STABILITY, PREDICTABILITY AND THE RULE OF LAW:
STARE DECISIS AS RECIPROCITY NORM

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Introduction

Legal stability and predictability are a fundamental part of "what people mean by the Rule of Law" (Schwarzschild 2007, 686). In the absence of stability and predictability in law, citizens have difficulty managing their affairs effectively (Eskridge and Frickey 1994). Legal stability also has a moral valence insofar as it assures that like cases will be treated equally. In common law systems, legal stability and predictability are furthered by judicial adherence to precedent and the informal norm of *stare decisis*.

While legal stability is generally favored, little empirical research has focused on whether it may be encouraged or discouraged within courts via institutional design. Our focus is on whether the institutional characteristics of a court system influence legal stability, with particular attention to whether such factors influence a court's propensity to destabilize the law by overruling existing precedents. We evaluate these influences in the state supreme courts because of the remarkable institutional variation that exists among them.

In doing so, we recognize that the stability of precedent must sometimes be subverted in order to achieve other beneficial objectives. While greater legal stability is generally preferred, absolute legal stability would produce a rigid legal paradigm impervious to changing societal norms and practices. Because (with a nod to Holmes) experience rather than logic vitalizes law, *stare decisis* has developed as an informal norm that may occasionally bend to changing circumstances. Yet because *stare decisis* does not constitute a formal norm that binds justices through specific and formal external sanctions, adherence to the norm may vary across individual judges and institutions. Judges must willfully *choose* to follow precedent and those choices are likely subject to the same types of influences that shape human behavior more generally. When judges dispense with prevailing doctrine in favor of a new rule, it has the potential to throw citizens' expectations into disarray. If judges frequently choose to do so, it creates a less predictable legal environment for the development of economic and other human relations.

At the same time, stable legal rules are not the only way to ensure predictability. When judges vote in accordance with their known policy preferences, their decisions are certainly predictable. Perhaps Oliver Wendell Holmes was correct when he noted that "the prophecies of what the courts will do in fact, and nothing more pretentious," define the law. In his study of state supreme courts, Andrew Hanssen (1999) linked litigation rates with judicial selection method, finding that states with partisan elected courts experienced lower rates of litigation and appeal. He speculated that partisan elections provided cues to litigants about the probable outcomes of cases such that settlement was more likely. While

predictability based on judges' policy preferences may serve a short term interest in settlement, it does not, of course, serve the longer term interest in enabling citizens to predict the legal consequences of their actions across judges and time. The problem with this politicized form of predictability is that it depends on the winds of change shaping the electorate's preferences. A contracting party should not be forced to place a finger in those political winds to predict the prevailing rules governing his contract. Such a requirement seems plainly in conflict with the rule of law.

An easy response is that political factors influence legal change through legislative enactments as well. To be sure, legislatures change rules based on the majority's policy preferences and may even do so retroactively under certain circumstances. But judicial alterations of precedent are, by their very nature, retroactive unless a court is willing to take the extreme step of rendering a judgment with prospective effect only. Prospective judicial rulings have been generally foreclosed at the federal level.[1] While other courts (particularly state courts) are not bound by the Supreme Court's pronouncements on retroactivity in the interpretation and application of state law, many have nevertheless adopted a similar stance on prospectivity. Moreover, at least at the federal level, a judicial presumption against statutory retroactivity exists which must be overcome before a court will find a statute has retroactive effect.[2] This presumption is followed in many state courts as well. Thus, a qualitative difference exists between alterations that are made by the legislature and that affect legal expectations, and alterations made by the judiciary to prevailing precedential rules.[3] That qualitative distinction makes a profound difference when it comes to evaluating either type of legal change on the rule of law. Judicial alterations of precedent have an arguably greater negative impact on the rule of law than do legislative alterations of existing statutory rules (or legislative creation of new rules).

This distinction between legislative and judicial alteration of prevailing rules is critical even where judges are elected. To be sure, charges of judicial activism or policy making have less force in states that elect their judges, since those judges share democratic credentials with legislative policy makers. Nevertheless, the retroactive nature of judicial rulings generally applies even in states with elected judiciaries; as a consequence, when elected judges overturn precedent, their decisions have an *ex post facto* character even if the overruling court experiences greater electoral accountability to the public. These considerations raise interesting empirical questions. If an elected judiciary appreciates its democratic qualifications, it may feel freer to overturn precedent in the face of electoral pressures to do so. At the same time, excessive overruling may attract the ire of interest groups bent on unseating a particular judge and thus may become a point of contention in the next election. Assuming the electorate cares about precedent (or is educated about its importance), frequent votes to overturn may not be viewed favorably by the voting public. Adherence to *stare decisis* may thus cut two ways for elected judges.

