When Courts Manage:
Judicial “Rowing” in Desegregation Governance

Robert K. Christensen

Submitted to the faculty of the University Graduate School
in partial fulfillment of the requirements
for the degree
Doctor of Philosophy
in the School of Public and Environmental Affairs,
Indiana University, Bloomington

May 2007

Acceptance

Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Charles R. Wise, Ph.D.

Doctoral Committee

James L. Perry, Ph.D.

February 14, 2007

David H. Good, Ph.D.

Leonard D. Fromm, J.D.

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To my beautiful wife and daughters who have been my serene co-passengers and motivators on this exciting voyage; to my parents who have consistently encouraged disciplined curiosity.

Acknowledgments

During the course of this study I have come to realize that a scholar's greatest enemy may be the fear that his or her work will collect more dust than attention, more criticism than praise, and become more useless than useful. If my work finds dust, criticism, and uselessness the responsibility is ultimately mine. However, if anything in this work generates attention, praise, or utility, then there are many individuals in my life who can rightfully step forward and take credit.

I begin with my dissertation committee. Each member has contributed something unique and lastingly important to the potential usefulness of this work. David Good has given many, many hours as an invaluable foil and advisor. He has helped me to improve not only the methodological quality of this work, but its fundamental orientation to the underlying problems. Among Dr. Good's greatest contributions has been his enthusiasm.

While a doctoral student is generally fortunate to enjoy the mentorship of one great scholar, I express deepest appreciation to both Charles Wise and James Perry for my embarrassment of riches in having enjoyed tutelage under each. In addition to their mentorship, employment, and co-authorship, it has been my greatest pleasure to enjoy their friendship and genuine concern for my family and me.

As the first employer and mentor of my doctoral experience, Dr. Perry's encouragement and expertise have immeasurably added to this work and to my career. To my work Dr. Perry contributed his rare gift to seamlessly improve the flow of both

minute details and global concepts. To my career, Dr. Perry's personification of research, service, and teaching could only be surpassed by his generosity and decency.

To my chair, Dr. Wise, I owe more than can possibly be recounted here. Without the resources and expertise that he brought to bear on my behalf, this project would not have been possible. Together with Rosemary O'Leary, it was Charles Wise's passion and scholarship on the courts that indelibly shaped my own scholastic interests—most notably in the present research. He has been, for me, the consummate scholar, teacher and counselor. Thank you.

In addition to my dissertation committee, there were many faculty, staff, and students that made my Indiana University doctoral experience not only fruitful but lastingly enjoyable. These include Beth Gazley, Elinor Ostrom, Roger Parks, Lois Wise, Ted Miller, Kirsten Gronbjerg, Sergio Fernandez, Bob Agranoff, Amos Sawyer, David Reingold, Bill McGregor, Bob Kravchuk, Trevor Brown, Donna Pritchett, Penny Volrich, Pat Combs, Deborah Lorenzen, Hun Myoung Park, Trevor Nagle, Mike Katula, Edward Rakhimkulov, Bohdan Radejko, Tun Myint, Kevin Livingstone, Steve Whiting, Dan Bradshaw, Laurie Paarlberg, Becky Nesbit, and Rich Clerkin. I am especially grateful to Dr. Ann Marie Thomson whose friendship and depth of spirit and mind buoyed me up countless times.

I am particularly indebted to the Spencer Foundation for generously funding this research through their dissertation fellowship program. I also acknowledge the help of Dr. David James, Dr. Audrey Light, Michael Ross, Unicon Research, and the National Center for Education Statistics for their assistance in sharing and helping me understand the data underlying this research.

Finally, I wish to thank my most valuable support network: my family. My wife and daughters have inspired and motivated me. Even though my 2nd and 4th graders have wondered out loud how and why I made it to the 24th grade, when I have needed it the most, they have had faith in me and given me courage. I stand in awe of my exquisite companion, Flori, who, in addition to supporting me in my studies, has nurtured our wonderful daughters; relentlessly enlarged her own knowledge of the world and the human soul; and beautified women and the community around her. She need never fear that her work will go unsung or underutilized.

Abstract

In this research I focus on courts in their roles as administrators and social policy actors. My research question is whether court administrative behavior alters policy outcomes. While *Brown v. Board of Education* researchers have typically explored the effectiveness of particular policy tools (e.g., busing, magnets, etc.), I focus here on the managerial and policy implications relative to how often and intensively courts use interventions. In other words, I focus on judicial administrative behavior as a possible, if partial, systematic explanation for judicial impact.

Using panel data of approximately 125 school districts, my linear findings suggest that court interventions do manifest an impact on policy. However, nonlinear models suggest that the effect of judicial behavior is bounded by degree; extreme degrees on the adjudicative/political powerbroker continuum (see Diver, 1979) may not correspond with positive policy impact. The evidence from public school desegregation suggests that when one examines the question of degree, there are circumstances when judicial behavior closer by degrees to adjudication may be more effective than judicial behavior that is closer to political exchange.

If, as many argue, the nation is as segregated now as a half-century ago, the implications of this study suggest that policy impact in this area of public governance may be related to the types of judicial behaviors used to govern desegregation policy. If the nation decides once again to revisit the present incarnation of school segregation, should federal courts be the ones to pick up the oars as they did in such cases as *Missouri v. Jenkins* where the court played persistent administrative role for decades? Or, should

courts step back and steer, leaving particular desegregation policy choices to school administrators? Before a governance arrangement can be supported that involves extensive court intervention, it should rest on empirical evidence of how courts have "rowed" in the past. In testing a theory of impact based on the continuum between rowing and steering, I provide not only a study of interest for law and courts scholars, but broader lessons for governance that help move public administration beyond the largely dichotomous question of steering versus rowing.

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Chapter 1

Introduction

> One type of book that practically no one likes to read is a book about the law. Books about the law are notorious for being very difficult to read. This is one reason many lawyers make heaps of money. The money is an incentive—the word "incentive" here means "an offered reward to persuade you to do something you don't want to do" – to read long, dull, and difficult books.
>
> (Snicket & Helquist, 1999, p. 83-84).

This dissertation is about law, policy, and management. While certain parts of it may be "notoriously" analytical or technical, my incentive in writing this work is to further our understanding of the role that courts play in shaping policies that affect our lives. Even as I presently write, the Supreme Court of the United States is hearing arguments in two elementary/secondary school cases –Seattle, WA and Louisville, KY—concerning the role of race in public education. Many have anticipated this day since 2003 when the Court last dealt with this issue in the higher education *Bollinger* cases. Among other issues, these litigants are grappling with policies addressing evidence (Chemerinsky, 2002; Clotfelter, 2004; Frankenberg & Lee, 2002; Orfield & Bachmeier, 1997; Orfield & Schley, 1994; Orfield & Yun, 1999) that schools are, at best, resegregating and, at worst, experiencing segregation levels rivaling those of 1950s—despite some observations (Glaeser & Vigdor, 2001) that residential segregation actually declined over the last half-century.

In the *Grutter v. Bollinger,* 539 U.S. 306 (2003), public law school admissions case, the U.S. Supreme Court gave litigants hope that the issue of racial equality in education will once more be part of the national policy agenda. Some observers believe that the *Grutter* Court "went beyond *Brown* in finding successful integration a necessity for the American economic system and even national security. Nothing so positive about the compelling necessity of interracial education had been said by the Supreme Court for three decades" (Orfield & Lee, 2004, p. 9). Other scholars (Parker, 2002; Wicker, 1997) generally encourage this direction and have advocated the need to give courts more power and responsibility in realizing the *Brown vs. Board of Education of Topeka,* 347 U.S. 483 (1954) mandate that Dr. Martin Luther King, Jr. (1960) declared to be the "joyous daybreak to end the long night of enforced segregation . . . transforming the fatigue of despair into the buoyancy of hope."

Even as litigants hold out hope that policy makers, especially courts, may someday fulfill the dream of *Brown*, others find equally compelling Gerald Rosenberg's thesis in *The Hollow Hope* (1991) that the judiciary faces real constraints that prevent it from affecting social change, which they contend helps explain why *Brown* has gone five decades without true fulfillment.

Centered on the theoretical and practical implications of this debate of judicial impact, my study addresses two intellectual audiences. The first comprises those legal studies scholars and social scientists focused on understanding the potential of courts to impact public policy. The second audience comprises social scientists concerned with public, administrative behaviors and actors. To the first, I present a theoretically-driven, nation-wide, longitudinal study examining the impacts of a variety of court decisions on policy outcomes. For the second audience I empirically engage one of the important questions of New Public Management—whether good administrators steer or row—and present findings that a court's managerial behavior does indeed matter to policy outcomes. Both audiences considered together, I emphasize that litigants' expectations of policy change as a product of judicial intervention should be carefully evaluated in the context of how courts "managed" desegregation in the decades following *Brown*.

In sum, my research question is whether court administrative behavior alters policy outcomes over time. While *Brown* researchers have typically explored the effectiveness of particular policy tools (e.g., busing, magnets, etc.), I focus here on the managerial and policy implications relative to how interventions are used and the of role courts in using them. My research question carries the potential to instruct a larger, unresolved debate surrounding the broader impact of courts on policy.

Chapter 2 focuses on this larger debate, synthesizing the literature that serves as the foundation for my research. Chapter 3 comprises a development of judicial impact theory, drawing, for example, on the scholarship of Montesquieu and Colin Diver (1979) to build empirical, hypotheses accounting for a spectrum of judicial administrative behaviors and policy impacts. This spectrum accounts for courts that adjudicate and courts that reach beyond adjudicatory means as political powerbrokers. Chapter 4 details a secondary, longitudinal data that contain two variables of interest: judicial behavior and policy outcome. The former, judicial behavior independent variable of interest is operationalized according to the frequency and intensity of court intervention over the course of observation (~1968-1986). The latter, policy impact dependent variable is operationalized as measures of improvements in racial integration over time. In addition to data descriptions, Chapter 4 also describes the methods used to test the models analyzed in Chapter 5. Chapter 5 reports the validity of ‘judicial powerbroker’ hypotheses based on longitudinal models of judicial behavior relative to federal court involvement in desegregation pursuant to *Brown*. Based on the results reported in Chapter 5, Chapter 6 concludes with the policy and administrative implications of this work.

While some note that “available research has not yet explained systematically why some Supreme Court rulings prevail over time, but others do not” (Marshall, 1989, p. 494), I focus on judicial administrative behavior as a possible, if partial, systematic explanation for judicial impact. If, as many argue, the nation is as segregated now as a half-century ago, I hypothesize that policy impact in this area of public governance may be related to the types of judicial behaviors used to govern desegregation policy. If the nation decides once again to revisit the present incarnation of school segregation, should federal courts be the ones to pick up the oars as introduced in the *Bollinger* case? Or, should courts step back and steer, leaving particular desegregation policy choices to school administrators? Before a governance arrangement can be supported that involves extensive court intervention, it should rest on empirical evidence of how courts have “rowed” in the past. In testing a theory of impact based on the continuum between rowing and steering, I introduce broader lessons for governance that help move public administration beyond the largely dichotomous question of steering versus rowing.

Chapter 2

Debating the Impact of Courts

The purpose of this chapter is to describe and contextualize the debate surrounding judicial impact on public policy. In the first section I place the judicial impact debate within the broader context of policy studies. My purpose in adding this context is to draw parallels between the approaches in the judicial impact research and the broader policy themes of incrementalism and rationalism. In the second section, Boundaries of the Judicial Impact Debate, I explore the accomplishments and limitations of existing judicial impact research and argue that such research largely adheres to a dichotomy of either incremental or rationalistic approaches. I conclude this chapter by introducing the need to theoretically and empirically bridge the dichotomy.

Framing the Judicial Impact Debate

One of the most fundamental debates in public policy, best articulated by Etzioni (1967, p. 385), is "to what extent social actors decide what their course will be, and to what extent they are compelled to follow a course set by forces beyond their control." In this dissertation I offer research focusing on an important set of social actors in this question: federal courts. My research raises questions about the role of courts in desegregation policy following *Brown v. Board of Education* (1954). My research also supplies implications for the field of public management by illuminating the ‘administrative’ behavior and impact of the judiciary.

The question is of great relevance as we consider the efficacy of courts in solving some of our most vexing social problems. Komesar observes that when legislative, executive, and administrative decision making results in political malfunction,[1] courts cannot act “without remaking the underlying societal decision. Despite continuing claims by judges that they do not make legislative decisions or social policy, that is precisely what judicial review (no matter how it is defined) requires them to do. As such, the judiciary’s ability to resolve the underlying societal decision becomes relevant” (1988, p. 690).

Judicial Impact and Policy Studies: Rational and Incremental Typologies

In an effort to simplify navigation of the literature exploring the ‘ability’ of courts to resolve societal decisions, I begin in the tradition of many policy studies by identifying some typologies to help organize the chaos that so often characterizes decision-making in public policy. Typologies, like models, “make it easier to remember the essence of complex intellectual arguments and offer the happy illusion that a matter has been settled by our betters” (Shafritz, Layne, & Borick, 2005, p. x). Hogwood and Gunn (1984, p. 43) observe that typologies are constructs “which nowhere exist in real life but which can help us to understand and explain real phenomena and to formulate or refine statements of what is desired.”

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[1] Which Komesar defines as “severe systemic under representation of a given interest” (1988, p. 690).

The use of typologies is particularly useful because the judicial impact literature represents an oft-shifting, historically-cyclical, and ever-heated debate surrounding the impact of courts on social policy. Relying on a range of largely qualitative, rarely quantitative (Canon & Johnson, 1999, p. 180; Stephen L. Wasby, 1970),[2] and comparative methods, researchers have nuanced and contrasted their arguments concerning the policy potency of the judiciary.[3] The search for a theoretical and empirical understanding of the extent to which judges decide what the course of policy will be characterizes the efforts of these scholars.

In addition to simplifying the judicial impact debate, applying policy typologies to the judicial impact research clarifies how the richness of the overarching policy control debate can be applied to the judicial impact question. As a point of entry and organization, I reference a few typologies in this research synthesis that serve as foundation for a deeper understanding of judicial impact in policy decision making.

The first typology champions rationalism as an approach to social control. Weber's conception of bureaucracy as an organizational means of maximizing the rationality of authority and decision-making, and Simon's description of a rational, if boundedly so, administrative man represent this tradition of policy decision-making.

The second typology recommends incrementalism as an approach to social control. Although Charles Lindblom shares Simon's bounded rationality assumption, Lindblom's (1959) classic "root" and "branch" approach yielded another tradition of policy decision-making by contrasting an incremental, successive limited decision-making (branch) with the orthodoxy of rational-comprehensive decision-making (root). Returning to the fundamental question posed at the beginning of this chapter, a key observation (Etzioni, 1967) from Lindblom's work is that rational-comprehensive decision makers maintain a high degree of control within the policy environment. Incremental decision-models, on the other hand, ascribe much less control to decision makers.

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[2] "much of what exists . . . is based on case studies of the effect of particular decisions in individual jurisdictions" (Stephen L. Wasby, 1970, p. 25-6).

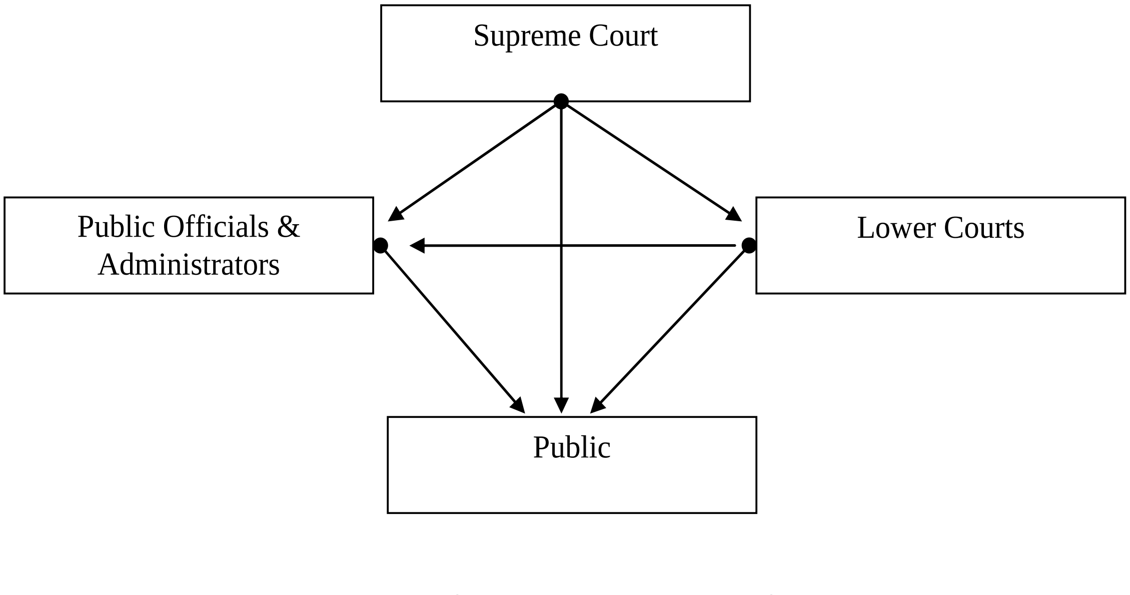
[3] I am indebted to, and have drawn from, several insightful reviews (Canon & Johnson, 1999; O'Leary, 1993a; Schultz, 1998b; Stephen L. Wasby, 1970) of particular aspects of this literature.

Scholars succeeding Lindblom have used these contrasting typologies in myriad ways. For public law scholars, Colin Diver sets synoptic and incremental decision-making as the opposing boundaries of administrative law, which he defines as the "search for a theory of how public policy should be made" (1981, p. 393). Diver elaborates that the space within the typologies' boundaries is "the vast landscape we call policymaking—the reconciliation and elaboration of lofty values into operational guidelines for the daily conduct of society's business" (1981, p. 393). Returning to Hogwood and Gunn's description of ideal typologies, the utility of the concepts of incrementalism and comprehensive rationality is not found in their actual existence, but in the *idea* that can serve as a point of entry or departure, a benchmark for deviations and comparisons. Understanding the boundaries of the debate, or "ideal" types marking the spectrum's ends, aids our comprehension of the views constituting the landscape between the poles. The approach is not unprecedented (e.g., Rosenberg, 1991) as will be discussed later.

Defining Judicial Impact

Before applying polar typologies to the judicial impact debate, I begin by briefly drawing attention to some of the meanings of "judicial impact." A popular definition of judicial impact is Gerald Rosenberg's where, in his focus on the Supreme Court, he describes judicial impact to be those reforms directly resulting in "policy change with nationwide impact" (Rosenberg, 1991, p. 4). Wasby (1970) is less exclusive in his definition and contemplates that judicial impact might also be indirect (see Figure 2.1). He ascribes judicial impact to include impact on lower courts, the public, and government officials.

Figure 2.1 Understanding Direct and Indirect Impact of Courts
adapted from Wasby (1970, p. 35)



In drawing out implications of intervening judiciaries for public administration, authors like O'Leary and Koenig (1994) and Moe and Gilmour (1995) remind us that judicial impact is not confined to the external relationships between courts and public decision makers. O'Leary and Koenig (1994, p. 180) clarify that law, including judge-made law, is the "water in which public managers swim," and that "public administration is produced within the law and at the same time is affected by the law."

A parallel argument illustrating the richness of the 'judicial impact' question can be found in the broader literature of organization studies. In exploring the influence of law on organizations, Walter Powell poses the question "just how malleable is the law?" (1996, p. 960). Relying on Scott's (1995) categorization of institutions as normative, cognitive, and regulative, Powell concludes that law's influence and illumination of organizations potentially reaches far beyond the external, regulatory aspects. Eschewing the 'law and society' view of 'regulative' law as ineffectual (e.g., Rosenberg's *Hollow Hope*), Powell encourages organization scholars to consider, among other things, that "law is practiced in an organizational setting that shapes its conduct" and that "law serves as both a normative and a regulatory environment in which organizations operate" (Powell, 1996).

Facing the richness of the judicial impact literature, researchers have organized the impacts of the judiciary (direct and indirect) in a variety of ways. For example, Canon and Johnson (1999, p. 193) parse the judicial impact question into (1) the contest of policy priorities between the Supreme Court and elected (especially Congress) branches; (2) the societal impact of courts, excepting the US Supreme Court, as policy makers, and (3) the role of courts in mobilizing public voice.

This dissertation emphasizes a hybrid of the first two categories of Canon and Johnson's conceptual framework. I concern myself with the research question of whether the judicial behavior of courts, federal district courts in particular, is associated with discernable social policy outcomes.

Judicial Impact Typologies

Returning to the typologies previously introduced, I argue that two powerful traditions provide useful boundaries. One is a model of judicial impact where courts and judges have little impact on public policy. In the broader tradition of incrementalism, judges under this typology have “much less command over the environment” (Etzioni, 1967, p. 385). This typology approximates the ‘law and society’ model that Powell refers to where law-on-the-books, including judge-made law, is ineffectual.

The opposing typology models judicial impact where courts and judges significantly impact public policy. Like the rationalistic approach, judges under this typology have a “high degree of control over the decision-making situation” (Etzioni, 1967, p. 385).

The incremental-rationalistic polar typologies have manifest themselves, if not explicitly, in much of the judicial impact literature. For example, Rosenberg (1991) contrasts a dynamic court model with a constrained court model. The dynamic court perspective contemplates the judiciary as “powerful, vigorous, and potent proponents of change” (1991, p. 2). The constrained court view, on the other hand envisions courts as “weak, ineffective, and powerless” (1991, p. 3) relative to social change.

Prior to Rosenberg’s book, Horowitz (1977) also constructed, if implicitly, the policy control typologies as hinging upon the question of judicial capacity. Discussed in greater detail below, Horowitz suggests that certain structural aspects of adjudication (e.g., the inability to ‘plan’ policy action as courts must rule on individualized controversies brought by the litigants) leave courts devoid of the capacity necessary to control social policy. Horowitz ascribes legislative and executive/administrative branches the more rationalistic elements of social control because of their capacity to plan, execute, and enforce their decisions.

My reading of Barclay and Birkland (1998) suggests that the varying treatments of the concept of control under the rationalistic and incremental models are broadly reflected in the divergence of how public law and public policy scholars view courts as social policy actors. Barclay and Birkland (1998: 231) describe public policy scholars as placing policy formulation and control beyond the traditional reach of courts. Public law scholars, on the other hand, deem courts to be viable policy making institutions with control over creation, choice and implementation of policy alternatives (1998: 231). Ultimately, Barclay and Birkland prescribe an alignment between public law and public policy scholars. They encourage public policy scholars to recast their apolitical conception of courts to reflect more of the empirical evidence of the judiciary's political relevance.

Clearly there are two aspects of Barclay and Birkland's work: descriptive (what is/has been) and prescriptive (what ought to be). Feeley (1989, p. 275) refers to this division as arguments of propriety—arguments founded in conceptions about how government powers and functions should be divided—and capacity. While the line is not always clear between descriptive and prescriptive policy typologies (Hogwood & Gunn, 1984), I am trying to focus as much as possible on descriptive models of judicial impact. Other studies have explained the historical, intellectual division of these streams (e.g., Friedman, 2005; Michelman, 1978) and have only recently proposed conceptual frameworks to unite the two (Friedman, 2005). For example, Friedman observes that the normative work of legal scholars should draw upon the richness of the positivist theory and approach, which “opens up a virtual playground for normative scholars in a field where at least some of the central debates have become stultified” (Friedman, 2005, p. 337). For this dissertation, my primary focus is not prescriptive models, or models that address the propriety of judicial intervention. While the normative certainly influences the descriptive researcher, were that my focus I would confront a vast array of literature that focuses primarily on more normative theories of judicial review and activism, e.g., (Neely, 1981), rather than theoretical and empirical descriptions of judges’ historical/current impact on public policy.

I reiterate that review of the literature addressing the descriptive, judicial impact questions is couched between the two lenses discussed above: the rationalistic and incremental. I do so to gather and encompass many of the typology approaches (e.g., constrained/dynamic court, court capacity v. lack of court capacity, public law v. public policy approach) within a broader framework, a family of theories about how much control particular actors have over their policy environments. I see two benefits to this approach. First, by grouping specific typologies into a rationalistic and incremental framework, I encourage a common language use that makes the judicial impact debate more accessible to other, related policy debates (e.g., impact of citizen groups on judicial intervention). Second, generalizing the judicial impact debate in this way facilitates the importation of a rich tradition of relevant policy theories and models that nuance the rationalistic/incremental approach. These include theories such as punctuated equilibrium (Baumgartner & Jones, 1991, 1993), policy streams (Kingdon, 1984) and garbage can models (Cohen, March, & Olsen, 1972), mixed-scanning approaches (Etzioni, 1967) and evolutionary change theory (John, 2003).

Boundaries of the Judicial Impact Debate

Judicial impact studies have generally focused on individual cases. They rarely systematically explore the particular effects of judicial activity on policy and administration over time within an agency or policy area. This observation is supported by Wasby (1970), Taggart (1989, p. 243), and O’Leary (1990).

An empirical exception to this observation, O’Leary’s dissertation research (1990; 1993a) includes a fine summary of many of these studies, and underscores the direct and indirect impacts of judicial influence. Her review of the impact literature, as well as her own analysis of court influence on the Environmental Protection Agency (EPA), confirm that a judge’s ability to change social policy falls along a continuum, both “multifaceted and complex” (O'Leary, 1993a, p. 170). The continuum O’Leary observes can be framed between the rationalistic and incremental boundaries discussed above. Where courts have less command over their policy environment (e.g., incremental), actions simply affirm the behavior of the EPA (O'Leary, 1993a, p. 170). Court behavior at the rationalistic end of the continuum (i.e., more command over their policy environment) is responsible for “bringing about change in the agency’s policy and administration” (O'Leary, 1993a, p. 170).

I agree with O’Leary that judicial impact falls along a continuum. However, I also observe that judicial impact studies can generally be bifurcated into those tending towards a rationalistic description/view of court behavior, and those with an incremental description/view of court behavior.[4]

Judicial Impact and Incrementalism

Some researchers (e.g., Schultz, 1998a) have chosen the Federalist Papers as their point of entry into the incrementalist's perspective of the judicial impact debate and as one of the older, if not best articulated, illustrations of the debate itself. I begin with Montesquieu's 1748 *The Spirit of Laws*, which, in expounding a theory of the separation of governing powers, explores implications of the judicial impact debate in history's greatest societies. Montesquieu's insights were directly influential in the formation of the United States. Referring to competition between legislative, executive and judicial powers, Hamilton's 1788 writings draw upon Montesquieu's observations that "of the three powers above mentioned, the judiciary is in some measure next to nothing" (Montesquieu, 1748: Book 11, Ch. 6; *The Federalist Papers*, No. 78). Hamilton's reasoning is relatively straightforward:

> The Executive not only dispenses the honors, but holds the sword of the community. The legislature not only commands the purse, but prescribes the rules by which the duties and rights of every citizen are to be regulated. The judiciary, on the contrary, has no influence over either the sword or the purse; no direction either of the strength or of the wealth of the society; and can take no active resolution whatever. It may truly be said to have neither *force* nor *will*, but merely judgment; and must ultimately depend upon the aid of the executive arm even for the efficacy of its judgments (*The Federalist Papers*, No. 78).

This view of the judiciary underscores the incrementalist's pole in the debate: a judiciary whose relative social impact is constrained and innocuous. Because policy control under this approach is generally beyond the reach of the judiciary, the Hamiltonian view is more akin to an incremental, successive limited policy typology.

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[4] Using the terms in a slightly different sense, Feeley and Rubin (1998, p: 15-16) would add to classic analysis (i.e., rationalism) and incrementalism the mode of hermeneutics.

Scheingold's (1974) articulation of the Hamiltonian view suggests that incremental-like limitations of court policy power are more a function of the judiciary's temporal function. Thus, even if a court successfully stipulates a right, political debate is likely to follow—drawing the policy influence away from the courts and to those political powers wielding purse and sword. Whether intentional, Hannon's review of Scheingold's book emphasizes this language when he observes Scheingold's inclination to view the right itself, even after articulated by a court, as "another political asset or weapon similar to money or status" (Hannon, 1975, p. 1070).

The most prolific contemporary advocate of a judiciary of limited policy influence is Gerald Rosenberg. His 1991 book *The Hollow Hope* has become a focal point of the judicial impact debate. As Rosenberg himself states, the book "hit a raw nerve" (1998, p. 253) by demonstrating the limitations of American courts to produce "significant social reform." For example, in commenting on the policy legacy of *Roe v. Wade*, Rosenberg observed that "Courts do not exist in a vacuum. Supreme Court decisions, even those finding constitutional rights, are not implemented automatically or in any straightforward or simple way. They are merely one part of a broader political picture. In and of themselves, they accomplish little" (Rosenberg, 1995, pp. 192-93).

Rosenberg's conclusions are based on contrasting his own conception of the poles of the judicial impact debate. Rosenberg's dynamic court perspective contemplates the judiciary as "powerful, vigorous, and potent proponents of change" (1991, p. 2). The Constrained court view frames courts as "weak, ineffective, and powerless" (1991, p. 3).

The latter model, which Rosenberg recommends as offering greater explanatory power, hypothesizes courts' relatively weak impact can be accounted for by the following constraints (1991, pp. 13-21): (1) inherent nature of constitutional rights is that of limitation –courts are limited in giving voice to a broad range of social policies; (2) the judiciary's dependence upon other branches; and (3) the paucity of judicial tools to effect policy development and implementation.

In reconciling the Dynamic and Constrained views Rosenberg (1991, pp. 32-35) argues that while courts generally will not significantly impact policy because of the preceding constraints, they might happen upon windows of significant policy relevance if (1) other actors induce compliance through positive incentives or imposed costs, (2) market mechanisms provide sufficient apparatus for implementation of judicial decrees, or (3) those crucial to implementation are willing to act *and* are induced to do so by the shield/cover/leverage of the judicial decree.

Implicit in his "reconciliation" of both the constraints of the constrained court view and the conditions of the dynamic court is Rosenberg's dissatisfaction with the dynamic court view and his assertion that a court's social impact is entirely dependent upon exogenous factors, e.g., political and economic environment. In other words, Rosenberg argues that a court cannot, of itself, effect social change. Even if all the conditions were to be met, a careful reading of Rosenberg suggests they would be satisfied not by the court, but by some other/non-judicial actor willing to induce/discourage compliance or by fortuitous market conditions. Possibly on this premise, Rosenberg argues (1991, p. 30) that "while courts may be more effective in producing significant social reform than the constraints of the Constrained Court view allow, the Dynamic Court view does not definitively demonstrate when, and under what conditions, court efficacy can be found."

Reflecting Hamilton's view that the purse and sword of public policy are external to the judiciary, Rosenberg's rationale is not entirely original. In the decades preceding Rosenberg's *Hollow Hope* many scholars perceived the difficulties courts faced in impacting social policy.

With a general focus on both the "sword" and "purse" Robert Dahl (1957) empirically challenged the influence of the Supreme Court on separation-of-powers grounds. Proposing a conception of a ruling-elite—comprising the popularly elected president and majority of Congress—Dahl challenged the traditional conception of the Court as a check on the popular branches of government. For example, Dahl observed that even in the relatively few cases where the Court declared unconstitutional major policies of Congress (from 1790-1957), Congressional preference prevailed a majority of the time in subsequent iterations of the policy. Dahl similarly argues that the ruling-elite conception of policy influence accounted for the general harmony that exists between the executive and judiciary. Dahl (1957) concluded that courts are more often part of a majoritarian political leadership, a partner with rather than a check on the other branches. Dahl accorded courts some power in determining a policy's reach and ultimate success, but that "by itself the Court is almost powerless to affect [the policy's] course" (1957: 293)

With a general focus on the "sword", Roscoe Pound's 1917 enumeration of the *Limits of Effective Legal Action* noted that "laws will not enforce themselves. Human beings must execute them, and there must be some motive setting the individual in motion to do this above and beyond the abstract content of the rule and its conformity to an ideal justice or an ideal of social interest" (p. 166). Pound observed that during at least two stages of legal development, jurists generally ignored questions of legal enforcement thereby contributing to the present day divergence between "law in the books and the law in action" (p. 158). Pound's essay, a foundation for the legal realism movement, describes the enforcement gap's role in accounting for the difference between law on the books and law in action.

