several works now specify when this is likely to happen. Meier (1993) finds that political support external to the organization facilitates the representation process and implies that relationships might not be linear. Selden (1997) introduces the concept of role and presents evidence that adopting the role of a representative is more important than demographic origins (in her case race). Hindera (1993) finds in the EEOC that race and ethnicity, but not gender, are correlated with favorable decisions. Riccucci and Saidel (1997) examine the neglected role of political executives.

One important concept in the theory of representative bureaucracy that has received little empirical attention, however, is discretion. In organizations designed to be active representatives, discretion is of less importance because the organization's goals are to represent and thus

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procedures can be established that enhance representation. In other bureaucracies, other goals

take precedence. For representation to occur, the bureaucrat must have a sphere of influence to

take actions that reflect the specific values he or she holds. This implies that the bureaucrat must

have and exercise discretion in an area where the values are relevant and results can observed.

Discretion merely makes representation possible in such an organization; it does not mandate it.

Consistent values (that is, values relevant to the concern being represented) and discretion are

both necessary for a bureaucracy to be representative. The result should be a correlation between

representative bureaucracy and policies that benefit the represented (Saltzstein 1979, 472; Dolan

2000).

Structure and Discretion

While discretion is not an easy concept to measure, by restricting one's attention to

organizations that perform the same general function, one can begin to isolate the variable. An

excellent review by Scott (1997) finds that discretion varies with organizational factors,

characteristics of the decisionmaker, and aspects of the decision (such as type of clientele). This

study will focus on the organizational element in discretion.[1] Organizations use a variety of

methods to structure and shape the actions of individual bureaucrats (Barnard 1938; Mintzberg

1979). Some organizations rely heavily on socialization (Kaufman 1960), others stress a

common educational background or training (Mintzberg's 1979 professional bureaucracy), and

others rely strongly on the supervision and hierarchy. Scott (1997) links rules, "red tape," and

procedures to the extent of discretion. Mintzberg, in particular has paid a great deal of attention

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[1]In his experimental study, Scott (1997) finds that organizational factors are generally
more important than characteristics of the decisionmaker or the clientele although all three
factors influence the willingness to exercise discretion.

to control and suggests that methods of control vary greatly across different types of organizations. This variation across types of control, therefore, means that objective measures such as span of control have different meanings depending on the type of organization and how it is structured.

Despite this variation, within a given type of organization, a structural measure like span of control should be directly related to discretion. *All thing being equal*, the more individuals a person supervises, the more discretion that person must permit subordinates simply because the supervisor's time is limited (see Price and Mueller 1986; Golembiewski 1962; Meier and Bohte 2000). Similarly, if a subordinate knows that his or her supervisor must deal with 15 subordinates rather than five say, the subordinate knows that the supervisor must permit individuals to exercise more discretion. Although individuals might vary on how much changes in span of control affect closeness of supervision, in general within the same type of organization, broader spans of control should be correlated with more street-level discretion (see Golembiewski 1962).

The linkage between span of control and discretion is stronger if one views span of control from the perspective of the entire organization. Wide spans at one part of the organization can often be countered by narrow spans at other levels (Mintzberg 1979). The best measure of structural discretion, therefore, considers spans of control at more than one level in the organization, if possible for the entire organization.

The Study Design

An ideal setting for a study of discretion and representative bureaucracy would be a set of organizations that all perform similar functions. Because functions and occupational mixes

likely affect spans of control and how closely they generate discretion (Mintzberg 1979; Scott 1997),[2] only with a set of similar organizations employing the same types of person to perform the same task can we be sure that wider spans of control necessarily translate into greater discretion at the lower levels of the organization. An ideal data set would also have measures of representation, measures of some output that could reflect discretionary decisions, and measures of organizational structure.

The Texas school district data set fits these criteria well. It contains information on 670 school districts with at least 500 students for a four year period from 1994-97 resulting in a total of 2680 cases. In addition to measures of the key concepts (see below), teachers are the type of street-level bureaucrats (Lipsky 1980) that one would expect to exercise a great deal of discretion. Teachers are well-educated professionals who interact with students on a continual basis with only modest direct supervision by administrators. An administrator who attempts to closely supervise a teacher needs to make a serious time commitment to monitor lesson plans, review course materials (that are often outside the administrator's area of expertise), and actually sit in on class sessions. This substantial time commitment means that as the number of teachers reporting to each principal increases, a principal has even less time to devote to each individual teacher. In such circumstances teacher discretion should increase even more.