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1 *Harper v. Virginia Department of Taxation,* 509 U.S. 86 (1993).
2 *Landgraf v. USI Film Products*, 511 U.S. 244 (1994).
3 We recognize and later address the more complicated scenario in which the legislature or the citizenry make changes to the prevailing constitutional legal regime or statutory rules such that a court must overrule precedent *to conform to* such legislative or constitutional change.

The preceding discussion identifies one way in which a court's institutional characteristics may influence or shape judicial incentives to adhere to existing precedent. The design of judicial institutions has garnered considerable attention of late as developing democracies reconfigure their judicial systems to promote the rule of law (e.g. Prillaman 1992, Rios-Figueroa 2008, Stone Sweet 2002). These studies often inquire how certain institutional characteristics related to judicial independence facilitate judicial resistance to corruption or to executive power. Here we ask a similarly important question: what institutional characteristics promote judicial adherence to precedent? Like the behavior of other government actors, judges' behavior is shaped by their institutional environment. Since *stare decisis* is an informal norm that judges choose to follow, we expect that the norm will evolve or be applied differently depending on institutional context.

To explore these theoretical ideas, this study examines legal stability at the level of state supreme courts. Increasingly important in public policy (Spiller and Vanden Bergh 2003), the state courts have a variety of characteristics that enable us to test institutional features that may influence decisions to overrule precedent. We begin by identifying our theoretical expectations regarding the relationship between institutional structures and judicial behavior. We then present a model of overruling behavior in state supreme courts over a thirty-year period that incorporates measures reflecting differences in institutional and other characteristics across the state supreme courts. The results of these models enable us to assess what types of judicial institutions are most likely to promote legal stability through judicial adherence to *stare decisis*.

I.   Consensual Norms in Courts as a Source of Stable Legal Rules

Like actors in other governmental institutions, judges within appellate courts are subject to their own unique set of governing norms and practices. Many of these norms are formal in nature, involving specific statutes, constitutions or procedural rules that regulate or proscribe jurisdiction, appellate procedure, and judicial tenure and selection. In addition to these formal norms, however, courts also develop informal norms that similarly constrain judicial actors to the extent that they produce shared expectations about appropriate behavior. Examples of such informal norms at the United States Supreme Court include secrecy during deliberations, the Rule of Four, and opinion assignment procedures (O'Brien 1999; Epstein and Knight 1998). These informal norms do not require governmental or other external enforcement to ensure cooperation because other mechanisms often exist that allow participants to monitor and sanction defectors and thus to maintain the norm at some level. In that sense, they constitute an equilibrium outcome among participants (Knight 1992).

Among the most important informal norms within collegial courts are those that involve consensual decision making. Such consensual norms govern judges' propensity to write dissenting or concurring opinions that publicize their disagreements (see Caldeira and Zorn 1998; Narayan and Smyth 2005), as well as their willingness to adhere to existing precedent (Rasmusen 1994; Spaeth and Segal 1999; Hansford and Spriggs 2006). These norms may emerge because of a shared commitment to the rule of law or to institutional legitimacy. They may also exist, however, because policy-oriented judges, motivated to ensure that their own precedents are respected, are able to enforce the norm in some way against those judges who are less respectful of precedent.