With a general focus on the "purse" in 1977 Donald Horowitz used four case studies to suggest that courts' ability to effect social change is limited by their institutional composition and their capacity, or lack thereof, to marshal resources (e.g., resources for planning, information, and management and control) to address social problems. He concludes that the judiciary's unique process of focusing on individual litigation is what "unfits" (1977, p. 298) the judiciary for public policy work. Horowitz's reference to Benthem's work is particularly enlightening on this note. Benthem wrote that because a judge's decree for society, which stems from a single case is but a "partial amendment [of the greater social problem, it] is bought at the expense of universal certainty; that partial good thus purchased is universal evil; and that amendment from the judgment seat is confusion" (cited in Horowitz, 1977, p. 2).

While Horowitz's analysis does not confirm total confusion, he does point out several factors (1977, pp. 256-74) that limit the thoughtful impact of judicial decisions on policy. These are generally expressed as limitations of judicial capacity:

- Restricted ability to assess policy costs, alternatives, and implementation environments.

- Confinement to redistribution of budgetary assets, as opposed to expansion of budgetary resources. Horowitz concludes after one case analysis that judicial impact's "foremost obstacle . . . proved to be budgetary" (1977, p. 258).

- "Limited capacity [of] the courts for sensing the relevance of social facts and for ascertaining them" (1977, p. 260), causing a severance of those facts that are contextually related and the merger of those facts that are contextually unrelated.

- Neglect of those interests expressed less formally than those conversant in legal language and relationships.

- Limited administrative capacities (e.g., manpower, patience for periodic monitoring of consequences, supervision of implementation, managerial aptitude).

In keeping with the incrementalist perspective of a judiciary's command of its policy environment, many have refined or amplified the implications of limited judicial capacity. Stewart and Sunstein (1982) ultimately favor courts entertaining rights of action and initiation against administrative agencies but observe that "enthusiasm for judicial remedies must be tempered by an acknowledgement of the considerable limitations. [C]ourts apprehend and implement only a few of the various possible conceptions of institutional purpose [of complex administrative schemes]" (1982, p. 1319). Whether courts actively choose or are externally influenced to reach beyond their traditional capacities in crafting remedies, they may initiate an order that compels administrative action to a degree that is impossible to enact due to paucity of administrative resources (Frug, 1978); "courts can do little to resolve such an impasse" (Stewart & Sunstein, 1982, p. 1283). Because of these capacity limitations, Stewart and Sunstein recommend the Hamiltonian purse and sword argument: "Congress [purse] and the President [sword] should be . . .encouraged to develop nonjudicial methods for controlling administrative authority" (1982: p. 1319).

Empirical studies offer some support. For example, Taggart (1989) studied the capacity of courts to influence the purse powers of legislatures. He did this by analyzing the impact of courts on state expenditures for corrections. Using a quasi-experimental, time-series design, Taggart modeled total and operating expenditures as a function of, among other things (e.g., measures of budgetary dynamics), court intervention.[5] Although some of Taggart's modeling suggests that court intervention has statistically significant explanatory power, Taggart ultimately concludes (1989, p. 267) that the collective influence of courts on state corrections budgets is "almost non-existent" and that the dynamics of state budgeting have far more explanatory power than judicial intervention.

Moving beyond the capacity argument, Komesar (1988) recommends economic and institutional analyses to reveal when the benefits of judicial intervention are greater than the costs of political malfunction (see Chapter 2, fn 1). Komesar is sensitive to the limitations of courts, but recommends analyzing, simultaneously, the capabilities of political decision makers as well. With this calculus, Komesar comes up with a narrow list of circumstances where court capabilities, even if limited, can remedy severe political malfunction. Ultimately, however, Komesar observes that no matter how aggressive a judiciary, they are physically constrained to reach and influence only a miniscule number of policy decisions. "Moral evolution, discovery of national principals, and search for civic virtue---whatever those terms mean—are not dominated by the judiciary because they cannot be" (Komesar, 1988, p. 659).

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[5] Where court intervention was expressed as a binary, dummy variable.

More recent analyses (Wise & Christensen, 2001, 2005) have paid particular attention to the capacities of administrative programs, and state and federal courts in determining the relative impact of the judiciary. Because of the limitations of federal courts to manage public programs, Wise and Christensen suggest, among other things, that a careful and simultaneous assessment of the capacities of courts--state and federal--and administrative programs precede federal courts intervening in public service provision. Relevant questions include the following:

> First, can the [federal] court fulfill the informational requirements, both technical and political, that would enable it to effect a successful remedy? Second, will the court have sufficient time to frame and reformulate the remedy and conduct as it supervises the institutions involved? Third, are the communication tools available to the court effective? Fourth, are the powers available to the court sufficient to gain cooperation among the multiple actors? Fifth, is there an identifiable goal for the remedy and a foreseeable end to judicial supervision of the institution? (Wise & Christensen, 2005, pp. 591-92)

Negative answers to these questions implicate federal judicial abstention. These doctrines constitute the authority granted by the US Supreme Court to lower federal courts to abstain from hearing certain cases. At the heart of the judicial doctrine of abstention is the recognition that the federal judiciary, as Rosenberg and others point out, often lacks the capacity to improve the execution of public policy.

Underpinning the capacity questions raised by Wise and Christensen above, many scholars, building upon Pound and Horowitz's traditions, provide insight into these judicial limitations.

One of the more intuitive limitations of an intervening judiciary's ability to impact policy comprises courts operating beyond their traditional realm of action and authority. This particular limitation forms the basis for theory building in chapter 3. For the present, Stephen Yeazell's (1977, p. 259) memorable observation concerning judicial intervention in the delivery of public education illustrates this point: "once one comprehends that the court is displacing the [school] board . . . the occasionally circus-like quality of the hearing becomes more explicable, if not more orderly. It doesn't, as the judge has remarked upon occasion, look much like a court, and for good reason: it really isn't one." William Fletcher's (1982) analysis of institutional reform litigation confirms that intervening judges, most fluent in the tools of legal rules and precedent, frequently confront political and bureaucratic territory where legal rule and reasoning bears little influence. Lon Fuller (1978, p. 363) supplies some insight in identifying judicial adjudication (the contest of legal proofs and reasoned arguments) as but one form of problem resolution that stands in contrast to contract-based (negotiation) and election-based (voting) social ordering. Yeazell (1977) assesses that the complexity of reforming public institutions necessitates multiple actors and approaches (e.g., contract, election and adjudication) that, in addition to adjudicative mechanisms, require negotiation, political, technical, and scientific mechanisms, all competencies beyond a judge's legitimate control. These problems are referred to by Yeazell and Fuller as polycentric problems, "a complex problem with a number of problem 'centers,' each is related to the others, such that the solution to each depends on the solution to all the others" (Wise & Christensen, 2001, p. 115; Yeazell, 1977).

Judges operating beyond their typical competencies often face practical limitations. Yeazell outlines these limitations from a comparative perspective (comparing judges to political actors).

> First, courts are less able than the political branches to apprise themselves of the "legislative facts' necessary to understand questions of public

> policy. Second, since courts normally enforce their judgments by compulsory process without a significant opportunity for reversal or modification by private parties affected by these judgments, they are less likely than other governmental decisionmakers to solve and re-solve a polycentric problem until an optimum solution is found. Third, since institutional decrees necessarily entail a great deal of discretion in their formulation, and since discretionary behavior is largely beyond the power of an appellate body to control, the primary means of external control over trial court behavior is virtually useless. Finally, and most important, courts have no institutional authority to assess normatively the ends of possible solutions to non-legal polycentric problems (1977, p: 641).

With these limitations in mind, the authors reviewed here concede that "there are polycentric elements in almost all problems submitted to adjudication." (Fuller, 1978, p. 397). However, they emphasize that the key to navigating the limitations of judicial influence on policy is discerning when the non-adjudicative "elements have become so significant and predominant that the proper limits of adjudication have been reached" (1978, p. 399).

Peter Schuck (1983) articulates three ideologies that underpin the assessment of when courts might become involved in institutional reform. These methods of intervention are *pure rights vindication*, where programmatic elements are downplayed in favor of courts vindicating individuals' rights; *judicial interpretivism*, where judicial management of institutional remedies is allowed because courts are viewed as best suited to actualize legal rights and values even if not best suited to manage structural changes; and *institutional competition*, where non-judicial institutions play a critical role in working along side courts to actualize legal rights and values. Affirming the polycentric arguments of Fuller and Yeazell, Schuck (1983, p. 178) ultimately rejects the former two propositions, noting that institutional competition alone facilitates assimilation of "conflicting goals, limited resources, political and ideological struggle, and human and institutional imperfections . . . into social reality." In other words, Schuck's recommendation of *institutional competition* seems to be founded in its sensitivity (in contrast to *pure rights vindication* and *judicial interpretivism*) to the balancing of adjudicative and non-adjudicative elements recommended by Fuller.

Failure to be sensitive to this balance by exceeding the adjudicative role comprises the judiciary's limited impact on policy and can follow three scenarios:

> First, the adjudicative solution may fail. Unexpected repercussions make the decision unworkable; it is ignored, withdrawn, or modified, sometimes repeatedly. Second, the purported arbiter ignores judicial proprieties – he "tries out" various solutions in posthearing conferences, consults parties not represented at the hearings, guesses at facts not proved and not properly matters for anything like judicial notices. Third, instead of accommodating his procedures to the nature of the problem he confronts, he may reformulate the problem so as to make it amendable to solution through adjudicative procedures" (Fuller, 1978, p. 401).

The scenarios raised by Fuller each implicate the perspective that courts are limited in their ability to effect sound policy.

John Yoo (1996) offers insight into why an adjudicative solution to polycentric policy making might fail. He observes while judicial organizations are experienced in assessing legal causation and establishing legal fact, courts are limited in adjudicating a solution that will reach non-adjudicative needs because polycentric problems require predictions about how judicial remedies will interact with non-legal dynamics (e.g., social, political, economic). As highlighted in Fuller's scenarios, courts that proceed in this pursuit run the risk of circumventing the solutions that political/majoritarian actors and administrative organizations might bring to bear upon the problem (Mishkin, 1978; Yoo, 1996). Paul Mishkin explains that an adjudicative remedy to polycentric problems

> inevitably involves allocation of state resources. To such decisions, the more abstract problems, possible countervailing considerations, and possible competing claims are all highly relevant. There is nothing in the nature of litigation which necessarily brings these matters out, or indeed, which provides a good vehicle for their development even if tried (1978, p. 965).

Returning to the rational-incremental ideal types, these authors all suggest that judges are consigned to an incremental role, the construction of social reality beyond the realm of the adjudicator's influence. Lee Epstein's empirical work offers some affirmation of this conclusion. For example, in their review of US Supreme Court constitutional civil rights decisions from 1953 to 1992, Epstein, Knight, and Martin (2004) found that justices' decision making patterns reflect an awareness of their context of majoritarian/political preferences. Lending support to Schuck's *institutional competition* proposition, Epstein et al.'s (2004, p. 186) analysis and conclusions illustrate an incremental perspective of judicial policy control, reinforcing that

> justices understand they will be unable to generate efficacious decisions---decisions that other actors will respect and with which they will comply—unless they are attentive to the preferences of those other actors and the institutions that structure the Court's interactions with them. [G]iven the institutional constraints imposed on the Court, justices cannot effectuate their own policy goals—whether they accord or collide with the ruling regime's—without taking into account the goals and preferences of the other branches. Justices find the best way to have a long-term effect on the nature and content of the law is to adapt their decisions to the preferences of these others.

Neal Devins's work also establishes this conclusion. In analyzing the decisions of the Rehnquist Court from 1995 to 2003, Devins (2004, p. 199) concludes that "while the Court helps shape popular and elected government discourse, the Court must operate within parameters established by elected officials. For this very reason, decisions invalidating federal and state legislation are usually tied to signals sent to the Court by elected officials and the American people." Devins's work reiterates that cognizant courts should understand their policy limitations and behave accordingly—with deference to other, political actors with influence over polycentric policy problems.

In many respects, Devin's work echoes Shep Melnick's classic work two decades previous. While Melnick (1983) allows that courts have deeply impacted program outcomes (e.g., diminished agency ability to implement and adapt their own directives), he emphasizes that such impact occurs within, and is dependent upon, a broader political context (e.g., with Congress's blessing).

Even if one accepts Schuck's *institutional competition* model for judicial intervention, a model more sensitive to the polycentric nature of problems, Colin Diver warns that judiciaries "competing" to the point of exceeding their adjudicative role run into another policy limitation. Diver (1979) observes that some judges, wanting to be effective in reforming public institutions, behave beyond their adjudicative role (Fuller's second scenario) and become broker/bargainers, competing for policy powers against other non-judicial actors. Seeking political power to affect the institutional remedies to vindicate rights, judge-brokers are taken up in the political institutional remedies perspective at the expense of the adjudicative, legal rights perspective for which they were trained (Diver, 1979, p. 104). So doing, Diver uncovers a paradox: judge-brokers lose legitimacy and, by implication, loss of influence of the policy problem that the court was trying to direct. As the judicial-political bargaining relationship progresses and lengthens, which it often does in judicial power brokering situations (e.g., Wise & O'Leary, 2003), the judge loses legitimacy to participate in the policy solutions and can draw “less and less on the reserve of authority that the revered position of neutral lawgiver confers” (Diver, 1979, p. 106).

In concluding this section I return to Rosenberg to highlight a specific application of the incremental view of court control over policy to *Brown* desegregation policy. Rosenberg primarily uses historical/qualitative analyses to emphasize that the ability of courts to effect social change is extremely limited. In commenting on Civil Rights policy, Rosenberg asserts that “in terms of judicial effects . . . *Brown* and its progeny stand for the proposition that courts are impotent to produce significant social reform” (1991, p. 71) Specifically contemplating the legacy of *Brown*, Rosenberg emphasizes this point: “courts and their decisions are part of broader social currents. On their own they can do little to alter those currents. In *Brown*, the Supreme Court jumped in and was swept along with the rest of the country. *Brown* was a small rivulet flowing into a sea of change” (interviewed in Ryan, 2004: 2).

Rosenberg and the incremental view of court control are not without detractors. What Rosenberg views as judicial ‘rivulets’ of influence, others view as torrents of judicial pressure with the ability to change policy outcomes.

Judicial Impact and Rationalism

To contextualize how Rosenberg’s critics differ in their conclusions, it is important to articulate how they differ in their approaches.

Canon and Johnson’s (1999) *Judicial Policies: Implementation and Impact* stands as one of the more widely read criticisms of Rosenberg. Canon and Johnson bring to the forefront aspects of judicial behavior supporting a conception of the judiciary that challenges incremental policy influence. They recommend to their readers that the judiciary often behaves as a rational-comprehensive decision maker, maintaining a high degree of control within various policy areas. One of the main ways they construct this argument (see chapters 2-4) is to broaden and articulate a scope of inquiry that includes at least four, potentially impacted populations: interpreting, implementing, consumer, and secondary. Each of these *actors*, in turn, "may respond to a judicial policy" individually and collectively shaping the ultimate impact of the judge's decision (Canon & Johnson, 1999, p. 17-18). Like Wasby (1970, see also Figure 2.1) before them, Canon and Johnson's scope of inquiry is broader than Rosenberg's, and implicates the indirect influence that a judiciary can have over policy. Michael McCann, another one of Rosenberg's critics, expounds on this point, emphasizing that Rosenberg's conclusions about judicial influence are not surprisingly impotent and incremental because he excludes "a far broader set of complex legal manifestations and dynamics," favoring a "top-down, linear judicial impact focus" (1996, p. 480).

Another material criticism of Rosenberg's approach is his exclusion of lower courts—an exclusion accounted by others, including Wasby (1970, see Figure 2.1), Canon and Johnson (1999), and McCann (1996). These authors also criticize Rosenberg's temporal framework. Canon and Johnson's inquiry includes analysis of immediate and later responses (e.g., 1999, p. 4-9), while McCann's (1996, p. 480) round chastisement of Rosenberg's temporal approach includes geographic delimiters as well: "the expectation that courts must unilaterally generate in a short time behavioral changes across the nation that uniformly comply with specific legal mandates to qualify as "significant" impacts connotes a standard so high as to assure its own negative conclusion."

Jonathan Casper's work (1976) reminds us that the exchange between Rosenberg and his critics is neither new nor novel. Using many of the same arguments, proponents of rationalistic judicial impact such as Jonathan Casper criticized the more incremental approaches of Robert Dahl's work decades before Rosenberg's work. Casper argued that Dahl's conception of judicial influence is overly limited and that "even in Dahl's own terms, he does not take account of the Court's influence on public policy" (1976, p. 63), but focuses on a dichotomous, policy winners/losers approach that subverts the broader scope of judicial influence. Casper observes that in most cases, the Supreme Court does not immediately (i.e., within Dahl's four year window) declare Congressional policies unconstitutional. Thus, Casper argues that Dahl missed many instances (roughly 70 percent) of the Court's policy influence over Congress. John Gates (1992) offers an alternative perspective of Dahl's ruling-elite hypothesis that recasts courts as highly influential policy players. Gates, in his study of judicial review of states' policies, asserts that the Supreme Court plays an important catalyst role in re-aligning the ruling-elites.

Chayes (1976) also illustrates an avenue contrary to the ruling-elite hypotheses by observing that the nature of judicial appointment actually insulates judges from certain political pressures of conformance, allowing them to more freely influence policy than Dahl would suggest. In short, scholars like Chayes and Gates ascribe a much more active role to the Court than Dahl's passive description of the Court taking its cues from the dominant political powers.

Canon and Johnson (1999, p. 198) likewise conclude that in policies contested between courts and "the purse," courts wield significant influence ranging from a matter of years to a full generation before Congress asserts its iteration of policy direction. In addition to reviewing literature on the mixed, but undeniable, influence of lower courts (1999, p. 199-204), *Judicial Policies* ultimately concludes that Rosenberg's hypotheses were misguided. For example, although lacking the powers of the purse and sword, Canon and Johnson (1999: 216) argue that "the courts' dependence on the other branches is only important when the other branches must help the court implement a reform . . . clearly this is not always the case." Indeed, Canon and Johnson (1999, p. 211-15) assert that the Supreme Court has initiated major policy movements in many areas over the last 50 years including criminal justice, reapportionment, religious issues in public education, abortion, pornography, and freedom of commercial speech (i.e., professional advertising).

With general reference to the context of policy making, Kagan (2001) has argued the rise of adversarial legalism—that policy making is increasingly articulated on the adversarial stages of common law courts, giving the judiciary increasing power in defining policy. Nathan Glazer's essays (1975; 1978) during the 1970s spoke of a seemingly irreversible trend of an "imperial judiciary." While pleading for judges to withdraw from judicial activism, he observes the courts' "far reaching decisions – [as] estimated by the impact on people and their everyday lives" (Glazer, 1975, p. 106). Indeed, Glazer notes (1975, p. 108) that even the check that is the legislature "no longer controls the purse, if the Court rules otherwise." In his 1978 article, Glazer doesn't question the impact of the judiciary, but whether the impact is desirable (pg. 80). His rationale is based on the notion that judicial intervention actually impacts policy by reducing the capacity of administrators (pg. 80).

Building on the notion of judicial impact via the capacity of administration, the literature of public administration has been particularly helpful in documenting the influence of courts on policy. For example, Rosemary O'Leary's *Environmental Change* (1993a) empirically documents that courts very often take first seat in policy control because of conflicting political and social contexts. In her 1980s study of the Environmental Protection Agency (EPA), O'Leary found that the EPA was often more influenced by federal court decisions than by political directives. O'Leary's findings were based on an analysis of over 2,000 federal court decisions spanning 1970-1988. She classified these cases across a matrix of influence: judicial decisions upholding EPA action to judicial decisions actively seeking to alter environmental policy. O'Leary linked each of these decisions to agency response and judicial follow-up. While she noted a range of judicial behavior, from passive to aggressive, O'Leary discovered that from both the agency and individual civil servant level, compliance with court decisions had become priority (1990, p. 561-62).

Spriggs (1996) tests hypotheses similar to O'Leary's in a different empirical manner but against a broad array of federal agencies. Using ordered probit regression, Spriggs tests a multivariate model of the impact of every Supreme Court opinion reversing or remanding a federal agency decision from the 1953 through 1990 terms. Spriggs identifies broad judicial policy influence but observes that policy change after Court opinions is influenced by the specificity of Supreme Court opinions, agency policy preferences, agency age, and amicus curiae support. Relative to administrative policy impact, the focus of O’Leary’s work, Spriggs (1996, p. 1143) observes that “it is unlikely that agencies can expect Congress or the president to protect their overturned policies from the Court.” This suggests a nuanced picture of Hamilton’s purse and sword critique, where the judiciary often wields both of these powers over agencies relatively untroubled by the political branches.

Extending empirical inquiry to a rich case of social policy, O’Leary and Wise (1991; Wise & O'Leary, 2003) analyzed the *Missouri v. Jenkins* desegregation litigation to establish that courts are “senior” partners in the triumvirate of judges, legislators, and managers. In the face of state constitutional provisions to the contrary, judicial impact in this litigation included court-ordered increases in property taxes. The Supreme Court affirmed and Kansas City School District #33 continued its nearly three-decade relationship with a supervising federal district court. In reviewing the actions and impacts of Judges Clark and Whipple, O’Leary and Wise’s analysis of judicial impact on policy thus runs counter to Rosenberg’s judicial impotence presumption, and directly opposes Rosenberg’s second “constraint.” The rationalistic-like reach of the court altered the operation and administration of the school district.

Parallel to O’Leary’s observations in the EPA, adherence to successive iterations of desegregation mandates became District #33’s “top priority, at times overshadowing its educational mandate” (O'Leary & Wise, 1991, pp. 322-23). Other policy outcomes include a restructuring of the “priorities, implementation, interorganizational relations, and accountability mechanisms” of the institution, with court orders becoming “sole components of the district’s strategic plan” (O'Leary & Wise, 1991, pp. 322-23). Again, in stark contrast to the incremental conception of judicial influence, where the judge is a junior partner to the purse and sword, the *Jenkins* case empirically describes a situation where the “senior judicial partner is in the position to arrange decision-making power” and local and state executive, legislative and administrative officials are “very much in a junior partner position” (O'Leary & Wise, 1991, pp. 325).

The *Jenkins* case finds broad support among the empirical and theoretical investigations of public administration. For example, scholars have explored judicial impact on public budget decisions and discretion (Frug, 1978; Hale, 1979; Harriman & Straussman, 1983; Horowitz, 1977; Straussman, 1986), agency decision and rulemaking processes (Bazelon, 1976; Cooper, 1988; O'Leary & Weiland, 1997; David H. Rosenbloom, 1987), liability (O'Leary, 1993b; David H. Rosenbloom, 1987; David H. Rosenbloom, Carroll, & Carroll, 2000), organization direction and control (Koenig & O'Leary, 1996; Malmsheimer & Floyd, 2004; O'Leary, 1990, 1993a; O'Leary & Straussman, 1993; O'Leary & Wise, 1991), property takings and eminent domain (Emerson & Wise, 1997; C. R. Wise & Emerson, 1994), and oversight termination (Wise & O'Leary, 2003). Some of these points are expanded below.

For example, speaking to the structure, operation, and immunity of the administrative state, Rosenbloom (1983; 1997) and Wise and O’Leary (1993a; 1991) have long contended that the judiciary has played a major role in retrofitting the civil service within constitutional schemes. Rosenbloom concludes that the impact has been profound. Where administrators once enjoyed immunity, the courts have played a major role in creating an administrative environment “governed by constitutional law” (D. H. Rosenbloom, 2000, p. 45). Several examples illustrate this observation. In an area of institutional reform litigation stemming from the common law case *Brown v. Board of*

Education (1954), O'Leary and Wise (1991) emphasize that the judiciary is often the most powerful partner in the partnership of managers, judges, and legislators. The theme of a judiciary shaping and directing civil service is emphasized again by Hamilton (1999) in the area of civil service patronage. Hamilton calls to the attention of public administration scholars and practitioners the influence of the relatively recent evolution of common law in prohibiting consideration of political association in the decision to hire, promote, terminate, or grant contracts.

Hamilton's study illustrates the broader impact of the judiciary on personnel relative to civil rights; Hamilton's own example largely focuses on civil servants' First Amendment right of political association. Beyond freedom of association, courts have been particularly influential in regulating a host of personnel decisions using the broad civil rights provisions of the Constitution and the civil rights statutes. Today, common law interpretations of civil service issues are frequently founded on the rights of free speech; religion; privacy; procedural and substantive due process; and equal protection (DiNome, Yaklin, & Rosenbloom, 1999; C. Wise, Clemow, Murray, Boston, & Bingham, 1999). For example, Wise et al. (1999) illustrate that workplace searches of public employees will be governed by judicial interpretation of the Fourth Amendment privacy standards.

Another area of judicial influence illustrated by the *Jenkins* case is the area of fiscal powers and policy. As indicated above, specific to public budgetary discretion, several scholars have generally challenged the observation that courts lack the power of the purse. Scholars including Chayes (1976), Glazer (1975), Frug (1978), and Feeley (1989) observe that in many circumstances courts widely exercise the power of spending in the course of regulating policy provision and reforms. The latter two suggest the broadest influence, and Feeley's work stands in direct opposition to Taggat's (1989) findings discussed above. In his review of Southern prison reform cases, Feeley (1989, p. 280-81) asserts that federal courts "have altered the vision and often the guiding principles of corrections officials and have helped re-shape the structure and organization of jails and prisons." In Hale's (1979, p. 363) study, he observes that court intervention influences budget and program decisions to the extent a majority of corrections officials responded that judicial rulings forced an alteration or creation of programs. Harriman and Straussman (1983) empirically confirm Hale's conclusions, arguing that states have historically allocated more money for corrections in response to judicial intervention. Also relevant to fiscal powers and policy, Wise (2001) finds that the Court's interpretations in Commerce Clause power and Spending Clause policy rulings, areas of policy particularly relevant in our current mode of government-by-contract, are highly influential in the direction and latitude of state government operations.

Bertelli and Feldmann (forthcoming) imply that judicial influence, by the adversarial nature of institutional reform, remains high even if judges were to behave neutrally towards policy outcomes. Using spatial bargaining modeling, they propose a theoretical argument that courts facilitating structural reform litigation shape bureaucratic direction, relatively insulated from legislative direction. Prior evidence (O'Leary and Wise, 1991) confirms that in these public service configurations of the triumvirate of judges, administrators, and legislators, judges maintain primary influence.

Returning to the substantive issue of this dissertation, school desegregation, Rosenberg's critics offer a more rationalistic view of Rosenberg's conclusions about

Brown: contrary to Rosenberg's implicit hypothesis, desegregation legislation (e.g., 1964 Civil Rights Act) did not rise up independently from *Brown*, but was highly influenced by the *Brown* decision. This raises a point recommended by Marc Galanter (1983, p. 126): court influence over policy can take the form of "strict imposition of controls," a measure Rosenberg relies upon almost exclusively, but it can also take the form of brokering information, often providing catalyst for policy mobilization.

David Schultz and Stephen Gottlieb (1998) provide a good deal of insight into this point. In articulating the role of legal realism/functionalism in the judicial impact debate, they observe that "what is critical about *Brown, Roe, Baker*, and other similar decisions is how they reshaped choices, expectations, institutions, and structures. In this respect, American politics was significantly different the day after these decisions because the Court granted legitimacy to certain claims, attached legal support or approbation to certain actions, or otherwise defined new roles for itself or for other institutions to follow" (Schultz & Gottlieb, 1998, p. 181). In contrast to the relatively short temporal framework and direct imposition of controls inherent in Rosenberg's analytical lens of desegregation policy, his critics suggest that "it is not necessary that we document the power of the court on large numbers; that *Brown* reflected the law of the land could have considerable significance through a small change in the numbers of unbelievers who nevertheless believed that public officials should obey the law" (Schultz & Gottlieb, 1998, p. 180). Empirical support for the functional role of judicial influence is found in the work of John Bohte, Roy Flemming, and B. Dan Wood (1998). These authors document the influence of Supreme Court decisions on media attention – how frequently and for what length of time judicial policies were covered. They conclude that judicial media attention is highest when judicial policies contest ground articulated by the political branches of government. They note that this finding stands in direct contrast to the conditions that Rosenberg set as most conducive to policy change, i.e., when decisions are in harmony with political branches.

Several recent empirical studies of court impact on desegregation policy enforce a more rationalistic view of judicial policy influence. For example, Sarah Reber’s dissertation research (2005) explores the longitudinal effects stemming from variation in timing of court-ordered desegregation plans. She concludes that court-ordered plans clearly resulted in lasting racial integration. The court-ordered plans also resulted in varying degrees of ‘white-flight.’ While her theme is certainly not a novel one, with many scholars documenting white flight in much earlier studies (e.g., James Smoot Coleman, Kelly, & Moore, 1975) , Reber’s focus is unique in that she focuses on some aspect of court behavior—timing of desegregation plans—over the type of plan ordered (e.g., Rossell, 1990).

Byron Lutz’s dissertation research (2005) explores the same dynamics in counterpoint. Beginning in the 1990s, Lutz explores the impact of court *dismissal* of court-ordered desegregation plans. Using a longitudinal, nationwide sample, Lutz finds that court dismissal of desegregation plans resulted in gradual growth of racially segregated school populations. Lutz also found that the court behavior impacted black student behavior (e.g., dropout and private school attendance).

Taken together, the literature in this section suggests that courts are gaining a rationalistic-like reach over policy direction– particularly through administrative mechanisms. Feeley and Rubin (1998) would argue that there is nothing inherently ‘new’ about the rise of judicial influence. They argue that judicial policymaking has evolved for at least decades, if not centuries, as the orthodoxy of federalism, separations of powers, and rule of law grew increasingly suspect. Looking at judicial impact on prison reform, Feeley and Rubin note that the evolution of a burgeoning administrative state challenged the Montesquieu-an separation of powers. As a consequence, courts have increasingly filled the role of reconceptualizing guidelines for organizing government to be “readily adopted to a centralized, bureaucratic nation” – a form of government far different than that conceived by the Framers (1998, p. 20). Others (Aman, 2004) argue that judicial decision-making influences this process even beyond national boundaries determining—even if indirectly—the organization of government relative to our global economy.

Refining the Impact Debate

This chapter has expounded the contours of the judicial impact literature within an incremental/rational framework that underpins one of the main themes of the study of public policy. I have tried to clarify in this chapter that the main corpus of judicial impact literature generally adheres to either an incremental tradition, where judges have very little control over their policy environment, or a rationalistic tradition, where judges wield varying degrees of influence over policy outcomes. My next task, and chapter, is to clarify a theoretical framework that allows navigation of the incremental/rationalistic dichotomy of the judicial impact literature. The need to further develop the theoretical and empirical literature regarding implications of a managing judiciary has been well stated by Koenig and O’Leary (1996, pp. 19-20):

> Given the significance of court orders for public administration, it is surprising that so little attention has been paid to the actual effects of such decisions. There is a need for survey research and comparative case studies that examine not just the spectacular cases but also the normal, everyday cases that affect public administration. Moreover, there is a need for long-range longitudinal studies of the impact of courts on public management. *Most important, there is a need for the development of an adequate theoretical base from which researchers might predict effects, test them, and ascertain the impact of these and other court decisions on public administration* (emphasis added).

Chapter 3

Social Adjustment, Judicial Impact Theory, and Montesquieu's Prescience

In this chapter I review theories of judicial impact and develop hypotheses to explore under what circumstances courts might be constrained in their impact and under what circumstances courts might self-determine their impact. I intend this endeavor to strike parallels with the incremental and rational approaches to social policy adjustment introduced in the previous chapter. I argue that incremental views of social control confine the impact of courts, while a more rational paradigm of social control ascribes much more potency to judicial action.

While the substantive policy focus of Chubb and Moe's (1988) work is similar to my own (i.e., education outcomes), they do not occupy themselves with judicial impact. However, their approach also focuses on variation in methods of social control and has consequently informed much of my methodological thinking. In their research, they encourage thoughtful consideration of the relationship between the environment of control behaviors and policy outcomes. The two environments contrasted in Chubb and Moe's empirical analysis are democratic, hierarchical governance and market-based decision making. They suggest that private, market-based education environments allow more discretion to administrators and educators, resulting in student outcomes more consistently responsive to demands for learning. Democratic, public education control environments, on the other hand, entertain not only demands for learning, but also reflect responsiveness to equality, deliberation, transparency and accountability. Based on these environmental distinctions, Chubb and Moe conclude that variations in education outcomes are partially accounted for by variations in control environments—whether market or democratic based.