The Dependent Variable

Our dependent variable, used to measure the transformation of passive representation into active representation, is the percentage of minority students who pass the Texas Assessment of

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[2]Scott (1997, 49), for example, shows that individuals trained as MPAs different from those trained in social work in their willingness to exercise discretion in regard to welfare recipients.

Academic Standards (TAAS) exam. This is an annual standardized test given in grades 3-8 and as an exit exam (which students must pass to graduate). The TAAS measures basic skills; and while basic skills are not the only objective of education systems, they are the essential building blocks of higher level skills and are a standard that many use to assess school performance.

The representation function for student test scores is more complicated than the representation function for granting loans to minority families (Selden 1997), deciding discrimination cases (Hindera 1993) or grouping, tracking and disciplining students (Meier and Stewart 1991). A teacher cannot directly change a minority student's test score but must somehow alter that student's educational experience so that the student performs better on exams.

Minority teachers might affect minority student test scores in four distinct ways. First, minority teachers could serve as role models for minority students. A student with appropriate role models is likely to develop higher aspirations, and motivation is positively correlated with student performance (Cole 1986, 332). Second, teachers are key decisionmakers in a variety of decisions that affect the quality of education available to the student. Meier and Stewart (1991) find that minority teachers are associated with fewer minority students being tracked into special education and more admitted to gifted classes. Minority teachers are also associated with more equitable disciplinary practices. Each of these factors should be positively related to minority student test scores. Third, minority teachers might well have additional insight into how to motivate and teach minority students (Moore and Johnson 1983, 472; Aaron and Powell 1982, 55; but see Ehrenberg, Goldhaber and Brewer 1995). Each minority teacher, after all, has also experienced the school system as a minority student. Fourth, in a provocative hypothesis, Meier, Wrinkle and Polinard (1999), using the logic of Becker (1993) argue that we should expect

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representative bureaucracies to be more effective simply because they do not establish racial barriers to entry. That is, because such organizations have no preference for race, race will not offset decisions that would be normally based on employee productivity (Becker 1993). If representative bureaucracies are more effective, then minority test scores should rise along with the test scores of white students.

Given these four methods of influence, representative bureaucracies in education do not rely on teacher A teaching student B this year. Teachers impacts might be in previous years with those impacts persisting over time, through influencing tracking decisions, or even as a role model with no direct contact with the student at all. Representation, as a result, should be thought of as an organizational process rather than an individual processes; what Weissberg (1978) calls collective rather than dyadic representation. Because examining the representation process at the individual level could miss one of more ways teachers might affect students, the appropriate level of analysis is the organization, in this case, the school district.

Independent Variables

Representation

Representation is measured at the street level in this research; it is the percentage of the teaching faculty who are either African American or Latino.[3] The percentage measure is used rather than a ratio because the percentage measures indicates the likelihood that a minority student will come into contact with a teacher who is also a minority. These districts have an

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[3]The state of Texas provides information only for blacks, Latinos and Anglos. All other minorities are grouped in the category "other." Given the vast differences between Asian Americans and say Native Americans, this other category contains both advantaged and disadvantaged students. Examining the "other" students along with more traditional minorities, therefore, is somewhat problematic.

average of 12.8% minority faculty with a standard deviation of 19.5 (see table 1). The measure is positively skewed; many districts have few or no minorities on their faculty, and a few districts have a majority.

[Table 1 About Here]

Discretion

The second key independent variable is the structural measure of discretion. We argued above that wider spans of control allow greater line discretion, all other things being equal. Two spans of control are of concern--first-line supervision and midmanagement. First-line supervision involves the supervision of teachers by administrators, usually principals. Spans of control at this first-line level are generally broad, reflecting the classroom autonomy of teachers; the first line span of control measure was calculated by dividing the number of teachers in a district by the number of principals and assistant principals. For the districts in this study first-line span of control variable averaged 13.8 with a standard deviation of 3.2.