The strength of consensual norms within courts is critical to their institutional legitimacy in many ways. For example, published dissents—described by one scholar as representing "institutional disobedience" (Campbell 1983, 304)—have the potential to elucidate needed change in legal doctrine and thus serve a useful purpose in some situations. But "too much dissensus weakens precedent, confuses the law, encourages further appeals, and leads to dissatisfaction among judges" (Sheldon 1999, 115). The institutional impact of high levels of dissent has been illustrated empirically at the United States Courts of Appeals: dissent rate is positively associated with reversal rate when controlling for other factors (Hettinger, Lindquist and Martinek 2006, 101). One causal explanation for this association is that dissent rates produce doctrinal ambiguity that creates interpretive difficulties for lower court judges. At the U.S. Supreme Court, some have charged that divided decisions complicate implementation of Court precedents by lower courts (see Corley 2006). Moreover, vote margin is positively associated with overruling, thus contributing to less stable and enduring precedent (Hansford and Spriggs 2006, ch. 5). High dissent rates also seem likely to generate higher rates of appeal and reduce the likelihood that litigants will settle their disputes (Priest and Klein 1984). And finally, individuated opinions by appellate court judges highlight the "politicized" nature of judicial decisions (see Walker, Epstein and Dixon 1988, 362), which has the potential to reduce public confidence in judicial objectivity. Thus, while dissent may serve some laudatory purposes, at some critical level excessive dissent may undermine other institutional goals and objectives.

Similarly, the extent to which judges adhere to the consensual norm of *stare decisis* has implications for institutional legitimacy and authority, and, more fundamentally, for the rule of law. According to the norm of *stare decisis,* judges must follow principles of law enunciated in prior court decisions and apply them in all future cases that involve substantially similar facts.[4] Occasional departures from precedent are justified when they allow judges to alter unsound or unjust legal doctrines that are no longer consistent with prevailing social or economic conditions, even in the absence of legislative intervention (Cardozo 1921; Levi 1949). As with dissent, however, frequent departures from the norm may have detrimental consequences for the judiciary and for the public good. The norm of *stare decisis* promotes private ordering of citizens' affairs by enabling them to plan their social and economic transactions with confidence that they act in compliance with existing law (Eskridge and Frickey 1994, 568; Hanssen 1999). *Stare decisis* also encourages private settlement of disputes by discouraging individuals from forum and judge shopping, furthers fair and efficient adjudication by sparing litigants the need to relitigate (and judges the need to reconsider) every issue in every case, and discourages a rush of litigation whenever a change of personnel occurs on the bench. Thus, *stare decisis* serves important functions that bolster institutional legitimacy and ultimately the rule of law. Where judges frequently reject existing precedent, the potential adverse institutional and social consequences are great. As Epstein and Knight observe in the context of the United States Supreme Court:

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[4]*Stare decisis* may take several forms. For example, "hierarchical" *stare decisis* refers to the obligation of lower courts to follow the decisions of courts situated at a higher level in the court hierarchy (Songer, Segal and Cameron 1994). *Stare decisis* may also refer to the self-imposed obligation of judges on a single court to adhere to the earlier precedents of that same court, which has been labeled "intertemporal *stare decisis*" (Stearns 1995, 789 n.8). Intertemporal *stare decisis* describes the adherence to precedent practiced by the U.S. Supreme Court and by state supreme courts, which occupy the highest positions within the federal and state judicial systems.

To the extent that members of a community base their future expectations on the belief that others will follow existing laws, the Court has an interest in minimizing the disruptive effects of overturning existing rules of behavior. If the Court makes a radical change, the community may not be able to adapt, resulting in a decision that does not produce an efficacious rule (1998, 164).

Because consensual norms within courts therefore have significant ramifications for the effective operation of judicial institutions and the rule of law, it is important that we understand the manner in which these norms develop and the institutional structures that are likely to sustain them.[5] To do so, however, requires a theory that convincingly explains why cooperative norms emerge in judiciaries and that enables researchers to generate falsifiable hypotheses regarding the development and maintenance of those norms such that empirical evaluation is possible. This objective also requires research within a comparative institutional context because institutional rules and structures are likely to have a significant impact on the evolution and stability of cooperative norms. Research has clearly demonstrated that certain institutional arrangements have a significant impact on human cooperation (North 1990; Gürerk, Irlenbusch and Rockenbach 2006). Since the state supreme courts vary significantly on a wide variety of institutional characteristics, they offer an ideal natural laboratory to evaluate how institutions affect the development of consensual norms such as *stare decisis*. In ways that will become clear, the varied institutional structures that characterize these courts have the potential to constrain the development of cooperative norms within them. Their study could thus result in observations that shed light on the evolution and stability of cooperation within alternative governmental institutions, which has been described as "an issue of foremost importance for the science of politics" (Bendor and Swistak 1997, 290).