Similarly, I argue that variations in judicial behavior, whether adjudicative or political exchange-based, create contexts that account for variations in judicial impact on policy. This "dialectic of meaningful actions and structural determinants" (Skocpol, 1984, p. 4) constituting the link between institutional context, behaviors, and outcomes are hallmarks of the neoinstitutionalist approach described by Gillman and Clayton (1999), employed by Chubb and Moe (1988) and recommended by Rogers Smith (1988).

In the first section of this chapter I identify a point of departure within judicial impact theories from which to develop hypothesis. In the second section I argue that while Montesquieu is widely read as a hallmark of one side of the judicial impact debate (i.e., incrementalist) his work actually provides the groundwork from which I develop framework to transcend the largely dichotomous nature of judicial impact studies. In the third section I define concepts—judicial behavior based on *adjudication* and *political exchange*—fundamental in my research hypotheses. This section also draws implications for public administration researchers by drawing parallels between adjudication and governance by steering, and political exchange and governance by rowing (see Table 3.1). The fourth section specifies my research hypotheses. In the conclusion I draw the themes of this chapter together and provide a bridge into the methodological and empirical chapters that follow.

Building on Judicial Impact Theory

In 1970 Stephen Wasby declared the theoretical and empirical field of judicial impact to be open season, arguing that “one will be making a valuable contribution by starting just about anywhere” (1970, p. 266). Almost thirty years later, Canon and Johnson (1999, p. 180) argued that in 50 years of judicial impact research, “little real theory has been tested concerning the limits or consequences of lower courts’ ability to make major positive and substantive policy. Arguments that such courts are exceeding their capabilities are largely drawn from case studies or particular experiences or based on speculation.” While some work has been done to expound theories of judicial impact, little of it has satisfied those seeking empirical support (Koenig & O'Leary, 1996, p. 19-20; Spriggs, 1996, p. 1124).

Canon and Johnson (1999, ch. 6) dedicate an entire chapter of their book to reviewing theories that have been used to assess judicial impact. These categories include psychological theories (e.g., legitimacy, cognitive dissonance); utility theory (e.g., cost-benefit theory); communications theory (e.g., decision context, means of communication); and organization and environmental theories (e.g., principal-agent, organization inertia). Similar groups of theories are raised by Spriggs (1996), as mid-level research frameworks, including utility theory, psychological theory, and organization theory. Wasby (1970) also notes the use of communications theory and theory of cognitive dissonance.

In noting that judicial impact research has offered neither “comprehensive explanations of judicial impact” or “attempts to reconcile alternative hypotheses,” Spriggs (1996, p. 1125) discounts psychological theories, particularly legitimacy theory.

He argues (1996, fn 2) that legitimacy theory “lacks refined hypotheses and has no precise empirical tests, offer[ing] little help for explaining government agency responses to the Court because it has no enforcement mechanism.” Concerning implementing and consumer populations, Canon and Johnson (1999, p. 184, Table 6-I) share Spriggs’s observation that legitimacy theory lacks structured hypothesis testing.

While many of the findings relying on the various theoretical approaches above are reviewed in the previous chapter, my purpose is not to unpack each theory and engage in a comparison of which theory is most appropriate or has the greatest universal utility. To some extent this has already been done by scholars like Canon and Johnson.

I seek here to develop judicial impact theory that I believe to have some power in navigating the polar (incremental/rational) nature of the judicial impact literature. In as braoder sense, I seek a more satisfying understanding of the role of courts in social adjustment. In other words, I take up a strand of Koenig & O’Leary’s (1994) and Sprigg’s (1996) call to develop a theoretical argument that has comprehensive explanatory power and the ability to reconcile alternative hypotheses—in this case the incremental/rational hypotheses.

Ironically, I find that the very theory Spriggs discounts to be of greatest benefit for my own inquiry. In fact, as will be laid out shortly, I find sufficient foundation in the literature to establish legitimacy hypotheses that guide my own empirical inquiry. Legitimacy theory, with a rich heritage in the political science and legal studies literature (e.g., Easton, 1965; Murphy & Tanenhaus, 1968), deals with “explaining individuals’ acceptance of and response to institutional policies as a function of their attitudes toward the institution’s authority and role in the governance of society” (Canon & Johnson, 1999, p. 157).

While legitimacy theory may have received “scant empirical scrutiny” (Mondak, 1992, p. 457), scholars’ use of it is not new to desegregation studies. Both Spriggs (1996) and Canon & Johnson (1999) concede that several scholars have employed legitimacy as a theoretical approach to desegregation (Birkby, 1966; Johnson, 1967; Mondak, 1992; Muir, 1967; Rodgers & Bullock, 1972; Stephen L. Wasby, 1978). However, Spriggs offers his own opinion as a version of the ‘sword argument’ by suggesting that legitimacy theory’s use is limited because “agencies have strongly-held policy goals and are unlikely to drop their policies simply because they think they ought to” (1996, fn 2).

Montesquieu’s Executive Sword, Legislative Purse, and Judicial Legitimacy

In order to develop an “adequate theoretical base” with which to guide the largely polarized judicial impact debate, and to put a finer point on the utility of legitimacy theory, I return to one of the foundations of judicial impact debate: Montesquieu.

Despite his statement that judicial power is, relative to the political branches, “next to nothing,” Montesquieu offers a much more nuanced description of judicial impact than Hamilton’s sword and purse argument would imply. I read Montesquieu’s work, a foundation of the judicial impact debate, to actually hold the key to transcending that debate.

In his historical description of separation of powers between and especially within branches, Montesquieu raises the importance of considering the various capacities and functions of the judiciary. Montesquieu's well-known articulation of the concept of liberty—*the right of doing whatever the laws permit* (1748, p. 219, Bk. XI, Ch. 3) — closely precedes Montesquieu's description of how that liberty is lost. Of primary concern for Montesquieu is liberty lost were judicial power to be blended with executive (sword) and legislative (purse) powers. His reasoning is straightforward. If judicial power is "joined with the legislative, the life and liberty of the subject would be exposed to arbitrary control; for the judge would be then the legislator. Were it joined to the executive power, the judge might behave with violence and oppression." (Montesquieu, 1748, p. 221, Bk. XI, Ch. 6). How then is judicial power established and distinguished?

Montesquieu suggests that judicial power should be removed from the personality of the executive and endowed in the "body of the people." So doing, "the judicial power, so terrible to mankind, not being annexed to any particular state or profession, becomes, as it were, invisible. People have not then the judges continually present to their view; they fear the office, but not the magistrate" (1748, p. 222, Bk. XI, Ch. 6).

Critical to 'fearing' (thus complying with) the office of magistrate, Montesquieu specified (1748, p. 223, Bk. XI, Ch. 6) that "though the tribunals ought not to be fixed, the judgments ought; and to such a degree as to be ever conformable to the letter of the law. Were they to be the private opinion of the judge, people would then live in society, without exactly knowing the nature of their obligations."

Judgment upon the published law, then, is the essence of the legitimate judicial function. In Montesquieu's view adherence to function *within* the judiciary was also the foundation of legitimacy. In Rome, "[t]he judges decided only the questions relating to matter of fact; for example, whether a sum of money had been paid or not, whether an act had been committed or not. But as to questions of law, as these required a certain *capacity*, they were always carried before the tribunal of the centumvirs" (Montesquieu, 1748: Book 11, Ch. 18, emphasis added), a larger group of approximately one hundred judges.

I do not believe that Montesquieu's use of the word capacity is accidental. Montesquieu implies that judicial functional roles, particularly the *capacity* associated with those functional roles, determine ultimate impact. In other words, just as the executive has the capacity of the sword and the legislative the capacity of the purse, the judiciary can wield its own capacity based on function. These functions, in the view of Montesquieu, were based on the separateness of the judiciary from the executive and legislative roles, and upon adherence to judgment on law within a particular, functional domain (whether question of fact or law).

A contemporary definition of capacity seems to warrant Montesquieu's approach relative to policy impact. For example, Hou, Moynihan, and Ingraham (2003, p. 297) measure capacity as those variables "that restrain discretion and direct behavior of . . . actors in a way expected to facilitate the achievement of the performance objective." Hou et al.'s definition of capacity invokes Etzioni's enunciation of the fundamental debate in public policy: "to what extent social actors decide what their course will be, and to what extent they are compelled to follow a course set by forces beyond their control" (1967, p. 385). Applied to Montesquieu's historical account of Rome, only the tribunal of the centumvirs possessed the capacity, thus the ability and influence, to determine questions of law; kings and consuls, on the other hand, retained the capacity to judge criminal affairs.

While the focus of this dissertation is largely empirical and descriptive, there is admittedly a normative argument here. In many of the countries chronicled by Montesquieu 'executive' officials determined who *should* have the function of judgment. "Most kingdoms in Europe enjoy a moderate government because the prince who is invested with the two first powers [executive and legislative] leaves the third [judicial] to his subjects. In Turkey, where these three powers are united in the Sultan's person, the subjects groan under the most dreadful oppression" (Montesquieu, 1748, p. 221, Book 11, Ch. 6). In similar manner, The Founding Fathers, architects of the governmental form present in the United States of America reinforced, based partially on Montesquieu's writings, that the Executive *should* wield the power of the sword, and that the Legislative *should* hold the power of the purse.

Notwithstanding this normative, architectural fiat, there remains an important empirical inquiry that is the focus of this theoretical development on judicial impact. In observing that certain policy functions require particular judicial capacities, Montesquieu suggests that those judicial behaviors accorded capacity by nature of their function are likely to have greater impact than those behaviors operating beyond their accepted function and capacity.

The descriptive research question becomes more nuanced than whether courts have impact, but whether determinants of the functional capacity of the court to impact policy can be identified theoretically (this chapter) and tested empirically (chapter 4). This descriptive question is one that returns to the incremental/rational debate within which I have framed the judicial impact literature. Are determinants of judicial influence dictated by the power given to Executive and Legislative branches, as Hamilton and judicial incrementalists have suggested? Or, does the judiciary hold a power of its own according to its function and behavior as Montesquieu suggested 250 years ago, an argument advocated by contemporary judicial rationalists?

While Rosenberg's work clearly advocates the former, Carter's (1977) definition of judicial capacity raises the possibility of the latter scenario. Carter's capacity (*institutional policy effectiveness*, in his terms) framework includes indicators of "technical competence . . . effective information processing, and . . . political acceptability" (1977, p. 148). The third group of indicators contemplates that "the public believes that [the judiciary's] authority and competence match the problem" (Carter, 1977, p. 148).

I pause here to note that the concept of capacity is not unique to the judiciary, nor do I suggest that it be considered in isolation from the capacities of the political branches, i.e. the capacity of sword and purse. To that end, Wise and I have argued elsewhere (Wise & Christensen, 2001) that capacity to impact policy may well exist within the judiciary. Like Wasby (1981) and Carter (1977), Wise and Christensen suggest that before judicial intervention is embraced or eschewed, one should conduct an assessment of the relative capacities of the courts, executive, and administrative officials to effect policy change.

As my focus is to develop theory and empirical support for judicial capacity, the question becomes to what extent we can measure behaviors influencing judicial capacity? What actions can a judiciary take that might enforce or detract from its functional capacity to impact policy? As envisioned by Carter (1977), and supported by Wasby

(1981), this consideration of authority and competence is a manifestation of judicial capacity that focuses heavily on the notion of political acceptability, or political legitimacy. In other words, while the executive wields the sword and the legislative holds the purse, the judiciary relies on legitimacy to actualize its preferences. What determines this legitimacy and how can theory and empirical hypotheses of judicial impact be developed?

Legitimacy and Governance: Hypothesizing Judicial Impact Through Adjudication and Political Bargaining

Several scholars provide insight guiding this pursuit. For example, Martin Shapiro observes that legitimacy is a function of judicial action. Like Montesquieu's argument that judicial impact results from capacity of function, Shapiro (1963, p. 603) argues that "if the Court is to be successful as a political actor, it must have the authority and public acceptance which the principled, reasoned opinion brings." Shapiro's argument begs what constitutes a principled, reasoned opinion. Montesquieu's response would almost certainly suggest that a principled, reasoned opinion is based on published law and devoid of aspirations of executive or legislative power – for those are the conditions in which liberty ceases to flourish.

The work of Colin Diver does much to contextualize principled, reasoned judicial behavior as he expounds a framework to theorize about judicial legitimacy. In 1979, Colin Diver published a law review article exploring the implications of judiciaries acting in structural reform litigation. I found in his writing what I believe to be a satisfying conceptual apparatus to develop Montesquieu's suggestion that judicial capacity is a function of judicial action. To test the theory of judicial legitimacy, I will draw extensively on Diver's work to guide my inquiry.

Diver observes that society's methods for social adjustment fall between two alternatives: reliance on authority or reliance on exchange. In expounding the role of courts in social adjustment, Diver explains that these polar alternatives imply two types of judicial behavior. These behavioral techniques are *adjudication* and *political bargaining*, where the former is behavior that relies on authority and the latter is behavior that relies upon exchange (see Table 3.1). Further illuminating the meaning of principled, reasoned opinions relative to adjudication and political bargaining, Cass Sunstein (1983, p. 126) summarizes a trend of contemporary adjudication literature to suggest that adjudication is a pursuit of *reason* and politics a pursuit of *will*.

Diver is not the unique source of an adjudicative/political approach, but it is perhaps the most descriptive and amenable to hypotheses formation. A few examples from various decades follow. Chayes (1976) does not parse between adjudicative and political exchange as approaches to social ordering. Rather he argues that our conception of adjudication should be updated to include many of the functions Diver includes under political exchange. Regardless, Chayes's "traditional" view of adjudication is closely related to Diver's description of adjudication. Chayes observes (1976, p. 1313) that "among the most important functions served by traditional conception of adjudication was that of accommodating the reality of judicial power to the theory of representative government." Paralleling Diver's articulation of social adjustment by reliance on adjudicative authority, Cass Sunstein's *One Case at a Time* (1999) offers a persuasive argument for judicial minimalism – a concept in my own mind akin to adjudication. To

Sunstein, judicial minimalism includes the maxim that “courts should not decide issues unnecessary to the resolution of a case” (1999, p. 4) and leaves as much to the democratic, political processes as possible. Earlier, Lon Fuller’s (Fuller, 1963; 1978) and J. Woodford Howard’s work (1969) also engaged a form of the adjudicative/political bargaining approach. One of Howard’s (1969, p. 341) observations drives to the heart of trying to distinguish between adjudicative and non-adjudicative forms of social adjustment: “Adjudication . . . is a functional concept that leaps across institutional structures and the frozen conceptual categories of separation of powers theory. Yet, in our bones, most of us feel that there are –and ought to be—differences between courts and legislatures as alternative instruments of public policy-making.” Like Montesquieu, these authors were seeking to understand the respective powers of judiciary, executive, and legislative. Like Montesquieu and Shapiro (1963), Fuller (1978) distinguishes adjudication as a form of social ordering reliant on principled reasoning. Where reasoned arguments were either undesirable or unfeasible, Fuller argues that adjudication is less preferable to legislative or administrative action (see, e.g., C. R. Sunstein, 1983, p. 134). Similarly, Guarnieri et al. (2002, p. 186-87) warn that judicial entrance into the political fray can give more pronounced roles to those with resources to influence the judicial arena, diminishing the functionality of democratically elected policy-makers.

Contrasting Adjudication and Political Bargaining: Steering or Rowing in Governance

Adjudicator. Returning to Diver’s own attempt to distinguish adjudication and political exchange as forms of social ordering, he also observes (Diver, 1979, pp. 46-47) that adjudication achieves resolution/adjustment through “principled elaboration of authoritative norms, typically embodied in rules and precedents". Pursuant to this definition, Diver (1979, pp. 46-47) characterizes the adjudicative judge as follows:

- pure adjudicators do seek to vindicate individual legal rights, and policy outcomes are determined by those rights
- pure adjudicators do find liability, which predicates further action
- pure adjudicators do not provide a blueprint for the action itself
- pure adjudicators do not promote any set of interests within society, but are limited by the plaintiff's claim; limited set of actors and dispute
- pure adjudicators do not seek strategic solutions to social problems
- pure adjudicators do seek to vindicate, over a relatively discrete time span, individual legal rights

Just predating Diver's work in this area, Fuller (1978, p. 364) also describes the uniqueness of adjudication observing that

> the distinguishing characteristic of adjudication lies in the fact that it confers on the affected party a peculiar form of participation in the decision, that of presenting proofs and reasoned arguments for a decision in his favor. Whatever heightens the significance of this participation lifts adjudication toward its optimum expression. Whatever destroys the meaning of that participation destroys the integrity of adjudication itself.

Political Exchange. In contrast to adjudicative behavior, political bargaining involves principles of exchange rather than authoritative norms. Diver (1979: 47-48) characterizes judicial political bargaining as follows:

- court decisions result from mutual accommodation of conflicting interests rather than formal structures or coercive authority
- status of interests is not determined by legal principle, but by ability/power to influence others (e.g., intensity interests, skill of players)
- process is more dynamic than adjudication, involving continuous, sequential, often cyclical bargaining among those in interdependent positions

- multiple related disputes and multiple actors who achieve their place at the table through bargaining and by nature of the positions they occupy in the hierarchy of organizations vying to influence the problem

The implications of these techniques of social adjustment are that courts may behave along a continuum of low judicial obstruction (adjudication) or judicial intervention (political bargaining).

In cases of structural reform litigation, Diver (1979: 64) has observed that courts have quietly "assumed a role, that although still cast in the authoritarian rhetoric of the adjudicatory model, actually relies upon a fundamentally different model of social adjustment, grounded essentially in exchange. Institutional action, under this view, does not come about as a set of responses to authoritative commands but as the result of a bargaining process." While there is some debate as to the current tempo of federal judicial intervention in institutional reform (e.g., Guarnieri et al., 2002; Kagan, 2004; Mello, 2002), the fact remains that we still know very little (theoretically or empirically) about the role of judicial behavior in impacting policy.

Implications for Governance. In addition to articulating and testing a theory of judicial impact, one of my endeavors is to draw out the implications competing models of social adjustment for the field of public administration and one of its prominent (see Frederickson, 2005) pursuits: governance. In this regard my research question is how judicial behavior enables/constrains attainment of public purposes. The link between these endeavors is not overly tenuous. Woodrow Wilson's (1887, p. 212) definition of the public administrative function as "detailed and systematic execution of the public law" demonstrates this connection.

I begin with a definition of governance as those “regimes, laws, rules, judicial decisions, and administrative practices that constrain, prescribe, and enable the provision of publicly supported goals and services” (Lynn, Heinrich, & Hill, 2001, p. 7). As Lynn et al. suggests, judicial decisions can significantly influence the environment of governance.

Much of the governance literature has drawn our attention to the distinction between the administrative behaviors of “steering” (e.g., setting program goals and criteria) and “rowing” (e.g., performing the work to meet those goals). Although envisioned as functions of the chief executive, Gulick’s (1937) POSDCoRB (planning, organizing, staffing, directing, coordinating, reporting, and budgeting) is applicable to the judiciary’s role in governance.

Detailed in the hypotheses below, I argue that the administrative behaviors of steering or rowing are essentially variations of the *directing* function, and parallel the judicial functions of judicial adjudication (steering) and political exchange (rowing) (see Table 3.1).

Table 3.1 Summary: Contrasting Models of Social Adjustment

	Reliance on Authority	**Reliance on Exchange**
	Adjudication	***Political Bargaining***
Directive Technique: pos***D***corb	Governance (Steering)	Governance (Rowing)
Hallmark	Principal	Power
Length, Process	Limited, discrete declaration of rights	Continuous adjustment, cyclical, sequential
Participation	Plaintiff primarily defines claim	Multiple, fluid players depending on their place in hierarchy of organizations seeking to influence the policy
Positions	Other actors given no preference in influence—all equal before law	Influence depends on actors place in hierarchy of organizations seeking to influence the policy
	Low Judicial Intervention	High Judicial Intervention

Directing, the choice between steering or rowing, in “new public management” has often been associated with incorporating private models of management and service provision into public service configurations (e.g., Osborne & Gaebler, 1992). However, we were reminded (Wise, 1990, p. 141) more than 15 years ago that the “privatization movement represents [but] one position in the debate over how public functions should be organized.” As suggested by Diver, I argue that another important position in the debate of public service configuration involves groups and individuals who seek the intervention of non-private parties, the courts, in managing public organizations. Litigants have long sought the intervention of courts in the governance of public problems and services. In the United States, which some argue (Kagan, 2004) as an increasingly prolific case, such a tradition reinforces de Tocqueville’s (1835: Bk I, Ch XVI) famous observation that “scarcely any political question arises in the United States that is not resolved, sooner or later, into a judicial question." The effect of such resolutions, de Tocqueville (1835: Bk I, Ch XVI) observes, is that "the American magistrate perpetually interferes in political affairs."

Applications of the present research focus on the types and effects of judicial involvement in public management. In understanding types of judicial behavior, the distinctions of rowing and steering are as useful and applicable to inquiry focused on the impact of judicial institutions in governance, as they are concerning privatization of governance. Exploring judicial behaviors along these lines has the potential to answer both (1) do courts impact policy, and, if so, (2) what range of judicial behaviors are associated with the greatest/least impact.

Hypotheses: Judicial Impact Based on Judicial Behavior

The remainder of this research is an attempt not only to transcend the dichotomous debate of whether courts matter, but also to develop an applied aspect of whether 'managing' courts enlighten our understanding of governance. Rosenberg's (1991) qualitative studies reported in the *Hollow Hope* proclaim to constitute treatment of the former debate as he attempts to transcend the dichotomy in terms of the *dynamic* vs. *constrained* court models. Unfortunately, Rosenberg's resounding support of the constrained model yields a hotly debated conclusion that does little to settle the impact debate. Nor, quite possibly because of its qualitative approach, does it provide a guiding framework for further empirical testing.

Returning to the key theoretical and empirical question of this research, does judges' capacity to impact social policy vary depending on whether the judge acts as an adjudicator or political bargainer? Hypotheses exist but have not been coherently assembled around legitimacy theory. Building on Diver's theory of social adjustment, I develop hypotheses of judicial impact based on judicial behavior—whether adjudicative or based on political exchange (see Table 3.2). I broadly relate these competing approaches to social adjustment (adjudication vs. political bargaining) to the rational and incremental policy models introduced previously.

Table 3.2 Social Adjustment Hypotheses: Implications for Judicial Intervention & Legitimacy

	Reliance on Authority ***Adjudication*** (Directing by Steering)	**Reliance on Exchange** ***Political Bargaining*** (Directing by Rowing)
Judicial intervention	**Low**	**High**
Legitimacy Hypothesis	Judicial Legitimacy Preserved H2A	Judicial Legitimacy Compromised H2B
Policy impact	Judicial policy impact heightened because of uncompromised legitimacy	Judicial policy impact decreased because of compromised legitimacy
Policy Model	Rational	Incremental

As a matter of review, one of the most prolific existing hypothesis that I should recognize comes from one of the leading incrementalists of judicial impact debate. Rosenberg suggests that even as adjudicators, judges have very little impact.

Hypothesis 1: Judges as adjudicators have very little impact on policy.

Rosenberg implies that if courts could overcome his specified constraints (see chapter 2), they would be able to have greater impact. One such condition, which Rosenberg articulates, is *when other actors induce compliance through positive incentives or imposed costs*. When courts step into structural reform implementation they arguably meet this condition by specifying the particulars of the plan and threatening contempt if those plans are not met. In other words, judges as powerbrokers (Diver's term for judges as political bargainers) seem to impose costs, thereby encouraging social adjustment.

Hypothesis 2A: Judges taking more control of the implementation of their policy goals achieve greater impact; judicial powerbrokers have a greater impact on social policy.

Countering this proposition, Diver's work supplies the following hypothesis: judges' participation in the bargaining process can actually lead to decreased legitimacy of the courts (a legitimacy bestowed by their adjudicative function). In his words, "as the political nature of judicial behavior in institutional reform litigation becomes more apparent, courts can draw less and less on the reserve of authority that the revered position of neutral lawgiver confers" (Diver, 1979: 106).

Hypothesis 2B: Judges taking more control of the implementation of their policy goals achieve less impact; judicial powerbrokers achieve less impact than adjudicators.

Diver (1979: 103) argues that the capacity of the judiciary "to achieve results through extrajudicial political processes rests, ultimately, on its legitimacy as a social institution." Diver observes that at its core, judicial legitimacy is a function of its impartial, adjudicative nature. This argument echoes Montesquieu's concern that blending judicial and executive-legislative powers hazards liberty.

Nathan Glazer (1975, p. 122) further illuminates this approach as he laments judicial involvement in legislative function: "the great fund of respect and trust by the people for governmental institutions has been drawn down; the courts, trying to create a better society, have increasingly lost the respect and trust of the people – which in the end is what sustained and must sustain the remarkable institution of a supreme judiciary in American life." Glazer's argument underscores the important link between legitimacy and policy impact. The more judges attempt to social engineer through non-adjudicative methods, the more they lose the capacity accorded them to impact policy. That capacity rests in their legitimacy. Horowitz adds some insight in his 1977 discussion of judicial capacities relative to social policy. He concludes that expanding judicial capacities beyond the legitimacy accorded them as non-executive/legislative actors "may erode the distinctive contribution the courts make to the social order. The danger is that courts, in developing a capacity to improve on the work of other institutions, may become altogether too much like them" (Horowitz, 1977, p. 298). I again invoke the close parallel between the type of proposition advanced by Horowitz and Montesquieu's own work, which appeared more than 200 years prior: "Again, there is no liberty, if the judiciary power be not separated from the legislative and executive" (1748, p. 221, Bk. XI, Ch. 6).

Conclusion

Both Glazer and Horowitz reinforce Montesquieu's and Shapiro's warning that the judicial function, to be policy potent, should be based on a principled, reasoned interpretation of the law. These observations reinforce the hypotheses I have drawn from Diver's work on social adjustment. The implications are summarized in Table 3.2, and suggest that adjudicative behavior preserves judicial policy potency while judicial political bargaining compromises the judicial role in social adjustment , while Yeazell (1998) illuminates the paradox contained in the adjudicative hypothesis:

> judges are powerful, but their power comes at the cost of a constraint; without that constraint power ceases to be legitimate. Judicial independence should not mean independence of law. [A]ny discerning defense of judicial independence will mean disapproval of some judicial behavior. For us, just as much as for judges, wisdom must include a sense of proportion.

Does the adage *the government that governs best, governs least* hold exceptional meaning for the institution of the judiciary? Does constraint from legislative/executive function as manifest in political exchange actually result in greater policy potency for the judiciary? Diver invites exploration of whether proportioning judicial behavior around the function of adjudication will actually yield greater judicial power (i.e., policy impact).

Retuning to the language of governance, judicial behavior that functions by steering via an adjudicative approach preserves the legitimacy necessary for policy impact. A "rowing" judiciary might expect the opposite: the more involvement in executive and legislative functions, the less likely they will distinguish their own institutional impact on policy.

As will be detailed in the next chapter, my analysis focuses on historical, proxy measures of judicial behavior (spanning the range from adjudicative to political exchange) to test the hypotheses I have developed from Diver's and others' work. This effort constitutes an important contribution to testing, if partially, legitimacy theory's utility. More importantly, my analysis seeks to enrich judicial impact theory generally by demonstrating a longitudinal model that accounts for, without presupposing its existence, the impact of judicial behavior on policy. This approach allows me to engage the judicial impact debate in its broader intellectual contest—the contest between rational and incremental approaches to policy making. By focusing on the relationship between judicial behavior and policy impact, I open the way to consider under what circumstances courts might be constrained in their impact (incremental) and under what circumstances courts might self-determine their impact (rational).

This approach fits squarely within a neoinstitutional methodology—where

> scholars seeking to explore the broader cultural and political contexts of judicial decision making are . . . examining how judicial attitudes are themselves constituted and structure by the Court as an institution and by its relationship to other institutions in the political system at particular points in history. This more “interpretive” approach to studying the Supreme Court, relying on historical and ethnographic analyses, is not only useful in examining judicial decision making, but it can also be used to examine the impact that the Court has on other political and social structures. In this sense, social scientists may find themselves in a much better position to understand the full range of “judicial politics” if they move beyond the question of how individual justices promote their preferences and toward an exploration of the role that Court plays in maintaining or disrupting major political, social, and economic structures and processes (Gillman & Clayton, 1999, p. 2).

More than 30 years ago, Howard’s (1969, p. 370) contrast of adjudication and legislation as means for conflict resolution, a concept akin to Diver’s use of social control, reminded us that ultimately there is no “open-and-shut calculus” to determine the normative question of whether adjudication of legislation is the ‘best’ institutional design. Beyond these questions, however, Howard encouraged us to engage the empirical implications of the adjudication vs. legislation debate (akin to Diver’s adjudication vs. political bargaining debate), arguing that “uncritical reliance on courts to fill policy vacuums raises” fundamental questions about their effectiveness. Mirroring the hypotheses developed in this chapter, Howard (1969, p. 370) asks “which procedure [adjudicative or legislative] is more likely to produce the desired behavior changes, less likely to dislocate legitimate expectations by their prospective or retroactive effects?”

The following chapters engage this question empirically, based on theoretical approaches—yet to be fully tested—articulated as early as Montesquieu.

Chapter 4

Data and Methodology

This chapter presents a methodology to test the hypotheses developed in chapter three. My approach is to test the hypotheses of judicial impact that I have developed from the literature, especially Montesquieu's and Diver's work. To do this, I rely on longitudinal analyses of panel data that report (1) judicial behavior in primary/secondary school race integration efforts and (2) measures of integration/desegregation (i.e., policy impact).

As evidenced in preceding chapters, the pillars of research bounding the judicial impact debate are largely qualitative case studies that have offered much insight, but little resolution. In this section I introduce analyses approaching the courts/social policy impact debate quantitatively, supplementing our understanding with a more generalizable, quasi-experimental design. The first part of my analysis focuses on quantitative, linear regression techniques. These are supplemented, in the following section, by non-linear regression techniques.

The hypotheses I propose to test, laid out in the previous chapter, constitute an important part of enriching the debate as to whether courts have the capacity to manage policy programs and problems. In Colin Diver's (1979: 46) words, the question I seek to assess is the impact of courts when judges use their "central position in the lawsuit to wield influence . . . beyond the immediate boundaries of the cases before [them]" and step into the fray of policy design and implementation. In such structural reform cases, can judges overcome the constraints posed by Rosenberg? If so, under what circumstances do courts evidence policy impact?

Diver (1979: 44) observes that recent decades have "witnessed a remarkable expansion of judicial participation in the implementation of public policy [where] courts have become the principal forum for the pursuit of structural reform." Court intervention in social policy continues to be prolific, although not without debate, across many substantive policy areas including prison reform, mental health institution reform, medical care reform, disability assistance reform, housing reform, and public school desegregation. I have chosen to conceptualize the courts/social policy impact question in terms of the latter, which Diver has termed the "prototype for the judiciary's new supervisory role" (1979: 44). In broad terms, have federal courts evidenced policy impact in their participation in desegregation policy?

I propose to analyze the impact of court intervention by regressing a continuum of federal court intervention behavior (i.e., managerial behavior) and control variables against policy outcomes (i.e., desegregation outcomes). The model is detailed below in my methods discussion. The range of court behaviors constitute measures of court intervention in (1) school districts where judiciaries closely and frequently managed desegregation to (2) districts where courts manifest very little or no intervention. As will be discussed in greater detail below, I articulate court intervention behavior in terms of frequency and scope of desegregation plan components (subparts of plans) and plans that courts ordered over time. Examples of interventions include judicial orders to school districts to establish transfer programs, rezoning, and magnet schools. By analyzing a nation-wide, longitudinal-panel data set that reports the frequency and complexity of judicial management from 1968 to 1985, I use regression techniques to model the effect of judicial management (independent variables of interest) on measures of segregation (dependent variables of interest). I set forth greater detail on the variables of interest following a description of the data.

Data Description

The data I have assembled are a composite of several secondary data sources (see Table 4.1). The data report student enrollee's race, type of court behavior, and other descriptive/control variables either at the school or district level (see Table 4.1).

These data sources include *New Evidence on School Desegregation* a report authored by Finis Welch and Audrey Light in 1987, and accompanied by an electronic data set supplied by Unicon Research Corporation. I also used non-electronic information published in the Welch/Light report to construct court intervention variables. The data sources also include Topologically Integrated Geographic Encoding and Referencing (TIGER) system information about the geographic size of the school districts in my sample. In all cases, where data were reported at the school-level, variables were aggregated to the district level – the unit of analysis for this dissertation.

