

**HETEROGENEITY IN SUPREME COURT DECISION-MAKING:
HOW CASE-LEVEL FACTORS ALTER PREFERENCE-BASED BEHAVIOR**

Brandon L. Bartels
Department of Political Science
Ohio State University
bartels.20@osu.edu

Abstract

Many theoretical perspectives of Supreme Court decision-making, most notably the attitudinal model, assume that justices' policy preferences exhibit a uniform impact on their decisions across a wide variety of situations. I argue that there exists meaningful heterogeneity in the impact of policy preferences that can be explained theoretically and tested empirically. Adopting social psychological insights from theories of the attitude-behavior relationship, I develop a theoretical framework specifying the mechanisms—attitude strength and accountability—that explain variation in the preference-behavior relationship for justices. Case-level factors associated with each mechanism are hypothesized to moderate the impact of preferences. To test the hypotheses, I use a multilevel (hierarchical) modeling framework and conceive of Supreme Court voting data from the 1994-2002 terms as a two-level hierarchy: justices' choices nested within cases. Estimates from a random coefficient model indicate that case-level variables associated with both attitude strength and accountability systematically explain variation in the preference-behavior relationship. Using an average partial effects post-estimation procedure, I present in-depth substantive interpretations of the results that highlight the compelling ways in which these case-level factors alter the nature of preference-based behavior. In addition to providing important substantive conclusions about Supreme Court decision-making, the paper also illustrates how a multilevel modeling framework is well-qualified to test heterogeneity-related hypotheses in social and behavioral processes.

Prepared as the foundation for a poster presentation at the Political Methodology Summer Conference, July 21-23, 2005, Florida State University. A previous version of this paper was prepared for presentation at the Annual Meeting of the Midwest Political Science Association, April 7-10, 2005, Chicago, IL. As part of my dissertation, the paper is a work in progress. I am extremely grateful to Larry Baum for his valuable guidance and input on this project. Thanks to Jan Box-Steffensmeier, Kathleen McGraw, and Elliot Slotnick for providing very helpful suggestions at various stages of the project. I also thank Dave Darmofal, Jim DeLaet, Roman Ivanchenko, Chad King, Andrew Martin, Rich Pacelle, Nancy Scherer, Cory Smidt, Craig Volden, Herb Weisberg, and Alan Wiseman for helpful comments and conversations.

Scholarship on Supreme Court decision-making examines how various considerations—policy, legal, and strategic—influence justices to decide cases in particular ways. Political scientists studying this phenomenon have been most influenced by the *attitudinal model*, the argument that justices’ personal policy preferences dominate their decisions on the merits (Schubert 1974; Rohde and Spaeth 1976; Segal and Spaeth 1993, 2002). This contention typically provides a starting point for analyses of justices’ behavior, with scholars—even critics of the attitudinal model (e.g., Epstein and Knight 1998)—underscoring at the outset the central role of justices’ policy preferences. While scholars differ in their acceptance of the attitudinal model, with some arguing for the influence of legal (e.g., George and Epstein 1992; Kahn 1999; Richards and Kritzer 2002) and strategic considerations (Spiller and Gely 1992; Epstein and Knight 1998; Maltzman et al. 2000), most assume that preferences exhibit a *uniform impact* on decision-making across a wide variety of situations. This assumption has fostered the ability to make broad generalizations about justices’ behavior, but I argue that there exists meaningful and systematic variation in the impact of preferences that should not be ignored. Instead, such variation can be explained theoretically and tested empirically, a task capable of expanding our knowledge about how and why justices decide cases in various ways.

The goal of this paper is to explain a particular type of heterogeneity in Supreme Court decision-making: the extent to which the impact of policy preferences on justices’ choices varies across cases. Under what conditions will justices’ policy preferences have a greater or lesser impact on their decisions on the merits? What case-level factors moderate the impact of justices’ policy preferences? Embedded within a psychological framework centering on the attitude-behavior relationship, I develop a theoretical framework that specifies the conditions under which policy preferences will exhibit a greater or lesser impact on justices’ choices. I posit that two mechanisms—attitude strength and accountability—govern the nature and magnitude of the preference-behavior relationship. I then hypothesize that case-level factors associated with each mechanism will explain variation in the preference-behavior relationship.

I employ a multilevel (hierarchical) modeling framework that is well-qualified to test the hypotheses associated with the heterogeneity perspective. Using data consisting of justices’ votes on all

formally decided civil liberties cases from the 1994-2002 terms, the analysis conceives of the data as a two-level hierarchy—justices’ choices nested within cases—and specifies a random coefficient model testing whether the hypothesized case-level factors explain variation in the impact of preferences. In addition to producing important substantive insights about Supreme Court decision-making, the paper also presents a useful illustration of how a multilevel modeling framework can be used to test heterogeneity-related hypotheses in social and behavioral processes.

POLICY PREFERENCES AND SUPREME COURT DECISION-MAKING

Contemporary presentations of the attitudinal model (Segal and Spaeth 1993, 2002) suggest that three factors allow Supreme Court justices to decide cases almost exclusively on the basis of their policy preferences: (1) they are electorally unaccountable, (2) they do not possess progressive ambition for higher office, and (3) the Supreme Court is the court of last resort, and no other court can overrule its decisions. Proponents of the attitudinal model have produced empirical evidence that both bolsters their central arguments and casts doubt on legal and strategic perspectives (Segal and Spaeth 1993, 2002; Segal 1997; Spaeth and Segal 1999). This has made the attitudinal model an influential perspective in judicial behavior research and a stimulus for alternative perspectives attempting to provide empirical evidence of other influences on justices’ behavior. While theoretical and empirical debates exist regarding the impact of considerations other than policy preferences (e.g., George and Epstein 1992; Segal 1997; Epstein and Knight 1998; Bergara et al. 2003; Richards and Kritzer 2002), I suggest that a central question remains open for inquiry: What is the nature of the relationship between justices’ policy preferences and their choices?

In the interest of parsimony and generalizability, most judicial behavioralists have sought answers to this question by estimating a global, uniform impact of policy preferences across a wide variety of situations, without an accompanying interest in conditions that may strengthen or weaken the effects of preferences. Indeed, some scholars have suggested exploring these conditions (Gibson 1983, 1991; Baum 1994, 1997), but there has been only limited theoretical and empirical inquiry into heterogeneity in justices’ decision processes. As a result, scholars have gained only a partial sense of *when* policy

preferences exhibit a greater or lesser impact on justices' decisions. An exception is research from the strategic perspective that investigates the conditions under which justices will deviate from acting on their policy preferences, but these studies have highlighted only a limited set of conditions, namely elements of the political environment (Eskridge 1991; Spiller and Gely 1992; Martin 1998) and collegial interaction (Epstein and Knight 1998). Other heterogeneity-related studies include Knight and Epstein's (1996) conception of precedent as a constraint on attitudinal behavior, Gibson's (1978) perspective on how role orientations can lead to less preference-based decision-making, and Spaeth and Segal's (1999) analysis of variation in the extent to which justices exhibit "preferentialist" versus "precedentialist" tendencies in adherence to past landmark precedents.

On the whole, it is safe to say that scholars have yet to undertake a broad examination of heterogeneity in Supreme Court decision-making, even in the face of perspectives like Gibson's (1983, 9) well-known and elegant statement that justices' decisions "are a function of what they prefer to do, tempered by what they think they ought to do, but constrained by what they perceive is feasible to do." It would seem that Gibson's conception of judicial decision-making, which accords with other scholars' conceptions, possesses a strong heterogeneity component. The first part of Gibson's troika connotes the role of policy preferences, but the second and third parts stress that conditions exist where the impact of justices' preferences might be tempered. What are these conditions capable of tempering or enhancing the impact of policy preferences? The attitudinal model essentially claims that the absence of political and electoral constraints provides justices maximum latitude to act solely on their policy preferences. But attitudinalists have only touched on these very broad constraints, and the strategic perspective (e.g., Epstein and Knight 1998), as mentioned, has examined a limited set of circumstances that might constrain justices. I argue that there are conditions at the case-level that might explain variation in the impact of policy preferences. Specifying these conditions is the goal of the paper's theoretical framework.

How can one begin to think about case-level factors that might explain variation in the preference-behavior relationship for Supreme Court justices? Contemporary social psychological perspectives on attitudes and decision-making motivate my theoretical framework of heterogeneity in

Supreme Court decision-making. Such perspectives place a central focus on the psychological processes that mediate the relationship between attitudes and behavior as well as the conditions under which attitude-behavior relations are more or less likely to emerge (Eagly and Chaiken 1993; Fazio and Olson 2003). In specifying the attitude-behavior relation as a *process* of judgment that can be explained, the focus becomes not simply *whether* attitudes guide behavior, but *when* attitudes guide behavior to greater or lesser degrees. As such, I specify the preference-behavior relationship in Supreme Court decision-making as a process to be explained theoretically and tested empirically.

THEORETICAL FRAMEWORK

For years, social psychologists assumed that attitudes—defined as tendencies to evaluate an object or entity with a degree of favor or disfavor—had a potent and uniform impact on behavior (Eagly and Chaiken 1993; Fazio and Olson 2003).¹ In response to critics of this assumption who suggested that many attitude-behavior correlations were minimal (e.g., Wicker 1969), scholars shifted the focus of inquiry from *whether* attitudes guide behavior to *when* attitudes guide behavior (e.g., Zanna and Fazio 1982). Importantly, social psychologists have specified the psychological processes by which attitudes guide behavior and the individual and situational characteristics that moderate the attitude-behavior relation. Two such characteristics stand out.

Attitude strength, an individual-level characteristic, is one of these moderators; the stronger the attitude, the more likely it will impact behavior (Petty and Krosnick 1995; Miller and Peterson 2004). There are multiple facets of attitude strength (see Miller and Peterson 2004), and I highlight two especially relevant to this paper. Fazio (e.g., Fazio et al. 1982; Fazio and Williams 1986; Fazio 1986) has long argued that *attitude accessibility*—defined as the association in memory between an attitude object and its evaluation—moderates the attitude-behavior relation. Attitude accessibility ranges from “non-attitudes” (Converse 1970), where no evaluative orientation comes to one’s mind upon exposure to an object, to automatic activation (e.g., Fazio 1995), where an evaluative orientation immediately comes to

¹ I treat “policy preferences” and “attitudes” toward legal policy as synonymous. Thus, the phrases “preference-behavior relationship” and “attitude-behavior relationship” are interchangeable.

mind upon exposure to an attitude object. The key finding from Fazio's research program is that the more accessible the attitude, the more likely it will influence behavior.

Some social psychologists have also emphasized that *attitude importance*, the second type of attitude strength, also moderates attitude-behavior relations, for example, in the degree of issue voting in the electorate (Krosnick 1988, 1990). According to these studies, individuals differ over the importance they attach to certain policies; the more important the issue is to them, the more potently their issue positions will affect their vote choices. In media effects research, importance is cast as a contextual-level, as opposed to an individual-level, characteristic. According to some (e.g., Iyengar and Kinder 1987), the media have an agenda-setting function such that when they cover an issue, the public as a whole believes that this issue is more important to the nation compared to if the media had not covered the issue. In this conception, the mass public is the object of a universally distributed signal, in this case, media's coverage of an issue. I will have more to say about contextual versus individual-level variation below, since it relates to my conception of attitude strength for Supreme Court justices.