II.   A Theory of Precedent as Consensual Norm

Some years ago, it was said that no "theory of precedent" exists (Easterbrook 1988). Easterbrook's observation reflected primarily on the usefulness of normative theories of precedent in the light of insights offered by public choice theory. In particular, his concern was that adherence to *stare decisis* has both positive and negative implications given that the development of precedent is susceptible to path dependence and cyclical voting. These influences undermine the consistency and stability of precedent, even for those judges who are willing to adhere to existing decisions. Ultimately, as Easterbrook observes, the normative doctrine of *stare decisis*—counseling consideration of values such as predictability, stability, reliance and efficiency—leave judges with broad discretion to follow or discard precedents based on their own preferences.

Descriptive or positive theories of precedent seek to move beyond the normative or doctrinal content of *stare decisis* to explain how precedent may constrain judges or predict when judges are most likely to adhere to existing decisions. One prominent example is a theory espoused by Ronald Dworkin, who suggests that precedent exerts a "gravitational pull" or operates on judges as if they were authors engaged in writing a chain novel. This

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[5]What constitutions "optimal" levels of dissent or overruling is beyond the scope of this paper. Correlations between trust in the courts and consensus levels, however, can be measured empirically and would be a worthy topic for future research. For an assessment of institutional variables (judicial selection methods) on appeal rates, which implicates these ideas, see Hanssen (1999).

"gravitational" theory of precedent, however, does not stand up to empirical verification (see Lindquist and Cross 2005; Spaeth and Segal 1999). More recent studies have moved closer to developing a workable theory of precedent. In their study of precedent on the U.S. Supreme Court, for example, Hansford and Spriggs (2006) construct a model of precedent that highlights the interaction between the justices' policy preferences and the vitality of existing precedent. They hypothesize that precedents constrain the justices' decisions but also present an opportunity for them to craft opinions that are perceived as legitimate by the legal community. Hansford and Spriggs' approach is extremely useful in helping us understand how precedent shapes the justices' decisions at the United States Supreme Court and how the norm of *stare decisis* serves instrumental objectives for justices seeking to legitimate their decisions. But because it focuses exclusively on a unique institution, it does not shed light on the manner in which institutional structures are likely to promote adherence to the norm in the first place.[6]

Several other theories have the potential to shed light on the manner in which consensual norms such as *stare decisis* are likely to develop within courts. For example, theories focusing on the sociological dimensions of behavior within small groups might offer insights into how the psychology of judging is influenced by the expectations of colleagues on the bench (Martinek 2006). Small group theory highlights the importance of social pressures to conform; it might be useful, therefore, as a basis to evaluate the development of consensual norms such as *stare decisis* in collegial courts. Similarly, scholars drawing on theories of psychology have generated a small but growing literature on different heuristic techniques judges employ to decide cases (see, e.g., Guthrie, Rachlinski and Wistrich 2001). Precedent certainly might qualify as one such framing or heuristic device (see Knight and Epstein 1996b). Another theoretical approach related to judicial psychology, the attitudinal model, offers the straightforward proposition that judicial adherence to the norm of *stare decisis* is primarily governed by judges' policy preferences over legal doctrine (see Brenner and Spaeth 1995). This attitudinal explanation for adherence to precedent in the U.S. Supreme Court has been well documented in the literature (Hansford and Spriggs 2006; Brenner and Spaeth 1995).

Yet these theoretical perspectives have certain limitations. Small group theory focuses on the internal workings of the group—certainly an important focus for purposes of understanding the development of consensual norms—but it does not clearly draw our attention to the ways in which institutional structures shape those group dynamics. Psychological theories of judging offer promise, but at this point the theoretical perspective is not sufficiently developed to enable generation of specific hypotheses regarding adherence to *stare decisis*. And while the attitudinal model has the obvious advantage of falsifiability, it is insufficiently nuanced to capture how strategic interaction among judges and institutional structures may shape the development of norms within collegial courts.