Table 4.1 Data Sources

Source	Years	Level	Description
Welch /Light Report (Welch, Light, Dong, & Ross, 1987)	1960-1985	School	School-level enrollment data (including race) for over 130 school districts, provided by *Unicon Research Corporation* in electronically readable files. These data based on (1) Taeuber-Wilson Data (2) Individual School Districts, and (3) Office of Civil Rights, U.S. Dept. of Education (see, Welch et al., 1987, p. 33).
Welch /Light Report	1960-1985	District	Table A3. This printed appendix indicates court intervention behavior by year and district for 125 school districts.
TIGER (Topologically Integrated Geographic Encoding and Referencing system), 2000 Census Files	2000	District	Contains geographic size of districts (land and water). (matched to the districts in the Welch/Light sample)

Independent Variables of Interest

My data sample mirrors that published in a report by Welch and Light (1987) and prepared for the United States Commission on Civil Rights under a research contract ultimately held by Unicon Research Corporation.

The primary purpose of the Welch and Light study was to lay the groundwork for a database that would “support analyses of school desegregation programs” (Welch et al., 1987, p. 69). With the database the authors sought answers to whether districts were desegregating and whether “white flight” was neutralizing the impact of desegregation plans. Full details of sample selection and description are available in their report. I have chosen to summarize essential sample information from their report here. My general understanding of these data was supplemented by my electronic and personal conversations with NCES statistician, Michael Ross, who assisted Welch and Light in the publication of their report.

The authors selected 125 of the 21,782 school districts in the United States in 1968 (Welch et al., 1987, p. 31) . Their tiered sampling criteria selected (1) all districts with more than 50,000 students where between 20 and 90 percent of student enrolled were nonwhite; (2) districts with more than 15,000 students where between 10 and 90 percent of student enrolled were nonwhite. Of this latter group the authors subsequently randomly sampled according to size and geographic location. Their final sample included 125 school districts,[7] where 68 districts enrolled over 50,000 students and 57 districts enrolled between 15,000 and 49,999 students. While a sample of 125 of 21,782 school districts may seem insufficient to analyze the question of desegregation, the authors note that their sample contains “approximately 20 percent of national public school enrollment in 1968” and accounts for “45 percent of all minority students attending public schools in 1968” (Welch et al., 1987, p. 32).

Tables 4.2 and 4.3 describe the breadth of data and regional location,[8] sorted by region (Table 4.2); and National Center for Education Statistics CCD identifiers and additional variables, such as federal judicial district,[9] which I created based on available information (Table 4.3).

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[7] New Castle County, Delaware was ultimately discarded from my data set because of multiple districts consolidating halfway through the sample period.

[8] For purposes of consistency with other desegregation scholarship my geographic designations mirror Gary Orfield’s, e.g., **South**= AL AR FL GA LA MS NC SC TN TX VA (see, G. Orfield & Monfort, 1992).

[9] Although the 11th Circuit split from the 5th in 1981, for the purposes of this study I have treated both 5th and 11th Circuits jointly, under the designation of 5th Circuit.

Table 4.2 Summary of Districts in Sample by Region

	Count	Proportion of Sample
Border	11	9%
East	13	10%
Midwest	23	19%
South	48	39%
West	29	23%
Total	124	100%

Table 4.3 Districts in Sample by State & Jurisdiction

Identifier (NCES)	School District	State	Geo. Region	Fed Ct. District
100390	Birmingham	Alabama	south	5
101920	Jefferson County	Alabama	south	5
102370	Mobile	Alabama	south	5
404970	Mesa	Arizona	west	9
408760	Tucson	Arizona	west	9
509000	Littlerock	Arkansas	south	8
609620	Compton	California	west	9
614400	Fremont	California	west	9
614550	Fresno	California	west	9
616740	Hayward	California	west	9
622500	Long beach	California	west	9
622710	Los Angeles	California	west	9
625150	Modesto	California	west	9
627690	Norwalk-La Mirada	California	west	9
628050	Oakland	California	west	9
629940	Pasadena	California	west	9
632550	Richmond	California	west	9
633840	Sacramento	California	west	9
634170	San Bernardino	California	west	9
634320	San Diego	California	west	9
634410	San Francisco	California	west	9
634590	San Jose	California	west	9
634710	San Lorenzo	California	west	9
635430	Santa Clara	California	west	9
640740	Vallejo	California	west	9
803360	Denver	Colorado	west	10
806120	Pueblo	Colorado	west	10
901920	Hartford	Connecticut	east	2
904320	Stamford	Connecticut	east	2
1200150	Brevard County	Florida	south	5
1200180	Broward County	Florida	south	5
1200390	Dade County	Florida	south	5
1200480	Duval County	Florida	south	5
1200870	Hillsborough County	Florida	south	5

1201080	Lee County	Florida	south	5
1201440	Orange County	Florida	south	5
1201500	Palm Beach County	Florida	south	5
1201560	Pinellas County	Florida	south	5
1201590	Polk County	Florida	south	5
1201920	Volusia County	Florida	south	5
1300120	Atlanta	Georgia	south	5
1301830	Dougherty County	Georgia	south	5
1303870	Muscogee County	Georgia	south	5
1709930	Chicago	Illinois	midwest	7
1713320	East St. Louis	Illinois	midwest	7
1734510	Rockford	Illinois	midwest	7
1803630	Fort Wayne	Indiana	midwest	7
1803870	Gary	Indiana	midwest	7
1804770	Indianapolis	Indiana	midwest	7
1810290	South Bend	Indiana	midwest	7
2007950	Kansas City	Kansas	midwest	10
2012990	Wichita	Kansas	midwest	10
2101860	Fayette County	Kentucky	border	6
2102990	Jefferson County	Kentucky	border	6
2200300	Caddo parish	Louisiana	south	5
2200330	Calcasieu parish	Louisiana	south	5
2200540	East Baton Rouge parish	Louisiana	south	5
2200840	Jefferson parish	Louisiana	south	5
2201170	New Orleans parish	Louisiana	south	5
2201290	Rapides parish	Louisiana	south	5
2201740	Terrebonne parish	Louisiana	south	5
2400090	Baltimore	Maryland	border	4
2400390	Harford County	Maryland	border	4
2400510	Prince George County	Maryland	border	4
2502790	Boston	Massachusetts	east	1
2508430	New Bedford	Massachusetts	east	1
2511130	Springfield	Massachusetts	east	1
2612000	Detroit	Michigan	midwest	6
2616440	Grand Rapids	Michigan	midwest	6
2621150	Lansing	Michigan	midwest	6
2630390	Saginaw	Michigan	midwest	6
2721240	Minneapolis	Minnesota	midwest	8
2916400	Kansas City	Missouri	border	8
2929280	St. Louis	Missouri	border	8
3174820	Omaha	Nebraska	midwest	8
3200060	Clark City	Nevada	west	9
3407830	Jersey City	New Jersey	east	3
3411340	Newark	New Jersey	east	3
3500060	Albuquerque	New Mexico	west	10
3501500	Las Cruces	New Mexico	west	10
3605850	Buffalo	New York	east	2
3620580	New York	New York	east	2
3624750	Rochester	New York	east	2
3631920	Yonkers	New York	east	2

3700011	Cumberland/Fayetteville	North Carolina	south	4
3701620	Gaston County	North Carolina	south	4
3702970	Mecklenburg County	North Carolina	south	4
3703330	New Hanover County	North Carolina	south	4
3904348	Akron	Ohio	midwest	6
3904375	Cincinnati	Ohio	midwest	6
3904378	Cleveland	Ohio	midwest	6
3904380	Columbus	Ohio	midwest	6
3904384	Dayton	Ohio	midwest	6
3904426	Lorain	Ohio	midwest	6
3904490	Toledo	Ohio	midwest	6
4017250	Lawton	Oklahoma	border	10
4022770	Oklahoma City	Oklahoma	border	10
4030240	Tulsa	Oklahoma	border	10
4110040	Portland	Oregon	west	9
4218990	Philadelphia	Pennsylvania	east	3
4219170	Pittsburgh	Pennsylvania	east	3
4501440	Charleston	South Carolina	south	4
4502310	Greenville County	South Carolina	south	4
4503360	Richland County	South Carolina	south	4
4702940	Memphis	Tennessee	south	6
4703180	Nashville	Tennessee	south	6
4808130	Amarillo	Texas	south	5
4808940	Austin	Texas	south	5
4816230	Dallas	Texas	south	5
4818000	Odessa	Texas	south	5
4818300	El Paso	Texas	south	5
4819700	Fort Worth	Texas	south	5
4823640	Houston	Texas	south	5
4828500	Lubbock	Texas	south	5
4838730	San Antonio	Texas	south	5
4844280	Waco	Texas	south	5
5100270	Arlington County	Virginia	south	4
5102670	Norfolk	Virginia	south	4
5102940	Pittsylvania County	Virginia	south	4
5103300	Roanoke	Virginia	south	4
5307710	Seattle	Washington	west	9
5308700	Tacoma	Washington	west	9
5401230	Raleigh County	West Virginia	border	4
5509600	Milwaukee	Wisconsin	midwest	7

A key contribution of the Welch/Light report is Table A3, found in the appendix. Based on the information in this table, I was able to construct variables reflecting court intervention behavior—frequency and intensity of intervention over time. Examples include whether a federal court required a desegregation plan in a particular year. If so, I was able to code the number and types of components. Welch and Light identify six plan components that judges included in their court orders (see Table 4.4). Detailed descriptions are available in Welch and Light's work (1987, pp. 23-28). Welch and Light (1987, pp. 34-35) gathered the data in Table A3 from published and unpublished court documents, school district documents, their own surveys, newspapers, journal articles, books, and government documents (e.g., Department of Education and US Commission on Civil Rights documents), relevant to their sample. In each of the districts in my sample, I triangulated court intervention reported in Table A3 and Appendix C with a web-based database, *Desegregation Court Cases & School Demographic Data*, initially assembled by John Logan and the Mumford Center, University of Albany, and currently sponsored by the American Communities Project, Brown University. The database is available at http://www.s4.brown.edu/schoolsegregation/desegregationdata.htm.

The districts in my sample manifest varying ranges of court intervention both along the dimension of *frequency* (plans and their components over time) and *intensity* (types and numbers of components). My sample also includes approximately 18 districts with no record of court intervention.

Table 4.4 Court Intervention Types

From Table A3 (Welch/Light)	Plan Components
Voluntary Plan Components (students retain choice of enrollment)	**Freedom of choice**: open enrollment within the district[1] **Magnets**: enhanced curricula and schools to encourage racial integration **Voluntary Transfers**: open enrollment if majority-to-minority schools
Mandatory Plan Components	**Neighborhood** attendance zones: mandatory assignment to neighborhood school **Rezoning**: mandatory changes in attendance zones **Pairing/Clustering**: mandatory reassignment between schools or grade restructuring

As illustrated in Table 4.5 the data indicate a continuum of judicial management: (1) districts with court intervention and varying levels of court-imposed desegregation policy, (2) districts with no court intervention, but with varying levels of desegregation policy (i.e., non-court or self imposed), and (3) districts with no court intervention and no evidence of desegregation policy. I verified the second category based on Appendix C (Welch et al., 1987, p. 115) and conversations with Michael Ross. Appendix C contains a listing of court and other documents used to create Table A3. Where court documents were not listed in Appendix C but integration measures were listed in Table A3, I coded the district as having a self imposed desegregation plan; this category also includes those plans directed by the United States Department of Health, Education and Welfare (HEW), from whence the Department of Education was created in 1979.

For example, in 1970 a federal court mandated that Birmingham, Alabama implement a plan (see table 4.5). This plan comprised two components. The first, “transfers”, is considered a voluntary method of integrating students, i.e., students are allowed to transfer from a majority to a minority school. The second, “rezoning” is a mandatory method of integrating students by altering attendance zones. In Birmingham, federal courts intervened again in 1976 and in 1981 with a mix of voluntary and mandatory components. Taken as a whole, Birmingham experienced three distinct interventions from 1968-1986 (e.g., frequency) and eight different mandatory and voluntary components (intensity).

The court in Fort Wayne, Indiana also intervened three times, but relied on straight mandatory plans in two cases and a voluntary plan in one case. The Gary District (Indiana) did not entirely escape federal court scrutiny but relevant cases did not yield a court ordered (or self-imposed) desegregation plan.[10]

Table 4.5 Range of Court Intervention, Illustration

State	District	Beg. Year	Component 1	Component 2	Component 3
Alabama	Birmingham	1970	transfers	rezoning	
		1976	magnets	rezoning	pairing
		1981	magnets	rezoning	pairing
Indiana	Fort Wayne	1971	rezoning		
		1977	rezoning		
		1979	magnets		
	Gary	No plan			

Aggregated over time, table 4.6 illustrates the dimensions of (1) type (2) frequency and (3) intensity of court intervention. The southern states stand out as receiving the most attention from courts, both in terms of intensity and frequency.

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[10] E.g., Bell v. School City of Gary (1963), although no desegregation plan was ordered.

Table 4.6 Type, Intensity, and Frequency of Intervention 1968-1986

	TYPE				INTENSITY			
Region	**Court Imposed plan**	**Self Imposed Plan**	**No Plan**	**Tot**	**Mand Plan Compon**	**Volun Plan Compon**	**Tot Plan Compon**	**Total New Plans**
Border	11	0	0	11	22	11	33	19
East	9	1	3	13	17	21	38	22
Midwest	18	1	4	23	50	39	89	50
South	47	1	0	48	164	47	211	117
West	12	6	11	29	35	27	62	34
Total	97	9	18	124	288	145	433	242

Other Control Variables

Beyond variables that deal with judicial management (e.g., type, intensity, frequency of court intervention), the independent variables range widely, from decennial demographic- to socio-economic-based features of the district's community in general (e.g., income and racial make up of the citizens in the district) to yearly, specific features about the school system in that district (e.g., number of schools, geographic location, white enrollment).

Dependent Variables of Interest

Another key facet of the data I use is student enrollment statistics at the school level. These were first collected at a national level by the Office for Civil Rights, Department of Health, Education, and Welfare in 1968. The Welch/Light publication contains some information collected directly from individual districts prior to 1968. However, because the electronic files provided by Unicon Research Corporation are based, in part, on the 1968 (and subsequent) national-level data collection, I have truncated my sample at 1968. However, I do retain information about some independent variables of interest prior to 1968, e.g., whether they were under court order prior to 1968 (see Table 4.7), in order to estimate the structural "initial" state dependency of various models discussed below.

Table 4.7 Structural State: Court Intervention Before 1968

	No	Yes	Total
Border	8	3	11
East	9	4	13
Midwest	22	1	23
South	36	12	48
West	22	7	29
Total	97	27	124

In general, the dependent variables are measures of racial integration by school district (although I have used individual school enrollment data to calculate each district's integration/segregation measure). There are multiple segregation indexes that could have been used for this study and many scholars catalog and contrast these measures. Massey and Denton (1988) catalog approximately 20 residential segregation measures, each contributing to some aspect of evenness, exposure, concentration, centralization, or clustering. James and Taeuber (1985) offer an analytical comparison of some of these measures along the dimensions of centralization and evenness. For this work, I have chosen two measures of segregation common in contemporary desegregation studies (e.g., Lutz, 2005; S. J. Reber, 2005; Rossell, 1990): exposure and dissimilarity. I used the dissimilarity index as a measure of evenness within a district – a good measure for compliance with court orders—and the exposure index as a measure of racial interaction, or potential interracial contact. While the two measures are inversely correlated, the importance of including both of these measures is detailed by Rossell (1990, p. 35), who illustrates that integration in terms dissimilarity (racial balance in her words), "can be achieved with very little interracial exposure, but interracial exposure cannot be achieved without significant racial balance."

The **dissimilarity index** is a measurement of evenness. In the case of school districts, it is a measurement of how evenly different (i.e., mutually exclusive), racial groups of students are distributed across a particular school district. Used as a measure of compliance with court ordered integration plans (e.g., S. J. Reber, 2005), the dissimilarity index communicates "the proportion of any one racial group of students that would have to switch schools to achieve racial balance across the district." (Clotfelter, Ladd, & Vigdor, 2005, p. 8).

As a measure of evenness, the dissimilarity index for a particular district is calculated from racial enrollments at the school level. With the school-level data supplied by Unicon, I used STATA to calculate the dissimilarity index according to the following formula, which illustrates the evenness of white and nonwhite student populations within a district.

$$\textbf{Dissimilarity Index} = 0.5\,\Sigma\,|\,N_j / N - W_j / W\,|$$

where N and W are total nonwhite and white enrollment in a district, and Nj and Wj are the nonwhite and white enrollments in school j.

According to this formula, the dissimilarity index variable is continuous between 0 to 1, where 1 is complete segregation and 0 is complete integration. For example, the nonwhite dissimilarity index for Birmingham, Alabama, in 1968 is .92, meaning that 92 percent of nonwhite students would have to change schools to accomplish evenness in race enrollments within the Birmingham district. Dynamically, an increase in the dissimilarity index indicates an increase in racial segregation within a district.

The dissimilarity index calculated in this way is statistically independent of the relative size of the student groups, a criticism that Rossell (1990, p. 35) uses to advocate complementing the dissimilarity index (or any measure of racial balance) with a measure of interracial exposure.

The **exposure index** is a measure of potential contact between mutually exclusive racial groups. In the case of school districts, it is a measurement of the likelihood of exposure between, for example, white and nonwhite students in schools within a particular district. As an indicator at the district level, it accounts for the racial balance of the district (i.e., evenness),[11] while retaining sensitivity to the relative proportion of total enrollments of the various racial groups of students.

As a measure of potential exposure, the exposure index for a particular district is calculated from racial enrollments at the school level. With the school-level data supplied by Unicon, I used STATA to calculate the exposure index according to the following formula, which here illustrates the exposure of nonwhite students to white students within a district (or “nonwhite to white” exposure index):

$$\textbf{Exposure Index} = \Sigma\, ((\mathbf{W_j}/\mathbf{T_j}) \cdot (\mathbf{N_j} / \mathbf{N}))$$

where $\mathbf{W_j}$ is number of white students in school j; $\mathbf{T_j}$ is the total number of all students in school j; $\mathbf{N_j}$ is the total number of nonwhite students in school j; and N is total nonwhite enrollment in the district.

According to this formula, the exposure index variable is continuous between 0 and the percentage of white students in the district as a whole. The nonwhite to white exposure index is a measure of the ‘average’ nonwhite student’s likelihood of exposure to a white student. In Rossell's (1990, p. 34) words, this exposure index measures 'the proportion white in the average minority child's school." For example, in Birmingham, Alabama, in 1968, the nonwhite to white exposure index was .06, meaning that the average nonwhite student's school was only 6 percent white. The nonwhite to white exposure index is capped at the percentage of white students in a particular district in a particular year. In 1968, Birmingham, Alabama the maximum exposure a typical nonwhite student could have had was .49 (the percentage of white students in the district that year). A .49 exposure index that year would have indicated the best integration possible given the relative enrollments of white and nonwhite students.

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[11] This feature is the reason that the exposure index is inversely related to the dissimilarity index.

The exposure index calculated in this way is not statistically independent of the relative size of student groups, but is sensitive to their relative size. Dynamically, an increase in the exposure index indicates a decrease in racial segregation within a district. Like others (e.g., Frankenberg & Lee, 2002; Lutz, 2005; S. J. Reber, 2005; Rossell, 1990) I use this index as an important measure of policy impact[12] to complement the 'compliance' measure that is the dissimilarity index.

Models and Methodology

The general methodology I will be using to test my hypotheses (i.e., the impact of court intervention techniques on policy outcomes) begins with a linear regression model for panel data. Panel data analysis allows testing of temporal and spatial dimensions. In other words, regression models for panel data facilitate the testing of relationships between dependent variables and regressors of interest, while retaining sensitivity to time (e.g., year of observation) and space (e.g., cross-sectional units such as school district) aspects of the data.

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[12] The merits of interracial exposure are not taken up here, but the index is used because of its value in integration policy evaluation. While racial integration (including exposure) is an intermediate policy outcome for which I have data, ultimately data describing the impact of integration on academic achievement would be ideal. However, I was unable to find achievement data for the range of dates in question. For example, 1997 (the last year of my sample) appears to be the first year dropout data are available for the sample I am using (see http://nces.ed.gov/ccd/drpagencysp).

We can think about the data generating processes of panel data in two general ways: fixed effects and random effects.[13] Fixed and random effects processes differ in their respective use of indicator or dummy variables. If the indicator variables—such as those identifying spatial grouping (district identifier) and time (year)—play a role in determining the intercept, then Ordinary Least Squares (OLS) estimation with dummies, or Least Squares Dummy Variable (LSDV) estimation of a *fixed effects model* is most appropriate. If, in the data generating process, the indicator variables do not play a role in determining the intercept, they consequently are more instrumental in the error term and Generalized Least Squares (GLS) estimation of a *random effects model* is most appropriate. In other words, a fixed effects data generation process most closely matches a scenario where intercepts systematically vary with the dummy regressors (Wooldridge, 2002).

Formal notations of these models (see, Park, 2005) are as follows:

Fixed Effects: $y_{it} = (\alpha + \mu_i) + X'_{it}\beta + v_{it}$

Random Effects: $y_{it} = \alpha + X'_{it}\beta + (\mu_i + v_{it})$

---

[13] Technically a third category exists, the constant coefficient (pooled) model. In the constant coefficient model, if the time unit (here, the year) and cross-sectional unit (here, the school district) do not have discernable effect, pooling the data is justified and Ordinary Least Square (OLS) can be used for estimation. In other words, constant coefficient models do not have dummy variables as do fixed and random effects.

where the error term v_{it} is independently/identically distributed; where $\boldsymbol{\mu}$ represents the dummy indicator for spatial unit *i* (e.g., school district) and t represents the temporal unit (e.g., year); and where X' is some vector of characteristics of spatial unit *i* at time t. In a fixed effects model, attributes of *i* that do not vary over time should be excluded to avoid collinearity with the fixed effects estimates.

The choice of model specification, whether random or fixed, can be quantitatively analyzed with a Hausman specification test. However, the Hausman test is primarily a test of efficiency. The Hausman test, applied to my data, does not justify rejecting the null hypothesis that the efficient (random) and consistent (fixed) effects models display comparable efficiency (see Appendix 4.A). In general, where H_0 is not rejected, random effects are usually preferred because of their relative efficiency but we should remember that under either hypothesis (null and alternative) the OLS based estimates are consistent (see, Kennedy, 1992, p. 22-23)

Beyond this statistical test, a deeper qualitative understanding of the data generating process is of primary importance. The random effects model requires that the covariance between the error and regressors (e.g., attributes of unit *i*) is unrelated; specifically, that "the random error associated with each cross-section unit is uncorrelated with the other regressor, something that is not likely to be the case" (Kennedy, 1992, p. 22). In other words, to fully justify a random effects model, the regressors should have little to do with influencing a unit's intercept.

Fixed Effects Models

In the case of school desegregation, I found this assumption too challenging. Some southern districts' resistance to the *Brown* decision (see, Kluger, 1976) illustrates that attributes within each unit district (e.g., attitudes about race, attitudes about social opportunity, respect for executive or judicial authority, etc.) certainly influence the ability of the court to direct racial integration. In other words, the history of desegregation in the United States suggests that school districts responded neither uniformly nor randomly to court orders to integrate. As with other social policy models, many such attributes are unobserved in that researchers have little ability to quantitatively operationalize them and incorporate them into a data set. Normally, when such attributes are unobserved quantitatively they contribute to unobserved heterogeneity and are captured in the error term. In panel data modeling, this describes the random effects model.

However, when the unobserved heterogeneity is systematically related to subsets of observations—those distinguished by unit (e.g., school district) identifier—we would prefer a more consistent model that removes systematic heterogeneity from the error term. This describes the fixed effects model, where dummy identifiers control for that unobserved heterogeneity systematically related to each school district. A fixed effects model of school desegregation gives each school district its own intercept to account for its unobserved uniqueness. Fixed effects models are built primarily on the variance within i rather than across i.

The base model I will test, then, focuses on variance within spatial units over time as follows:

$$y[\textit{policy impact: segregation indexes}]_{it} = (\alpha + \mu\ [\textit{dummy indicating each school district}]_{i}) + X'[\textit{measurable attributes of each school district that vary over time, including types of court intervention}]_{it}\beta + v_{it}$$

I have chosen fixed-effects based models because I esteem them to be the best match for the data generation process of court intervention in school districts across the country. However, several estimation issues remain that are common among panel data. These include simultaneity, autocorrelation, and structural shifts.

Methodological Considerations: Simultaneity

One of the primary threats to the model suggested above is simultaneity. In OLS modeling, endogeneity—a systematic relationship between error term and explanatory variable(s)—causes estimates to be biased. For example, one might argue that school integration in period *t* influences court action in period *t*, as plausibly as court action in period *t* influences school integration in period *t*.

The most popular way to handle simultaneity has been to identify instrumental variables for each endogenous variable (e.g., Heckman, 1978) in order to break the chain of simultaneity. The limited data collection over the entire time period of data collection makes this approach infeasible.

My solution to the threat of simultaneity is based on thinking about the underlying data generating process. In general, those data generating processes that are in equilibrium are especially prone to simultaneity, e.g., the coterminous determination of both court action and school district segregation. If one were looking at three or more year increments, this would certainly be the case. One might even make the case that two year periods exhibit some equilibrium. Imagine the following scenario where the simultaneous relationships between dependent variables (DV) and independent variables (IV) are depicted by arrows (see Figure 4.1).

Figure 4.1 Simultaneous Model

Periods of Analysis
(equilibrium within period: simultaneous system)

DV$_t$. School district segregation changes following court orders in the previous period;
IV$_t$. Courts assess segregation levels and order districts to implement plans aimed at changing segregation.
DV$_t$. School district segregation levels change following court orders in the current period.

However, by disaggregating the temporal nature of the data to one year intervals (see Figure 4.2), I contend that the system does not have enough ‘time’ to reach equilibrium. Within one year, courts with their limited resources and time-intensive adjudicative processes cannot respond to the current year’s segregation levels.

Figure 4.2 Non-simultaneous Model

Periods of Analysis
(equilibrium broken across periods: non-simultaneous system)

DV$_t$. School district segregation changes following court orders in the previous period.
IV$_{t+1}$. Courts assess segregation levels in period *t* and order districts to implement plans aimed at changing segregation.

DV$_{t+2}$. School district segregation levels change following court orders in period *t+1*.

This notion is supported by Glazer’s (1978, p. 75) observation that “determining the impact of any intervention – even the most massive— is an extremely difficult undertaking, and very likely impossible in the time needed to be a proper guide for a court.” By disaggregating the analysis of the data generating process of school integration to one year periods, I argue that simultaneity threats are far less relevant and that OLS estimates are far less biased. This is accomplished by essentially introducing a lag between the dependent and independent variables.

Methodological Considerations: Autocorrelation

Another common issue in data generated over time is autocorrelation. Autocorrelation problems violate the assumption that estimation errors are uncorrelated. Considering the time-series aspect of the data generating processes (closely spaced interval data), one might presume the presence of serial-correlation, or non-independence of error terms. In other words, because of the temporal aspect of panel data, errors in time period t are commonly systematically related to the estimation of the model in time period t-1. In such a case ordinary least squares (OLS) estimation will produce inefficient (biased) estimators. Kennedy (1992, p. 119) reminds that several features about the data generating process may be responsible for these systematic relationships, including inertia, misspecification, and spatial autocorrelation.

Inertia and Misspecification. Most use the Durbin-Watson (DW) test to assess the existence of first-order autocorrelation. Whereas my data are in panel form, a simple Durbin Watson test is more appropriate for single time series. Scholars Bhargava, Franzini, & Narendranathan (1982) have provided a generalized DW autocorrelation test appropriate for panel data. I will review the results of this test after engaging one of the problems contributing to autocorrelation: inertia.

Typical models predicting segregation levels might include variables for segregation levels from previous time periods (lagged dependent variables) as explanatory variables. However, as Greene demonstrates (1990, p. 435) " if the regression contains any lagged values of the dependent variable, least squares will no longer be unbiased or consistent." If these are the conditions:

Lagged DV Regressor Model: $y_t = \alpha + X_t\beta + y_{t-1}\beta + v_t$

then the Durbin Watson test is also inappropriate, with a "presumption against finding evidence of serial correlation, no matter what the true situation may be" (Nerlove & Wallis, 1966, p. 237).

However proper conditions for the Durbin Watson test, and least squares estimation in general, might be achieved, if one thinks about the model as in terms of the differences between dependent variables

First Difference Model: $y_{it} - y_{it-1} = \alpha + X_{it}'\beta + v_{it}$

rather than a lagged dependent variable with its own coefficient.

One might think about the advantages of this model in terms of addressing the 'inertia' aspect of the data generation process contributing to autocorrelation. In modeling school integration, the Lagged DV Regressor model may be a better description of the data generating process if segregation levels are dynamic and quite responsive to stimuli—whether court intervention, residential patterns. In other words, The First Difference Model does not account very well for the social inertia that may be contributing to the autocorrelation aspects of the data generating process. One could conceptualize the agility of the Lagged DV Regressor model as segregation quickly improving by time period *t+1* after extensive court intervention in time period *t*.

Historical accounts of school integration suggest that a much less agile model is warranted – a model that accounts for the stickiness of change. The First Difference Model accommodates this inertia-based stickiness and one can conceptualize the influence of the less-than-agile social and cultural values on levels of segregation. Without certain court interventions segregation levels from previous periods are relatively static – highly bound by the segregation values from the previous time period.

The First Difference Model controls for the measured (and unmeasured) sticky social, cultural, and community attributes that might otherwise confound detection of the courts' efforts. Controlling for these measured and unmeasured sticky influences also serves to handle some of the misspecification that can contribute to autocorrelation.[14]

One might think of segregation levels as an oil tanker coming into harbor. Unlike a quick and agile jet ski, the trajectory of the moving tanker in time period *t* is highly dependent upon its trajectory in time period *t-1*. If courts are conceptualized as tug boats pushing on the ship to guide it into port, the Lagged DV Regressor model will reveal very little of the courts' effects. However, under the First Difference Model, one can focus on the change in trajectory (rather than the trajectory itself) between time periods by controlling for those variables influencing overall trajectory. I believe analyzing school desegregation in a similar way (where segregation is the oil tanker) to be less disingenuous than a Lagged DV regressor model. Moreover, such a model seems better suited to handle the problem of inertia that can lead to poor estimates due to autocorrelation.

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[14] Tests for autocorrelation serve as general tests for model misspecification (Gujarati, 1995, p. 462-63).

I ran a basic analysis of my data for autocorrelation assuming an exogenous model where the dependent variable is the change from one year to the next in the black student segregation index for the district (dindexbl_{it} – dindexbla_{it-1}) and the dependent variable is the total counts of court-ordered voluntary/mandatory desegregation plan components.

As mentioned above, the traditional Durbin Watson autocorrelation diagnostic, often used for single cross-section time series data, is not appropriate for panel data. I incorporated Bhargava et al.'s (1982) modifications of the Durbin Watson test. These modifications are particularly suited for fixed effects models (the generalized form of first difference models) and overcome the "significant computational burden" of the Imhof routine (see, Abrahamse & Koerts, 1969). The formula for Bhargava -Durbin Watson is identical to the Durbin Watson calculation,

$$d = \frac{\sum_{t=1}^{n}(e_t - e_{t-1})^2}{\sum_{t=1}^{n} e_i^{\,2}}$$

but is calculated from data that account for each cross-sectional unit over time.[15]

The results of tests applied to my data suggest that serial correlation is not a significant threat in the first difference model of the data. The null hypothesis is one of no autocorrelation. The calculated DW(Bhargava) statistic is very near 2 (=2.019756254) with rho near zero (=-0.009878127). Bhargava et al. (1982) publish the test parameters for their panel autocorrelation test. With an n (number of observations) of 15 for each H, and H (number of cross-sectional units) of 124, the upper and lower bounds of indecision $d_{pl} = 1.82$ and $d_{pu} = 1.93$, at a .5 significance level (Bhargava et al.,

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[15] See R:\Rob\BALANCED_DISS\excel_balanced_01_autocorr.xls

1982, p. 537). Since the d in my case = 2.02, there is little indecision: we do not reject H_0. In fact, Bhargava et al. (1982, p. 536) states that “for very large data sets (in H) it would not even be necessary to calculate d_{pl} and d_{pu} but simply test if the sample criterion calculated from (4) is less than two.”