The second key factor of interest in determining the nature and magnitude of the attitude-behavior relation is *motivation*. In social psychology, motivation is often treated as situational; under different conditions, people have different motivations to behave in various ways (e.g., Fiske and Taylor 1991; Kunda 1990; Fazio and Towles-Schwen 1999). Of course, many judicial specialists adopt the assumption that Supreme Court justices are motivated solely by policy goals, that they seek to impose their personal policy preferences on legal outcomes. Baum's (1994, 1997) multiple goals framework for judges, which adopts social psychological insights, is largely a response to the one-goal assumption long dominant in Supreme Court decision-making research. While justices may be motivated by policy goals under various conditions, under other conditions, justices may be motivated by accuracy goals, for instance, seeking to achieve both good law and good policy (Baum 1997). Furthermore, justices may be motivated in part to please various legal and public audiences (Baum 1997, 47-55). According to Baum and others, the key is to ascertain the conditions under which a particular motivation, or a combination thereof, becomes operative.

Social psychologists who have posited the multiple processes by which attitudes guide behavior—ranging from deliberative, reasoned processes (Fishbein and Ajzen 1975) to more spontaneous processes where attitudes are strongly predictive of behavior (Fazio 1990; Fazio and Towles-Schwen 1999)²—have highlighted motivational factors that initiate people into one process over another (e.g., Fazio and Towles-Schwen 1999). *Accountability*, defined as an “implicit or explicit expectation that one may be called on to justify one’s beliefs, feelings, and actions to others” (Lerner and Tetlock 1999, 255), is a key situational factor affecting motivation. Akin to a “fear of invalidity,” accountability induces a careful and effortful reasoning process, where one suppresses attitudinal biases (to a degree) and is influenced by more objective considerations (Fazio and Towles-Schwen 1999). In short, increasing accountability levels should reduce the influence of attitudes on behavior (Fazio and Towles-Schwen 1999; Schuette and Fazio 1995).

Embedded within these general perspectives, I posit that two key mechanisms influence the nature and magnitude of the preference-behavior relationship for Supreme Court justices: *attitude strength* and *accountability*. The theoretical framework contends that certain case-level characteristics affect each mechanism to a certain degree and thus help determine the impact of those mechanisms on the preference-behavior relationship. What does it mean for a case-level factor to affect the preference-behavior relationship for justices? In social psychological studies and judicial decision-making studies alike, the impact of preferences (or attitudes) is posited and assessed in comparative terms; that is, *variation in preferences across units of analysis* explains the propensity of casting a liberal vote. Thus, if preferences are influential, then liberal justices are significantly more likely than conservative justices to cast a liberal vote in a given case, *ceteris paribus*. Segal and Spaeth’s (2002, chapter 8) evidence from the search-and-seizure issue area shows that, controlling for relevant case facts, as policy preferences become more liberal, the probability of casting a liberal vote significantly increases. It is important to highlight

² Inquiries into the processes by which attitudes are influential in a decision-making context parallel other social psychological perspectives, including schematic perspectives (Fiske and Taylor 1991) and motivated reasoning (Kunda 1990), that describe top-down versus bottom-up reasoning processes.

this issue of relative comparisons when parsing out the empirical implications of the heterogeneity perspective. Figures 1 and 2 provide a basis for understanding these implications.

[Figures 1 and 2 about here]

The theoretical framework posits that certain case-level factors can either *enhance* or *attenuate* the impact of policy preferences on justices' decisions on the merits.³ Figure 1 illustrates potential theoretical scenarios by which a case-level variable may enhance the impact of policy preferences; note that figures 1 and 2 provide highly stylized scenarios. The x-axis represents justices' policy preferences, and the y-axis represents the probability of a justice casting a liberal vote in a given decision. The solid line represents a sort of "baseline" effect of preferences, and, in this example, it shows that an extreme conservative's probability of casting a liberal vote is .25, a true moderate .5, and an extreme liberal .75. Given the relative comparison interpretation discussed above, the baseline plot shows that, *ceteris paribus*, liberals are significantly more likely than conservatives (and moderates) to cast a liberal vote in a given case.

There are two scenarios by which a case-level characteristic enhances the impact of policy preferences relative to the baseline. The first, depicted in the long-dashed line, is what I refer to as the "enhancement, polarization" effect. In this scenario, a case-level characteristic induces ideologically polarized behavior amongst the justices, relative to baseline behavior. This is seen in comparing the steepness of each line's slope; the steeper the slope, the stronger the impact of policy preferences and the more polarized justices are in their ideological voting. The presence of some case-level characteristic (compared to the baseline) causes liberals to be even more likely to cast liberal votes and conservatives to be more likely to cast conservative votes. The second type of enhancement is what I refer to as "asymmetric enhancement," depicted in figure 1 as the short-dashed line. In this scenario, a case-level characteristic enhances the impact of preferences, but it does so asymmetrically. Either liberals' ideologically-based voting is bolstered to a greater extent than conservatives' behavior, or vice versa. For

³ Note that "attenuation" is akin to strategic theorists' conception of "constraint" (Epstein and Knight 1998; Knight and Epstein 1996).

instance, figure 1 depicts liberals as significantly more likely to cast a liberal vote compared to the baseline, while extreme conservatives barely stray from their default positions. In this scenario, it is important to examine how moderates behave. In this example, conservative-leaning moderates appear to be about 50% likely to cast a liberal vote. The case characteristic appears to pull everyone in the liberal direction, including the pivotal moderates, leading to the increasing prospects of a liberal outcome.

Figure 2 depicts theoretical attenuation scenarios. The first is “attenuation, consensus,” depicted as the long-dashed line. In this scenario, a case characteristic ideologically unifies the justices around a more consensual position, relative to the baseline. The slope of the line is much less steep, meaning that the impact of policy preferences is dampened. Compared to the baseline, conservatives are more likely to cast a liberal vote, and liberals are more likely to cast a conservative vote. The second scenario is “asymmetric attenuation,” depicted as the short-dashed line in figure 2. In this scenario, a case characteristic induces one group of justices—either liberals or conservatives—to deviate from their baseline preference-based behavior. Without loss of generality, figure 2 depicts liberals as being significantly more willing to cast a conservative vote, relative to the baseline, and conservatives just barely more likely to cast a conservative vote. Like its counterpart in figure 1, in this scenario, a case characteristic induces all justices, but especially liberals, to tend toward a conservative vote. Again, it is important to see how the moderates, as pivotal actors, behave in this scenario. Note how liberal moderates would be pulled toward a conservative vote, meaning that, compared to baseline behavior, the characteristic seems to increase the likelihood of a conservative outcome.

Attitude Strength

The first mechanism posited to affect the preference-behavior relationship is attitude strength.⁴ In the context of Supreme Court decision-making, attitude strength is defined as the degree to which justices’ preferences toward an issue are activated once they are confronted with a case. I posit that

⁴ I use the term “attitude strength” instead of “preference strength” because it has a long history of inquiry in social psychology (see Petty and Krosnick 1995) and possesses an increasingly important presence in political science (see Miller and Peterson 2004). I view the two terms as synonymous.

particular case stimuli prime policy preferences to differing degrees. My conceptualization of attitude strength is slightly different from social psychological perspectives in terms of the units over which strength varies. In social psychological studies (e.g., Fazio 1995; Krosnick 1988), strength varies across *individuals*; person A may possess very strong attitudes toward an attitude object, yet person B may not have strong feelings at all for the same object. In my perspective, strength is treated as a contextual factor that varies across cases. Certain case-level factors activate strength to varying degrees, and these factors are treated as universally dispersed signals to the justices, much like how the media's coverage of a policy issue, as mentioned above, is dispersed to the mass public in studies of media effects (Iyengar and Kinder 1987).

Three case-level factors are associated with attitude strength. First, justices are likely to exhibit stronger preference-based behavior on issues with which they have high familiarity. In my perspective, previous experience with an issue is a *case-level* characteristic, as opposed to a factor that varies across justices.⁵ Thus, cases with higher issue familiarity should invoke enhanced preference-based behavior across justices, something akin to an “enhancement, polarization” effect in figure 1. Legal issues can be thought of as either established “blue chip” issues that have been decided on many times, or relatively new issues that are just making their way into the legal system. Search-and-seizure cases provide a good example. The Court has been deciding these types of cases for years, and the justices are likely to have strong views on this issue. Thus, when justices are confronted with a search-and-seizure case, strong policy preferences toward this issue are going to be primed, leading to ideologically polarized voting behavior. However, for newer issues, e.g., internet regulation, on which the Court has rarely decided, policy preferences toward the issue may not become activated to the same degree, perhaps leading to a more ideologically consensual voting situation. Thus, as *issue familiarity* increases, the strength of the preference-behavior relationship is expected to increase.

⁵ It is safe to say that, for instance, Justice Breyer in his first term is going to perceive issue familiarity the same as Justice Rehnquist in his thirtieth term because more than likely, Breyer did not live in a legal vacuum before he arrived on the court. That is, as a legal professional before his justiceship began, Breyer more than likely kept up with the legal issues swirling around the federal courts.

The second strength-related characteristic is *case complexity*. Cases with multiple legal provisions and multiple issues will make it more difficult for both (1) the activation of policy preferences, since justices might have preferences in two different directions on each of the separate issues present in the case, and (2) the determination of where the alternatives of the case lie in policy space relative to the justice's policy preference. Thus, as complexity increases, it is expected that the impact of justices' preferences on decisions will decrease.

The third strength-related characteristic is case *salience*, which implies that the case is of high importance to the justices. It is safe to assume that justices recognize the importance of a case as they become familiar with its substance (e.g., Epstein and Segal 2000). I posit that salient cases will prime strong policy preferences across justices, and thus, salience is expected to enhance the preference-behavior relationship.

Accountability

As mentioned, accountability, defined as a justice's perceived obligation to justify and/or defend the merits of a legal decision to an external audience, is a key factor determining motivation. My theoretical framework calls attention to the notion that in some cases, justices may feel accountable to a particular audience or entity, which will affect their motivations and thus, the nature of preference-based behavior in a case (Baum 1997, 47-55). In some instances, justices may feel accountable to Congress, the executive branch, the legal community, or the public. Accountability is a sort of constraint induced by the Supreme Court's role in the legal and political system. Importantly, I contend that accountability is a situational factor that attenuates the impact of policy preferences (figure 2), leading to less ideologically polarized behavior.

The first accountability-related factor is the *information environment*, specifically the nature and balance of *amicus curiae* briefs on both sides of the case. Interest groups, who make up the bulk of amicus participation, serve an important informational function for the justices (e.g., Caldeira and Wright 1988; Kearney and Merrill 2000; Collins 2004), and therefore, accountability to these groups may be triggered to varying degrees depending on the case. I posit that as the information environment becomes

more polarized—i.e., as the number of briefs supporting each side becomes increasingly balanced—justices will be more *unconstrained* to vote their policy preferences; accountability to interest groups as a whole would be low because there are groups supporting both sides equally. But as the information environment becomes less polarized and more consensual, justices may feel increasingly accountable to interest groups and other interested parties, and they would have a difficult time justifying why they voted against such a consensus. This leads to attenuation in the impact of preferences, inducing a more ideologically consensual voting context. Thus, as ideological consensus in the information environment increases, the magnitude of the preference-behavior relationship is expected to decrease.

The second accountability-related factor involves the justices' accountability to the executive branch via the Solicitor General (SG). The SG's influence and success in the Supreme Court are well-documented (e.g., Segal and Reedy 1988; Pacelle 2003; Ditslear 2003). Often called the "tenth justice," the SG has earned a wealth of credibility with the court. Pacelle (2003) argues that this credibility comes from the SG's sensitivity to its role "between law and politics." That is, the SG possesses a complex goal structure inducing it to balance its interest in serving the President with its fidelity to the law and to the Court (Pacelle 2003, chapter 1). As the ultimate "repeat player," the SG possesses a wealth of legal resources and a finicky case-screening strategy that makes it an extremely valuable informational source as well as an ally to the justices. As a result, I argue that justices maintain a sense of accountability to the SG, which is rooted in the informational benefits justices receive from the SG.