Midmanagement spans of control reflect the supervision of campus level administrators (that is, principals and assistant principals) by central office administrators (assistant superintendents, etc.). These are measured by the ratio of campus level administrators to central office administrators. At this level, spans of control are much narrower averaging only 2.4 with a standard deviation of 1.3.

Our argument on discretion suggested that overall spans of control in the organization rather than simply those at one level were the most important. In regard to schools, central office administrators can affect teachers' jobs in two ways. First, by closely supervising principals, they encourage principals to treat subordinates (teachers) in a similar manner. Second, central office

administrators can proliferate reporting requirements that require teachers to spend their time conforming to organizational rules rather than focusing on their core function. To create this multi-level measure, we multiplied the first-line span of control for the organization by the midmanagement level span of control. This figure represents the total number of persons under the direct or indirect supervision of the average central office administrator. The mean for the districts was 34.6 with a standard deviation of 23.9. The measure is negatively skewed with a median of 29.

This figure retains its substantive meaning. A overall span of control of 30, for example, indicates that a central office administrator supervises 30 total employees. These employees might be clustered in a variety of ways. To illustrate, a midmanagement span of control of 5 and a first-line span of 6 would produce the same figure as a midmanagement span of 3 and a first line supervision of 10. Larger overall spans, in theory, should produce less direct supervision and thus more discretion for teachers, all other things being equal.

Control Variables

To assess the relationship between structure and representation, several other factors that affect student performance need to be added in the analysis as controls. Our goal is not to contribute to the education literature and thus not to estimate the perfect education production function. Our objective is to assess the linkage between structure and representative bureaucracy. As a result, we tried to include a wide range of controls even though this results in a degree of collinearity; that collinearity affects the wealth/income variables to a substantial degree. Eleven such controls will be included. Poverty, and thus social class, is negatively correlated with student performance on standardized tests and other indicators (Coleman 1961; Necochea and

Cune 1996; Jencks and Phillips 1998). Learning takes place not only in school but also in the home; middle-class students frequently have access to computers and other educational tools; they also tend to have access to better preschool programs. Four social class measures are included--the percent of students who are eligible for free or reduced price lunches, the percent of black and Latino students, and median family income.[4]

In the rapidly changing world of educational technology, teacher experience is an enigma. Traditionally, experienced teachers were considered an advantage since the actual craft of teaching took time to learn. Each teacher eventually figured out what worked and what did not. At the same time, teacher training has become more rigorous with higher standards, and in many states competency exams are in place. New techniques including those for teaching disadvantaged students continue to be developed. This suggests teacher experience might actually be a detriment simply because new teachers are better trained. Our measure of teacher experience is the average number of years of teaching. We also include a measure of teacher education–the percentage of teachers with at least an MA degree.

Class size is at the center of many education reforms. Recent experimental studies with large numbers of students confirm that class size reductions are positively associated with higher student performance (Wenglinsky 1997) because teachers can spend more time with individual students. Disadvantaged students appear to benefit more from class size reductions than do nondisadvantaged students (Bohte 1999).

The impact of school finances on student performance has been controversial because

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[4]Including all these variables means the impact of black students is the impact separate from any influences resulting from income or poverty.

several meta analyses by Hanushek (1996; 1986) come to pessimistic conclusions. At the same time, another meta analysis arrives at more positive conclusions (Hedges and Greenwald 1996). Recent work that examines changes in school finances in a longitudinal framework rather than cross-sectionally also find that money does matter in educational outcomes (Murray 1995; Evans, Murray and Schwab 1997; Bohte 1999). Our measures of school resources are the dollars spent per student on instruction and the average teacher's salary.