Methodological Considerations: Structural Shifts

Kennedy describes spatial autocorrelation as a shock or event within a cross-section that affects other cross-sectional units. These supra-cross-section events “tend to cause the error terms between adjacent regions to be related” (Kennedy, 1992, p. 119). In the case of school desegregation where federal district court behavior is the independent variable of interest, the Supreme Court—with jurisdiction over all federal courts—is conceivably the source of such events.

The Chow test allows us to assess the “structural stability of a regression model” (Gujarati, 2003, p. 306). Intuition suggests that each of the major school integration decisions[16] handed down from the Supreme Court could possibly have an impact, or structural shift, on the data generating process of the data I use. In practice, many researchers (e.g., D. Armor & Rossell, 2002; Orfield, Frankenberg, & Lee, 2003; Welch et al., 1987, p. 29) have identified two major patterns in the Supreme Court’s decisions categorized by pre-Swann and post-Swann periods. [17]

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[16] For a very brief summary of these decisions, see Welch & Light (1987, p. 29).

[17] I see in the research another pattern, relevant to the years right after my data coverage. During the early and mid-1990s, the Supreme Court signaled lower courts to withdraw from active desegregation oversight. These cases *Board of Education of Oklahoma v. Dowell* (1991), *Freeman v. Pitts* (1992) and *Missouri v. Jenkins* (1995) “created standards for dismissing long running desegregation orders and allowing a return to neighborhood schools even if doing so meant returning to segregated schools [and otherwise] constricted the extent and duration of desegregation remedies” (Orfield et al.,

Swann v. Charlotte-Mecklenburg Board of Education (1971) was the first busing order from the Supreme Court and sent a new signal to the lower courts to move beyond geographic-based integration measures to achieve racial balancing. Welch and Light (1987, p. 29) have identified *Swann* as dramatically altering "the nature of school segregation plans," by ushering in an era of wide-scale involuntary busing. I have allowed a two-year lag, and mark 1973 as the point of shift (to account for *Swann* lag since I am using actual changes in racial integration rates, not attitudinal reactions, which can be more immediate).

"The Chow test is computed using three sums of square errors.

$$\mathbf{F}_{chow} = \frac{(\hat{\mathbf{u}}'\hat{\mathbf{u}} - \hat{\mathbf{u}}_1'\hat{\mathbf{u}}_1 - \hat{\mathbf{u}}_2'\hat{\mathbf{u}}_2)/\mathrm{k}}{(\hat{\mathbf{u}}_1'\hat{\mathbf{u}}_1 + \hat{\mathbf{u}}_2'\hat{\mathbf{u}}_2)/(\mathrm{n}_1 + \mathrm{n}_2 - 2\mathrm{k})}$$

where $\hat{\mathbf{u}}$ is the regression residual vector from the full set model, $\hat{\mathbf{u}}_1$ is the regression residual vector from the first set model, and $\hat{\mathbf{u}}_2$ is the regression residual vector from the second set model. Under the null hypothesis, the Chow test statistic has an F-distribution with k and (n1+n2-2k) degrees of freedom, where k is the number of elements [RKC: estimation parameters] in β" (SAS Help guide).

As an alternative to running three models, using a dummy variable in Stata with the command "test" yields the same result but in one model. The full calculation of the Chow statistic is available in the endnotes (see Appendix 4.B). Using the balanced model from 1968-1985, the Chow test yields F= 88.45, with p value of 0.0000. "The Chow test statistic is used to test the null hypothesis $H_0 : \beta_1 = \beta_2$ conditional on the same error variance $V(\mathbf{u}_1) = V(\mathbf{u}_2)$" (SAS Help guide).

2003, p. 19). The impact of the withdrawal of courts on school integration is the subject of research beyond the scope of this dissertation (Frankenberg, Lee, & Orfield, 2003; Lutz, 2005; Orfield et al., 2003).

Referencing an F distribution table, at the .05 confidence level the critical value $F_{4,\ 1894} = 2.4$. Since the Chow statistic well exceeds this critical value, I can reject the null hypothesis that estimation parameters β pre- and post- 1973 are identical. I also note that the p value of the observed F is near zero, which is additional evidence that rejection of the null hypothesis is a sound decision.

Conclusion

The implications of the Chow test, as well as other statistical tests reviewed here will be discussed in greater detail in the results chapters. The purpose of this chapter has been to specify the general models I will use to test the hypotheses articulated in the preceding chapter. In general, I will be employing a fixed effects-based, first-difference model to analyze the impact of court intervention on school integration.

In this chapter I have also inspected my data for common data threats that would lead to poor estimates. I have discussed simultaneity and autocorrelation (inertia, misspecification, and spatial autorcorrelation) related threats and tested for their presence. My selection of the first differenced model goes some distance in addressing many of these threats as it captures the data generating process underlying my data. Spatial autocorrelation is an issue, and Chow test results have been included to describe the influence of the *Swann* case on the data generating process underlying my data.

Chapter 5

Analysis and Results

The purpose of this chapter is to empirically test the hypotheses raised in Chapter 3 with the models and methods introduced in Chapter 4. Using data reporting court involvement and segregation levels from 1968-1986, the hypotheses I propose to test are reviewed as follows:

> Hypothesis 1: Judges as adjudicators have very little impact on social policy.
>
> Hypothesis 2A: Judges taking more control of the implementation of their policy achieve greater impact; judicial powerbrokers have a greater impact on social policy.
>
> Hypothesis 2B: Judges taking more control of the implementation of their policy goals achieve less impact; judicial powerbrokers achieve less impact than adjudicators.

As these issues have largely been explored qualitatively thus far (see Chapter 2), two groups of panel-data quantitative models will be used to add a voice of generalizability to the debate of judicial impact.

The first section of this chapter details linear models. The second section deals with linear models – but explores the possibility of structural shifts in those models over time. The final section of this chapter discusses curvilinear models. In this latter section I raise the possibility that the relationships between adjudicative interventions and policy outcomes are nonlinear.

Output Notation and Key Variable Description

Before reviewing the results, I wish to briefly discuss my data in terms of the hypotheses. The primary *dependent variables* of interest will be the yearly change in racial integration as measured by the change in desegregation indexes: nonwhite-to-white exposure (***Exposure***) and dissimilarity (***Dissimilarity***) discussed in Chapter 4. However, because my chosen Markov-based methodology does not explicitly account for the history or prior extent of segregation in each of the districts in my sample, I have also considered two other dependent variables. These variables, *% Dissimilarity* and *% Exposure*, reflect the percent change in dissimilarity and exposure indices from one period to the next, respectively. For example, I calculated *% Dissimilarity* as Dissim_t – Dissim_{t-1}/Dissim_{t-1}. I use these variables to measure the "impact on social policy" or impact on policy goals. I make the assumption here that the goals of judges handling desegregation litigation is to improve racial integration among the student bodies in question. I interpret racial integration—measured by a decreasing dissimilarity index and/or increasing exposure index—as an indicator of positive policy impact. For students of governance interested in organization performance – I use these segregation indexes as measures of organizational performance. From this perspective, I envision performance as whether the school district, under the guidance of the "managing" judge, realized improved racial integration.

The primary *independent variable* of interest is a measure of judicial behavior along the continuum of judicial adjudicator (i.e., steering) to judicial powerbroker (i.e., rowing). The proxy I use judicial "management" focuses on the intensity and breadth of that intervention (***Components***). Intensity of observation is measured in two ways: the number of plan components (*Components*) ordered and the type of plan components ordered. The type of plan components includes whether the component was mandatory/voluntary (i.e., whether the student had a choice to participate).[18] I discuss this latter aspect of court intensity, including operationalization, in greater detail shortly. Conceptually, I deem those courts ordering no/few intervention components and those ordering voluntary components to be adjudicative in nature – closer to the steering end of the governance continuum. I deem those courts exhibiting intense oversight to be “rowers”—policy powerbrokers proactively participating in the policy process.

The first models I use to test my research hypotheses assume that the relationships between judicial management (i.e., rowing vs. steering) and policy impacts are linear relationships.

In this chapter I explore the first difference version of the general fixed effects linear model outlined in Chapter 4,

$$y_t - y_{t-1}\ \text{[policy impact: segregation indexes]}_i = (\alpha + \mu\ \text{[dummy indicating each school district]}_i) + X'\text{[attributes of each school district including types of court intervention]}_{it}\,\beta + v_{it}.$$

---

[18] I base these categorizations on those made in the Welch and Light (1987) report and from recent, personal communication with Audrey Light:
“We gathered boxes of documents (from courts, districts, newspapers, etc.) for each district in the sample. By studying these documents, we determined (a) whether each district implemented at least one plan and, if so, how many [plan components] and the year(s) of implementation; (b) which plan(s) for each district should be deemed "major" and (c) which components were used in each plan and which components should be deemed "major."” (Light, personal communication 2006).

[22] More specifically, the dependent variables are measured as follows: (1) Nonwhite Dissimilarity$_t$ - Nonwhite Dissimilarity$_{t-1}$ (2) Nonwhite-to-White Exposure$_t$ - Nonwhite-to-White Exposure$_{t-1}$

Remembering that fixed effects models account for measured and unmeasured cultural, and community sticky (i.e., static) attributes, I begin with a relatively parsimonious model that facilitates a focus on the dynamic attributes of intervening courts.

To ensure that the models comply with assumptions of homoskedastic error term variance and no serial correlation, the results below are reported (1) directly, with the (2) robust and (3) cluster options. These latter two options constrict the models to standard errors that are asymptotically robust to (option 2) heteroskedasticity and (option 3) both heteroskedasticity and serial correlation. The robust option alone would produce standard errors that are asymptotically robust to arbitrary heteroskedasticity, but the cluster option is required in order that standard errors are not subject to arbitrary serial correlation. In other words, the cluster option obtains a fully robust asymptotic variance matrix (Wooldridge, 2002, p. 275). For this reason, cluster constricted models are reported in place of models constricted to robust estimates.

In the tables displayed in this chapter, significance levels are represented by asterisks in the traditional manner: *** p<0.01, ** p<0.05, * p<0.1. Standard errors are reported for each coefficient in parenthesis. Robust standard errors are reported in the cluster constricted models, indicated by the suffix “clstr” after certain iterations, e.g., “5.1.2.clstr.”

Where applicable, I report inspections of multicolinearity among the independent variables by listing the VIF (variance inflation factor) and tolerance scores (1/VIF). Generally, the closer the tolerance is to 1, the less multicolinearity is a threat. Similarly, a VIF of 10 represents severe multicolinearity.

Variable prefixes L, L2, L3, etc., indicate Stata's designation that these are lagged variables. For example L.Components is the equivalent of $Components_{t-1}$; L3.Components is the equivalent of $Components_{t-3}$. Similarly, "g2" as the prefix of a variable is Stata's syntax indicating the second time state in structural shift models. For example, if the period 1961-1980 were divided in half, g2*variablename* would indicate the effect of various variables during the period 1971-1980.

Linear Models

Linear regression models in this section focus primarily on an independent variable dealing with the presence, but more specifically, the intensity of court intervention. ***Components*** is a measure of the extensiveness of that court intervention, e.g., how many desegregation plan components were ordered in a particular year. My models employ first difference estimates, so the dependent variables of interest are changes in dissimilarity (***Dissimilarity***) or exposure (***Exposure***) indexes from one time period to the next.[22] As indicated in chapter 4, there are several variables that I use to control for phenomena relevant to racial enrollment patterns in school. One of these controls is "white flight" or the attrition of white students from a school/district, presumably in response to integration efforts.

This variable is of potential importance because many scholars have debated a relationship between district/court directed desegregation and declining white enrollment (James Smoot Coleman et al., 1975; Orfield, 1976; Rossell, 1975, 1990; Rossell & Others, 1978; Welch et al., 1987). More recently, scholars have documented "resegregation" in many of the areas where district/court directed desegregation has diminished (D. Armor & Rossell, 2002; Lutz, 2005; Orfield & Yun, 1999).

My findings with respect to white flight, however, are partially atheoretical and certainly raise the possibility for future exploration of these relationships. Accordingly, I have placed much of this analysis in Appendix 5.A-5.C. In brief, white flight bears a positive coefficient in predicting the change in the dissimilarity index. This suggests, as we might expect, that increases in white flight (i.e., larger attritions of white students) correspond to increased (magnitude of 5 percent, see Appendix 5.A.5 and 5.A.7) changes racial segregation—all else equal. Although intuitive, the relationship remains somewhat vague. As Sarah Reber, (2003, p. 11) expounds in her research, “The relationship between fraction white and the dissimilarity index is ambiguous; in general, it depends on whether whites who depart were in schools that were more or less integrated than the average school in the district.”

Contrary to what one might expect, the variable’s coefficient is also positive in predicting the exposure index (see Appendix 5.A.6 & 5.A.8). This suggests that as white students leave the district, the average nonwhite student’s exposure to whites actually increases. Because this seems to be a mathematical anomaly, I ran several diagnostic models to explore other possible explanations. These are reported in Appendix 5.B. First, there is a possibility that the atheoretical results are the product of a dominating independent variable. I took out all other independent variables excepting measures of white flight. The coefficients’ directions remain the same (see Appendix 5.B.1-5.B.6), and overall adjusted R-squared values are quite small. This indicates that the independent variables I am using do not dominate direction of white flight variables.

Second, I explored issues of directionality by modeling white flight as an independent variable, with my main independent variable of interest—court behavior—as the control. While statistically significant, these models also have very small adjusted R-squared values indicating that the way I have operationalized court behavior does not account for a great deal of the variation in measures of white attrition (see Appendix 5.C). If anything, the coefficients suggest that court intervention and increasing intensity of court intervention corresponds with retention of white students.

To some extent, the white flight findings are not inconsistent with historical observations of other researchers. Using a similar data set and time frame as I do, Sarah Reber observed that:

> Between 1968 and 1970, segregation (by all measures) began to fall, as the first districts began to adopt major plans; white enrollment was steady. During the 1970s, the average dissimilarity index fell substantially, indicating increasing integration. However, as measured by the exposure of nonwhites to whites, integration rose only slightly – from 37 to 43 percent – between 1970 and 1980 (2005, p. 565).

Another important control variable to consider is the location of the district. For example, historians have suggested that southern districts were fundamentally—if only initially—different than other regions of the United States in their approach to desegregation. Some have observed (Rossell, 1990; Welch et al., 1987) that *de jure*, or intentional, segregation prevailed in the south, whereas segregation in other regions was often the result of *de facto*, or segregation that was not the result of administrative decisions. Because this difference has bearing on the role of court intervention in desegregation, I have included “region” as a control variable.

Table 5.1 displays the results of these models, controlling for region. The various specifications focus on the relationship between intensity of court intervention (***Components***) and the dissimilarity and exposure indexes while controlling for region.

Each model is a statistically significant improvement in predicting the changes in segregation, whether by the dissimilarity or exposure indexes, than chance alone. The specifications using the percent changes in segregation (e.g., 5.1.3, 5.1.4, 5.1.7, 5.1.8) are similarly statistically significant, although with a lesser degree of explanatory power in terms of R-square values. This suggests that even when one accounts for the "history" of segregation in each district, court intervention plays a positive role in affecting racial integration. In most of these specifications the southern districts and those districts bordering southern districts (***South***) displayed a statistically significant tendency to integrate—although the coefficients suggest a fairly small order of magnitude. In specification 5.1.2, for example, the coefficient is -0.006. This suggests that southern/border districts witness changes in the dissimilarity index towards integration approximately one percent faster than non-southern districts. The same relationship holds in predicting the change in the exposure index (see 5.1.6): southern districts trend towards positive exposure (i.e., integration) 1.2 percent faster than non-southern districts over the period of the sample.

If we expect more resistance, and thus slower integration in southern states, these relationships may seem counterintuitive. However if we remember that one of the characteristics distinguishing southern states is intentional segregation, the legacy of *Brown v. Board of Education* is far more likely to expose and remedy intentional than de facto segregation. Thus, while being a "southern" state occurs independent of court action (i.e., not a result of court action), the regional impact of being a southern state is slightly more apparent coupled with a control for court behavior because court involvement had direct bearing on the de jure segregation more prevalent in that region. In contrast, I intuit that court involvement in de facto segregation regions (i.e., non-southern) had a slightly less noticeable impact because causes of segregation were influences such as housing patterns rather than racially-prejudiced administrative decisions. Welch et al. (1987) seem to support such an approach.

Another control variable to consider is school size reflected in total enrollment (***Enrollment***), logged. In theory, larger schools districts would have a more difficult time accomplishing the logistics of integration -- particularly those elements that are mandatory (no student choice involved). In these regressions, the log of total enrollment does not show up as a statistically significant predictor (see Appendix: Table 5.D). However, the positive signs of the coefficients are in the direction expected: more populated districts are more difficult to balance racially. Perhaps this is because greater numbers of students involve more comprehensive logistical efforts.

However, one reason that total enrollments may not be statistically significant on its own is that it accounts for but one element of “size.” Another element of size—land size—is important to consider along with total enrollment in order represent the difficulty of integrating a particular district’s population. The more concentrated student populations are likely to be the more urban populations and thus more difficult to integrate because of a relative lack of suburban, lower density areas with counter-populations to bring about racial balance.

I added the variable ***Density*** to previous models to capture the ratio of a district’s total enrollment, logged, divided by the district’s total land square mileage, logged. Size represented in this way is significant both in the court intervention (***Intervention***) and intensity of court (***Components***) models (see 5.2.1-5.2.8). In predicting change in the dissimilarity index (see 5.2.1-5.2.4) the coefficients of these variables are positive, suggesting that for every unit increase in density, districts trend towards segregation from one year to the next by about one half percent. A similar finding is more pronounced in predicting changes in the exposure index (see 5.2.5.-5.2.8). The coefficients of these variables are negative, suggesting that for a unit increase of density, districts trend towards segregation (remember that a zero exposure index indicates total segregation) from one year to the next by one to five percent.

The models reported in Table 5.2 are slight improvements over those, simpler models reported in Table 5.1, as indicated by slightly higher adjusted R-squared scores, with court behavior maintaining strong predictive value.

Table 5.1 Effects of Court Intervention and Region on Segregation

	5.1.1	**5.1.2.clstr**	**5.1.3**	**5.1.4.clstr**	**5.1.5**	**5.1.6.clstr**	**5.1.7**	**5.1.8.clstr**
VARIABLE	Dissimilarity	Dissimilarity	%Dissim	%Dissim	Exposure	Exposure	%Expos	%Expos
Components	-0.044***	-0.044***	-0.075***	-0.075***	0.030***	0.030***	0.136***	0.136***
	(0.002)	(0.004)	(0.004)	(0.008)	(0.002)	(0.004)	(0.010)	(0.019)
South	-0.006**	-0.006***	0.005	0.005	0.012***	0.012***	0.075***	0.075***
	(0.003)	(0.002)	(0.005)	(0.004)	(0.002)	(0.002)	(0.013)	(0.012)
Constant	-0.006***	-0.006***	-0.016***	-0.016***	-0.006***	-0.006***	-0.028***	-0.028***
	(0.002)	(0.001)	(0.003)	(0.003)	(0.001)	(0.001)	(0.009)	(0.005)
Observations	1902	1902	1902	1902	1902	1902	1902	1902
R-squared	0.200	0.200	0.165	0.165	0.172	0.172	0.111	0.111
Adj R-squared	0.199	0.199	0.164	0.164	0.172	0.172	0.110	0.110
F test	236.8***	50.3***	187.4***	48.7***	197.8***	46.1***	119.0***	33.3***
VIF	1.00		1.00		1.00		1.00	

Table 5.2 Effects of Court Intervention, Region, and Density on Segregation

	5.2.1	**5.2.2.clstr**	**5.2.3**	**5.2.4.clstr**	**5.2.5**	**5.2.6.clstr**	**5.2.7**	**5.2.8.clstr**
VARIABLE	Dissimilarity	Dissimilarity	%Dissim	%Dissim	Exposure	Exposure	%Expos	%Expos
Components	-0.044***	-0.044***	-0.075***	-0.075***	0.030***	0.030***	0.136***	0.136***
	(0.002)	(0.004)	(0.004)	(0.008)	(0.002)	(0.004)	(0.010)	(0.019)
Density	0.005	0.005**	0.008	0.008**	-0.009***	-0.009***	-0.048***	-0.048***
	(0.003)	(0.002)	(0.006)	(0.004)	(0.002)	(0.002)	(0.014)	(0.011)
South	-0.003	-0.003	0.010*	0.010**	0.006**	0.006**	0.043***	0.043***
	(0.003)	(0.002)	(0.006)	(0.005)	(0.003)	(0.002)	(0.016)	(0.011)
Constant	-0.018**	-0.018***	-0.037**	-0.037***	0.018***	0.018***	0.096**	0.096***
	(0.008)	(0.006)	(0.015)	(0.012)	(0.006)	(0.005)	(0.038)	(0.027)
Observations	1902	1902	1902	1902	1902	1902	1902	1902
R-squared	0.201	0.201	0.166	0.166	0.180	0.180	0.117	0.117
Adj R-squared	0.199	0.199	0.165	0.165	0.178	0.178	0.115	0.115
F test	158.8***	38.6***	125.8***	35.6***	138.5***	43.3***	83.7***	25.5***
VIF	1.38		1.38		1.38		1.38	

Because one of my primary goals is to examine the impact of court intervention, a theoretically important group of predictors includes the effects of past court intervention. In many circumstances court intervention in school integration policy has evolved into an ongoing relationship between the court and district (O'Leary & Wise, 1991; Wise & O'Leary, 2003). Like many policy decisions, effects are not always fully manifested in the time period of the decision. Distributed lag-models (Gujarati, 1995, p. 585) more accurately describe these data generating processes. To account for the distributed impact of court behavior I created lagged variables of court intervention. Again, Stata's syntax marks lagged variables with an "L.variablename" for t-1, "L2.variablename" for t-2, etc.

Table 5.3 reports the results of distributed-lag models with court intervention distributed over an additional time period (***L.Components***). The addition of this technique improves the overall predictive value of this model compared to previous models. For example, for my models using the intensity of court intervention as a predictor of segregation, the adjusted R-squared for specification 5.3.2 (*Dissimilarity*) is now 22 percent and 19 percent for specification 5.3.5 (*Exposure*).

The coefficients of the variables themselves are meaningful. Density continues to be statistically significant in the directions expected – retarding the integration of a particular school district, but not eclipsing the effects of court intervention towards integration. Being a southern district is not consistently statistically significant in these specifications.

Specifications 5.3.1-5.3.4 are models of the intensity of court intervention in predicting the change in dissimilarity index. Negative coefficients indicate variables that have a positive influence on racial integration (the more the dissimilarity index moves towards zero, the more integration in the district).

For each court-ordered desegregation plan component there is a 4 (i.e., -.044) percent improvement in the change of the dissimilarity index from one period to the next (see 5.3.2). The effect are more pronounced when examining percentage change in the dissimilarity index (see 5.3.4). The effects of court intervention are not entirely manifest within the period they are ordered. For example, the effect of a single component of intervention is also felt through the next time period. The coefficient for ***L.Components*** in specification 5.3.2 is -0.014, which indicates that the effect of a court component one year after it was ordered is that the change in the dissimilarity index trends towards integration by about one and a half percent.

Specification 5.3.5 is a model of the intensity of court intervention in predicting the change in the exposure index. Positive coefficients indicate variables that have a positive influence on racial integration (the more the exposure index moves towards the maximum percentage of white students in the district, the more integrated the district).

For each court-ordered desegregation plan component there is a three percent improvement in the change of the dissimilarity index from one period to the next. The effect of a single component of intervention is also felt through the next time period. The coefficient for ***L.Components*** in specification 5.3.5 is 0.007, which indicates that the effect of a court component one year after it was ordered is that the change in the exposure index trends towards integration by just under one percent.

Including the effects of presence and intensity of court intervention for more than one year previous does not offer noticeable improvements to the overall predictive value of models estimating changes in the exposure indices (see Table, 5.4, e.g., adjusted R-square values). However, two-year lags are of marginal statistical significance when modeling changes in the dissimilarity index (5.4.1-5.4.4)—although the same does not hold for modeling changes the exposure index. I attribute this to the difference between the two indexes – dissimilarity being a proxy for compliance, and exposure being a measure of potential contact (see chapter 4).

Type of Intervention. My data allow me to unpack the "intensity" of court intervention by modeling the effect of those court-ordered components that are *mandatory* (students cannot choose to elect out of the component, e.g., mandatory busing) versus *voluntary* (students can elect to plan component, e.g., magnet school attendance). Table 5.5 reports these findings.

Refining the variable, intensity of court intervention (***Components***), into two categories--voluntary components (***Voluntary***) and mandatory components (***Mandatory***) boosts the explanatory value of general model to nearly 30 percent when modeling changes in the dissimilarity index (see 5.5.2) and nearly 25 percent when modeling changes in the exposure index (see 5.5.6). These are significant improvements over previous specifications.

The results suggest that for each additional court-ordered, voluntary integration component, the change in dissimilarity index trends towards segregation by 1 percent. However, lagged one year, that component begins to have an effect in the opposite direction – at almost the same magnitude. This is somewhat intuitive in that voluntary measures such as magnet schools take some time to get traction on segregation. One possible scenario is that the year a magnet school is ordered mobile, affluent white families exit the district. However after mobile, white families have exited, the remaining white students opt for voluntary measures because of the increased educational resources found in magnet schools. A year later, this integration is reflected, via a negative coefficient for lagged voluntary components, in the change in dissimilarity index. Again, these relationships are more pronounced when predicting the percentage change in the dissimilarity index (Table 5.5.3, 5.5.4).

Additional specifications suggest that, while statistically insignificant, these trends manifest themselves for components ordered two years after the year modeled (see ***L2.Voluntary*** 5.5.2)—voluntary components continue to influence integration in a positive way (negative coefficient) after the first year's effects are overcome.

The same patterns hold for the effect of voluntary components on changes in the exposure index. The negative coefficient in the first year (see 5.5.4) suggests that for each additional court-ordered, voluntary integration component, the change in the exposure index trends towards segregation by about 1 percent. However, lagged one year, that component begins to have an effect in the opposite direction – at an even smaller magnitude (.3 percent improvement in integration). Again, this reflects the longer lead-time in implementing voluntary components. As with modeling the dissimilarity index the effect of voluntary components continues to manifest influence on racial integration (although not to any statistically significant level) two years after implementation began (See 5.5.6).

Mandatory components, on the other hand, have a more immediate, consistent impact on integrating schools. One reason for this effect may be that mandatory plan components, unlike voluntary, do not allow for a “wait and see” choice in student adoption. The first year, therefore, is likely to evidence immediate change.

Each mandatory plan component corresponds with a 7 percent change in the dissimilarity index towards integration, The influence of a mandatory component lagged one year (***L.Mandatory***) corresponds with a 1.3 percent change in the dissimilarity index towards integration (see 5.5.2). Again, these effects are more pronounced when examining the percent change in the dissimilarity index (see 5.5.4). While not statistically significant, mandatory components continue to manifest a positive influence (negative coefficient in predicting the dissimilarity index) on desegregation even two periods prior to the year modeled (see ***L2.Mandatory*** 5.5.2, 5.5.4).

The effect of mandatory components on changes in the exposure index is similar to the effect on the dissimilarity index (see ***Mandatory*** 5.5.6). The positive coefficient in the first year (see 5.5.6) suggests that for each additional court-ordered, mandatory integration component, the change in the exposure index trends towards integration by about 5 percent. A component lagged one year (***L.Mandatory***) has a 1 percent impact on integration. As with modeling the dissimilarity index the effect of mandatory components continues to manifest influence on racial integration (although not to any statistically significant level) even two years later (see ***L2.Mandatory*** 5.5.6 and 5.5.8).

Table 5.3 One-Year Lagged Effects of Court Intervention on Segregation

	5.3.1	**5.3.2.clstr**	**5.3.3**	**5.3.4.clstr**	**5.3.5**	**5.3.5.clstr**	**5.3.7**	**5.3.8.clstr**
VARIABLE	Dissimilarity	Dissimilarity	%Dissim	%Dissim	Exposure	Exposure	%Expos	%Expos
Components	-0.044***	-0.044***	-0.074***	-0.074***	0.030***	0.030***	0.135***	0.135***
	(0.002)	(0.004)	(0.004)	(0.007)	(0.002)	(0.004)	(0.010)	(0.019)
L.Components	-0.014***	-0.014***	-0.027***	-0.027***	0.007***	0.007***	0.016	0.016**
	(0.002)	(0.003)	(0.004)	(0.006)	(0.002)	(0.002)	(0.010)	(0.008)
Density	0.004	0.004*	0.008	0.008*	-0.009***	-0.009***	-0.047***	-0.047***
	(0.003)	(0.002)	(0.005)	(0.005)	(0.002)	(0.002)	(0.014)	(0.011)
South	-0.002	-0.002	0.012*	0.012**	0.005**	0.005**	0.043***	0.043***
	(0.003)	(0.003)	(0.006)	(0.005)	(0.003)	(0.002)	(0.016)	(0.012)
Constant	-0.015*	-0.015**	-0.031**	-0.031**	0.017***	0.017***	0.093**	0.093***
	(0.008)	(0.006)	(0.015)	(0.012)	(0.006)	(0.005)	(0.038)	(0.028)
Observations	1902	1902	1902	1902	1902	1902	1902	1902
R-squared	0.221	0.221	0.188	0.188	0.189	0.189	0.118	0.118
Adj R-squared	0.219	0.219	0.186	0.186	0.187	0.187	0.116	0.116
F test	134.6***	32.4***	109.7***	31.6***	110.2***	35.6***	63.4***	23.6***
VIF	1.29		1.29		1.29		1.29	

Table 5.4 Two-Year Lagged Effects of Court Intervention on Segregation

	5.4.1	**5.4.2.clstr**	**5.4.3**	**5.4.4.clstr**	**5.4.5**	**5.4.5.clstr**	**5.4.7**	**5.4.8.clstr**
VARIABLE	Dissimilarity	Dissimilarity	%Dissim	%Dissim	Exposure	Exposure	%Expos	%Expos
Components	-0.041***	-0.041***	-0.072***	-0.072***	0.027***	0.027***	0.106***	0.106***
	(0.002)	(0.004)	(0.004)	(0.008)	(0.002)	(0.003)	(0.007)	(0.014)
L.Components	-0.015***	-0.015***	-0.029***	-0.029***	0.008***	0.008***	0.027***	0.027***
	(0.002)	(0.003)	(0.004)	(0.006)	(0.001)	(0.002)	(0.006)	(0.008)
L2.Components	-0.004**	-0.004*	-0.010***	-0.010**	0.001	0.001	-0.003	-0.003
	(0.002)	(0.002)	(0.004)	(0.005)	(0.001)	(0.002)	(0.006)	(0.004)
Density	0.001	0.001	0.005	0.005	-0.006***	-0.006***	-0.019**	-0.019***
	(0.003)	(0.002)	(0.006)	(0.004)	(0.002)	(0.002)	(0.010)	(0.007)
South	-0.001	-0.001	0.013**	0.013**	0.004*	0.004*	0.031***	0.031***
	(0.003)	(0.003)	(0.006)	(0.005)	(0.002)	(0.002)	(0.011)	(0.010)
Constant	-0.006	-0.006	-0.020	-0.020*	0.008	0.008	0.023	0.023
	(0.008)	(0.006)	(0.015)	(0.012)	(0.006)	(0.005)	(0.026)	(0.018)
Observations	1781	1781	1781	1781	1781	1781	1781	1781
R-squared	0.220	0.220	0.188	0.188	0.175	0.175	0.151	0.151
Adj R-squared	0.218	0.218	0.185	0.185	0.173	0.173	0.149	0.149
F test	100.3***	23.0***	82.1***	24.7***	75.6***	22.7***	63.1***	20.6***
Mean VIF	1.23		1.23		1.23		1.23	

Table 5.5 Lagged Effects of Mandatory and Voluntary Court Intervention on Segregation

VARIABLE	**5.5.1** Dissimilarity	**5.5.2.clstr** Dissimilarity	**5.5.3** %Dissim	**5.5.4.clstr** %Dissim	**5.5.5** Exposure	**5.5.6.clstr** Exposure	**5.5.7** %Expos	**5.5.8.clstr** %Expos
Voluntary	0.011**	0.011	0.019**	0.019	-0.009**	-0.009	-0.018	-0.018
	(0.005)	(0.007)	(0.009)	(0.012)	(0.004)	(0.005)	(0.016)	(0.027)
L.Voluntary	-0.014***	-0.014**	-0.024***	-0.024*	0.003	0.003	0.013	0.013
	(0.005)	(0.007)	(0.009)	(0.012)	(0.003)	(0.004)	(0.015)	(0.016)
L2.Voluntary	-0.006	-0.006	-0.018**	-0.018*	0.002	0.002	0.004	0.004
	(0.004)	(0.005)	(0.009)	(0.010)	(0.003)	(0.004)	(0.015)	(0.010)
Mandatory	-0.070***	-0.070***	-0.121***	-0.121***	0.046***	0.046***	0.175***	0.175***
	(0.003)	(0.007)	(0.006)	(0.012)	(0.002)	(0.006)	(0.010)	(0.028)
L.Mandatory	-0.013***	-0.013***	-0.025***	-0.025***	0.010***	0.010***	0.029***	0.029**
	(0.003)	(0.005)	(0.006)	(0.009)	(0.002)	(0.003)	(0.010)	(0.011)
L2.Mandatory	-0.003	-0.003	-0.005	-0.005	0.001	0.001	-0.004	-0.004
	(0.003)	(0.004)	(0.006)	(0.007)	(0.002)	(0.003)	(0.010)	(0.008)
Constant	-0.004***	-0.004***	-0.004	-0.004	-0.004***	-0.004***	-0.007	-0.007*
	(0.001)	(0.001)	(0.003)	(0.002)	(0.001)	(0.001)	(0.005)	(0.004)
Observations	1781	1781	1781	1781	1781	1781	1781	1781
R-squared	0.282	0.282	0.237	0.237	0.217	0.217	0.172	0.172
Adj R-squared	0.279	0.279	0.234	0.234	0.214	0.214	0.169	0.169
F test	116.0***	22.3***	91.7***	24.1***	81.8***	16.8***	61.3***	13.1***
Mean VIF	1.21		1.21		1.21		1.21	

Structural Shift Models

In addition to controlling for variables such as type of court intervention, density and region, I consider the importance of temporal, structural shifts in the relationships. As discussed in Chapter 4, the question here becomes whether certain time-based events caused the impact of court behavior to matter differently. I report here on Chow models raised in Chapter 4 to explore the possibility of these shifts—centered on 1973, two years after the *Swann v. Mecklenburg* case.