In contrast, strategic models of judging provides a promising starting point for researchers interested in understanding how individual preferences interact with institutional constraints to shape behavior. Strategic accounts of human behavior begin with clearly specified

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[6] It is important to acknowledge here that the Supreme Court's institutional characteristics have, in fact, changed substantially over time. In that sense, studies of the Supreme Court using a time-series design offer greater promise for understanding judicial decision making in response to different institutional constraints (see Walker, Epstein & Dixon 1988; McGuire 2004).

assumptions about the content and ordering of personal preferences and generate empirical predictions derived from those axiomatic principles. These models of rational behavior typically focus on the probability of cooperation among strategic actors given certain contextual constraints, thus making them uniquely promising for the analysis of consensual norms on collegial courts. In particular, strategic models assume that rational decision makers (1) have and are aware of their own preferences and (2) understand any limitations on their ability to realize their preferred outcome, including formal institutional rules and the anticipated actions of other participants in the decision making process. Game theorists in political science have highlighted the extent to which formal institutional constraints or rules and the anticipated actions of other participants structure strategic interactions among political actors.[7] Indeed, the notion that institutional constraints structure the strategic interactions among judicial actors has gained a strong foothold in political science studies of the courts (see Epstein and Knight 1998; Rogers, Flemming and Bond 2006).[8]

Game theorists have offered important insights regarding the evolution of cooperative norms within social institutions (Axelrod 1984). Cooperative norms often play an important role in solving social dilemmas, which "occur whenever individuals in interdependent situations face choices in which the maximization of short-term self interest yields outcomes leaving all participants worse off than feasible alternatives" (Ostrom 1998, 1; see also Posner 2000). Such a dilemma may arise in the context of judicial decision making on collegial appellate courts. Assuming that judges are primarily motivated by policy preferences (see Schauer 1997; Epstein and Knight 2000), each judge on a collegial court thus wishes to embody her own policy preferences in the law. A completely sincere judge, motivated by her own preferences, will therefore choose the outcome she prefers ideologically, even if doing so would require the invalidation of a conflicting precedent. If all judges choose to follow their own policy preferences in this way, however, then any existing precedent, including that produced by judges serving on the court, are vulnerable to similar invalidation.

Judges are thus faced with a social dilemma of the kind described by Ostrom and which generally follows the contours of the prisoners' dilemma. If judges maximize their own self interest by sincerely voting to further their own policy preferences in the short term regardless of conflicting preferences, they create an environment in which their own precedential opinions are similarly vulnerable to invalidation in the long run. Or, in game theoretic terms, individual rationality drives each judge to defect in the short term, thus achieving an equilibrium that would substantially undermine, if not eliminate, either's individual adherence to *stare decisis*. This equilibrium is suboptimal for all players/judges in the long run, however, who ultimately desire to have their preferences preserved and followed as precedent in the future.

One mechanism to sustain cooperation in the prisoners' dilemma is repeated play. Iterated prisoners' dilemma allows the players to establish strategies that achieve cooperation to the extent that the value of long term cooperation is sufficiently large for each player. "If the value of future cooperation is large and exceeds what can be gained in the short term by

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[7]Formal institutional structures serve to shape or produce certain equilibria within collective decision making arrangements (Greif 1998; Knight 1992; Shepsle 1979).
[8]As Epstein and Knight have described the rational choice perspective, strategic justices Arealize that their ability to achieve their goals depends on a consideration of the preferences of others, of the choices they expect others to make, and of the institutional context in which they act" (1997, 4).

cheating, then the long-term individual interests of the players can automatically and tacitly keep them from cheating, without the need for any additional punishments of enforcements by third parties" (Dixit and Skeath 1999, 257). When the game is infinitely repeated or where it extends for indeterminate duration, players who defect in early rounds can be "punished" with defection in subsequent rounds, while players who cooperate can be "rewarded" with cooperation. On the other hand, where the relationship between the players is of a fixed and known length, the rational strategic move in the last round is to defect (as no benefit from cooperation can accrue in future rounds)—this will create a rollback or unraveling effect that produces cheating to the very first round of play.[9]

To ensure cooperation in the iterated game with no clear end point, players can adopt contingent strategies that depend on behavior in previous rounds. For example, a player may use a trigger strategy such that she will cooperate as long as the other player does so, but a defection from the other player will trigger a period of punishment for a specified length in which she too defects. The grim strategy entails a permanent defection once the other player defects, until the end of the game. A tit for tat strategy, on the other hand, allows one player to punish the other for defecting only as long as the other player defects. Once he again begins cooperating, the "punisher" will similarly cooperate. This is obviously a far more forgiving contingent strategy and one that turns out to produce the highest payoffs and fewest defections in computer simulated, iterated games (Axelrod 1984).