Two final control variables are district enrollment and the Anglo pass rate. District size might affect the potential size of the spans of control, and some literature links district size to student performance (Jencks and Phillips 1998). The Anglo pass rate is included to control for the overall quality of education delivered by the school district (see Weiher 2000; Jencks and Phillips 1998). This means that the percentage of minority teachers must be correlated with minority student performance even after controlling for Anglo student performance.[5]

Estimation and Findings

With 670 cases and four years of data, we have a pooled time series. Pooled data sets must address questions of serial correlation and can be affected by heteroscedasticity (Stimson 1985). To control for serial correlation, a series of dummy variables for individual years was included in all regression equations. Test scores in Texas have improved dramatically over this time period, and these controls also adjust for that fact. Heteroscedasticity was examined by assessing the residuals in each of the cross-sections (i.e., the individual years). The residuals did not show any apparent signs of heteroscedasticity. As a check for this conclusion, we

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[5]This relative comparison means that we cannot examine the provocative Meier et al. (1999) hypothesis about the influence of minority teachers on non-minority students.

reestimated the models with appropriately weighted regressions and found the similar results.

To determine if our structural measure of discretion affects the representative bureaucracy relationship, we first estimated a base regression without considering structure. The results of that regression appear in table 2. The control variables generally perform as expected with positive relationships for Anglo pass rates, family income, teacher's salaries and expenditures and negative relationships for race, ethnicity, class size and enrollment.[6] For the teacher experience and education measures, the relationships are negative consistent with the notion that teacher training has benefitted from recent improvements. The key variable of concern, however, is for minority teachers; and this relationship is positive as expected. All other things being equal, a one percentage point increase in minority teachers is associated with a .20 percentage point increase in minority student pass rates. While this relationship is not large, it is significant and in line with other studies of minority teachers (Weiher 2000; Meier et al. 1999).

[Table 2 About Here]

If discretion mediates the relationship between active and passive representation, we would expect that minority teachers would have a greater impact on minority student test scores in organizations with wider spans of control. We divide our set of schools into those with a discretion measure of greater than 29 (the median) and those with a discretion measure of less than 29.[7] If our hypothesis is correct, the size of the regression slope for the high-discretion

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[6]Poverty is unrelated to performance but only because it is collinear with a variety of the other wealth measures that are included in this table.

[7]We used a median split rather than an interaction term for two reasons. First, collinearity as noted above is already a concern and interaction terms generate a great deal of collinearity. Second, the interaction term's interpretation is more complex than the interpretation of the coefficients for the split regressions. The relationship found in Table 3 is relatively stable

organizations should be larger than the size of the slope for the low-discretion organizations.

Table 3 presents these two regressions, and they provide support for the hypothesis. In high discretion organizations, a one percentage point increase in minority teachers is associated with a .24 percentage point increase in minority student test scores, all other things being equal. The size of this relationship is approximately 20% larger than the relationship in all organizations. In low discretion organizations, the relationship drops to .16. In low-discretion organizations the representation of teachers is associated with smaller gains for minority students compared to the gains in high discretion organizations.[8]

[Table 3 About Here]

A brief glance at the other coefficients suggests that representation is not the only organizational process affected by structure. The coefficients for teacher's salaries, advanced degrees, family income, and low income students are also different from each other. While a full discussion of these differences is beyond the scope of this paper, they suggest that structure could well be a significant variable that conditions a wide variety of processes and results in these organizations (see Scott 1997).

In our introductory discussion we argued that one needs to look at the overall span of control in the organization rather than simply examine it at one level. To verify our intuition, table 4 replicates the results but uses the average first-line span of control only (the ratio of teachers to campus administrators). High-discretion agencies have spans of control greater than

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relative to different cut points. Sensitivity analysis shows that the real differences are for spans of control above 35.

[8]This result is robust to different specifications and is not affected by including or excluding individual variables.

13.5 teachers per school administrator. Again the relationship for representation in high discretion agencies increases but just slightly, and the relationship in low discretion agencies falls but just slightly. The differences are not statistically significant. The interaction between representation and discretion, therefore, exists only when the structure of the entire organization is considered.

[Table 4 About Here]

The implications of tables 3 and 4 are that structure should be considered an organizational level concept. Changes in structure at one level of the organization can be compensated for with opposite changes at other levels of the organization (see Mintzberg 1979). Only by considering the overall structure of an organization can a manager be sure that structural changes are likely to have their intended impact on the organization.

Conclusion

Organizational structures that enhance discretion are desirable because they transform passive representation into active representation for minority populations. In the present case, African-American and Hispanic students typically face a wider range of problems than middle-class white students. Having successfully advanced through the educational system themselves, minority teachers may possess special insights and skills that may be of use in educating minority students. Organizational structures that promote discretion allow minority teachers to take concrete action in shaping the performance of minority students, turning passive teacher empathy over the problems of minority students into a pro-active approach to solving problems.