Theoretical support for suspecting a structural shift around *Swann* is discussed in Chapter 4, and is generally reflected in the approaches of several segregation studies (e.g., D. Armor & Rossell, 2002; Welch et al., 1987). Although the *Swann* case was handed down in 1971, 1973 is chosen, in part, to allow for implementation effect and because in 1973 the Supreme Court handed down *Keyes v. School District No. 1, Denver*, 413 U.S. 189 (1973), which brought the effect of *Swann* to northern school districts as well (D. Armor & Rossell, 2002, p. 224).

General statistical evidence reported in Chapter 4 suggested the existence of a structural shift pursuant to the *Swann* case. Without considering the dummy variable approach to the Chow test, one might assume several states explaining the structural shift. These are described as concurrent, parallel, and dissimilar regressions (Gujarati, 1995, p. 511). The traditional Chow test allows us to reject the states of coincident regression. However, by referencing the Chow test (results in Table 5.6) we can determine that there has been a shift in the regression intercept between the two regressions (i.e., parallel), and a change in slopes (i.e., dissimilar). In this case, the nature of Chow test reveals that the nature of the structural shift is dissimilar regressions (i.e., difference slopes before and after the structural shock).

For example, when modeling the effect of intensity of court intervention before *Swann*, for each additional court-ordered desegregation component, the change in the dissimilarity index improved by 6.8 percent (see **Components,** table 5.6.5). Lagged components had a 1.6 percent correspondence with desegregation. After *Swann*, however, each court-ordered component corresponded to a 4.2 percent change towards segregation as manifest by the change in dissimilarity index (see **g2Components,** table 5.6.5).

These general relationships describe both the changes in dissimilarity and exposure indexes pre- and post-*Swann* whether one examines intensity or presence of court intervention as independent variables(see 5.6.5-5.6.8).

In general, the fit of the model is extremely good. Specifications controlling for structural shift around *Swann* account for around 30 percent of the variance of changes in segregation from time period to the next (5.6.5 and 5.6.7) and around 25 percent of the variance of the percentage changes in segregation (5.6.6 and 5.6.8). This level of fit is generally 10 percent better than previous specifications which do not account for possible structural shifts.

Notwithstanding the improvement in overall fit, this structural shift model introduces results that may be counterintuitive. The model suggests that court interventions have the opposite effect before (encouraged integration) and after (corresponded to segregation) the *Swann* decision.

Research by scholars such as Christine Rossell and David Armor suggests that part of the courts' influence may be determined by whether the court ordered voluntary or involuntary measures. As introduced in Chapter 4, *Swann v. Charlotte-Mecklenburg Board of Education* was the Supreme Court's first clear definition that an integrated school "was defined as one whose racial composition is roughly the same as the racial composition of the entire school system" (D. Armor & Rossell, 2002, p. 232). According to Welch and Light (1987, p. 29) *Swann* allowed lower courts to use mandatory measures that went beyond narrower, geographic-based methods by using busing. *Swann* introduced mandatory busing as a federal judicial integration tool. Armor and Rossell (2002, p. 227) observe that "after *Swann*, most Southern districts that still had substantial racial imbalance were immediately back in court and typically ordered to adopt busing remedies along the lines of the Charlotte-Mecklenburg plan."

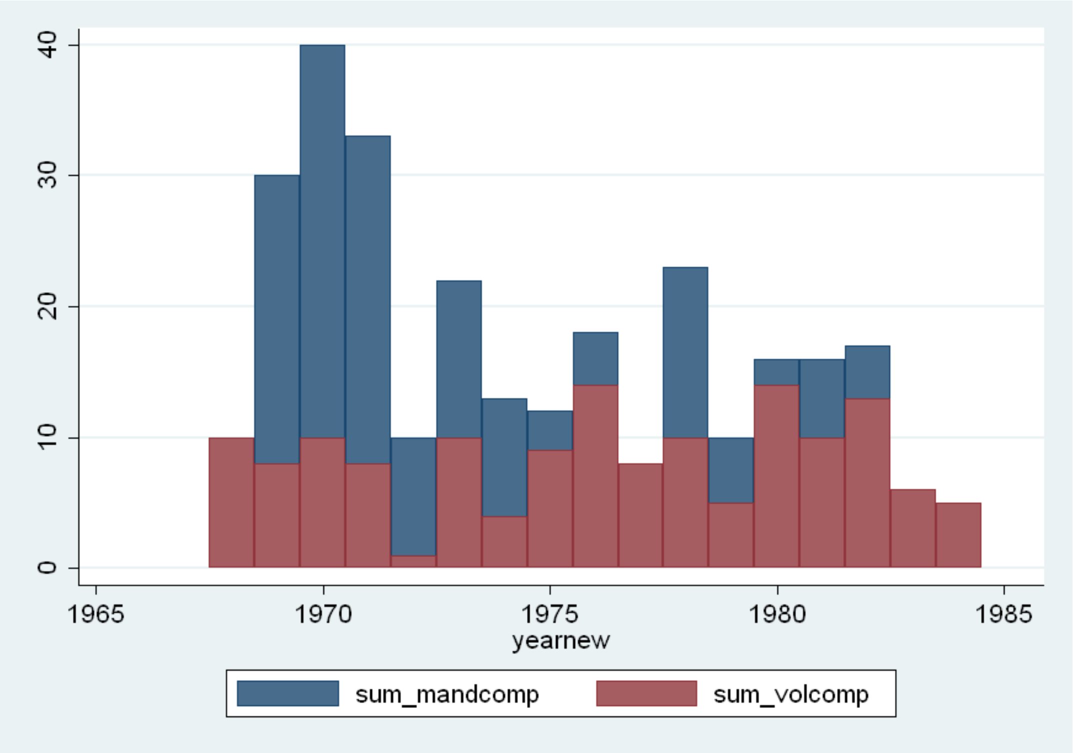
My sample does not evidence, however, that mandatory integration plan components eclipsed the growing use of voluntary plan components after *Swann*. On the contrary, the average total counts of mandatory measures are higher before *Swann* and average total counts—across the sample—of voluntary measures appear higher after Swann (see Figure 5.1). In fact, t-tests confirm that for mandatory components these means are statistically different before and after *Swann*. The use of voluntary components does not statistically differ before and after *Swann*.[23]

---

[23] `ttest volcomp if yearnew<1986, by(g2) unpaired`

```
Two-sample t test with equal variances
------------------------------------------------------------------------------
   Group |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
PreSwann |     744     .063172    .0093214     .254253    .0448727    .0814714
PostSwann|    1488    .0658602    .0076516     .295159    .0508511    .0808694
---------+--------------------------------------------------------------------
combined |    2232    .0649642    .0059717    .2821288    .0532534    .0766749
```

Figure 5.1: Average Comparison of Mandatory and Voluntary Intervention



```
---------+--------------------------------------------------------------------
    diff |           -.0026882    .0126707               -.0275357    .0221594
------------------------------------------------------------------------------
    diff = mean(0) - mean(1)                                      t =  -0.2122
Ho: diff = 0                                     degrees of freedom =     2230

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.4160         Pr(|T| > |t|) = 0.8320          Pr(T > t) = 0.5840

. ttest mandcomp if yearnew<1986, by(g2) unpaired

Two-sample t test with equal variances
------------------------------------------------------------------------------
   Group |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
PreSwann |     744    .1935484    .0189319    .5163922    .1563821    .2307147
PostSwann|    1488    .0967742    .0099728    .3846976    .0772119    .1163365
---------+--------------------------------------------------------------------
combined |    2232    .1290323    .0092149     .435349    .1109616    .1471029
---------+--------------------------------------------------------------------
    diff |            .0967742    .0194444                .0586431    .1349053
------------------------------------------------------------------------------
    diff = mean(0) - mean(1)                                      t =   4.9770
Ho: diff = 0                                     degrees of freedom =     2230

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 1.0000         Pr(|T| > |t|) = 0.0000          Pr(T > t) = 0.0000
```

[25] Judicial activity in desegregation was certainly a fixture since at least 1954, but 1968 is the first year when nationwide data was consistently available on enrollments by race.

Research on this topic (e.g., Rossell, 1990; Rossell & Armor, 1996) ultimately concludes that voluntary measures have been more effective in bringing about racial balance than mandatory measures. My analysis confirms these findings to some degree, but suggests that these relationships shifted structurally around events like *Swann* and should be analyzed within their respective structural states.

During the pre-*Swann* structural state, the constant terms suggests that, all else equal, districts trended toward integration (whether measured by the dissimilarity or exposure index, see ***constant***, 5.7.1-7.2 and 5.7.3-7.4). During the post-*Swann* structural state, however, districts trended toward segregation (all else equal, see ***g2***, 5.7.1-7.2 and 5.7.3-7.4).

The effect of voluntary components (***Voluntary***) is somewhat ambiguous. The direction of the coefficients suggests that each additional voluntary component actually had a negative impact on racial integration pre-*Swann* but a positive impact on integration post-*Swann* (see pre-Swann [***Voluntary***] and post-*Swann* [***g2Voluntary***]). However, statistical certainty can only be ascribed to the effect of each additional voluntary component, post-*Swann*, on the percentage change in dissimilarity index (see 5.7.2 and 5.7.6). For each additional voluntary component ordered, the dissimilarity index trends towards integration 3 percent more than had intervention not been ordered (see ***g2Voluntary***, 5.9.1).

The effect of mandatory components (***Mandatory***) is far less ambiguous. The direction of the coefficients suggests that each additional mandatory component actually had a positive impact on racial integration pre-*Swann* but a negative impact on integration post-*Swann* (see all specifications pre-Swann [***Mandatory***] and post-*Swann* [***g2Mandatory***]). For example, as measured by the percentage change in dissimilarity index pre-Swann, for each additional mandatory component ordered, the dissimilarity index trends towards integration 15 percent more than had no intervention been ordered (see ***Mandatory***, 5.7.2).

Modeling the type of court intervention per structural period improves the overall fit of the model, and offers a slight improvement over the fit of previous models (contrast adjusted R-square values in Table 5.7 with Table 5.6). However, specifications (see 5.7.5 to 5.7.8). modeling lagged effects of type of court intervention—whether voluntary or involuntary—do not consistently add to the overall statistical significance of the model. .

These findings raise the possibility that, at least in the post-*Swann* era, voluntary plan components seem to correspond with faster racial integration. Why voluntary components do not manifest more statistically significant relationships with desegregation in either pre- or post-*Swann* is something that I take up at the beginning of the next section. From the post-*Swann* structural state, there is some evidence to support the work of Rossell and Armor who ultimately recommend that "desegregation should be strictly voluntary, as with magnet schools or open enrollment options" (2002, p. 255). At the same time, I observe some statistical evidence that mandatory plan components marked the zenith of their positive influence on racial integration at or before *Swann*, a court case that ironically allows federal courts to implement mandatory components (at least busing) more fully.

While I have arranged the structural shift analysis around the *Swann* case I recognize here the possibility that *Swann* merely coincides other forces that influence the diminishing returns of certain tools, e.g., mandatory tools. However, whether *Swann* causes or was facilitated by these forces is not the focus of the present research. *Swann's* importance lies in its symbolic message to lower courts condoning a new direction in intervention to include mandatory, district-wide components. Representing the culmination of social/judicial forces that would condone such court action, *Swann* serves as a guidepost viewed as a meaningful (e.g., Armor & Rossell, 2002; Welch et al., 1987) to desegregation and desegregation research

Table 5.6 Chow Test: The Effects of Court Intervention on Segregation, before and after *Swann* (1972)

	5.6.1	**5.6.2.clstr**	**5.6.3**	**5.6.4.clstr**	**5.6.5.clstr**	**5.6.6.clstr**	**5.6.7.clstr**	**5.6.8.clstr**
VARIABLE	Dissimilarity	%Dissim	Exposure	%Expos	Dissimilarity	%Dissim	Exposure	%Expos
South	-0.018***	-0.012	0.017***	0.108***	-0.015*	0.002	0.014**	0.099***
	(0.006)	(0.012)	(0.005)	(0.030)	(0.008)	(0.014)	(0.006)	(0.031)
Density	0.011**	0.017*	-0.018***	-0.107***	0.003	0.009	-0.010**	-0.040**
	(0.005)	(0.010)	(0.004)	(0.028)	(0.005)	(0.010)	(0.004)	(0.019)
Components	-0.067***	-0.105***	0.052***	0.246***	-0.068***	-0.110***	0.049***	0.204***
	(0.009)	(0.015)	(0.007)	(0.044)	(0.010)	(0.017)	(0.008)	(0.034)
L.Components					-0.016**	-0.036***	0.009*	0.013
					(0.007)	(0.013)	(0.005)	(0.022)
L2.Components					-0.001	-0.008	-0.000	-0.034**
					(0.006)	(0.013)	(0.004)	(0.015)
Constant	-0.037***	-0.066**	0.042***	0.248***	-0.014	-0.038	0.021**	0.080*
	(0.013)	(0.026)	(0.011)	(0.072)	(0.014)	(0.027)	(0.010)	(0.048)
g2	0.025	0.038	-0.034***	-0.228***	0.006	0.018	-0.014	-0.064
	(0.016)	(0.034)	(0.012)	(0.074)	(0.016)	(0.034)	(0.012)	(0.053)
g2rsthbord	0.027***	0.039**	-0.020***	-0.113***	0.023***	0.024	-0.018**	-0.103***
	(0.008)	(0.016)	(0.006)	(0.032)	(0.009)	(0.017)	(0.007)	(0.033)
g2Density	-0.010	-0.013	0.013***	0.094***	-0.002	-0.005	0.005	0.027
	(0.006)	(0.012)	(0.005)	(0.029)	(0.006)	(0.012)	(0.004)	(0.021)
g2Components	0.040***	0.054***	-0.038***	-0.196***	0.042***	0.060***	-0.036***	-0.155***
	(0.010)	(0.017)	(0.008)	(0.045)	(0.011)	(0.019)	(0.008)	(0.036)
g2LComponents					0.003	0.014	-0.003	0.007
					(0.008)	(0.014)	(0.006)	(0.023)
g2L2Components					0.000	0.002	-0.001	0.030*
					(0.007)	(0.014)	(0.004)	(0.015)
Observations	1902	1902	1902	1902	1781	1781	1781	1781
R-squared	0.297	0.225	0.315	0.228	0.302	0.237	0.290	0.266
Adj R-squared	0.294	0.222	0.312	0.225	0.298	0.233	0.286	0.261
F test	26.2***	24.2***	30.3***	15.3***	14.6***	15.0***	16.0***	13.3***
Post Swann F Test	17.86***	12.28***	27.97***	13.86***	8.01***	5.72***	12.01***	8.69***

Table 5.7 The Effects of Mandatory and Voluntary Court Intervention on Segregation, before and after *Swann* (1972)

VARIABLE	5.7.1.clstr Dissim	5.7.2.clstr %Dissim	5.7.3.clstr Exposure	5.7.4.clstr %Expos	5.7.5.clstr Dissim	5.7.6.clstr %Dissim	5.7.7.clstr Exposure	5.7.8.clstr %Expos
Density	0.011**	0.017*	-0.017***	-0.106***	0.003	0.009	-0.010***	-0.042**
	(0.005)	(0.009)	(0.004)	(0.028)	(0.005)	(0.009)	(0.004)	(0.019)
South	-0.012*	-0.000	0.012**	0.092***	-0.011	0.009	0.012**	0.097***
	(0.006)	(0.012)	(0.005)	(0.031)	(0.007)	(0.014)	(0.006)	(0.031)
Voluntary	0.020	0.042*	-0.010	0.043	0.021	0.046*	-0.007	0.058
	(0.014)	(0.021)	(0.012)	(0.090)	(0.017)	(0.027)	(0.014)	(0.088)
Mandatory	-0.094***	-0.151***	0.071***	0.310***	-0.096***	-0.160***	0.067***	0.250***
	(0.011)	(0.018)	(0.009)	(0.063)	(0.013)	(0.022)	(0.010)	(0.049)
L.Voluntary					-0.012	-0.021	0.015	0.043
					(0.019)	(0.034)	(0.014)	(0.062)
L2.Voluntary					-0.002	-0.006	0.000	-0.005
					(0.017)	(0.033)	(0.013)	(0.035)
L.Mandatory					-0.011	-0.030*	0.003	-0.006
					(0.009)	(0.017)	(0.007)	(0.028)
L2.Mandatory					-0.002	-0.010	0.000	-0.042*
					(0.010)	(0.017)	(0.007)	(0.022)
Constant	-0.039***	-0.069***	0.043***	0.253***	-0.017	-0.043*	0.023**	0.086*
	(0.012)	(0.025)	(0.010)	(0.073)	(0.013)	(0.025)	(0.010)	(0.047)
g2	0.028*	0.043	-0.036***	-0.234***	0.009	0.024	-0.016	-0.070
	(0.015)	(0.032)	(0.012)	(0.074)	(0.015)	(0.031)	(0.011)	(0.052)
g2Density	-0.010*	-0.013	0.013***	0.094***	-0.002	-0.005	0.005	0.029
	(0.006)	(0.012)	(0.004)	(0.029)	(0.005)	(0.012)	(0.004)	(0.021)
g2rsthbord	0.021***	0.029*	-0.016***	-0.098***	0.019**	0.016	-0.015**	-0.100***
	(0.007)	(0.015)	(0.006)	(0.032)	(0.008)	(0.016)	(0.007)	(0.033)
g2Voluntary	-0.024	-0.047*	0.013	-0.031	-0.027	-0.053*	0.012	-0.045
	(0.015)	(0.024)	(0.013)	(0.092)	(0.019)	(0.029)	(0.016)	(0.090)
g2Mandatory	0.053***	0.069***	-0.050***	-0.234***	0.056***	0.080***	-0.047***	-0.177***
	(0.014)	(0.023)	(0.011)	(0.066)	(0.016)	(0.026)	(0.013)	(0.057)
g2LVoluntary					-0.009	-0.013	-0.007	-0.009
					(0.020)	(0.037)	(0.014)	(0.063)
g2L2Voluntary					-0.005	-0.015	0.004	0.017
					(0.018)	(0.035)	(0.013)	(0.036)
g2LMandatory					0.004	0.017	0.000	0.015
					(0.011)	(0.019)	(0.007)	(0.030)
g2L2Mandatory					0.004	0.012	-0.005	0.028
					(0.010)	(0.018)	(0.007)	(0.022)
Observations	1902	1902	1902	1902	1781	1781	1781	1781
R-squared	0.344	0.268	0.351	0.239	0.349	0.281	0.322	0.280
Adj R-squared	0.341	0.265	0.348	0.236	0.343	0.274	0.316	0.273
F test	24.1***	25.0***	25.6***	12.6***	12.3***	13.4***	11.6***	10.3***
Post Swann F Test	11.6***	8.0***	19.6***	10.0***	5.5***	3.9***	7.7***	5.9***

Curvilinear Models

Previous models, even structural shift models, have been constricted to linear relationships. The result is that statistical effects, to the extent to which nonlinear dynamics exist in the data generating process, will be underestimated in both the overall fit (e.g., R-squared) and individual coefficients. For example, one question raised in the previous, structural shift linear models is why voluntary components do not manifest more statistically significant predictive properties both before and after *Swann*. That the structural shift models do not reveal a larger role for court-ordered voluntary measures may be because there is a nonlinear relationship between their influence and segregation indexes.

One way to more fully explore the influence of courts on racial integration is to use models that detect non- or curvilinear relationships (the idea that x amount more intervention does not necessarily produce x amount more integration). As a compromise between the simplicity of linear models and the complexity of nonlinear models, curvilinear models are presented here to explore this notion. Curvilinear models rely on ordinary least squares estimation, while employing both linear and nonlinear transformations (e.g., polynomical U-shaped curves) of the regressors.

Some very elementary specifications suggest the appropriateness of these curvilinear models. For example, when modeling the impact of intensity of court intervention, the specification (see 5.8.2) employing a nonlinear transformation (i.e., squaring the variable of interest) of intensity of court intervention (***Componentssq***) displays a higher goodness of fit (see adjusted R-square, 5.8.2) than the curvilinear model (see 5.8.1). The improved fit of curvilinear modeling holds when racial integration is measured by the change in dissimilarity index (see 5.8.1, 5.8.2; and percent change in dissimilarity see 5.8.5, 5.8.6) or change in exposure index (see 5.8.3, 5.8.4; and percent change in exposure see 5.8.7, 5.8.8).

These relationships are visually depicted in figures 5.1 and 5.2. Graph 5.1 indicates that the largest improvements in the dissimilarity index are associated with two components, and that judicial intervention exceeding this level (e.g., 3 and 4 components) offers diminishing returns. Keeping in mind that the exposure index most generally displays an inverse relationship to the dissimilarity index, figure 5.2 depicts the same phenomenon: court intervention is most effective when restrained to two components.

Table 5.8 Linear and Nonlinear Effects of Court Intervention on Segregation

VARIABLE	**5.8.1.clstr** Dissimilarity	**5.8.2.clstr** Dissimilarity	**5.8.3.clstr** Exposure	**5.8.4.clstr** Exposure	**5.8.5.clstr** %Dissim	**5.8.6.clstr** %Dissim	**5.8.7.clstr** %Expos	**5.8.8.clstr** %Expos
Components	-0.045***	-0.095***	0.031***	0.073***	-0.075***	-0.170***	0.140***	0.369***
	(0.004)	(0.017)	(0.004)	(0.014)	(0.008)	(0.031)	(0.019)	(0.071)
Componentssq		0.021***		-0.017***		0.039***		-0.094***
		(0.006)		(0.005)		(0.012)		(0.024)
Constant	-0.009***	-0.008***	-0.000	-0.002*	-0.013***	-0.011***	0.008	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.005)	(0.005)
Observations	1902	1902	1902	1902	1902	1902	1902	1902
R-squared	0.198	0.224	0.158	0.189	0.164	0.193	0.094	0.121
Adj R-squared	0.197	0.223	0.157	0.188	0.164	0.192	0.094	0.120
F test	99.8***	60.0***	75.8***	45.0***	95.2***	64.1***	51.8***	29.7***

Figure 5.1 Curvilinear Relationship between Intensity and Dissimilarity

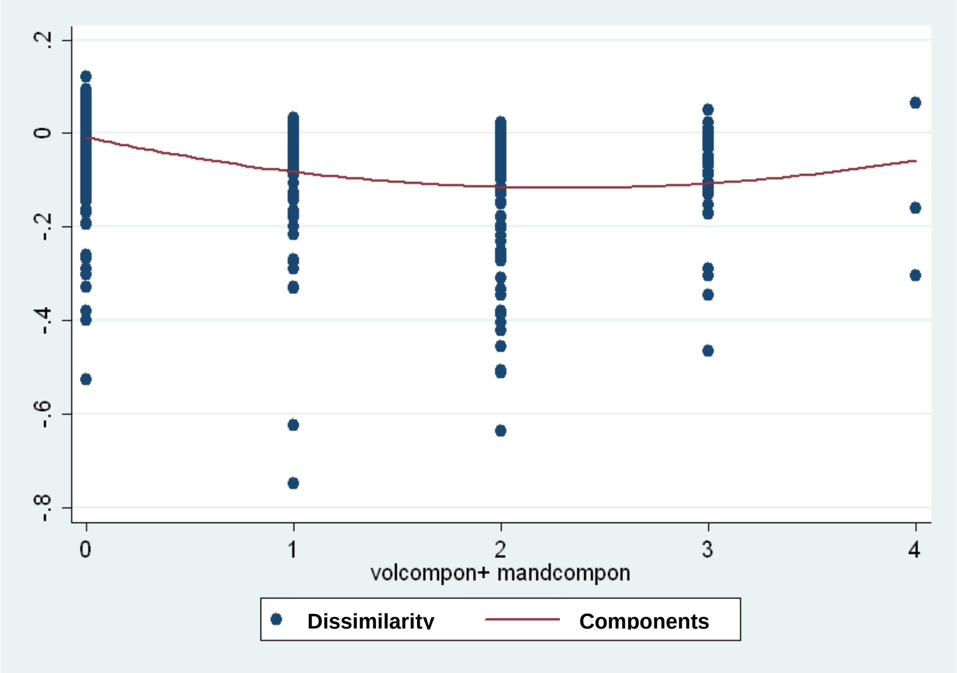
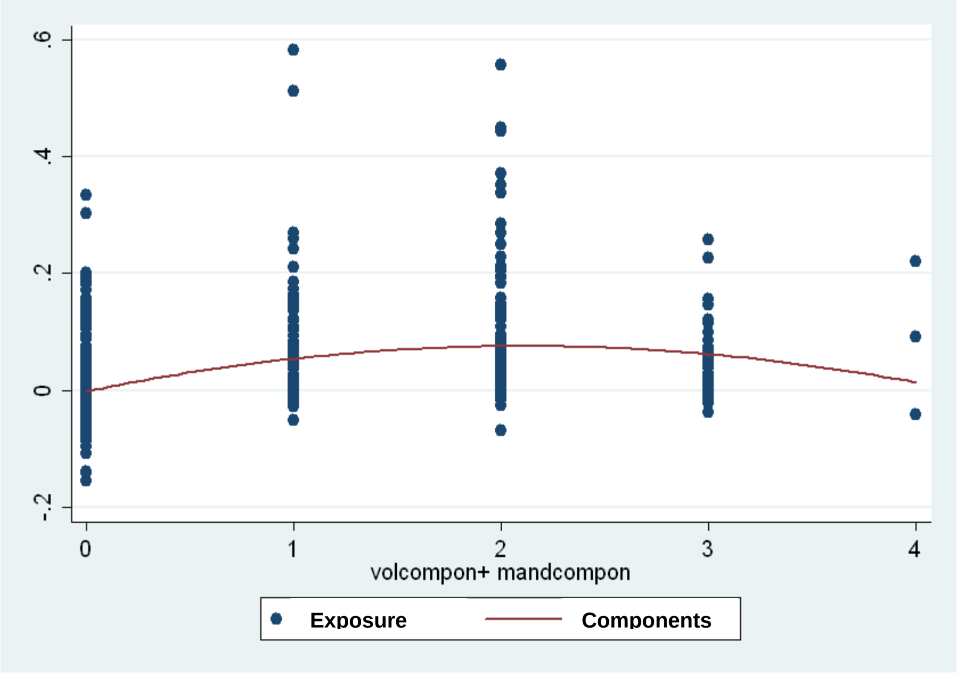


Figure 5.2 Curvilinear Relationship between Intensity and Exposure



Not surprisingly, similar results are evident when examining the relationships between court intervention and percent change in dissimilarity and percent change in exposure indexes (see appendices 5.E and 5.F, respectively).

Fuller models are presented below. These models are primarily a mixture of modeling some control variables linearly but court behavior nonlinearly. For example, I modeled region (***South)*** nonlinearly because of its dichotomous nature. For parsimony, I also did not perform nonlinear transformations on the lags of court intervention. As in the models reported in Table 5.8, I did model the initial (non-lagged) intensity of frequency (***Componentssq***) nonlinearly.

Table 5.9 reports specifications that include many of the control variables (e.g., region, density) discussed previously in this chapter as well as lags of court intervention. In each of these specifications the nonlinear transformation of intensity of court intervention (***Componentssq***) (see e.g., 5.9.2, 5.9.4, 5.9.6, 5.9.8) provided a better fit than the linear counterparts (see e.g., 5.9.1, 5.9.3, 5.9.5, 5.9.7), while the controls behave as in previous models (e.g., denser school district are slower to integrate, while southern districts are faster to respond to court intervention).

Visual depictions of these full model specifications are very similar to figures 5.1 and 5.2. I include, below visualizations of (see Figures 5.3 and 5.4) two specifications in Table 5.9.2—integration measured by dissimilarity index—and 5.9.4—integration measured by exposure index. The figures emphasize that even when controlling for region and density, intensity of court intervention has an optimal effect on race integration just above 2 intervention components.