There are two modes of SG participation in a Supreme Court case: (1) when the U.S. is a direct party, and (2) when the SG participates as *amicus curiae*.⁶ Pacelle (2003, 20-23) argues that when the SG's role is as direct party, it most resembles the "tenth justice." This is because the Court is aware that the SG petitions cases it "believes the Court will find worthy" (Pacelle 2003, 21). Thus, I expect that SG participation as a direct party will attenuate the impact of justices' policy preferences, relative to when there is no U.S. participation in a case. Furthermore, since the U.S.'s interests in civil liberties cases (the

⁶ In most instances, when the SG participates as *amicus curiae*, it participates in oral arguments and submits a brief.

focus on my empirical study) is typically in the conservative direction, I expect an “asymmetric attenuation” pattern to emerge. That is, compared to a baseline of no U.S. participation, conservatives will only be slightly more inclined to cast a conservative vote, while moderates, and especially liberals, will be significantly more likely to cast a conservative vote.

Pacelle contends that when the SG participates as *amicus curiae*, it is still influential, but not as influential as its direct party role. As *amicus curiae*, the SG “plays a role closer to the ‘fifth clerk’ of the justices” (Pacelle 2003, 20). In these cases, the SG typically participates in cases to further the administration’s views on legal matters. Given the credibility of the SG on legal matters, the expectation is that SG participation as *amicus curiae* will attenuate the impact of justices’ policy preferences, relative to when there is no U.S. participation, but not to same degree as when the SG is direct party. Moreover, since the SG’s *amicus* participation could consist of a mixture of liberal and conservative positions depending on the party of the administration, no strong expectation emerges regarding whether the attenuation will reflect a pattern of asymmetry (as is the expectation for SG as direct party) or consensus.

The third characteristic that may prime accountability levels is whether or not the case involves *statutory interpretation*. Strategic perspectives have generally assumed that the Court is more constrained in its statutory decisions, as opposed to constitutional cases, because Congress and the President can reverse the Court’s statutory rulings (e.g., Eskridge 1991; Spiller and Gely 1992; Epstein and Knight 1998; but see Epstein et al. 2001). In essence, these scholars have argued that the Court possesses more of a “fear of reversal” from Congress for statutory cases. Pertaining to accountability, it is plausible to expect that since statutory interpretation cases are the domain of both the Court and Congress, the Court may feel more accountable to the Congress in these cases. Hausegger and Baum’s (1999) analysis of the Court’s override invitations to Congress in statutory interpretation cases suggests that indeed justices may be more willing to suppress ideologically polarized decision-making in statutory cases. Since cases *not* involving statutory interpretation, most notably constitutional cases, are primarily the domain of the judicial branch, justices may feel less accountable for their constitutional decisions than for cases

involving statutory interpretation.⁷ Thus, the preference-behavior relationship is expected to be weaker for statutory than for constitutional cases.⁸ More specifically, I expect that statutory cases will follow a pattern of “attenuation, consensus” relative to the non-statutory cases.

RESEARCH DESIGN AND ANALYSIS

A multilevel, or hierarchical, modeling framework (Raudenbush and Bryk 2002; Steenbergen and Jones 2002; Skrondal and Rabe-Hesketh 2004) is well-qualified to test the hypotheses discussed above. Hierarchical data structures contain more than one level of analysis, where one level is nested within another level. In a two-level hierarchical structure, which will be used in this analysis, units from the lowest level of analysis (level-1 units) are nested within units from a higher level of analysis (level-2 units). In many quantitative analyses of Supreme Court decision-making, justices’ *choices* are the only recognized units of analysis (e.g., Segal and Spaeth 2002; Richards and Kritzer 2002). While judicial scholars undoubtedly recognize that additional levels are present, studies very rarely incorporate hierarchical structures into empirical analyses (but see Martin 1998; Zorn 2001; Martin and Quinn 2002). The use of this methodology, then, is an advance in providing a way to explain heterogeneity in Supreme Court decision-making and other social and behavioral processes as well. By focusing on the levels of analysis present in a social or behavioral process, a multilevel modeling framework allows one to specify explicitly how higher-level variables (e.g., contextual variables) explain variation in lower-level effects.

This section discusses model specification for the two-level hierarchical structure, *justices’ choices nested within cases*. Justices’ choices are level-1 units and cases are level-2 units.⁹ For all analyses, the dependent variable—a justice’s vote in a case—is dichotomous, where “1” is a liberal vote

⁷ I will frequently refer to “statutory” versus “non-statutory” cases. Most (about 80%) non-statutory cases are constitutional cases, and the remainder of non-statutory cases (about 20%) includes supervision of lower courts and federal common law.

⁸ Some scholars have suggested that the opposite relationship might exist (Epstein et al. 2001). This analysis will be able to shed light on this question.

⁹ Of course, a third level of analysis also exists: *justices*. Clearly, “cases” are the more significant level-2 units for purposes of my theoretical framework. One potential framework for dealing with justices as a level of analysis is through the use of non-hierarchical multilevel model, where justices’ choices would be *cross-classified* as belonging to either cases or justices (see Skrondal and Rabe-Hesketh 2004, 60-62).

and “0” is a conservative vote. Thus, a hierarchical generalized linear model will be used, which specifies the sampling model for the dependent variable, the link function, and the structural model. For binary dependent variables, a Bernoulli sampling model is used, and I use a logit link. For the logit link, first define $\Pr(Y_{ij}=1) = p_{ij}$, which is the probability of a liberal vote for choice i in case j . Then define η_{ij} as the log-odds of p_{ij} , as in equation 1 below, which allows one to specify the log-odds as a linear function of the level-1 independent variables.

$$(1) \quad \eta_{ij} = \log[p_{ij} / (1 - p_{ij})]$$

Before discussing the model that will be used to test the hypotheses discussed above, consider first the model in equation 2 below, which is a simple random coefficients model designed to test whether the impact of preferences varies significantly across cases.

$$(2) \quad \begin{aligned} \eta_{ij} &= \beta_{0j} + \beta_{1j}PREF_{ij} \\ \beta_{0j} &= \gamma_{00} + u_{0j} \\ \beta_{1j} &= \gamma_{10} + u_{1j} \end{aligned}$$

The first equation in the system above is the level-1 equation. The i subscript indexes level-1 units (choices), and the j subscript indexes level-2 units (cases). $PREF_{ij}$ is a justice’s policy preference associated with choice i in case j . The level-2 equations, which are the second and third equations in the system above, are what explicitly make this a *random coefficient* specification; namely, the random coefficients (β_{0j} and β_{1j}) are each modeled as a function of a stochastic error component (u_{0j} and u_{1j} , respectively).

First, β_{0j} is a random intercept that varies across cases. γ_{00} is the “average” intercept, and u_{0j} is the level-2 stochastic error term, or random effect, for the intercept. Importantly, u_{0j} captures *unobserved heterogeneity* across cases, that is, unmeasured variability in case-level factors that may affect the outcome, η_{ij} . β_{0j} can be thought of as each case possessing its own individual propensity of being decided in a liberal direction. As many judicial scholars find it important to control for case facts (e.g., Segal 1986; Segal and Spaeth 2002), which amounts to “observed heterogeneity” that might affect the outcome, the random intercept specification seems to be an alternative way to account for case differences, albeit of

an unobserved nature, when one does not have access to measured case facts variables. This seems like a most valuable strategy for scholars analyzing “global” civil liberties decisions, where it is not feasible to include case facts variables like one would for issue-specific data like search-and-seizure cases (Segal 1986).

β_{ij} represents the impact of justices’ policy preferences on their choices and is specified to vary randomly across cases. Substantively, this specification is directly connected to this paper’s theoretical framework, which posits that the *impact of policy preferences varies across cases*. In the third equation in system 2 above, γ_{10} is the average impact of policy preferences, and u_{1j} is the level-2 stochastic component associated with the preferences coefficient. Substantively, u_{1j} accounts for unobserved case-level heterogeneity that may explain variation in the impact of policy preferences.

The level-2 error components, u_{0j} and u_{1j} , are assumed to have a bivariate normal distribution, and so we can estimate $\text{var}(u_{0j})$, $\text{var}(u_{1j})$, and $\text{cov}(u_{0j}, u_{1j})$. The estimates of the two variance components have important substantive meanings. When $\text{var}(u_{0j}) > 0$, one concludes that significant unobserved heterogeneity exists across cases in the overall propensity for a case to be decided liberally. When $\text{var}(u_{1j}) > 0$, one concludes that significant variation exists in the *impact* of preferences across cases, which again is the crux of the paper’s theoretical framework. Before attempting to model variation in the impact of policy preferences, which the next specification will do, it is generally recommended that one first determine whether there is significant variance to explain (Raudenbush and Bryk 2002; Hox 2002). Thus, testing whether $\text{var}(u_{1j}) > 0$ is the goal of this first model specification.

The next model specifies a random coefficients model, but in addition to the specification just discussed, this model includes the two sets of level-2 covariates associated with the heterogeneity perspective I have laid out. The structural model can be written as:

$$\begin{aligned}
 \eta_{ij} &= \beta_{0j} + \beta_{1j}PREF_{ij} \\
 (3) \quad \beta_{0j} &= \gamma_{00} + \gamma_{01}SAL_j + \gamma_{02}COMP_j + \gamma_{03}ISSUEFAM_j + \gamma_{04}INFO_j + \gamma_{05}USAMICUS_j + \\
 &\quad \gamma_{06}USPARTY_j + \gamma_{07}STAT_j + u_{0j} \\
 \beta_{1j} &= \gamma_{10} + \gamma_{11}SAL_j + \gamma_{12}COMP_j + \gamma_{13}ISSUEFAM_j + \gamma_{14}INFO_j + \gamma_{15}USAMICUS_j + \\
 &\quad \gamma_{16}USPARTY_j + \gamma_{17}STAT_j + u_{1j}
 \end{aligned}$$

The level-1 equation is the same as in the previous specification. But in this model, β_{0j} and β_{1j} are specified as a function of case-level covariates associated with attitude strength and accountability. Thus, both random parameters are now a function of a systematic component (vis-à-vis the case-level covariates) and a stochastic component (vis-à-vis a case-level error term, or random effect). For the β_{0j} equation, the γ parameters represent the effects of *observed* case-level heterogeneity on the propensity of a liberal decision, and u_{0j} represents unobserved heterogeneity in the response across cases. γ_{01} represents the impact of salience on the average propensity of a case to be decided in a liberal direction, and the remaining γ parameters represent analogous effects for complexity, issue familiarity, information environment, U.S. as amicus, U.S. as direct party, and statutory versus non-statutory cases.

Moving on to the level-2 equation for β_{1j} , γ_{10} represents the average impact of policy preferences when the level-2 variables are held at their zero values. This is true because the remaining γ parameters in the level-2 equation for β_{1j} represent *cross-level interaction* effects, i.e., they represent the effects of the attitude strength and accountability case-level variables on the impact of policy preferences (β_{1j}). Thus, a useful strategy is to mean-center all level-1 and level-2 variables to give the parameter estimates substantively meaningful interpretations. This allows one to interpret γ_{10} as the average impact of policy preferences (i.e., the effect of preferences when all other variables equal 0, or their mean values). Moreover, when all level-2 covariates are mean-centered, the γ parameters in the β_{0j} equation represent average case-level effects on the outcome, i.e., the impact of a level-2 covariate on the likelihood of a case being decided liberally when all other variables equal 0 (i.e., their mean values).