Our findings on one structural attribute, span of control, reveal that wide spans of control should lead to more operator discretion, which subsequently leads to improvements in

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organizational performance. One of the ironies of bureaucratic organizations is that employees are often hired because they have expert knowledge in a particular area but organizational rules and structures prevent them from using this knowledge as they see fit (Wilson 1989, 149). Teachers are hired precisely for their expertise in educating students, yet placing tight limits on their discretion may squander the package of skills they bring to their jobs. For example, Chubb and Moe (1990, 89), in examining a sample of high and low performing American schools, found that teachers in academically superior schools were entrusted with more responsibilities and discretion than their counterparts in low-performance schools.

In terms of broader implications for organization theory, our findings on structure and discretion suggest that rigid structural controls over employee discretion are less necessary when employees are highly professionalized. Professionals operate under norms of conduct, and assuming that organizational leaders believe in the value of these professional norms, reducing structural controls over employee discretion is a viable option. This line of reasoning is not meant to imply that professional norms eliminate the need for structural controls over employee discretion. Rather, it suggests that professional norms are a conditioning agent that moderate the need for tight structural controls over employee discretion.

Finally, this study adds to the literature on representative bureaucracy. Prior studies linking active and passive representation have all assumed that bureaucrats had discretion but made no attempt to measure it. Within similar types of organizations, structural measures of span of control are a reasonable estimate of individual discretion. Discretion, we find, strengthens the relationship between active and passive representation. Although this study focused only on one type of organization, it suggests that the linkage between structure and

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representation might also hold in other types of organizations.

References

Aaron, Robert and Glen Powell.

    1982. "Feedback Practices as a Function of Teacher and Pupil Race during Reading

        Group Instruction." *Journal of Negro Education* 51 (Winter): 50-59.

Barnard, Chester.

    1938. *Functions of the Executive*. Cambridge: Belnap Press.

Becker, Gary S.

    1993. *Human Capital*. Third Edition. Chicago: University of Chicago Press.

Bohte, John.

    1999. "Class Size, Teacher Salaries and Student Performance on the TAAS" typescript,

        Texas A&M University.

Carmines, Edward G. and James Stimson.

    1989. *Issue Evolution: Race and the Transformation of American Politics*. Princeton:

        Princeton University Press.

Cole, Beverly P.

    1986. "The Black Educator: An Endangered Species." *Journal of Negro Education* 55

        (Summer): 326-334.

Coleman, James.

    1966. *Equality of Educational Opportunity*. Washington: Department of Health,

        Education, and Welfare.

Dolan, Julie.

    2000. "The Senior Executive Service: Gender, Attitudes, and Representative

Bureaucracy." *Journal of Public Administration Research and Theory* 10 (July):

513-530.

Downs, Anthony.

1967. *Inside Bureaucracy.* Boston: Little, Brown.

Ehrenberg, Ronald G., Daniel D. Goldhaber, and Dominic J. Brewer.

1995. "Do Teachers' Race, Gender and Ethnicity Matter?" *Industrial and Labor*

Relations Review 48 (April), 547-61.

Evans, William N., Sheila E. Murray, and Robert M. Schwab.

1997. "Schoolhouses, Courthouses, and Statehouses After *Serrano*." *Journal of Policy*

Analysis and Management 16 (Winter), 10-31.

Golembiewski, Robert T.

1962. *Behavior and Organization: O&M and the Small Group.* Chicago: Rand-

McNally.

Hanushek, Eric A.

1986. "The Economics of Schooling: Production and Efficiency in Public Schools."

Journal of Economic Literature 24 (September):1141-1177.

Hanushek, Eric A.

1996. "School Resources and Student Performance." In Gary Burtless, ed. *Does Money*

Matter? The Effect of School Resources on Student Achievement and Adult

Success. Washington: Brookings.

Hindera, John.

1993. "Representative Bureaucracy: Imprimis Evidence of Active Representation in the

EEOC District Offices." *Social Science Quarterly* 74 (March): 95-108.