Figure 5.3 Illustration of Curvilinear Relationship between Intensity & Dissimilarity

(see Table 5.9.2)

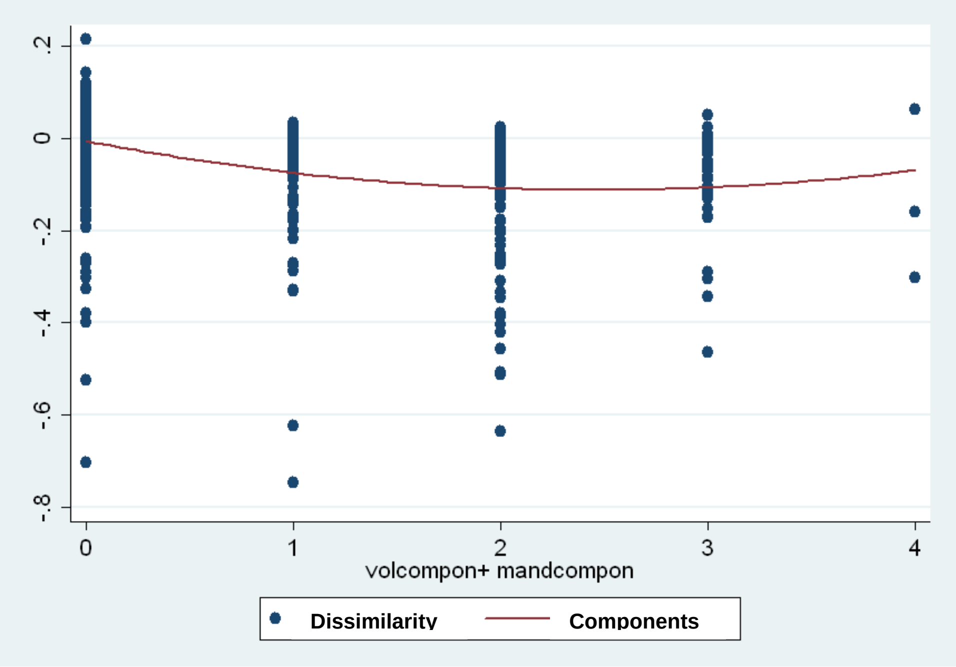
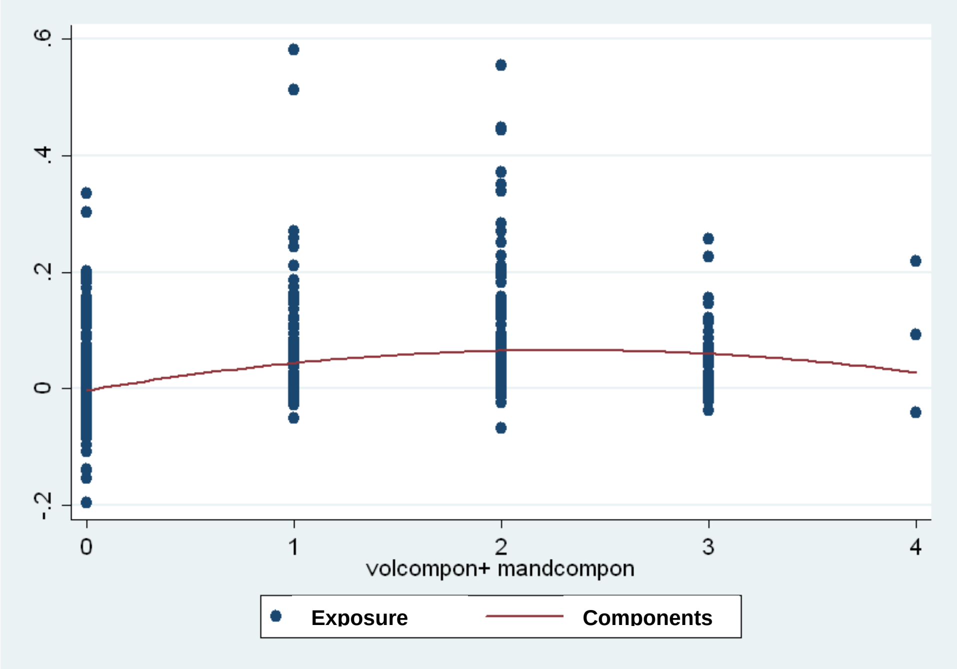


Figure 5.4 Illustration of Curvilinear Relationship between Intensity & Exposure

(see Table 5.9.4)



One of the final questions to explore in this chapter was raised at the beginning of this section: whether focusing type of component—mandatory or voluntary—adds additional understanding to the role of courts in desegregation. Table 5.10 presents the results of specifications exploring this question.

When intensity of court intervention is unpacked into its component parts (voluntary and mandatory), the models exhibit much higher goodness of fit (compare, e.g., 5.9.2 to 5.10.2). Within Table 5.10, when the impact of voluntary and mandatory components is nonlinearly transformed (***Voluntarysq*** & ***Mandatorysq***), those specifications have a slightly better goodness of fit than linear specifications (compare, e.g., adjusted R-squared values in 5.10.1 (.28) and 5.10.2 (.29). This evidence of nonlinearity may help to explain why the relationships between voluntary court-ordered components and desegregation indexes were largely statistically insignificant, for example, in the *Swann* structural shift models (see Table 5.7, partial evidence that the impact of voluntary components was underestimated). The linear relationships between mandatory court-ordered components and desegregation indexes, on the other hand, were statistically significant (see Table 5.7, partial evidence that mandatory intervention's impact was not underestimated).

Table 5.9 Curvilinear Effects of Intensity of Court Intervention on Segregation

	5.9.1.clstr	**5.9.2.clstr**	**5.9.3.clstr**	**5.9.4.clstr**	**5.9.5.clstr**	**5.9.6.clstr**	**5.9.7.clstr**	**5.9.8.clstr**
VARIABLE	Dissimilarity	Dissimilarity	Exposure	Exposure	%Dissim	%Dissim	%Expos	%Expos
Components	-0.041***	-0.083***	0.027***	0.058***	-0.072***	-0.160***	0.106***	0.243***
	(0.004)	(0.017)	(0.003)	(0.013)	(0.008)	(0.033)	(0.014)	(0.057)
Componentssq		0.017**		-0.012***		0.036***		-0.055***
		(0.007)		(0.005)		(0.013)		(0.020)
L.Components	-0.015***	-0.015***	0.008***	0.008***	-0.029***	-0.028***	0.027***	0.025***
	(0.003)	(0.003)	(0.002)	(0.002)	(0.006)	(0.006)	(0.008)	(0.008)
L2.Components	-0.004*	-0.003	0.001	0.001	-0.010**	-0.009*	-0.003	-0.004
	(0.002)	(0.002)	(0.002)	(0.001)	(0.005)	(0.005)	(0.004)	(0.004)
Density	0.001	0.001	-0.006***	-0.006***	0.005	0.004	-0.019***	-0.018***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.007)	(0.007)
South	-0.001	-0.002	0.004*	0.005**	0.013**	0.012**	0.031***	0.033***
	(0.003)	(0.003)	(0.002)	(0.002)	(0.005)	(0.005)	(0.010)	(0.010)
Constant	-0.006	-0.004	0.008	0.006	-0.020*	-0.016	0.023	0.016
	(0.006)	(0.006)	(0.005)	(0.005)	(0.012)	(0.012)	(0.018)	(0.019)
Observations	1781	1781	1781	1781	1781	1781	1781	1781
R-squared	0.220	0.239	0.175	0.195	0.188	0.211	0.151	0.171
Adj R-squared	0.218	0.236	0.173	0.192	0.185	0.209	0.149	0.169
F test	23.0***	20.7***	22.7***	20.3***	24.7***	22.8***	20.6***	17.4***
VIF	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23

Table 5.10 Curvilinear Effects of Mandatory and Voluntary Court Intervention on Segregation

	5.10.1.clstr	**5.10.2.clstr**	**5.10.3.clstr**	**5.10.4.clstr**	**5.10.5.clstr**	**5.10.6.clstr**	**5.10.7.clstr**	**5.10.8.clstr**
VARIABLE	Dissimilarity	Dissimilarity	Exposure	Exposure	%Dissim	%Dissim	%Expos	%Expos
Mandatory	-0.070***	-0.083***	0.045***	0.065***	-0.123***	-0.181***	0.171***	0.234**
	(0.007)	(0.029)	(0.006)	(0.018)	(0.012)	(0.059)	(0.028)	(0.093)
Voluntary	0.011	0.075***	-0.008	-0.045**	0.022*	0.155***	-0.012	-0.064
	(0.007)	(0.027)	(0.005)	(0.020)	(0.013)	(0.046)	(0.027)	(0.103)
Voluntarysq		-0.041***		0.023**		-0.084***		0.030
		(0.014)		(0.011)		(0.025)		(0.050)
Mandatorysq		0.004		-0.009		0.026		-0.032
		(0.015)		(0.009)		(0.032)		(0.046)
LMandatory	-0.014***	-0.013***	0.009***	0.008***	-0.027***	-0.025***	0.023**	0.022*
	(0.005)	(0.005)	(0.003)	(0.003)	(0.009)	(0.009)	(0.012)	(0.012)
L2Mandatory	-0.003	-0.003	0.000	0.000	-0.007	-0.008	-0.010	-0.010
	(0.004)	(0.004)	(0.003)	(0.003)	(0.007)	(0.007)	(0.008)	(0.008)
LVoluntary	-0.013**	-0.014**	0.004	0.005	-0.021*	-0.024*	0.020	0.022
	(0.007)	(0.007)	(0.004)	(0.004)	(0.012)	(0.012)	(0.016)	(0.016)
L2Voluntary	-0.005	-0.006	0.003	0.003	-0.015	-0.015	0.011	0.011
	(0.005)	(0.005)	(0.004)	(0.004)	(0.010)	(0.010)	(0.010)	(0.010)
Density	0.001	0.001	-0.006***	-0.006***	0.004	0.004	-0.019***	-0.018**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.007)	(0.007)
South	0.002	0.002	0.002	0.003	0.019***	0.018***	0.025**	0.026**
	(0.003)	(0.003)	(0.002)	(0.002)	(0.005)	(0.005)	(0.010)	(0.010)
Constant	-0.006	-0.007	0.008*	0.008	-0.021*	-0.021*	0.024	0.022
	(0.006)	(0.006)	(0.005)	(0.005)	(0.011)	(0.011)	(0.018)	(0.019)
Observations	1781	1781	1781	1781	1781	1781	1781	1781
R-squared	0.282	0.291	0.224	0.231	0.241	0.254	0.183	0.185
Adj R-squared	0.279	0.287	0.221	0.227	0.238	0.25	0.179	0.18
F test	17.1***	15.6***	15.5***	13.8***	18.8***	18.5***	14.1***	11.9***

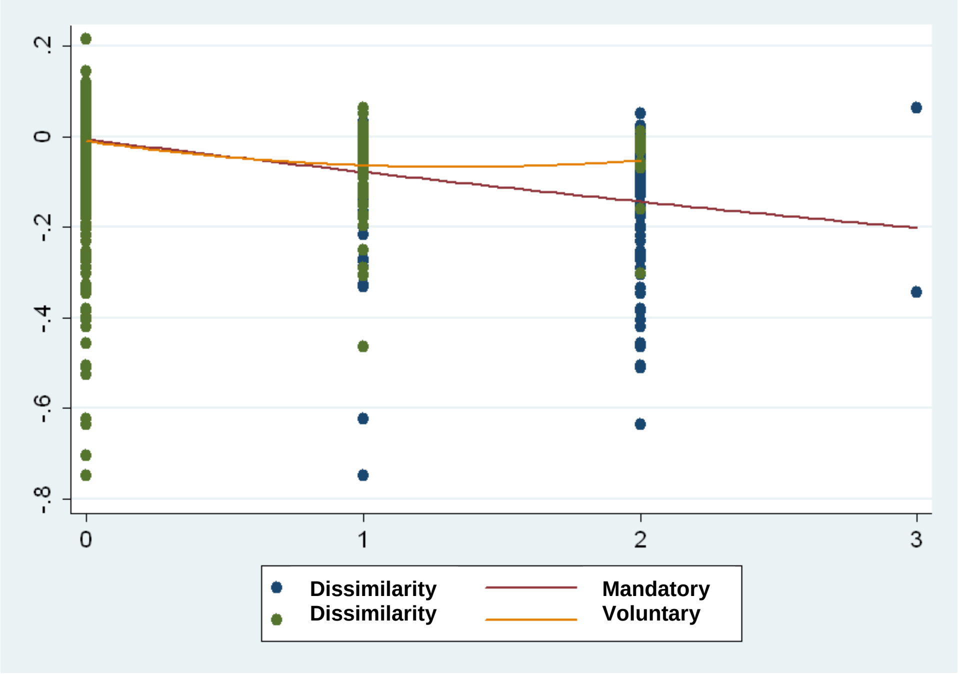
In the linear specifications (5.10.1, 5.10.3, 5.10.5, 5.10.7), the independent variables of interest (voluntary and mandatory court-ordered components) yield somewhat conflicting results. The coefficients for mandatory components (***Mandatory***) suggest that, whether measured by the dissimilarity or exposure indexes—or percent changes in those indices--mandatory components increase the rate of racial integration. Because of research (e.g., D. Armor & Rossell, 2002; Rossell, 1990) suggesting voluntary plans are generally more effective, one would expect voluntary components of desegregation plans—even if they included mandatory components—to be as strong or stronger in predicting racial integration. The evidence presented in the linear specifications, however, suggests that voluntary components actually have weaker influence (smaller coefficients than mandatory counterparts) AND actually work against racial integration.

The curvilinear models (5.10.2, 5.10.4, 5.10.6, 5.10.8) provide some insight into this seeming contradiction. I use layered, two-way graphs to provide graphical illustrations of several specifications in Table 5.10. Voluntary interventions exhibit a parabolic correspondence with racial integration. Figure 5.5 depicts this relationship as measured by changes in the dissimilarity index. The gold/light line represents predicted values of voluntary intervention and the purple/dark line represents predicted values of mandatory court interventions. *Type* of court intervention, not just general court intervention, seems most effective in measured doses. For example, Figure 5.5 displays that more intervention is not always better: two court-ordered voluntary components correspond with the same reductions in segregation that one voluntary component yields.

Increasing mandatory interventions, on the other hand, seems to produce more reductions in racial segregation (Figure 5.5, purple line).

Figure 5.5 Illustration of Curvilinear Relationship between Mandatory and Voluntary Court Intervention and Dissimilarity

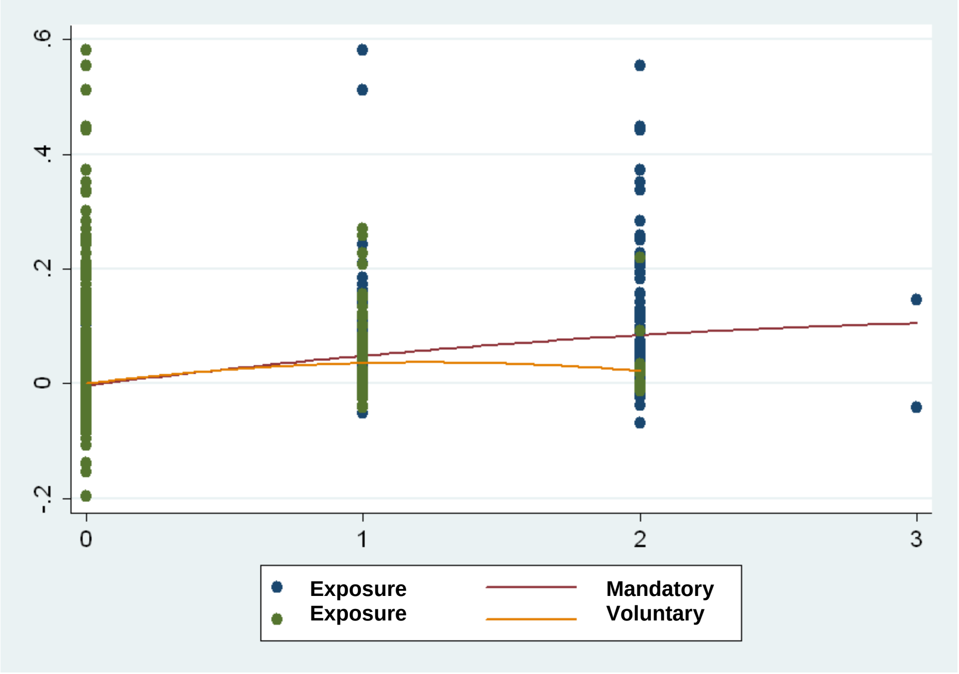
(see Table 5.10.2)



Using the change in exposure index as a measurement of racial integration yields similar results. In Figure 5.6 the predicted values of voluntary interventions are again represented by the gold line and mandatory interventions by a purple line. Voluntary interventions are most effective alone (not paired with others) while mandatory interventions achieve higher exposure rates when more than one is ordered. Similar patterns are evident when examining the dependant variables percent changes in the dissimilarity and exposure indexes (see Appendices 5.G, 5.H).

Figure 5.6 Illustration of Curvilinear Relationship between Mandatory and Voluntary Court Intervention and Exposure

(see Table 5.10.4)



The significance of these models goes directly back to the role that intensity of court intervention plays in reducing school desegregation. One of the research hypotheses guiding my inquiry is that judges who micromanage school desegregation by ordering a multitude of plan components do not achieve desegregation as effectively as their adjudicating counterparts who leave these decisions to local school administrators. The models I have just presented (see Tables 5.9 & 5.10) suggest that a deeper understanding of court influence comes in two ways. First, we learn that court influence does not necessarily follow a linear relationship (i.e., some intervention is effective, so twice as much intervention is twice as effective). In the case of school desegregation, court intervention was most effective when used moderately; too little or too much intervention yield diminishing policy influence. Second, we learn that the impact of intervention depends, in this case, on whether the intervention involved voluntary or mandatory components. In other words intensity of court intervention—the sum of voluntary and mandatory plan components—offers additional insight when broken into its elemental parts.

Returning to my research hypotheses, my analyses suggest that optimal judicial influence strikes the balance between mandatory and voluntary interventions. For those advocates of judges as agents of political exchange, there is some evidence that too little intervention—particularly the ordering of mandatory components—does not encourage school integration. For those advocates of judges as pure adjudicators, there is some evidence that too much intervention—particularly the ordering of voluntary components—does not induce school desegregation.

Summary

This chapter introduces statistical evidence with the ability to enlighten three empirical hypotheses:

> Hypothesis 1: Judges as adjudicators have very little impact on social policy.
>
> Hypothesis 2A: Judges taking more control of the implementation of their policy achieve greater impact; judicial powerbrokers have a greater impact on social policy.
>
> Hypothesis 2B: Judges taking more control of the implementation of their policy goals achieve less impact; judicial powerbrokers achieve less impact than adjudicators.

Implications of these results will be discussed more fully in the concluding chapter. However, the statistical evidence presented above answers these hypotheses, respectively, in the negative, positive, positive.

Court interventions do manifest an impact on policy. The presence and intensity of court intervention account for a significant portion of the yearly improvement in racial integration, whether measured by the dissimilarity or exposure indexes. In other words, court actions manifest a positive impact on social policy over time.

The second and third hypotheses are antitheses of each other, yet both seem to be answered positively. How is this possible? More mandatory interventions (i.e., more judicial "management") do correspond with larger annual improvements in the segregation indexes. However, more voluntary intervention seems to work in the opposite direction. Taken together this suggests that there is an "optimal" amount of judicial intervention. While less intervention is not always warranted, more judicial intervention is certainly not always favorable to social outcomes.

Chapter 6

Implications & Conclusion

"We do not believe that the law is or should be so preoccupied with theory that practical consequences must be disregarded."

-Judge Schwelb, *Helm v. United States*, 555 A.2d 465, 469 (D.C. 1989).

In this chapter I conclude by discussing the implications of my findings—the "practical consequences" of the empirical theory analyses performed in earlier chapters. In the first two parts of this chapter I organize the discussion around each of my hypotheses. I then focus on assimilating the three hypotheses in a discussion that focuses on the implications—both for public policy and public administration—of judicial intervention. My concluding section focuses on future research to further explore these implications.

The question of judicial impact shares a heritage with the doctrine of the separation of powers upon which this country was organized. Scholars since the time of Montesquieu have grappled with the conceptual, and to a lesser extent, the empirical responses to this question.

My first hypothesis focuses the question of judicial impact by examining a particular type of behavior: adjudication. When judicial behavior is based on a social ordering underpinned by principled reasoning, what is the effect?

Hypothesis 1: Judges as adjudicators have very little impact on social policy.

Empirical work, particularly that which is quantitative in nature, that operationalizes “adjudication” in this context is scant. Rosenberg’s (1991) widely-read qualitative analysis of the Supreme Court’s influence is largely responsible for the assertion in Hypothesis 1. He recommends that without action from political institutions, we have but a hollow hope that adjudicatory behavior will influence real policy change. While Rosenberg’s conclusions seem to remove politically-based behavior from the judiciary’s autonomy, Fuller’s (1978) and Diver’s (1979) conceptions of judicial power allow that non-political, judicial institutions often reach beyond the adjudicative realm into the fray of political power brokering. The paucity of quantitative work testing Diver’s continuum is understandable; most problems submitted to judges are “polycentric” in nature, simultaneously begging both legally-reasoned and political action. The complexity of distinguishing judges’ adjudicatory and political behaviors challenges effective modeling. In Chapters 2 and 3 I have developed an argument to distinguish these concepts and set forth the theory upon which I built my empirical analysis, described in Chapter 4.

In the debate over whether judges can autonomously affect policy outcomes, I view whether Rosenberg’s or Diver’s approach is most warranted to be a partially empirical question. I esteem the history of court involvement in school desegregation to be an ideal phenomenon for testing the empirical nature of this question—one that will ultimately guide those debating the impact of the judiciary.

According to Diver, judicial power brokering is in direct contrast to judicial behavior that approximates to pure adjudication. Pure adjudication is much more concerned with base-level establishment of rights and far less concerned with the legislative and administrative behavior that “blue-prints” and maintains oversight of remedies of violated rights (see Chapter 3).

As I discussed in Chapter 4, I seek to empirically differentiate adjudicatory and powerbroker behavior by controlling for the presence and intensity judicial oversight in a panel sample of the nation’s school districts during part of desegregation’s most judicially active period: 1968-1985.[25]

On the question of whether adjudicators impact public policy, my quantitative findings contradict Rosenberg’s. In all analyses (see Chapter 5) court involvement—even minimal court involvement—displayed a positive relationship with patterns of desegregation. Whether measured by the dissimilarity or exposure indexes, court intervention accounts for a statistically detectible portion of the yearly improvement in racial integration. This same relationship generally held even when “lagged”; in other words, court involvement generally exhibited impact with more than temporary effect. In addition, because I used fixed-effects-based estimation I was able to control for the more permanent social and political characteristics that Rosenberg suggests are wholly responsible for real social change (see discussion in Chapter 4).

Empirically engaging this hypothesis, however, only partially addresses the judicial impact debate. Whether from a policy impact or policy governance perspective, a more fulsome understanding of judicial impact should reach beyond the dichotomous question of “was a court involved” and engage the question of degree, “to what extent was the court involved.” In other words, if some adjudication displays a positive relationship with policy impact, does even more judicial activity –that reaching beyond the adjudicatory into the political – yield even more desirable policy results? From the governance perspective, if some managerial behavior is good, is a greater degree better? These questions are addressed in the next hypotheses.

Hypothesis 2A: Judicial powerbrokers have a greater impact on social policy than pure adjudicators.

Hypothesis 2B: Alternatively, judicial powerbrokers achieve less impact than adjudicators.

Reflecting the polarized nature of the judicial impact literature, I present these hypotheses as mutually exclusive statements. As research questions, they engage the judicial impact debate and encompass a host of theoretical approaches. Again, it is not my goal to develop or originate a particular theory of judicial impact. Rather, my goal in testing the adjudicator/powerbroker continuum is to provide a larger, more accommodating theoretical context to the polar (incremental/rational) nature of the judicial impact theories (see discussion in Chapter 3) lamented by Koenig & O'Leary's (1994) and Sprigg's (1996) call to develop a theoretical argument that has some comprehensive explanative power and the ability to reconcile alternative hypotheses.

Particularly with the area of institutional reform litigation that has been so central to the judicial impact literature, I contend that the way to provide this larger context is to examine the question of degree. Consider the dichotomous nature of legitimacy theory. On the one hand, some judicial legitimacy theorists contend that court intervention in institutional reform litigation compromises their ability to influence policy because courts lack the political authority of purse or sword. The opposing explanation is offered by Fletcher (1982, p. 637) who suggests that illegitimacy can "be overcome" when political bodies “default,” leaving courts the ability to legitimately substitute their judicial discretion for political discretion.

Rather than engaging legitimacy theory by dichotomously constraining judicial behavior as ineffectual when resembling those powers of purse and sword, or effectual when political bodies are in default, my approach has been to empirically assess to whether a certain degree of judicial behavior (on the continuum of adjudicatory to powerbroker) might correspond with policy effects. Legitimacy theory might then be expanded to accommodate this approach. For example, while Fletcher argues certain circumstances when judicial discretion might substitute for political discretion, a non-dichotomous version of legitimacy theory might suggest that judicial discretion—as a substitute for political discretion—is only a legitimate substitute up to a certain threshold of intervention.

To the question of degree, my analysis affirms this approach and Hypothesis 2A. Judicial powerbrokers – those reaching beyond adjudication by a certain degree – do have a positive impact on public policy. One way to conceptualize degree is to examine how involved courts became in specifying the desegregation plan blueprint. My linear analysis reveals that each additional court-ordered desegregation plan component corresponded with 3 percent improvement in the change of the dissimilarity index from one period to the next (see Table 5.5). The effect of that added component of intervention, or additional degree of judicial intervention beyond the adjudicatory, continues to be felt through the next time period.

Linear modeling does not, however, completely satisfy an attempt to provide a larger conceptual framework based on degrees of intervention rather than dichotomous, yes/no, judicial intervention. An extreme application of my linear results might suggest that courts should not only reach beyond adjudication but that they should order as many desegregation components as possible. If two or three judicially-mandated desegregation plan components are good, are five or eight or fourteen better? My linear models do not illuminate whether there is an outside boundary of intervention.

Curvilinear modeling provides support for what one might intuit – effective judicial behavior is bounded by degree; extreme degrees (on the adjudicative/political powerbroker continuum) may not correspond with positive policy impact. The evidence from school desegregation suggests that when one examines the question of degree, there are circumstances when judicial behavior closer by degrees to adjudication may be more effective than judicial behavior that is closer to political power brokering.

Linear models begin to illustrate these boundaries. These general relationships were visually depicted in figures 5.6 and 5.7. These graphs indicate the largest improvements in desegregation indexes (exposure and dissimilarity) are achieved when courts specify no more than two components. Judicial intervention that exceeds two components, on the other hand, offers diminishing returns. I found similar patterns when modeling specific types of judicial intervention (voluntary vs. involuntary plans components), see tables 5.11, 5.12.

In keeping with the larger theoretical framework I introduce in this work, these results introduce a relatively unique concept to the judicial impact literature. The implications of judicial behavior might be better understood if modeled by degree. In other words, in addition to the dichotomous approach (e.g., whether judicial behavior is or isn’t warranted according to cognitive dissonance or legitimacy theories), scholars might also explore what amount of judicial intervention is *optimal* given a certain context (e.g., school desegregation and funding, social service delivery, prison and hospital reform, etc.).

Implications for Public Administration and Public Policy

The implications of this study are not limited to the legal studies and political science disciplinary literature on judicial impact. Because the judiciary plays an important role in the administration of public services and regulations, this research also advances our thinking in public administration in several ways.

First, it answers Koenig and O’Leary’s (1996, pp. 19-20) call to supplement public administration’s knowledge of the prolific court intervention cases (e.g., Missouri v. Jenkins, see O'Leary & Wise, 1991; Wise & O'Leary, 2003) with an empirical, longitudinal knowledge of “normal, everyday cases that affect public administration.” The national, longitudinal sample of courts’ dealing with school desegregation, analyzed here, serves as such a supplement.

Second, also in answer to Koenig and O’Leary’s call, this research offers public administration scholars a theoretical base from which to develop propositions about judicial impact. I have proposed and found some evidence that judicial intervention in institutional reform litigation might best be understood in terms of degree, rather than dichotomously. In other words, I offer a theoretically-grounded, quantitative analysis supporting what we intuitively and qualitatively know: a clearer understanding of the “new partnership” between public administrators and judges (Bazelon, 1976) can be achieved by moving beyond dichotomous conventions and examining the degree of judicial intervention. This insight drives to the heart of Rosenbloom and O'Leary's observation that "The courts still play the role of saying "no" or "yes" to agencies, as they did during the periods of opposition to and acquiescence in the administrative state, but now they have a supervening role as well" (1997, pp. 44-45). In this supervening role Scholz (1984) asks "How can agencies be supervised in the use of appropriate techniques without reducing the flexibility required for handling different situations?" (p. 152). By focusing on "optimal" judicial behavior, my research expounds a theoretical and empirical continuum in understanding judges supervening administrative affairs, for, as Rosemary O'Leary observes, judicial behavior falls along a continuum of intervention "neither entirely passive nor totally aggressive" (1990, p. 559).

Third, in addition to articulating and testing a theory of judicial impact, one of my endeavors is to draw out implications for the field of public administration particularly in one of its most current, prominent (see Frederickson, 2005) intellectual pursuits: advancing our understanding of governance. Lynn et al. (2001, p. 7) define governance as the administrative practices, legal constraints, regimes, and judicial decisions that enable and constrain public policies and services. I contend that one aspect of this governance, judicial decision making, is an untapped area of study rich in lessons for those studying governance and public administration. My research addresses the types and effects of judicial involvement in public management. In understanding types of judicial management, the distinctions of rowing and steering are as useful and applicable to inquiry focused on the impact of judicial institutions in particular policy/administrative areas, as they are in broader governance arrangements, such as public-private contracting. However, in addition to importing concepts from the governance literature, my research offers as an export a longitudinal study of judicial decision making behavior that parallels the steering (i.e., adjudication) and rowing (i.e., power brokering) concepts common in the governance literature. The theoretical framework and empirical conclusions from my research stand to be replicated in other areas of administrative practice. Questions that might be answered in this approach include:

- Should other (non-judicial) administrative rowing and steering behaviors be broached, like adjudication and power brokering, on a continuum rather than dichotomously?
- Could we understand governance better if we replaced an "either/or" assumption that steering or rowing is better, with empirical constructs that allow for an "optimal" mix of steering *and* rowing?

A final implication of this research—perhaps the most relevant—concerns public policy. A vast debate (Boozer, Krueger, & Wolkon, 1992; Tushnet & Lezin, 1991; S. Wasby, 1977) has gathered in the wake of one of the United State's most significant policy decisions, and one of the U.S. Supreme Court's most famous (Balkin & Ackerman, 2001) judicial opinions: *Brown v. Board of Education* (1954). The debate of *Brown's* impact cuts across boundaries of many academic disciplines to include: law (e.g., Ryan, 2004), education (e.g., Orfield, Eaton, & Jones, 1997), political science (e.g., Foreman, 2004; Rossell, Armor, & Walberg, 2002), public management (e.g., O'Leary & Wise, 1991), sociology (e.g., James S. Coleman, 1966), history (e.g., Kluger, 1976; Kluger, 2004), and economics (e.g., Clotfelter, 2004). With each anniversary of the *Brown* decision, scholars and policy makers appear to become more and more inquisitive and reflective of this policy legacy. As the year 2004 recently passed, marking the 50th anniversary of the departure from *Plessy v. Ferguson* (1896), the tenor of the conversation seemed especially intense.

Meaningful answers in this debate are particularly urgent because research (e.g., Clotfelter, 2004; Frankenberg & Lee, 2002; Orfield & Bachmeier, 1997; Orfield & Yun, 1999) indicates that America is in fact resegregating. While there is some debate on the extent and measurement of school resegregation (D. Armor & Rossell, 2002; Clotfelter et al., 2005; Logan, 2004), these trends run counter to findings that residential segregation has declined over the same period (Glaeser & Vigdor, 2001). Erwin Chemerinsky reminds us that "public schools in the United States are more segregated today than any other time since 1954 and . . . today much less is spent, on average, on a black child's elementary and secondary education than on a white child's education" (Chemerinsky, 1999: 49). This trend is especially troubling to those who view the *No Child Left Behind* (NCLB) policy as "structured in ways that will hurt poor students and students of color [because] NCLB's sanctions for low-performing schools serve to further impoverish already poor schools by forcing them to divert district dollars out of the classroom and put them into transportation and tutoring" (Au, 2004).

If America is indeed resegregating one might doubt the impact of the *Brown* decision. Researchers have queried into many aspects of *Brown's* legacy, delving into inquiries that include the following:

- The effectiveness of magnets/voluntary programs vs. mandatory plans (Rossell, 1990; West, 1994).
- The effectiveness of busing (D. J. Armor, 1972, 1989; Orfield, 1978).
- The legitimacy of judicial taxation in desegregation policy (Wolohojian, 1989).
- The constitutional legitimacy of the *Brown* decision (Hockett, 2003) .
- The impact of court-ordered desegregation plans on student enrollment (Cunningham, Husk, & Johnson, 1978).
- The impact of court-ordered desegregation plans on residential patterns (Cunningham et al., 1978).
- The impact of court-ordered desegregation plans on housing values (Vandell & Zerbst, 1984).

- The impact of court-ordered desegregation plans on achievement (Klein, 2002).
- The meaning of unitary status (Moore, 2002).
- When and how to terminate federal court intervention (Wise & O'Leary, 2003).

While some (Parker, 2002; Wicker, 1997) argue the need to give courts more power and responsibility in realizing the Brown v. Board of Education mandate, to date there is scant research on “how” courts managed *Brown* desegregation for the last half-century. Does the adjudicative approach achieve results as satisfactory as a supervening, power brokering approach?

In this research I have revisited the policy dynamics of the *Missouri v. Jenkins* case, a case renowned for its legacy of intense judicial involvement in desegregation. Using a longitudinal, national sample of school districts with varying degrees of judicial oversight from, I have sought to contextualize the *Missouri v. Jenkins* case to more fully understand factors that led to successful/ unsuccessful desegregation.