Importantly, estimates of γ_{11} through γ_{17} in the level-2 equation for β_{1j} provide critical tests of whether the attitude strength and accountability case-level variables explain variation in preference-behavior relationship. γ_{11} represents the impact of salience on the preference-behavior relationship, and the remaining γ parameters represent analogous effects for the other case-level covariates. u_{1j} continues to represent the impact of unobserved case-level heterogeneity on the preference-behavior relationship.

Significance tests and substantive interpretation of the γ coefficients will be used to gauge whether and how much each of these case-level factors explains variation in the impact of policy preferences.

Data and Measurement

I estimate the models using data from the Spaeth (2004) database consisting of justices' votes on all formally decided civil liberties cases from the 1994-2002 terms, which covers the current natural court of the Rehnquist Court.¹⁰ For the model discussed above, it is optimal to examine natural Courts separately, since natural courts experience no personnel change. This reduces potential bias induced by membership change (Baum 1992) and other changes over time. The data consist of 3,586 choices (level-1 units) nested within 399 cases (level-2 units).

As mentioned, the dependent variable is a justice's vote in a case, where "1" is a liberal vote and "0" is a conservative vote. Measuring justices' policy preferences, the key level-1 covariate of interest, is a complicated issue in judicial politics. First, the widely-used Segal-Cover (1989; Segal et al. 1995) scores, based on pre-nomination editorials from four major newspapers, are advantageous since they are independent of the justices' behavior once on the Court. However, the measure's inexactness is a limitation on its value for the purposes of my analysis. To test the proposed hypotheses, it is crucial to use a measure capable of validly ordering the justices from conservative to liberal. Recall that a policy preferences coefficient is interpreted as how increasing levels of liberalism increase the propensity to cast a vote in a liberal direction. Thus, a measure that accurately taps, for instance, how much more liberal Justice A is than Justices B and C is a necessity for this analysis. Table A1 in the Appendix illustrates how Segal-Cover scores, while useful for other analyses, are less than ideal for this analysis. The first problem with the Segal-Cover scores is that they do not account for over-time changes in policy preferences. Thus, Segal-Cover codes Justice Stevens as the fourth most *conservative* justice, which clearly does not account for Stevens's ideological change he has experienced over his career. Moreover, Justice Souter, who has also undergone ideological change in the liberal direction, is coded by Segal-

¹⁰ Case selection criteria from the Spaeth database: ANALU = 0 (citation) or 4 (split vote); DEC_TYPE=1, 6, or 7; and VALUE \leq 6.

Cover scores as the median justice on the current court, despite the fact that he is widely considered to be a solid member of the liberal group of four (along with Justices Breyer, Ginsburg, and Stevens). If one were to use Segal-Cover scores in a vote choice model, one would project that Justices Stevens and Souter are more likely to cast *conservative* votes in a given case than Justices Kennedy and O'Connor.

As an alternative to Segal-Cover scores, I use a measure based on justices' immediate past behavior.¹¹ Specifically, the measure captures a justice's average propensity to cast a liberal vote based on the proportion of liberal votes s/he cast in the *previous* term.¹² For interpretation purposes, I rescaled the preferences variable so that it is mean-centered and that it ranges from roughly -1 to 1 (see table A2 in the appendix for descriptive statistics).¹³ Table A1 in the Appendix presents a side-by-side comparison of Segal-Cover scores and the average of the lagged behavior measure over the 1994-2002 terms for each Justice. Note how the lagged behavior measure captures ideological differences between the justices more validly than Segal-Cover scores.

Moving on to measures of the level-2 covariates, for *case salience*, I adopt the measure developed by Epstein and Segal (2000), a dichotomous indicator for whether or not the case appeared on the *New York Times* front page the day after it was decided.¹⁴ *Case complexity* has been measured using factor scores retrieved from a factor analysis of the number of issues in the case, the number of legal provisions, and the number of opinions written in the case (Maltzman and Wahlbeck 1996).¹⁵ For data used in this paper, this measure fails to possess satisfying measurement properties given the lopsided distributions of both the number of legal provisions and issues (see table A3 in the Appendix). Therefore, I opt for a

¹¹ Martin and Quinn's (2002) ideal point estimates present another alternative to Segal-Cover scores. However, Martin and Quinn caution against using the measures as independent variables in a vote choice model. The measure I use based on lagged behavior is highly correlated with Martin-Quinn scores.

¹² Since the 1994 term was Justice Breyer's first term, policy preferences for Breyer are missing data in the 1994 term. This excludes 42 level-1 units from the analysis.

¹³ Specifically, I first recoded the original lagged proportion liberal measure to a 0 to 1 scale. I then multiplied this by 2, and then mean-centered.

¹⁴ Even though the measure is temporally subsequent to justices' choices, Epstein and Segal argue that the measure taps *contemporaneous* salience. The measure correlates highly with the number of amicus briefs filed in a case, another measure used to tap salience (Maltzman et al. 2000). Also, Maltzman et al. (2000) suggest that *legal salience* and *political (issue) salience* are two separate dimensions of salience. I plan on exploring this issue in the future.

¹⁵ For purposes of my analysis, I drop *number of opinions* as an indicator of complexity.

trichotomous measure, where “0” represents a case containing one legal provision and one issue, “.5” represents a case containing either more than one legal provision or more than one issue, and “1” represents a case containing more than one legal provision and more than one issue. Finally, *issue familiarity* should tap the degree to which a case involves a “blue chip” issue in the legal system, or how often the Court has previously heard the issue. Using Spaeth’s “issue” variable, for each case, I calculated the number of times the Court had previously decided cases in the same issue area dating back to 1953.¹⁶ Given the skewness of the variable and since it is reasonable to expect diminishing returns with increases in the number of times the Court has previously decided on the issue, I use the natural logarithm of this variable.

For the accountability-related variables, in measuring *information environment*, the goal is to tap polarization (ranging from *consensus* to *dissensus*) by capturing both the *intensity* and *ideological division* in the configuration of amicus curiae briefs. I adopt a measure akin to ambivalence measures used in public opinion research (Thompson et al. 1995; McGraw et al. 2003).¹⁷ The measure is:

$$\text{Information environment polarization} = [(L + C) / 2] - |L - C|$$

“L” is the number of amicus briefs supporting the liberal position, and “C” is the number of amicus briefs supporting the conservative position.¹⁸ The first term in the equation—the average of the number of liberal and conservative briefs—captures the *intensity* of the informational environment, and the second term—the absolute value of the difference between liberal and conservative briefs—captures *ideological division* between liberal and conservative briefs. I recoded the measure so that it ranges from 0 to 1.

Higher values of the measure indicate higher levels of ideological polarization (i.e., lower consensus).

¹⁶ This date (1953), while somewhat arbitrary, coincides with the starting term of the Spaeth database (2004). In the future, I plan to explore some other measures of this variable. One possibility is to use the number of times the Court has decided on the issue in the past 10 years or so. Another possibility is to use a measure tapping the age of the legal issue, i.e., how long the issue has been in the legal system.

¹⁷ I am in the process of developing an alternative measure of the information environment, namely one capable of assessing the separate effects of *intensity* and *ideological division*, as well as the interaction between the two.

¹⁸ For all 399 cases in my dataset, I examined the U.S. Reports and counted the number of amicus briefs in favor of both the liberal and conservative sides of the issue. I did not count amicus briefs regarded as neutral by the U.S. Reports.

Using Spaeth's database and the U.S. Reports, *U.S. as a direct party* is coded as "1" when the U.S. was a direct party in the case, and "0" otherwise. *U.S. as amicus curiae* is also a dichotomous indicator, where "1" indicates such participation, and "0" indicates otherwise.¹⁹ Since U.S. participation is treated as a three-level nominal variable that has been dummied out, the γ coefficients for *U.S. party* and *U.S. amicus* in the statistical models represent comparisons to the excluded group, which is the absence of U.S. participation. Finally, *statutory interpretation* is coded as "1" when a case involves statutory interpretation and "0" otherwise.²⁰

To facilitate interpretation of the model's coefficients, I mean-centered each level-2 variable. Raudenbush and Bryk (2002) and Hox (2002) suggest such an approach, even for dichotomous variables (Hox 2004, chapter 4), and the next section will highlight how this aids in the substantive interpretations of the statistical results. The appendix (table A2) includes descriptive statistics of all variables, for both the regular coding and the mean-centered transformations. Mean-centering has no effect on the γ coefficients in the β_{ij} equations; that is, these coefficients are the same regardless of whether one mean-centers or not. Mean-centering primarily aids in interpreting the γ coefficients in the β_{0j} equation, where each γ represents the impact of a case-level characteristic on the average propensity of a case being decided liberally when the other case-level characteristics equal 0, which is of course their mean values.

Estimation

Several estimation procedures are available for fitting multilevel models, and Rodriguez and Goldman (2001) refer to maximum likelihood estimation and Markov Chain Monte Carlo (MCMC) as two "standards" for estimating such models with binary responses.²¹ In maximum likelihood, the task is to acquire the unconditional distribution of the outcome by integrating out the random effect(s). This requires numerical integration using quadrature-based methods. Gauss-Hermite quadrature is a standard

¹⁹ In the future, I plan to use a more variegated measure of U.S. participation that indicates whether the U.S., either as direct party or amicus, took a liberal or conservative position in the case.

²⁰ This measure is based on the variable "auth_dec" in the Spaeth database. If auth_dec = 4, 45, or 54, the case was coded as a statutory interpretation case.

²¹ Other procedures, such as penalized quasi-likelihood (PQL) and marginal quasi-likelihood (MQL), can produce biased estimates of the variance components for binary response models (see Rodriguez and Goldman 2001).

procedure for this type of integration, but Skrondal and Rabe-Hesketh (2004, chapter 6; Rabe-Hesketh et al. 2002) suggest that adaptive quadrature is a more accurate method for integrating out the random effects.²² MCMC, the second “standard”, is a simulation-based procedure and approximates the posterior—the distribution of the parameters conditional on the data—by sampling iteratively from the full conditional distributions. As the number of random effects increases, MCMC becomes particularly advantageous compared to quadrature-based methods, which become impractical because of computing demands.

I use maximum likelihood estimation with adaptive quadrature (using 20 integration points) to produce the results presented in this paper.²³ As a means of cross-validation, I also used MCMC (with diffuse priors) to estimate the models and the results were nearly identical to those obtained from the adaptive quadrature estimation.

Results

To conserve space, I will briefly discuss the results from the first model that tests whether significant variation exists in the impact of policy preferences across cases, i.e., whether $\text{var}(u_{ij}) > 0$. There are two tests one can conduct to test for heterogeneity in a coefficient and both indicate that there is statistically significant variation in the impact of policy preferences across cases. First, a likelihood ratio test comparing the random coefficient model to a reduced random intercept model (without a random coefficient for the preferences coefficient) indicates significant heterogeneity ($\chi^2=111.2$; $df=2$; $p<.001$). Second, a z-test (variance/standard error) also confirms statistically significant heterogeneity in β_{ij} ($z=5.76$, $p<.001$). The results also indicate that significant case-level heterogeneity exists in the overall propensity of a liberal decision; this is supported by a significance test for whether $\text{var}(u_{0j}) > 0$ ($z=8.51$,

²² As an alternative to quadrature-based methods, simulated ML uses Monte Carlo simulation to integrate out the random effects (see Train 2003).

²³ Using GLLAMM (Rabe-Hesketh et al. 2004; Skrondal and Rabe-Hesketh 2004), an add-on software package to Stata, I estimated the models proceeding iteratively, first using 4 integration points, then using 8, then 12, 16, and finally 20. To facilitate convergence, for each model, I specified as start values the estimates from the previous specification (see Rabe-Hesketh et al. 2004). Results were extremely stable between the last three specifications. Rabe-Hesketh et al. suggest that 12 integration points provides accurate results for most models.