Hedges, Larry V. and Rob Greenwald.

1996. "Have Times Changed? The Relation between School Resources and Student

Performance." In Gary Burtless, ed. *Does Money Matter? The Effect of School*

Resources on Student Achievement and Adult Success. Washington: Brookings.

Jencks, Christopher and Meredith Phillips.

1998. *The Black-White Test Score Gap* Washington: The Brookings Institution.

Kaufman, Herbert.

1960. *The Forest Ranger*. Baltimore: The Johns Hopkins University Press.

Lipsky, Michael.

1980. *Street Level Bureaucracy*. New York: Russell Sage Foundation.

Long, Norton.

1952. "Bureaucracy and Constitutionalism." *American Political Science Review* 46

(September), 808-818.

Meier, Kenneth J.

1993. "Latinos and Representative Bureaucracy: Testing the Thompson and Henderson

Hypotheses." *Journal of Public Administration Research and Theory* 3 (October):

393-415.

Meier, Kenneth J. and John Bohte.

2000. "Ode to Luther Gulick: Span of Control and Organizational Performance."

Administration & Society 32 (May): 115-137.

Meier, Kenneth J. and Joseph Stewart, Jr.

1991. *The Politics of Hispanic Education*. Albany: SUNY Press.

Meier, Kenneth J., Robert D. Wrinkle and J.L. Polinard.

1999. "Representative Bureaucracy and Distributional Equity: Addressing the Hard

Question." *Journal of Politics* 61 (November), 1025-39.

Mintzberg, Henry.

1979. *The Structuring of Organizations*. Englewood Cliffs: NJ: Prentice Hall.

Moore, Helen A. and David R. Johnson.

1983. "A Reexamination of Elementary School Teachers' Expectations: Evidence of Sex

and Ethnic Segmentation." *Social Science Quarterly* 64 (September): 460-475.

Mosher, Frederick C.

1968. *Democracy and the Public Service.* New York: Oxford University Press.

Murray, Sheila E.

1995. "Two Essays on the Distribution of Education Resources and Outcomes." PhD.

diss. Department of Economics, University of Maryland.

Necochea, Juan and Zullmara Cune.

1996. "A Case Study of Within District School Funding Inequities." *Equity &*

Excellence in Education 29 (September): 69-77.

Price, James L. and Charles W. Mueller.

1986. *Handbook of Organizational Measurement*. Marshfield, MA: Pitman.

Riccucci, Norma M. and Judith R. Saidel.

1997. "The Representativeness of State-Level Bureaucratic Leaders: A Missing Piece of

the Representative Bureaucracy Puzzle." *Public Administration Review* 57

(September/October): 423-430.

Romzek, Barbara and J. Stephen Hendricks.

    1982. "Organizational Involvement and Representative Bureaucracy: Can We Have It

        Both Ways?" *American Political Science Review* 76 (March), 75-82.

Rourke, Francis E.

    1984. *Bureaucracy, Politics and Public Policy*. Boston: Little-Brown.

Saltzstein, Grace Hall.

    1979. "Representative Bureaucracy and Bureaucratic Responsibility." *Administration*

        and Society 10 (February), 465-75.

Scott, Patrick G.

    1997. "Assessing Determinants of Bureaucratic Discretion: An Experiment in Street-

        Level Decision Making." *Journal of Public Administration Research and Theory*

        7 (January), 35-57.

Selden, Sally Coleman.

    1997. *The Promise of Representative Bureaucracy*. Armonk, NY: M.E. Sharpe.

Stimson, James.

    1985. "Regression in Time and Space: A Statistical Essay." *American Journal of*

        Political Science 29 (November): 914-947.

Thielemann, Gregory S. and Joseph Stewart, Jr.

    1996. "A Demand Side Perspective on the Importance of Representative Bureaucracy."

        Public Administration Review 56 (March/April): 168-73.

Thompson, James D.

1967. *Organizations in Action*. New York: McGraw Hill.

Weiher, Gregory R.

2000. "Minority Student Achievement: Passive Representation and Social Context in

Schools." *Journal of Politics* 62 (August), 866-895.

Weissberg, Robert.