The relevance of such an investigation is highlighted by the recent pair of *Bollinger* (2003) Supreme Court cases. These cases, like NCLB, renew the importance of racial equity in education. If the nation decides once again to revisit the present incarnation of school segregation, should federal courts rise once again to pick up the oars? Before such a governance arrangement can be supported, it should rest on empirical evidence of how courts have rowed in the past. The *Jenkins* experience and its contextualization serve as a rich text from which to draw lessons about governance arrangements that rely heavily on court involvement. My findings offer a unique perspective that courts should row AND steer—that the most effective judicial behavior in the past was that which sought the optimal balance between adjudicative and political disposal of the conflict.

Future Research

This dissertation was largely inspired as an effort to quantitatively and longitudinally substantiate many of the qualitative lessons of the *Missouri v. Jenkins* case (e.g., O'Leary & Wise, 1991; Wise & O'Leary, 2003). In their work O’Leary and Wise qualitatively substantiate the ways a judiciary impacts public administration and public policy. Their work describes the complexity of public services administered by managerial configurations that include judges, legislators, and public managers. They conclude that “courts have been instrumental in . . . remedying discrimination [but that it] is time for the public management and education experts in the KCMSD [Kansas City Missouri School District] to take back responsibility for quality education of the children.” (Wise & O'Leary, 2003, p. 189). From Wise and O’Leary’s perspective, the problem with transferring more responsibility from courts to public managers institutional reform arrangements is that there are not clear answers to questions such as whether continued levels of court supervision will “make the likelihood of achieving policy objectives better or worse” (p. 189).

While I have quantitatively substantiated that court behavior has had significant impact in remedying school desegregation, I have also sought to illuminate this question of transferring power from the judiciary to public managers. My analysis establishes a first cut at detecting the contours of when continued judicial intervention might actually decrease the likelihood of achieving a particular policy objective. To convey this I offer empirical evidence that court behavior impacts policy in a non-linear fashion; additional intervention does not necessarily lead to “more” positive policy outcomes. By suggesting that there are “optimal” levels of court intervention, I offer an empirical approach that contemplates a balance between the adjudicatory and political methods of conflict resolution in institutional reform litigation.

As we might expect, however, additional information is required. For example, in the interdependent administrative configurations (i.e., triumvirates of judges, legislators, and administrators) how might judicial intervention influence the ability of executive and legislative actors to assume additional supervisory power? Might some of that power naturally gravitate back towards these actors? Ironically, I see the best exploration of these questions facilitated by a return to the qualitative richness that initially inspired my quantitative work.

One such proposition to be tested qualitatively is articulated by Guarnieri et al. (2002, p. 186-87). They warn that judicial entrance into the political fray can give more pronounced roles to those with resources to influence the judicial arena, diminishing the functionality of democratically elected policy-makers. Addressing this and related questions are best done in the richness of several qualitative cases. Diver’s (1979) own work facilitates an extension of study of cases of intense judicial oversight.

As a next step to the quantitative work presented here, Diver offers at least three propositions that spring from the adjudication/power brokering continuum. According to Diver (1979, p. 88) powerbroker-like judicial supervision can lead to a “pattern” of power shifts:

1) “Power within the executive branch of the affected jurisdiction tends to shift toward the operating manager

2) The litigation tends to redistribute power within the institution from the custodial staff to professional workers

3) The executive branch tends to gain significant bargaining advantages over the legislature as a consequence of its active involvement in the litigation."

I propose that these are hypotheses that can be examined empirically—reviewing the histories of several cases from my study sample that display a ranges of judicially-driven power brokering. Such cases might include Kansas City, MO., and Indianapolis, Indiana, where rich histories are available for examination (O'Leary & Wise, 1991; Thornbrough, 1989; Wise & O'Leary, 2003). Diver also encourages further exploration of legitimacy theory in these administrative arrangements. The suggestion that over-reliance on judicial politicization can lead to decreased legitimacy of the courts is also reinforced by Wise and O'Leary (2003). According to Diver (1979) legitimacy is primarily bestowed by their courts' adjudicative functions. Again, I view this as an empirical question to be examined qualitatively.

Continuing the search for alternative dependent variables is also important to my qualitative agenda. While measures of school integration are important, they are predecessors to more important measures of outcomes. In Reber's (2003, fn 1) terms, "ultimately, we are interested in how these plans affected educational and other outcomes for the minority students they were designed to help." To date, longitudinal, quantitative analysis of court impacts on school performance (minority dropout rates) can be accomplished only decennially (e.g., Guryan, 2004). While gathering annual educational outcomes is a daunting task, a case-by-case approach is much more manageable.

By proposing a research agenda around these qualitative questions I am not suggesting that quantitative approaches have been exhausted. Among additional quantitative efforts to be explored is the expansion of the time series. I have only recently obtained from the Office of Civil Rights (Department of Education) the 1986 data on race enrollments. These data were unavailable when I began this project. Race enrollments from 1986 would allow me to connect the UNICON data to corresponding districts that the National Center for Education Statistics began tracking in 1987. Extending my study from 1968 to present would allow me to track the influence of judicial behavior through the late 1980s and early 1990s and beyond, when courts began withdrawing their supervision and declaring many districts unitary.

Conclusion

Returning to the ideal types—rational and incremental—discussed at the outset of this research, I reiterate the puzzle that frames my inquiry: "to what extent social actors decide what their course will be, and to what extent they are compelled to follow a course set by forces beyond their control" (Etzioni, 1967, p. 385). I have taken up the "search for a theory of how public policy should be made" (Diver, 1981, p. 393). I have focused on the influence of the judiciary as a social actor. While my aim has been descriptive, the implications are undeniably normative. Proponents of the rational-type maintain that courts wield vast power as social actors; some (e.g., Parker, 2002; Wicker, 1997) maintain that courts should proactively wield that power to remedy social ills. Proponents of the incremental-type maintain that courts as social actors have "much less command over the environment" (Etzioni, 1967, p. 385); some (Rosenberg, 1991, 1998) even suggest that hopes of social change stemming from judicial action are hollow.

Perhaps it is not surprising that Etzioni, the framer of my inquiry, also provides the construct that accommodates my findings. While my findings to not suggest that a purely incremental-type perspective of judicial influence is warranted, neither do they wholly support a rational-type perspective of policy influence. I have found that court behavior, even that reaching beyond the adjudicative, does result in policy change. However, there are limits to that reach. My models suggest that reaching too far into the political fray of conflict resolution leads to diminished policy impact. There is much work to be done qualitatively to understand the nuances of “optimal” judicial impact. However, Etzioni’s (1967) discussion of morphological factors recommend that judicial intervention in social change is perhaps best understood by a mixed-model that accommodates both incremental- and rational-type perspectives. Even as the Supreme Court is poised to hear two race and education cases this term, the mixed-approach has the potential to offer us clearer insight as we decide how the future *Brown’s* legacy will unfold in the America.

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Appendices

Appendix 4.A Fixed vs. Random Effects Models: Hausman Specification Test

```
 Fixed-effects (within) regression               Number of obs      =      2331
 Group variable (i): distident                   Number of groups   =       124

 R-sq:  within  = 0.0479                         Obs per group: min =         8
        between = 0.1536                                        avg =      18.8
        overall = 0.0514                                        max =        23

                                                 F(3,2204)          =     36.96
 corr(u_i, Xb)  = 0.0131                         Prob > F           =    0.0000

 ------------------------------------------------------------------------------
dissimilarity |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
 -------------+----------------------------------------------------------------
  LComponents |  -.0182765   .0018528    -9.86   0.000      -.02191   -.0146431
 L2Components |  -.0062934   .0018288    -3.44   0.001    -.0098797   -.0027071
 L3Components |   .0010205   .0018244     0.56   0.576    -.0025573    .0045982
        _cons |  -.0059535   .0011295    -5.27   0.000    -.0081685   -.0037386
 -------------+----------------------------------------------------------------
                                                           sigma_u |   .0087154
                                                           sigma_e |  .04859234
                           rho |  .03116651   (fraction of variance due to u_i)
 ------------------------------------------------------------------------------
 F test that all u_i=0:     F(123, 2204) =     0.56           Prob > F = 1.0000


 Random-effects GLS regression                   Number of obs      =      2331
 Group variable (i): distident                   Number of groups   =       124

 R-sq:  within  = 0.0479                         Obs per group: min =         8
        between = 0.1539                                        avg =      18.8
        overall = 0.0514                                        max =        23

 Random effects u_i ~ Gaussian                   Wald chi2(3)       =    126.15
 corr(u_i, X)       = 0 (assumed)                Prob > chi2        =    0.0000

 ------------------------------------------------------------------------------
dissimilarity |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
 -------------+----------------------------------------------------------------
  LComponents |  -.0185037    .001783   -10.38   0.000    -.0219983   -.0150091
 L2Components |  -.0062473   .0017624    -3.54   0.000    -.0097016    -.002793
 L3Components |   .0010717   .0017576     0.61   0.542    -.0023732    .0045166
        _cons |  -.0059341   .0010995    -5.40   0.000     -.008089   -.0037792
 -------------+----------------------------------------------------------------
                                                           sigma_u |          0
                                                           sigma_e |  .04859234
                           rho |          0   (fraction of variance due to u_i)
 ------------------------------------------------------------------------------
```

```
hausman fixed random

---- Coefficients ----
|      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
|     fixed        random       Difference          S.E.
-------------+-------------------------------------------------------------
    LComponents |    -.0182765    -.0185037        .0002271        .0005039
   L2Components |    -.0062934    -.0062473       -.0000461        .0004881
   L3Components |     .0010205     .0010717       -.0000512        .0004892
-------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
```

```
          B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        0.52
                Prob>chi2 =      0.9140
```

Appendix 4.B Structural Shift Analysis: Chow Test

```
      Source |       SS       df       MS              Number of obs =    1902
-------------+------------------------------           F(  7,  1894) =  120.16
       Model |  2.37106042     7  .338722918           Prob > F      =  0.0000
    Residual |  5.33916518  1894  .002818989           R-squared     =  0.3075
-------------+------------------------------           Adj R-squared =  0.3050
       Total |  7.71022561  1901  .004055879           Root MSE      =  .05309

            ------------------------------------------------------------------------------
           dissimilarity |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
            -------------+----------------------------------------------------------------
              Components |  -.0246673   .0078729    -3.13   0.002    -.0401077   -.0092268
            Intervention |  -.0829611   .0139079    -5.97   0.000    -.1102375   -.0556847
                   South |  -.0235446   .0044545    -5.29   0.000    -.0322808   -.0148083
                      g2 |  -.0017041   .0036906    -0.46   0.644    -.0089422    .0055339
            g2Components |  -.0002821   .0098706    -0.03   0.977    -.0196404    .0190763
          g2Intervention |   .0790106   .0188383     4.19   0.000     .0420645    .1159567
                 g2South |   .0315894    .005353     5.90   0.000     .0210911    .0420877
                   _cons |  -.0062424   .0030036    -2.08   0.038    -.0121331   -.0003518
            ------------------------------------------------------------------------------

test g2 g2Components g2Intervention g2South

 ( 1)  g2 = 0
 ( 2)  g2Components = 0
 ( 3)  g2Intervention = 0
 ( 4)  g2South = 0

       F(  4,  1894) =   57.54
            Prob > F =    0.0000
```

Appendix 5.A – 5.C Discussion and Analysis of White Flight

In my analyses, one way that I calculate white flight is the change in logged total of white students in the district from time period *t-1* to time period *t* (***White Flight***). Because the variable calculated in this way is also more sensitive to larger demographic movements (baby boom growth, etc.), I also calculated it as the change in the proportion of white students (White $_{\text{district}}$ /Total $_{\text{district}}$) and proportion of white to nonwhite students (White $_{\text{district}}$ / Nonwhite $_{\text{district}}$). However, because each proxy for white flight yielded similar statistical results I primarily report ***White Flight***. The addition of ***white flight***, however, adds but marginally to the overall explanatory value of the model (see adjusted R-squared values 5.A.5 – 5.A.8). Furthermore, as discussed in Chapter 5, the results are only partially harmonious with what we might expect from theory.

Appendix 5.A Effects of Court Intervention and White Flight on Segregation

VARIABLE	**5.A.1** Dissimilarity	**5.A.2.clstr** Dissimilarity	**5.A.3** Exposure	**5.A.4.clstr** Exposure	**5.A.5.clstr** Dissimilarity	**5.A.6.clstr** Exposure	**5.A.7.clstr** Dissimilarity	**5.A.8.clstr** Exposure
Intervention	-0.074***	-0.074***	0.063***	0.063***	-0.091***	0.068***		
	(0.010)	(0.021)	(0.008)	(0.017)	(0.008)	(0.007)		
Components	-0.011**	-0.011	0.002	0.002			-0.044***	0.032***
	(0.005)	(0.010)	(0.004)	(0.008)			(0.004)	(0.004)
White Flight					0.055**	0.113***	0.052*	0.115***
					(0.028)	(0.027)	(0.028)	(0.027)
Constant	-0.008***	-0.008***	-0.002	-0.002**	-0.005***	0.003**	-0.007***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	1902	1902	1902	1902	1902	1902	1902	1902
R-squared	0.222	0.222	0.187	0.187	0.225	0.222	0.202	0.194
Adj R-squared	0.221	0.221	0.186	0.186	0.224	0.221	0.201	0.193
F test	270.3***	60.8***	217.8***	45.4***	60.5***	48.5***	52.2***	44.1***
Mean VIF	5.81	5.81	5.81	5.81	1.00	1.00	1.01	1.01

Appendix 5.B First Difference Estimates of the Effect of White Flight on Racial Integration

VARIABLE	**5.B.1.clstr** Dissimilarity	**5.B.2.clstr** Exposure	**5.B.3.clstr** Dissimilarity	**5.B.4.clstr** Exposure	**5.B.5.clstr** Dissimilarity	**5.B.6.clstr** Exposure
White Flight	0.080***	0.094***				
	(0.029)	(0.029)				
District Ratio of White to Total			0.023**	0.051***		
			(0.010)	(0.009)		
District Ratio of White to Total					0.276***	0.544***
					(0.070)	(0.079)
Constant	-0.015***	0.010***	-0.017***	0.010***	-0.015***	0.012***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	1902	1902	1902	1902	1902	1902
R-squared	0.011	0.025	0.007	0.056	0.012	0.079
Adj R-squared	0.010	0.024	0.006	0.055	0.012	0.078
F test	7.4***	10.6***	5.0***	30.3***	15.6***	47.0***

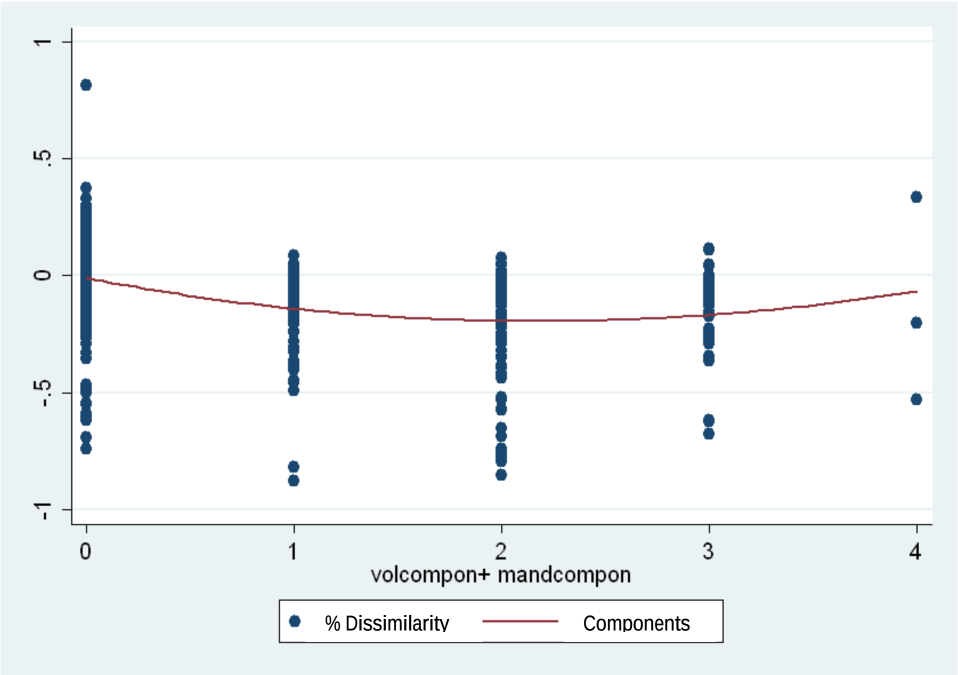
Appendix 5.C First Difference Estimates of the Effect of Court Behavior on White Attrition

VARIABLE	**5.C.1.clstr** White Flight	**5.C.2.clstr** White Flight	**5.C.3.clstr** District Ratio of White to Nonwhite	**5.C.4.clstr** District Ratio of White to Total	**5.C.5.clstr** District Ratio of White to Total	**5.C.6.clstr** District Ratio of White to Total
Components		-0.011***		-0.015***		-0.003***
		(0.003)		(0.005)		(0.001)
Intervention	-0.018***		-0.026**		-0.004***	
	(0.005)		(0.011)		(0.001)	
Constant	-0.041***	-0.041***	-0.084***	-0.084***	-0.010***	-0.010***
	(0.003)	(0.003)	(0.008)	(0.008)	(0.001)	(0.001)
Observations	1902	1902	1902	1902	1902	1902
R-squared	0.005	0.007	0.001	0.002	0.003	0.004
Adj R-squared	0.004	0.006	0.001	0.001	0.003	0.004
F test	11.1***	14.8***	5.1***	8.3***	13.9***	22.4***

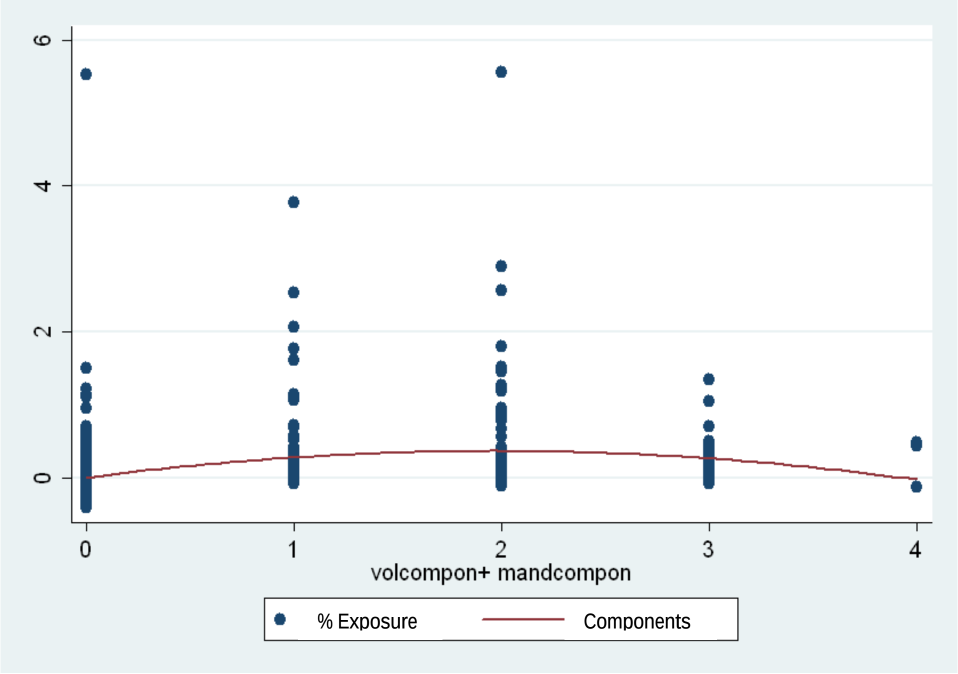
Appendix 5.D First Difference Estimates of the Effect of School Size on Racial Integration

	5.D.1	**5.D.2.clstr**	**5.D.3**	**5.D.4.clstr**	**5.D.5**	**5.D.6.clstr**	**5.D.7**	**5.D.8.clstr**
VARIABLE	Dissimilarity	Dissimilarity	Dissimilarity	Dissimilarity	Exposure	Exposure	Exposure	Exposure
Intervention	-0.092***	-0.092***			0.068***	0.068***		
	(0.004)	(0.008)			(0.003)	(0.007)		
Components			-0.044***	-0.044***			0.032***	0.032***
			(0.002)	(0.004)			(0.002)	(0.004)
White Flight	0.056***	0.056**	0.053***	0.053*	0.113***	0.113***	0.115***	0.115***
	(0.016)	(0.028)	(0.016)	(0.028)	(0.012)	(0.027)	(0.012)	(0.027)
Enrollment	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.000
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	-0.025	-0.025	-0.025	-0.025	0.000	0.000	-0.000	-0.000
	(0.018)	(0.016)	(0.019)	(0.015)	(0.014)	(0.013)	(0.014)	(0.013)
Observations	1902	1902	1902	1902	1902	1902	1902	1902
R-squared	0.225	0.225	0.202	0.202	0.222	0.222	0.194	0.194
Adj R-squared	0.224	0.224	0.201	0.201	0.220	0.220	0.192	0.192
F test	183.8***	40.6***	160.6***	35.0***	180.1***	32.8***	151.9***	29.9***
Mean VIF	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01

Appendix 5.E Curvilinear Relationship between Intensity and Percent Change in Dissimilarity

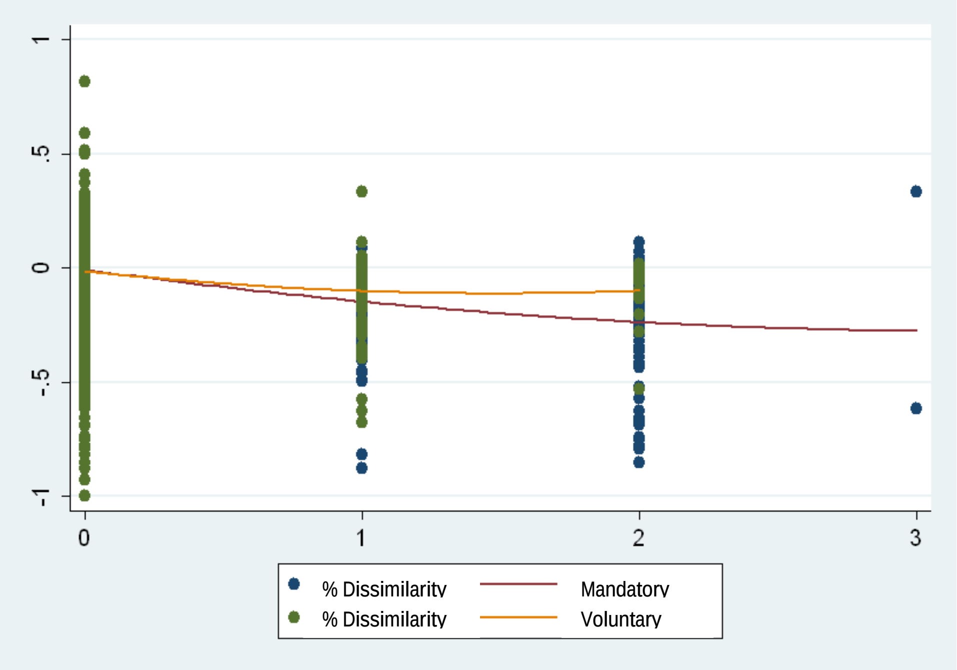


Appendix 5.F Curvilinear Relationship between Intensity and Percent Change in Exposure



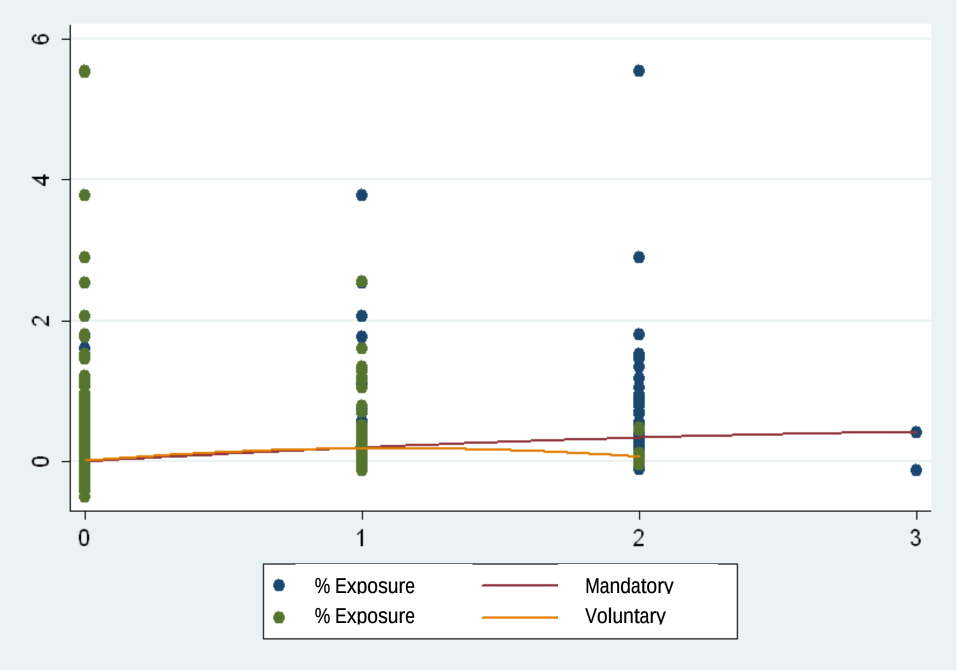
Appendix 5.G Curvilinear Relationship between Mandatory and Voluntary Court Intervention and Percent Change an Dissimilarity

(see Table 5.12.6)



Appendix 5.H Curvilinear Relationship between Mandatory and Voluntary Court Intervention and Percent Change in Exposure

(see Table 5.12.6)



Robert K. Christensen

School of Public and Environmental Affairs
Indiana University
Bloomington, IN 47405
rokchris@indiana.edu
rkchristensen@gmail.com

EDUCATION & DISTINCTIONS

PH.D. IN PUBLIC AFFAIRS, May 2007

School of Public and Environmental Affairs, Indiana University (Bloomington, IN)

Major Concentrations: Public Management & Policy Analysis; Minor: Law
Dissertation: *When Courts Manage: Judicial "Rowing" in Desegregation Governance*
Dissertation Committee: Charles Wise (chair), James Perry, David Good, Leonard Fromm

- Spencer Dissertation Fellowship for Research Related to Education, $20,000 awarded by the Spencer Foundation, 2006
- John A. Rohr Scholarship in Public Administration and Law, $1,000 award from the American Society for Public Administration, Section on Public Law, 2006
- School of Public and Environmental Affairs Award for Excellence in Doctoral Research, $500 award, 2006
- Wells Graduate Fellow, $30,000 award recognizing academic and service achievement, 2004-2005. Awarded by Indiana University Graduate School.
- Chair, Association of SPEA Ph.D. Students, 2003
- Best Doctoral Student Conference Paper, Academy of Management, August 2003
- Emerging Scholar Award, Association for Research on Nonprofit Organizations and Voluntary Action, November 2002

JURIS DOCTOR, Dec. 2000

J. Reuben Clark Law School, Brigham Young University (Provo, UT)

- Graduated *cum laude*
- Editor-in-Chief, *BYU Education and Law Journal*, 1999-2000
- Member of the Jessup International Arbitration Team, 1999-2000

MASTER OF PUBLIC ADMINISTRATION, Dec. 2000

Marriott School of Management, Romney Institute of Public Management (Provo, UT)

- William F. Edwards Academic Scholar, 1999-2000
- Ronald C. and Kaye Gunnell Academic Scholar, 1999-2000
- Romney Institute Scholar, Winter 1999
- Marriott School Dean's List, 1998-1999

BACHELOR OF ARTS, Spring 1997

Brigham Young University, (Provo, UT)

- Russian major; Economics minor
- University Academic Scholar, 1992-1993

FACULTY APPOINTMENTS

Assistant Professor. Department of Political Science. University of North Carolina at Charlotte, 2006-present.

Instructor. School of Public and Environmental Affairs. Indiana University. 2003-2006.

TEACHING

DOCTORAL

Law and Public Management (PPOL_8617). Doctoral Seminar. Department of Political Science. University of North Carolina at Charlotte. Fall, 2006.

Law, Public Policy & Public Management (SPEA_V640). Master and Doctoral Student Seminar. School of Public and Environmental Affairs, Indiana University-Bloomington. Spring, 2006.

MASTERS

Administrative Law (MPAD_6143). Master Student Class. Department of Political Science. University of North Carolina at Charlotte. Spring, 2007.

Research Applications, Capstone (MPAD_6188). Master Student Class. Department of Political Science. University of North Carolina at Charlotte. Spring, 2007.

Foundations in Public Administration (MPAD_6102). Master Student Class. Department of Political Science. University of North Carolina at Charlotte. Fall, 2006.

UNDERGRADUATE

Law and Public Policy (SPEA_V376). Junior/Senior Undergraduate Seminar. School of Public and Environmental Affairs, Indiana University. First Semester, 2003-2004.

REFEREED PUBLICATIONS

Robert K. Christensen & Jiang He. (In Press). “Courts and Public Policy" in *Encyclopedia of Public Administration and Public Policy, Second Edition*, edited by Jack Rabin. Taylor & Francis Group.

Robert K. Christensen. (2006). “International Nongovernmental Organizations: Globalization, Policy Learning, and the Nation-State.” *International Journal of Public Administration*, vol. 29(4-6), 281-303.

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NON-REFEREED PUBLICATIONS

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GRANT AWARDS

Robert K. Christensen. (Jan, 2006). Amount: $1,000. *John A. Rohr Scholarship in Public Administration and Law, American Society for Public Administration, Section on Public Law and Administration*. Status: Awarded Feb. 2006.

Robert K. Christensen. (Nov, 2005). Amount $20,000. “When Courts Manage: Judicial “Rowing” in Desegregation Governance.” *Spencer Foundation Dissertation Fellowship. Grant*. Status: Awarded, June 2006, Grant #200700018.

INVITED PRESENTATIONS

Robert K. Christensen. “When Courts Manage.” Presentation given at the Central Piedmont Chapter of the American Society for Public Administration, March 8, 2007 meeting. Charlotte, NC.

CONFERENCE PRESENTATIONS

Robert K. Christensen & Beth Gazley. “What’s Capacity Got to Do With It? A Review of the Capacity and Performance Research.” Paper presented at The 2nd Determinants of Performance in Public Organizations Conference. University of Hong Kong, Hong Kong, December 7-10, 2006.

Robert K. Christensen, Richard Clerkin, Becky Nesbit, Laurie Paarlberg. “Nonprofit Strategy in the Competitive Market Place: The Case of Charitable Bingo.” Paper presented at the Association for Research on Nonprofits and Voluntary Action (ARNOVA) Conference. Chicago, IL. Nov. 16-18, 2006.

Eva Witesman, Becky Nesbit, Stephanie Moulton, Helen Liu, Robert K. Christensen. “Capacity and Performance: Indiana’s Community Housing and Development Organizations.” Paper presented at the Association for Research on Nonprofits and Voluntary Action (ARNOVA) Conference. Chicago, IL. Nov. 16-18, 2006.

Robert K. Christensen & Beth Gazley. “Measuring Management: A Review of Performance and Capacity in the Public Management and Nonprofit Literature.” Paper presented at the Association for Research on Nonprofits and Voluntary Action (ARNOVA) Conference. Chicago, IL. Nov. 16-18, 2006.

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Mary Tschirhart, Robert K. Christensen, & James L. Perry. "The Paradox of Branding and Collaboration." Paper presented at the Academy of Management Annual Conference. Denver, Colorado, August, 2002.

Robert K. Christensen. "Law and Public Management: Possibility in Paradox." Paper presented at Academy of Management Annual Conference. August, 2002 in Denver, Colorado. *Recipient of an Academy of Management Small Scholarship Conference Award*.

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PROFESSIONAL EXPERIENCE

Principal Investigator. When Courts Manage: Judicial "Rowing" in Desegregation Governance. Spencer Foundation Dissertation Fellowship. Grant #200700018 ($20,000), June 2006.

University Relations Coordinator. Professional Staff, Full Time. Research grant from United States Agency for International Development (USAID) to the Parliamentary Development Project for Ukraine. Indiana University, Bloomington, IN. July 2005-July 2006.

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Project Associate. Research grant from the Points of Light Foundation to the Center for Urban Policy and the Environment, Indiana University-Purdue University Indianapolis. Jan 2002 to Jan 2003.

Law Clerk. City Attorney's Office, Orem, UT. April 1999-December 2000.Extensive research and writing in various legal fields including: community development, election law, municipal gifts, emergency and law enforcement services, zoning, and human resources. Trial court practice (misdemeanors).

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