$p < .001$). The next step, of course, is to test the heterogeneity perspective outlined above. In particular, the model specified in equation 3 tests whether the hypothesized case-level characteristics explain variation in the impact of preferences.

The results from the random coefficient model are displayed in table 1. Three sets of estimates are presented: (1) effects of the case-level covariates on the average propensity of a case to be decided in a liberal direction (estimates from the β_{0i} equation), (2) effects of the case-level covariates on the impact of preferences, including the average effect of policy preferences (estimates from the β_{ij} equation), and (3) the variance-covariance components of the random effects. Note that the parameters listed in the tables correspond to those in equation 3. Beginning with the attitude strength variables, results indicate that that in the β_{0i} equation, conditional on other variables held at their mean values, *salient* cases were significantly more likely to be decided in a liberal direction than non-salient cases. I will have more to say about the salience finding in the next section, but anecdotal evidence seems to support that the current Rehnquist Court has been willing to issue liberal decisions on high salience cases, e.g., upholding *Miranda*, the Michigan affirmative action case, the Texas sodomy case, and the more recent enemy combatant cases.

[Table 1 about here]

Moving to the accountability variables in the β_{0i} equation, the coefficient for *U.S. as direct party* is negative and statistically significant at $\alpha = .05$. This means that cases in which the U.S. is a direct party are significantly more likely to be decided in a conservative direction than cases in which the U.S. does not participate, conditional on other case-level variables held at their mean values. This supports other research (e.g., Segal 1984) and is generally intuitive since the U.S. government often possesses conservative interests in civil liberties decisions. The effect of *U.S. as amicus* (relative to the baseline of no U.S. participation) is also negative and statistically significant at $\alpha = .05$.

More interesting in table 1 are the estimates from the β_{ij} equation, which directly test the heterogeneity perspective. First, the estimate of γ_{10} represents the average effect of policy preferences,

conditional on the other variables held at their mean values. Without surprise, the average impact of policy preferences is potent and statistically significant, such that as a justices' liberalism levels increase, the probability of a liberal vote increases as well. The remainder of the γ estimates test whether case-level variables moderate the impact of policy preferences. The results indicate that two of attitude strength variables—*salience* and *issue familiarity*—explain variation in the preference-behavior relationship at statistically significant levels. As expected, salience enhances the impact of policy preferences relative to the non-salient cases; the finding suggests that the impact of preferences is significantly different between salient and non-salient cases. I will discuss this finding, in conjunction with the effect of salience on the average propensity of a liberal decision, in more detail in the next section. Furthermore, as expected, increases in issue familiarity produce an enhanced impact of preferences. Thus, for “blue chip” issues, justices are more likely to divide along ideological cleavages than for newer cases that have not been heard by the Court as frequently. The effect of complexity on the preference-behavior relationship is in the correct direction, but fails to attain statistical significance. Note that $\text{var}(u_{ij}) > 0$, indicating that significant unobserved heterogeneity in the impact of preferences exists after accounting for observed heterogeneity in β_{ij} . Thus far, there is fairly strong support for the heterogeneity perspective; significant variation exists in the preference-behavior relationship, and two of the strength-related case variables—salience and issue familiarity—explain variation in this relationship.

Results from the β_{ij} equation also indicate that one of the accountability-related variables—*U.S. as a direct party*—is statistically significant at the $\alpha=.05$ level of significance, and another—*statutory interpretation*—exhibits a marginally significant ($p=.10$) effect on the preference-behavior relationship. The results indicate that the effect of U.S. as a party is not only as an influence on the overall propensity of the case to be decided conservatively (relative to no U.S. participation), but it also attenuates the impact of justices' policy preferences. While this finding will be discussed in more detail below, it highlights a potent role of the SG heretofore uncovered. That is, the SG's participation as a direct party seems to reduce the degree of ideological polarization that might otherwise exist. However, the SG does

not have this same effect when it participates as amicus curiae; the coefficient for U.S. amicus is negative, as expected, but statistically insignificant.

Regarding the marginally significant effect of statutory interpretation, as some strategic perspectives expect, the impact of policy preferences in statutory cases is reduced compared to non-statutory cases. This result at least suggests a hint of empirical evidence that justices seem to constrain themselves ideologically in statutory cases, which are the domain of both the legislative and judicial branches, compared to non-statutory cases, which are almost always left untouched by the legislative branch (especially constitutional issues, of course). The coefficient for information environment (γ_{II}) is in the wrong direction, and is far from statistical significance; the ideological configuration of amicus briefs does not appear to alter the impact of policy preferences.

Substantive Interpretations Using Average Partial Effects

To get a better understanding of the substantive magnitude and nuance associated with the effects discussed above, I estimate and present average partial effects (APEs) for various quantities of interest. (e.g., Wooldridge 2002, 2005). APEs are akin to run-of-the mill predicted probabilities used in numerous post-estimation analyses, but they are particularly valuable in models with unobserved heterogeneity since they average over this heterogeneity in the sample. Thus, APEs allow one to compute the expected value (in terms of a probability) of a liberal decision for a particular value of a variable of interest, while averaging across the distribution of unobserved heterogeneity. I present substantive interpretations for the statistically significant case-level variables from the β_{ij} equations for each model in two different forms. The first form, depicted in figures 3-6, provides a very general substantive view of how the each case-level variable alters the preference-behavior relationship. The second, depicted in figures 7 and 8, is more of a justice-centered view of how two of the more interesting variables alter the influence of preferences.

For figures 3-6, the x-axis is policy preferences, and for these figures, policy preferences is represented in its original form—the proportion of liberal decisions for a justice in term $t-1$. The vertical axis is the probability of a liberal decision. The lines in each graph represent the probability of a liberal

choice by a justice in a particular case corresponding to a given policy preference, while holding the particular case-level variable of interest constant at a particular value. The rest of variables are held constant at their mean values, and since these are APEs, the calculations average over the distribution of the unobserved heterogeneity. Note how these figures can be compared to the theoretical scenarios presented in figures 1 and 2.

First, figures 3 and 4 illustrate in general how the two significant attitude strength variables explain heterogeneity in the preference-behavior relationship. Figure 3 illustrates how salience enhances the impact of preferences, relative to non-salient cases. Ideological divisions in salient cases appear to be greatly accentuated compared to non-salient cases. Moreover, the pattern in figure 3 strongly resembles an “asymmetric enhancement” effect, like the scenario portrayed in figure 1. That is, liberals are far more likely to cast a liberal vote in salient cases, but conservatives are *not* far more likely to cast a conservative vote in salient cases, compared to non-salient cases. In fact, it appears as if strong conservatives’ voting behavior remains largely unchanged from non-salient to salient cases. Most interesting is how salience influences moderate conservatives. Recall from the discussion earlier that an “asymmetric enhancement” effect suggests that the presence of a case-level characteristic not only enhances the impact of policy preferences, but it also has a sort of main effect on the response such that it increases overall the propensity of a case to be decided in a particular direction. Figure 3, then, also illustrates how the coefficient for salience (γ_{01}) in the β_{0j} equation works. Salience, in general, increases the overall propensity for a case to be decided in a liberal direction. This effect is most crucial for the behavior of moderate conservatives (one of whom, either Kennedy or O’Connor, is usually the swing vote), who appear to be more likely to cast *liberal* votes in salient cases compared to non-salient cases. I elaborate on this finding more in the next section on justice-specific results.

[Figures 3 and 4 about here]

Figure 4 presents the general effect of issue familiarity. The low familiarity plot holds this variable constant at its 5th percentile, while the high familiarity plot holds the variable constant at its 95th percentile. The goal here is to compare preference-based behavior for issues on which the Court has

previously decided with less frequency against behavior in “blue chip” issues on which the Court has had plenty of experience deciding. Figure 4 shows how the Court’s high familiarity with an issue in a case enhances the impact of preferences. Note how the slope of the high familiarity curve is much steeper than the low familiarity curve, and moreover, the pattern resembles a “polarized enhancement” effect depicted in figure 1. That is, liberals are more likely to cast liberal votes and conservatives more likely to cast conservative votes for high familiarity issues compared to low familiarity ones. The effect appears to be especially pronounced for liberals.

Figure 5 displays the general effect of SG participation on the preference-behavior relationship. The solid bold line represents U.S. as a direct party, and the solid thin line indicates SG as *amicus curiae*. I will focus on comparing the *U.S. party* plot with the *no U.S. participation* plot. First, the figure shows how the impact of preferences is attenuated when the U.S. is a direct party relative to when it is not involved. Moreover, the plot resembles an “asymmetric attenuation” effect like that portrayed in figure 2, such that liberals are far more likely to vote in a conservative direction in cases when the U.S. is a direct party, and conservatives are not moved to a great extent. Moreover, the graph illustrates how the main effect of U.S. party participation (i.e., the negative and significant coefficient, γ_{06} , for U.S. party in the β_{0j} equation from table 1) and the attenuation effect on the impact of preferences work in conjunction with each other. That is, U.S. participation has the general effect of increasing the propensity of the Court to decide a case conservatively, which is expected given that the U.S.’s interests in civil liberties cases are often more conservative. But the graph also suggests a type of persuasion effect, especially for liberals, as this group is most likely to be moved in a conservative direction when the U.S. is a party relative to when the U.S. does not participate. More generally, the graph and the finding suggest that one of the mechanisms by which the SG is so successful in front of the Court is because the justices, particularly liberals, are more likely to suppress the ideological basis for their decisions when the U.S. is a direct party.

[Figures 5 and 6 about here]

Figure 6 presents the general effect of statutory versus non-statutory cases on the preference-behavior relationship. Although the magnitude of the effect does not appear to be particularly large, the figure shows that the preference-behavior relationship is slightly attenuated in statutory cases relative to non-statutory cases. The pattern resembles the “attenuation consensus” effect from figure 2, such that in statutory cases, both liberals and conservatives are more likely move away from their default positions (relative to non-statutory cases). While this finding should not be overstated given that neither liberals nor conservatives (nor moderates) stray too far from their non-statutory tendencies, it does shed some light on debates over whether justices are more constrained in statutory versus constitutional cases (e.g., Eskridge 1991; Epstein and Knight 1998; Epstein et al. 2001). In line with some strategic perspectives, the results do suggest that in statutory cases, justices behave in a more ideologically constrained manner than in non-statutory cases.

The second set of post-estimation analyses (figures 7 and 8) presents APEs for two of the more compelling effects—salience and U.S. as a direct party—from more of a justice-centered perspective. The figures present the average probability of a justice deciding a case liberally, while manipulating the case-level variables (salience and U.S. participation) of interest. For each justice, I calculated his or her average policy preference over the full range of analysis. Thus, for a given case characteristic, the results reflect the average propensity of each justice to cast a liberal vote over the 9 terms analyzed. In both figures, the x-axis orders the justices from conservative to liberal based on justices’ average preference scores for the 9-term span.