Accounting for the payoffs in iterated prisoners' dilemma requires consideration of the cumulative nature of such payoffs over numerous rounds. One key consideration involves the rate at which each player discounts future benefits of cooperation in comparison to the present benefits of defection. The discount rate reflects the importance of the future relative to the present; the payoff to each judge involves a comparison of the present value of disregarding precedent with the future gains realized when his predecessors respect his precedent in later cases. Since the game is repeated, the judge will assess the cumulative benefits of future cooperation, reduced by the discount factor, which also reflects the notion that precedent itself experiences decay over time due to loss of relevance to current disputes; precedents lose strength with age.[10]

Thus, the discount factor reflects judges' evaluation of the value of future payoffs when other judges follow their precedents. The size of this discount factor could depend on several factors, including judges' personal impatience (Osborne 2004, 422). It could also depend on the time horizon involved in the repeated game. Under some institutional arrangements, judges may not know for certain how long their interaction will continue, such that the game is likely to continue only with some probability. Where the game is likely to continue with low probability (i.e. where judges hold their seats for shorter periods because they are vulnerable to electoral constraints), the discount rate for the present value of future gains decreases.

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[9]Interestingly, under experimental conditions, players will sometimes cooperate for some period at the beginning of play, although they may ultimately defect at the end of play, even when they are aware ex ante that the iterated play has a clearly designated endpoint. See Andreoni and Miller (1993).

[10]The decay rate for precedent has been calculated for several courts. At the United States Courts of Appeals, for example, it has been calculated at .147 (see Lindquist and Klein 2006).

This simple model highlights the importance of judges' perception of the endpoint to the game they are playing with their colleagues on the bench. Other factors affecting monitoring and punishment for defection are also relevant to the norm's development pursuant to this game theoretic account. One such factor involves court size: collegial courts involve the potential cooperation or defection of up to nine players (for courts in the United States). Obviously, decision making on collegial courts differs from the simple scenario described above, which only incorporates the actions of two judges. The more players involved in the game, the more difficult it is for judges to monitor and punish defectors.[11] In that situation, even for the judge who deviates, his precedents may be followed by future judges who fail to recognize the previous defections. At the very least, larger decision making bodies increase the risk that judge who wish to defect will free ride on the cooperative behavior of others. On the other hand, institutional mechanisms that strengthen the potential for effective leadership can produce more opportunities for sanction. For example, a chief justice who exercises control over opinion assignment can punish defectors with undesirable assignments. These factors can be viewed as affecting the utility associated with defecting in terms of the likelihood of punishment.

These parameters offer a basis upon which to evaluate adherence to precedent empirically by isolating variables that reflect their values in the real world. In that sense, the model provides a useful theoretical tool for evaluating *stare decisis*. Before proceeding with an empirical evaluation of these theoretical predictions, however, several caveats are in order. First, some have criticized this particular approach because it "relies on the empirically dubious assumption that judges look to other judges' respect for legal precedent when determining whether to follow precedent set by those judges" (Bueno de Mesquita and Stephenson 2002, 757). This statement may be valid, but the model's empirical implications have never been tested systematically. The purpose of this study is to perform such an empirical evaluation of the model; whether its assumptions or implications are "dubious" remains to be seen. Second, the model posits that judges are primarily policy-motivated actors. Judges have other goals of course, including an interest in institutional legitimacy (see Epstein and Knight 1998, 11-12; Baum 2006). In the state context, their objective may include reappointment or reelection. Positing policy as the primary goal thus serves as a starting point for analysis; alternative goals and objectives are discussed in later sections of this paper.

III. Research Hypotheses

The strategic model presented above may be used to generate hypotheses concerning judges' decisions to defy *stare decisis* by overruling precedent. The hypotheses developed below specifically concern the propensity of courts to overrule precedent, an event that reflects a clear deviation from the norm of *stare decisis*.[12] In addition to the propensity to overrule *in general,* hypotheses are also developed in relation the *age* of the overruled

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[11]As noted by Gates and Humes, the game of prisoner's dilemma may accommodate multiple players, although the more players there are, the more difficult cooperation is to achieve (1997, 104-05).