1978. "Collective vs. Dyadic Representation in Congress." *American Political Science*

Review 72 (June), 535-547.

Wenglinsky, Harold.

1997. *How Educational Expenditures Improve Student Performance and How They*

Don't. Princeton, NJ: Educational Testing Service.

Table 1. Descriptive Statistics

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Variable	Mean	Standard Deviation
Minority Pass Rate	50.9	14.1
Percent Minority Teachers	12.8	19.5
Midmanagement Span of Control	2.4	1.3
First Line Span of Control	13.8	3.2
Discretion Measure	34.6	23.9

Table 2. Representative Bureaucracy and Minority Pass Rates

Dependent Variable = Minority Student Test Scores

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Independent Variable	Slope	Error	T-Score
Minority Teachers Percent	.2037	.0170	12.01
Teachers Salaries (000)	.8299	.1387	5.98
Teacher Experience	-.4140	.1308	3.17
Class Size	-.3440	.1604	2.14
Per Student Expenditures K	1.4012	.6101	2.30
Low Income Students	.0281	.0232	1.22
Percent Black Students	-.3694	.0190	19.46
Percent Latino Students	-.1878	.0163	11.52
Enrollment (000)	-.0426	.0145	2.94
Anglo Pass Rate	.6842	.0232	29.51
Teacher Advanced Degrees	-.0632	.0207	3.05
Family Income (000)	.1544	.0363	4.25

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R-Square   .64

Standard Error   8.5

F   306.70

N   2646

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Coefficients for individual year dummy variables omitted.

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Table 3. Discretion and Representative Bureaucracy

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Dependent Variable = Minority Student Test Scores

Independent Variable	Low Discretion	High Discretion
Minority Teachers Percent	.1600 (6.49)	.2404 (10.30)
Teachers Salaries (000)	.7700 (3.98)	.9115 (4.56)
Teacher Experience	-.4476 (2.44)	-.4069 (2.21)
Class Size	-.3877 (1.67)	-.3287 (1.38)
Per Student Expenditures K	2.0893 (2.69)	-.2283 (.23)
Low Income Students	.0718 (2.25)	-.0200 (.59)
Percent Black Students	-.4083 (14.35)	-.3245 (12.64)
Percent Latino Students	-.1809 (7.98)	-.1832 (7.65)
Enrollment (000)	-.2872 (1.18)	-.0507 (3.40)
Anglo Pass Rate	.6634 (20.73)	.7023 (22.91)
Teacher Advanced Degrees	.0200 (.65)	-.1405 (4.85)
Family Income (000)	.2346 (4.22)	.0879 (1.76)

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R-Square	.62	.66
Standard Error	8.80	8.08
F	143.6	169.8
N	1315	1330

Coefficients for individual year dummy variables omitted.
Discretion measured by both first line and midmanagement spans of control.
T-scores in parentheses.

Table 4. An Alternative View of Discretion and Representation:

Discretion at the Street Level

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Dependent Variable = Minority Student Test Scores

Independent Variable	Low Discretion	High Discretion
Minority Teachers Percent	.1993 (7.39)	.2081 (9.70)
Teachers Salaries (000)	1.0932 (5.38)	.5359 (2.81)
Teacher Experience	-.7066 (3.68)	-.0512 (.29)
Class Size	-.4293 (1.84)	-.0657 (.28)
Per Student Expenditures K	.9462 (1.18)	1.7513 (1.74)
Low Income Students	.0419 (1.15)	.0297 (1.01)
Percent Black Students	-.4087 (13.76)	-.3136 (12.92)
Percent Latino Students	-.1902 (7.62)	-.1725 (8.03)
Enrollment (000)	-.3634 (2.20)	-.0427 (3.01)
Anglo Pass Rate	.7059 (21.29)	.6442 (19.42)
Teacher Advanced Degrees	-.0175 (.53)	-.1070 (4.12)
Family Income (000)	.2520 (3.76)	.1884 (4.34)

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R-Square	.62	.67
Standard Error	9.21	7.66
F	138.0	178.0
N	1309	1331

Coefficients for individual year dummy variables omitted.
Discretion measured by both first line and midmanagement spans of control.
T-scores in parentheses.