[Figures 7 and 8 about here]

Figure 7 presents these results for salience. The general pattern in this figure resembles that of figure 3, revealing once again “asymmetric enhancement.” The four liberals (Stevens, Souter, Ginsburg, and Breyer) are, on average, significantly more likely to cast liberal votes in salient cases compared to non-salient cases. In fact, for each of the liberals, the probability of a liberal vote increases by about .15 as salience varies from trait-absent to trait-present; this is a substantively large magnitude indeed. While the ideological behavior of the liberals is bolstered, the three conservatives (Thomas, Scalia, and Rehnquist)

are quite steadfast in their behavior; they remain conservative in their voting tendencies regardless of salience. Crucial to this analysis is the behavior of the “swing justices,” Kennedy and O’Connor. The figure shows that the average probability of casting a liberal vote in non-salient cases was about .35 for Kennedy and .37 for O’Connor. However, in salient cases, Justice Kennedy’s average probability of a liberal vote jumps to .44, and O’Connor’s to .46. Thus, while their conservative colleagues were barely swayed in salient cases, Kennedy and O’Connor, the moderate conservatives, are significantly *more likely to cast liberal votes in salient cases* (relative to non-salient cases). This finding is one I did not necessarily anticipate, and it presents a puzzle ripe for an explanation, something I am in the process of investigating.²⁴

Figure 8 presents the justice-specific analysis highlighting the impact of U.S. as a direct party; note that this figure only presents plots for U.S. as a direct party and no U.S. participation. The general pattern, of course, resembles figure 5. The four liberals are moved most by the presence of the U.S. as direct party, relative to no U.S. participation. For the liberals, the probability of a conservative vote increases by between .17 and .18 when this variable goes from no U.S. participation to U.S. as direct party. Justices O’Connor and Kennedy are also significantly more likely to cast conservative votes when the U.S. is a direct party compared to when it does not participate. The three conservatives are again obstinate in their ideological voting; their propensity to cast a conservative vote remains unswayed in the presence of the U.S. as direct party. This is sensible since the U.S. often takes the conservative position,

²⁴ One possibility is that salience is a case-level factor associated with both attitude strength *and* accountability. Salience bolsters liberals’ ideological behavior, does not alter conservatives’ preference-based behavior, but it induces moderate conservatives (Justices O’Connor and Kennedy) to *move away* from their ideological default positions. This is where accountability might play a role. Baum (1997, 47-55) makes the strong case that justices care a great deal about their standing with certain audiences, including policy and legal groups and the media. Sowell (1994) goes a step further and argues that a “Greenhouse Effect”—named after Linda Greenhouse, the *New York Times* Supreme Court reporter—might exist and others have suggested that it exists mainly for weakly conservative Supreme Court justices who had not worked in D.C. prior to their arrival on the Supreme Court. O’Connor and Kennedy both fit this bill. This phenomenon suggests that under certain conditions, susceptible justices’ voting behavior might reflect their desire for praise from the media, which Sowell suggests exerts left-leaning pressures on judges. Salient cases would be obvious candidates for these conditions under which certain justices, namely O’Connor and Kennedy, make decisions that might reflect media pressures.

and therefore, liberals, and to a lesser extent moderates, have more capacity for movement in the conservative direction than conservatives.

DISCUSSION AND CONCLUSION

This paper began by posing a question heretofore rarely asked by judicial specialists: Under what conditions will justices' policy preferences exhibit a greater or lesser impact on their decisions on the merits? Put another way, is there heterogeneity in the impact of justices' policy preferences that can be explained systematically? Adopting insights from psychological inquiries of the attitude-behavior relation, I have conceptualized the preference-behavior relationship for Supreme Court decision-making as a process to be explained theoretically and tested empirically. The theoretical framework posited that three case-level factors associated with attitude strength and three associated with accountability explain variation in the impact of policy preferences. Using a multilevel, hierarchical modeling framework and data from the current Rehnquist natural court, the results strongly support many aspects of the heterogeneity framework. Significant variation exists in the impact of policy preferences, and case-level factors associated with both attitude strength and accountability exhibit statistically significant effects on the preference-behavior relationship.

Altogether, the theoretical framework, the modeling strategy, and the results suggest that, contrary to those who assume that the impact of preferences is constant across a wide variety of situations, preference-based behavior varies across cases, and it does so in interesting and systematic ways. The evidence reveals that case-level factors are capable of significantly altering the nature of preference-based behavior in a compelling manner that has implications for legal outcomes. Among the highlights, the results and substantive interpretations suggest that salience significantly increases the propensity of the pivotal swing justices, Kennedy and O'Connor, to cast liberal votes (relative to non-salient cases), helping to explain why in so many high profile decisions, O'Connor or Kennedy (or both) are in the liberal majority. The results also suggest an insightful mechanism by which the SG exhibits influence on the Court; the overall impact of preferences is attenuated when the U.S. is direct party, compared to when it does not participate at all. The results indicate that this effect is asymmetric, and

substantive interpretations reveal that liberals and moderate conservatives are significantly more likely to cast conservative votes when the U.S. is a direct party (compared to no participation), yet conservatives remain unmoved.

Many other avenues exist for examining heterogeneity in Supreme Court decision-making. In the future, I intend to expand upon the case-level factors capable of explaining this variation. One of these factors is legal considerations. Using a jurisprudential regimes framework (Richards and Kritzer 2002), I plan to analyze whether legal considerations attenuate the impact of policy preferences for justices, akin to Knight and Epstein's (1996, 1020) inquiry into precedent's role as a "constraint on justices from acting on their personal preferences." I also intend to analyze how broader contextual factors, like the preferences of the other branches (Martin 1998) and public opinion, potentially moderate the impact of preferences.

Beyond providing important substantive insights about Supreme Court decision-making, the paper has also demonstrated how a multilevel modeling framework can be used to test heterogeneity-related hypotheses in social and behavioral processes. With a focus on the levels of analysis present in a behavioral process, one can explicitly account for how certain higher-level variables explain variation in the impact of level-1 covariates. The general heterogeneity perspective and the corresponding multilevel modeling framework are applicable to explanations of other forms of political behavior (e.g., Congress, the presidency, citizen voting behavior) where heterogeneity has only been examined to a limited degree.

REFERENCES

- Baum, Lawrence. 1992. "Membership Change and Collective Voting Change in the United States Supreme Court." *Journal of Politics* 54:3-24.
- Baum, Lawrence. 1994. "What Judges Want: Judges' Goals and Judicial Behavior." *Political Research Quarterly* 47:749-68.
- Baum, Lawrence. 1997. *The Puzzle of Judicial Behavior*. Ann Arbor, MI: University of Michigan Press.
- Bergara, Mario, Barak Richman, and Pablo T. Spiller. 2003. "Modeling Supreme Court Strategic Decision Making: The Congressional Constraint." *Legislative Studies Quarterly* 28:247-80.
- Caldeira, Gregory A., and John R. Wright. 1988. "Organized Interests and Agenda Setting in the U.S. Supreme Court." *American Political Science Review* 82:1109-28.
- Collins, Paul M. 2004. "Friends of the Court: Examining the Influence of Amicus Curiae Participation in U.S. Supreme Court Litigation." *Law & Society Review* 38:807-32.
- Converse, Philip E. 1970. "Attitudes and Non-Attitudes: Continuation of a Dialogue." In *The Quantitative Analysis of Social Problems*. Reading, MA: Addison-Wesley.
- Ditslear, Corey A. 2003. *Office of the Solicitor General Participation Before the United States Supreme Court: Influences on the Decision-Making Process*. Ph.D. Diss. Ohio State University.
- Eagly, Alice H., and Shelly Chaiken. 1993. *The Psychology of Attitudes*. Fort Worth: Harcourt Brace Jovanovich.
- Epstein, Lee, and Jack Knight. 1998. *The Choices Justices Make*. Washington D.C.: CQ Press.
- Epstein, Lee, Jack Knight, and Andrew D. Martin. 2001. "The Supreme Court as a Strategic National Policymaker." *Emory Law Journal* 50:563-611.
- Epstein, Lee, and Jeffrey A. Segal. 2000. "Measuring Issue Salience." *American Journal of Political Science* 44:66-83.
- Eskridge, William N., Jr. 1991. "Reneging on History? Playing the Court/Congress/President Civil Rights Game." *California Law Review* 79:613-84.
- Fazio, Russell H. 1986. "How Do Attitudes Guide Behavior?" In *Handbook of Motivation and Cognition*, eds. R.M. Sorrentino and E.T. Higgins. New York: Guilford Press.
- Fazio, Russell H. 1995. "Attitudes as Object-Evaluation Associations: Determinants, Consequences, and Correlates of Attitude Accessibility." In *Attitude Strength: Antecedents and Consequences*, eds. Richard E. Petty and Jon A. Krosnick. Hillsdale, NJ: Erlbaum.
- Fazio, Russell H., and Michael Olson. 2003. "Attitudes: Foundations, Functions, and Consequences." In *The Sage Handbook of Social Psychology*, eds. M.A. Hogg and J. Cooper. London: Sage.
- Fazio, Russell H., and Tamara Towles-Schwen. 1999. "The MODE Model of Attitude-Behavior Processes." In *Dual Process Theories in Social Psychology*, eds. Shelly Chaiken and Y. Trope. New York: Guilford Press.
- Fazio, Russell H., and C.J. Williams. 1986. "Attitude Accessibility as a Moderator of the Attitude-Perception and Attitude-Behavior Relations: An Investigation of the 1984 Presidential Election." *Journal of Personality and Social Psychology* 51:505-14.
- Fazio, Russell H., J.R. Jackson, B.C. Dunton, and C.J. Williams. 1982. "Attitude Accessibility, Attitude-Behavior Consistency, and the Strength of the Object-Evaluation Association." *Journal of Experimental Social Psychology* 18:339-57.
- Fiske, Susan T., and Shelley E. Taylor. 1991. *Social Cognition*. New York: McGraw-Hill.
- George, Tracey E., and Lee Epstein. 1992. "On the Nature of Supreme Court Decision Making." *American Political Science Review* 86:323-37.
- Gibson, James L. 1978. "Judges' Role Orientations, Attitudes, and Decisions: An Interactive Model." *American Political Science Review* 72:911-24.
- Gibson, James L. 1983. "From Simplicity to Complexity: The Development of Theory in the Study of Judicial Behavior." *Political Behavior* 5:7-49.
- Gibson, James L. 1991. "Decision Making in Appellate Courts." In *The American Courts: A Critical Assessment*, eds. John B. Gates and Charles A. Johnson. Washington, D.C.: CQ Press.