[12] Some may object that the overruling is not the only means to invalidate or undermine a precedent. This observation is correct and would be problematic to the current study if the states differed systematically in terms of such implicit deviations from precedent. At this point, no evidence exists that the states do differ systematically on this dimension; future research might focus on this question.

precedents. Although it is not perfectly clear whether the doctrine of *stare decisis* is more compromised when a court overturns newer rather than older precedents, on balance the cooperative norm is probably most weakened when courts overturn precedents that are relatively young. When a court overturns a precedent that has prevailed for many decades, it may adversely affect reliance interests that have been in place for years. But overruling precedents within a short period of years (or even months) is problematic because it creates a "whiplash" effect that injects a degree of instability and uncertainty in the law. Moreover, normative theories of *stare decisis* hold that overturning existing precedent is justifiable when that precedent has become obsolete or inefficient in the light of changing societal or economic conditions. Significant social and economic changes are less likely to emerge over brief time periods, suggesting that this normative justification carries less punch in relation to younger precedents.

Because of the nature of the available data—which measures propensity to overrule precedent at the court level—the hypotheses set forth below focus explicitly on courts rather than judges as the units of analysis.

First, the repeated game theoretic model highlights, via the discount factor, the idea that justices will cooperate and respect other colleagues' prior doctrinal pronouncements when they expect to engage in repeat play with those colleagues. The model points out the potential unraveling effect when judges on the same court have knowledge of a specific or probable endpoint to their service with other judges. In those situations, judges are less likely to cooperate with their colleagues' decisions because they will discount the benefits of future cooperation more severely. On the other hand, where judges serve in longer terms, have life tenure, or where the probability of retirement is less certain, this unraveling effect should be less pronounced. Thus judges may make calculations regarding their willingness to adhere to the norm in light of the average tenure length of justices sitting on the court. In addition, however, the variability of tenure may also affect justices' expectations regarding their colleagues' continued service on the bench; measures of central tendency may mask this important variable. Thus tenure may be related to overruling behavior in two ways. First, the theory leads to the expectation that average tenure on the court will be inversely related to the frequency of overruling behavior in state supreme courts and to a propensity to overturn younger precedents. Second, it suggests that variability in tenure length will be positively related to the frequency of overruling behavior in state supreme courts and to the likelihood that younger precedents will be overturned.

The first hypothesis contradicts the outcome one might expect based solely on attitudinal theory. As noted above, where judges are insulated from the political process through longer terms and thus enjoy a high degree of independence, one might expect them to feel freer to defy *stare decisis* and reorient precedent in conformity with their preferences. One of the reasons typically offered to explain the strong influence of policy preferences at the U.S. Supreme Court is that the justices are relatively unconstrained once they take the bench (Segal and Spaeth 2002). As Boyea has recently noted in connection with elected courts, "longer term lengths increase the stability of judicial office, offering greater security while decreasing the incentives to be mindful of the electorate and their perceived preferences" (2007, 648-49). By highlighting the potential for retribution over the long term, however, the strategic model suggests that longer judicial tenure will promote consensus and cooperation, rather than dissensus and defection. This proposition is supported by an early study of the Rhode Island Supreme Court (Beiser 1974), where justices serve for life. Beiser found that

Rhode Island justices followed a strong norm of acquiescence to their brethrens' opinions. Similarly, Skeel (1999) found that the opinions of the Delaware Supreme Court, where justices serve relatively long twelve-year terms, are characterized by strong unanimity. The United States Supreme Court obviously provides a clear counterpoint to these examples, however, since over time, consensual norms on that Court have become increasingly lax even as the justices enjoy lifetime tenure (see Caldeira and Zorn 1998). The cause of the demise of consensus on the U.S. Supreme Court is attributed to the leadership style of Chief Justice Stone (Walker, Epstein and Dixon 1988).

An additional hypothesis related to the discount factor stems from the idea that while judge tenure length may be important, even in states with legally-mandated shorter terms, justices may have little expectation that their colleagues will leave the bench because the seats are not subject to electoral competition. In these states, risks to tenure are lessened and the unraveling effect should be less pronounced, promoting cooperation rather than dissensus. Hall and Brace (1990) have shown that when state justices are selected by partisan ballot in states with high levels of electoral competition, the justices may demonstrate higher levels of dissenting behavior in certain circumstances. Of course, elected judges also face countervailing pressures that do not affect appointed judges. Judges subject to electoral constraints must attend to constituency preferences that may strain their commitment to precedent when existing precedent is inconsistent with constituent expectations. For these reasons, elected systems, as opposed to appointive, are more likely to promote overruling behavior, and we similarly expect that elected judges will overrule younger precedents.