- Hausegger, Lori, and Lawrence Baum. 1999. "Inviting Congressional Action: A Study of Supreme Court Motivations in Statutory Interpretation." *American Journal of Political Science* 43:162-85.
- Hox, Joop. 2002. *Multilevel Analysis*. Mahwah, NJ: Lawrence Erlbaum.
- Iyengar, Shanto, and Donald Kinder. 1987. *News That Matters*. Chicago: University of Chicago Press.
- Kahn, Ronald. 1999. "Institutional Norms and Supreme Court Decision-Making: The Rehnquist Court on Privacy and Religion." In *Supreme Court Decision-Making: New Institutional Approaches*, eds. Cornell W. Clayton and Howard Gillman. Chicago: University of Chicago Press.
- Kearney, Joseph D., and Thomas W. Merrill. 2000. "The Influence of Amicus Curiae Briefs on the Supreme Court." *University of Pennsylvania Law Review* 148:743.
- Knight, Jack, and Lee Epstein. 1996. "The Norm of Stare Decisis." *American Journal of Political Science* 40:1018-35.
- Krosnick, Jon A. 1988. "The Role of Attitude Importance in Social Evaluation: A Study of Policy Preferences, Presidential Candidate Evaluations, and Voting Behavior." *Journal of Personality and Social Psychology* 55:196-210.
- Krosnick, Jon A. 1990. "Government Policy and Citizen Passion: A Study of Issue Publics in Contemporary America." *Political Behavior* 12:59-92.
- Kunda, Ziva. 1990. "The Case for Motivated Reasoning." *Psychological Bulletin* 108:480-98.
- Lerner, Jennifer S., and Philip E. Tetlock. 1999. "Accounting for the Effects of Accountability." *Psychological Bulletin* 125:255-275.
- Maltzman, Forrest, and Paul J. Wahlbeck. 1996. "Strategic Policy Considerations and Voting Fluidity on the Burger Court." *American Political Science Review* 90:581-92.
- Maltzman, Forrest, James F. Spriggs, and Paul J. Wahlbeck. 2000. *Crafting Law on the Supreme Court: The Collegial Game*. New York: Cambridge University Press.
- Martin, Andrew D. 1998. *Strategic Decision Making and the Separation of Powers*. Ph.D. Diss. Washington University.
- Martin, Andrew D., and Kevin M. Quinn. 2002. "Dynamic Ideal Point Estimation via Markov Chain Monte Carlo for the U.S. Supreme Court, 1953-1999." *Political Analysis* 10:134-53.
- McGraw, Kathleen M., Edward Hasecke, and Kimberly Conger. 2003. "Ambivalence, Uncertainty, and Processes of Candidate Evaluation." *Political Psychology* 24:421-48.
- Miller, Joanne M., and David A.M. Peterson. 2004. "Theoretical and Empirical Implications of Attitude Strength." *Journal of Politics* 66:847-67.
- Pacelle, Richard L., Jr. 2003. *Between Law & Politics: The Solicitor General and the Structuring of Race, Gender, and Reproductive Right Litigation*. College Station, TX: Texas A&M University Press.
- Petty, Richard E., and Jon A. Krosnick. 1995. *Attitude Strength: Antecedents and Consequences*. Hillsdale, NJ: Erlbaum.
- Rabe-Hesketh, Sophia, Anders Skrondal, and Andrew Pickles. 2002. "Reliable Estimation of Generalized Linear Mixed Models Using Adaptive Quadrature." *The Stata Journal* 2:1-21.
- Rabe-Hesketh, Sophia, Anders Skrondal, and Andrew Pickles. 2004. *GLLAMM Manual*. UC Berkeley Division of Biostatistics Working Papers Series.
- Raudenbush, Stephen W., and Anthony S. Bryk. 2002. *Hierarchical Linear Models*. Thousand Oaks: Sage.
- Richards, Mark J., and Herbert M. Kritzer. 2002. "Jurisprudential Regimes in Supreme Court Decision Making." *American Political Science Review* 96:305-20.
- Rodriguez, German, and Noreen Goldman. 2001. "Improved Estimation Procedures for Multilevel Models with Binary Response: A Case-Study." *Journal of the Royal Statistical Society, Series A* 164:339-55.
- Rohde, David W., and Harold J. Spaeth. 1976. *Supreme Court Decision Making*. San Francisco: W. H. Freeman.
- Schubert, Glendon. 1974. *The Judicial Mind Revisited*. Oxford: Oxford University Press.
- Segal, Jeffrey A. 1986. "Supreme Court Justices as Human Decision Makers: An Individual-Level Analysis of the Search and Seizure Cases." *Journal of Politics* 47:938-55.

- Segal, Jeffrey A. 1997. "Separation-of-Powers Games in the Positive Theory of Congress and Courts." *American Political Science Review* 91:28-44.
- Segal, Jeffrey A., and Albert D. Cover. 1989. "Ideological Values and the Votes of U.S. Supreme Court Justices." *American Political Science Review* 83:557-65.
- Segal, Jeffrey A., Lee Epstein, Charles M. Cameron, and Harold J. Spaeth. 1995. "Ideological Values and the Votes of the U.S. Supreme Court Justices Revisited." *Journal of Politics* 57:812-23.
- Segal, Jeffrey A., and Cheryl D. Reedy. 1988. "The Supreme Court and Sex Discrimination: The Role of the Solicitor General" *Western Political Quarterly* 41:533-68.
- Segal, Jeffrey A., and Harold J. Spaeth. 1993. *The Supreme Court and the Attitudinal Model*. New York: Cambridge University Press.
- Segal, Jeffrey A., and Harold J. Spaeth. 2002. *The Supreme Court and the Attitudinal Model Revisited*. New York: Cambridge University Press.
- Skrondal, Anders, and Sophia Rabe-Hesketh. 2004. *Generalized Latent Variable Modeling: Multilevel, Longitudinal, and Structural Equation Models*. Boca Raton, FL: Chapman & Hall.
- Spaeth, Harold J. 2004. *United States Supreme Court Judicial Database*. Program for Law and Judicial Politics. Michigan State University.
- Spaeth, Harold J., and Jeffrey A. Segal. 1999. *Majority Rule or Minority: Adherence to Precedent on the U.S. Supreme Court*. New York: Cambridge University Press.
- Spiller, Pablo T., and Rafael Gely. 1992. "Congressional Control or Judicial Independence: The Determinants of U.S. Supreme Court Labor-Relations Decisions, 1949-1988." *RAND Journal of Economics* 23:463-492.
- Steenbergen, Marco R., and Bradford S. Jones. 2002. "Modeling Multilevel Data Structures." *American Journal of Political Science* 46:218-37.
- Thompson, Megan M., Mark P. Zanna, and Dale W. Griffin. 1995. "Let's Not be Indifferent About (Attitudinal) Ambivalence." In *Attitude Strength: Antecedents and Consequences*, eds. Richard E. Petty and Jon A. Krosnick. Mahwah, NJ: Lawrence Erlbaum.
- Train, Kenneth. 2003. *Discrete Choice Methods with Simulation*. New York: Cambridge University Press.
- Wicker, Alan W. 1969. "Attitude versus Actions: The Relationship of Verbal and Overt Behavioral Responses to Attitude Objects." *Journal of Social Issues* 25:41-78.
- Wooldridge, Jeffrey M. 2002. *Econometric Analysis of Cross-Section and Panel Data*. Cambridge, MA: MIT Press.
- Wooldridge, Jeffrey M. 2005. "Simple Solutions to the Initial Conditions Problem in Dynamic, Nonlinear Panel Data Models with Unobserved Heterogeneity." *Journal of Applied Econometrics* 20:39-54.
- Zanna, Mark, and Russell H. Fazio. 1982. "The Attitude-Behavior Relation: Moving Toward a Third Generation of Research." In *Consistency in Social Behavior*, eds. Mark P. Zanna, E.T. Higgins, and C.P. Herman. Hillsdale, NJ: Erlbaum.
- Zorn, Christopher J. 2001. "Generalized Estimating Equation Models for Correlated Data: A Review with Applications." *American Journal of Political Science* 45:470-90.

APPENDIX

TABLE A1. Segal-Cover Preference Scores versus Transformed Lagged Proportion Liberal Measure

Justice	Segal-Cover Score		Justice	Transformed Lagged Behavior Score (Avg. over 1994-02 Terms)
Scalia	-1.00	<i>Most conservative</i>	Thomas	-0.62
Rehnquist	-0.91		Scalia	-0.56
Thomas	-0.68		Rehnquist	-0.55
Stevens	-0.50		Kennedy	-0.23
Souter	-0.34		O'Connor	-0.19
Kennedy	-0.27		Breyer	0.41
O'Connor	-0.17		Ginsburg	0.50
Breyer	-0.05		Souter	0.54
Ginsburg	0.36	<i>Most liberal</i>	Stevens	0.74

TABLE A2. Descriptive Statistics

Level-1 Variable	N	Mean	SD	Min	Max
Policy Preferences	3544	0.000	0.543	-0.916	1.084

Case-Level (Level-2) Variables	Uncentered					Mean-Centered			
	J	Mean	SD	Min	Max	Mean	SD	Min	Max
Saliency	399	0.225	0.418	0	1	0.000	0.418	-0.225	0.775
Complexity	399	0.118	0.243	0	1	0.000	0.243	-0.118	0.882
ln(Issue Experience)	399	3.544	1.015	0	5.187	0.000	1.015	-3.544	1.644
Information Environment	399	0.530	0.091	0	1	0.000	0.091	-0.530	0.470
U.S. Party	399	0.373	0.484	0	1	0.000	0.484	-0.373	0.627
U.S. Amicus	399	0.374	0.484	0	1	0.000	0.484	-0.374	0.626
Statutory	399	0.418	0.493	0	1	0.000	0.493	-0.418	0.582

TABLE A3. Frequency Distributions for Complexity Indicators

Number of Legal Provisions	Freq.	Percent	Number of Issues	Freq.	Percent
1	321	80.45	1	383	95.99
2	67	16.79	2	16	4.01
3	9	2.26	Total	399	100
4	1	0.25			
5	1	0.25			
Total	399	100			

FIGURE 1. Theoretical Enhancement Scenarios

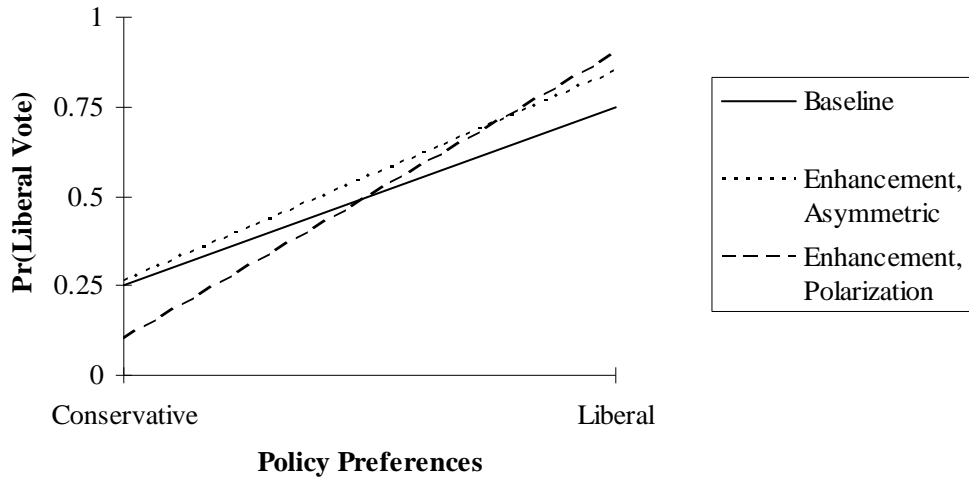


FIGURE 2. Theoretical Attenuation Scenarios

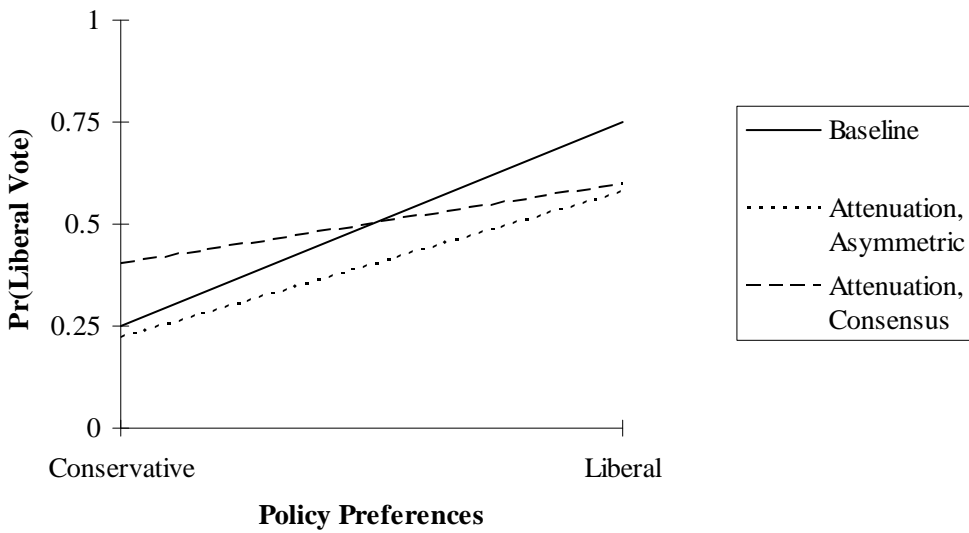


TABLE 1. Random Coefficient Model of Heterogeneity in Supreme Court Decision-Making, 1994-2002 Terms

	Coeff.	(SE)	p
<i>Estimates From β_{0j} Equation (Effects on Case Outcome):</i>			
Intercept, γ_{00}	-0.390	(0.228)	0.088
Saliency, γ_{01}	1.304	(0.541)	0.016
Complexity, γ_{02}	-0.232	(0.945)	0.806
Issue Familiarity, γ_{03}	0.083	(0.223)	0.708
Information Environment, γ_{04}	-3.249	(2.480)	0.190
U.S. Amicus, γ_{05}	-1.210	(0.567)	0.033
U.S. Party, γ_{06}	-1.671	(0.597)	0.005
Statutory, γ_{07}	0.204	(0.471)	0.664
<i>Estimates From β_{1j} Equation (Cross-Level Interactions):</i>			
Policy Preferences (Avg. Effect), γ_{10}	4.465	(0.312)	<0.001
Saliency, γ_{11}	1.428	(0.636)	0.012
Complexity, γ_{12}	-0.374	(1.072)	0.363
Issue Familiarity, γ_{13}	0.524	(0.254)	0.020
Info. Environment, γ_{14}	-0.244	(2.965)	0.467
U.S. Amicus, γ_{15}	-0.773	(0.676)	0.127
U.S. Party, γ_{16}	-1.331	(0.701)	0.029
Statutory, γ_{17}	-0.688	(0.542)	0.102
<i>Variance-Covariance Components:</i>			
var(u_{0j})	15.094	(2.088)	<0.001
var(u_{1j})	11.133	(2.036)	<0.001
cov(u_{0j}, u_{1j})	0.464	(1.569)	0.768
Log likelihood = -1434.09			
Number of choices (level-1 units): 3544			
Number of cases (level-2 units): 399			
Note: p-values in the β_{0j} equation are based on 2-tailed tests, while those from the β_{1j} equation are based on 1-tailed tests.			

FIGURE 3. General Effect of Salience on the Preference-Behavior Relationship

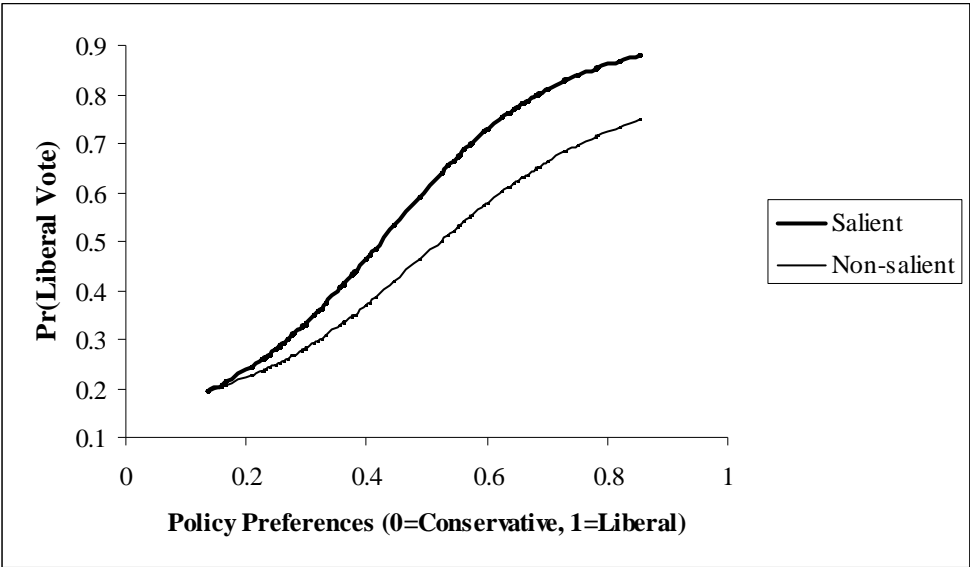


FIGURE 4. General Effect of Issue Familiarity on the Preference-Behavior Relationship

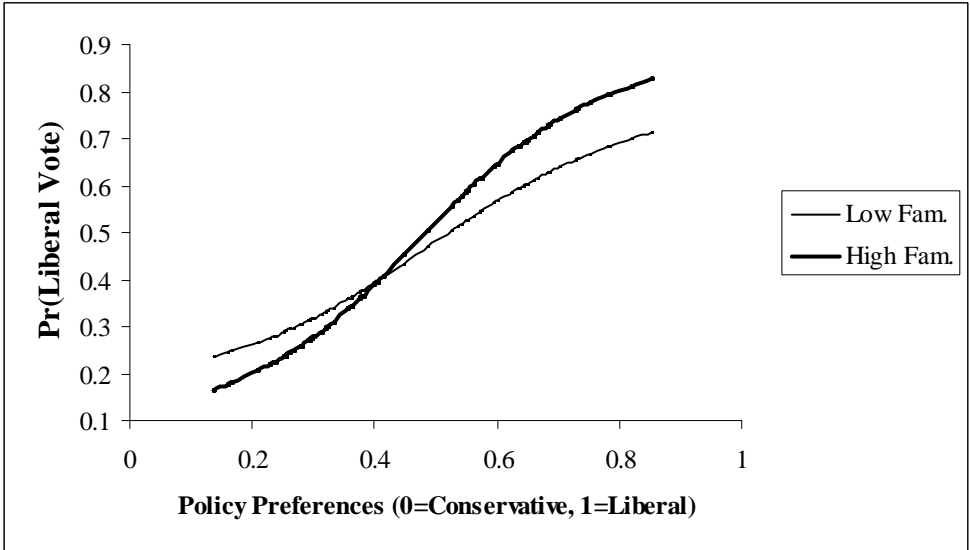


FIGURE 5. General Effect of SG Participation on the Preference-Behavior Relationship

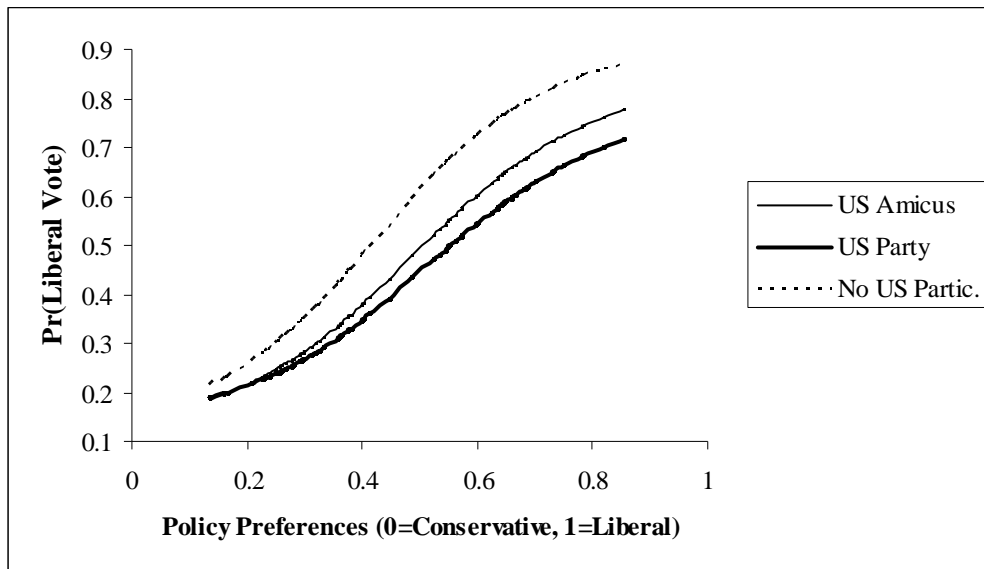


FIGURE 6. General Effect of Statutory Interpretation Cases on the Preference-Behavior Relationship

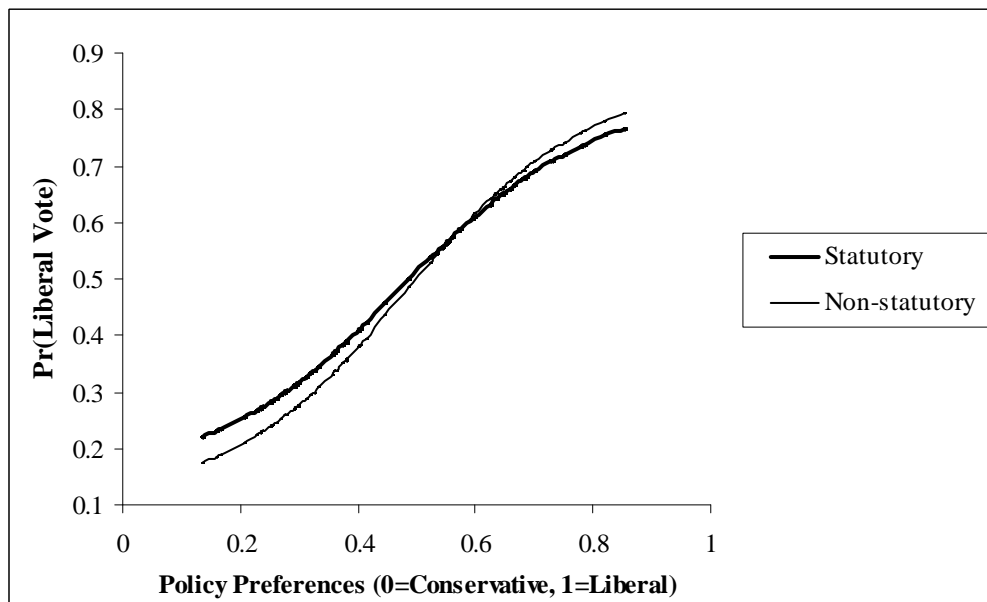


FIGURE 7. Justice-Specific Effects of Salience on the Preference-Behavior Relationship

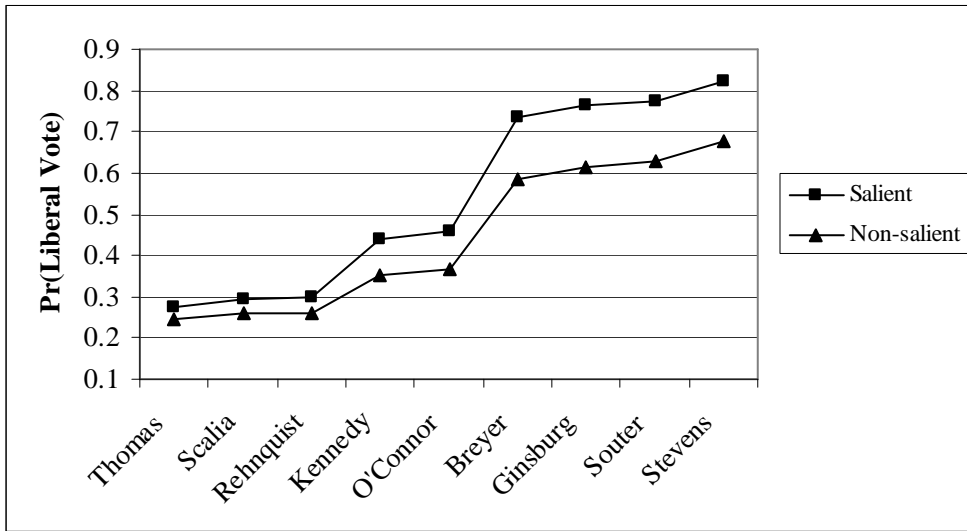


FIGURE 8. Justice-Specific Effects of SG Participation on the Preference-Behavior Relationship