In addition, the model implicitly predicts that court size may have an impact on the strength of *stare decisis* among judges on any given court. Drawing on the literature explaining cartel behavior, O'Hara (1993) suggests that cartels are commonly understood to have an optimal membership size because it is harder to monitor the decision making behavior of cartel members that form a larger group. In the case of judicial decision making, judges who sit on a large collegial court may have more difficulty "keeping track" of the cooperative or defecting behavior of all court members, which would make it more difficult for them to punish or reward defecters over the long term. Even if monitoring difficulties are not the problem, Posner (1993) argues that judges on larger courts will experience greater incentives to "free-ride" on their fellow judges' adherence to *stare decisis* because they are more likely to believe that their own individual behavior will have little effect on the practice of *stare decisis* followed by court members generally. Since state supreme courts do vary from a minimum of five authorized seats and maximum of nine seats, WEexpect that justices on state supreme courts with nine seats will overrule precedent more often and will overrule younger precedents than those serving on courts with seven or five seats.

Studies of dissenting behavior have drawn conflicting results when assessing the impact of court size on the development of consensual decision making. Hall and Brace (1989) found that court size was unrelated to rates of dissent, while Glick and Vines (1973) found that court size was related to patterns of dissent. More recent studies have found a positive correlation between dissenting behavior and court size on the United States Courts of Appeals (Lindquist 2006).

State supreme courts also vary in terms of their opinion assignment rules; assignment rules that strengthen the power of the chief justice provide him with the opportunity to sanction defecting justices. Research on death penalty cases has shown that in states that do

permit a seniority advantage in decision making, junior members are significantly less likely to dissent than their senior counterparts, although the effects of seniority is reversed in states that have no seniority advantage--with senior judges more likely to join majorities (Hall and Brace 1999). In the context of overruling behavior, one would expect that procedures that serve to enhance chief justices' authority and control would promote consensus and greater adherence to precedent. State courts vary substantially with respect to their method of opinion assignment, with some using a random assignment procedure and others providing that the chief justice will assign the majority opinion even when he is in dissent. The strategic analysis would therefore suggest that judges who sit on courts where opinions are assigned exclusively by the chief justice will overrule less frequently and will be less likely to overrule younger precedents.

One final hypothesis relates to the utility gained from defection. Judges will be more motivated to deviate from existing precedent if their preferences conflict with prior doctrinal pronouncements. The social science literature is replete with evidence that the distance between the ideological direction of existing precedent (or majority opinion) and a judge's policy preferences are related to the judge's willingness to vote in favor of overruling precedent or to dissent (Spaeth and Segal 1999; Brenner and Spaeth 1995; Hansford and Spriggs 2006; Hettinger, Lindquist and Martinek 2006). This hypothesis is most easily evaluated with data measured at the judge-level. Even at the aggregate court-level, however, it is possible to assess the impact of judicial preferences. To the extent that changes to the median justices' preferences shift over time, overruling decisions should become more likely. More simply, ideological change on a court over time may produce greater ideological disagreement between justices over the policy outcomes promoted by existing precedent. Controlling for this effect is also important to ensure that the impact of tenure length is not solely a function of personnel turnover—with new justices bringing different preferences to the bench. In this connection, therefore, We expect that overruling behavior (including an increased propensity to overturn newer precedents) will increase as a court's ideological preferences (as measured by the median justice) shift over time.

IV. Data and Models

Dependent Variables:. To test the hypotheses set forth above, two dependent variables were measured. First, a count variable was developed to measure the frequency of state supreme court decisions that are overruled in each year over the period 1975 to 2004. These data were collected from Westlaw by (1) downloading all citations (in excess of two million cites) to decisions rendered by the (52) state supreme courts over the entire course of their histories, (2) reformatting those citations using Perl programming language[13] to create efficient input files for Westcheck, (3) submitting the files to Westcheck, (4) parsing the Westcheck output to identify all red flagged cases and the decisions overruling those case in whole or in part, and (5) generating a comprehensive database of all overruled and overruling decisions for all states across all years. This database provided the basis to develop a second dependent variable measuring the median age of precedents overruled in each state supreme court per year. These two dependent variables were then combined with a dataset of institutional variables at the state level; because these institutional variables were limited in scope from 1975 to 2004, the multivariate analysis encompasses that 30 year period only. The data

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[13]We are very grateful to Charles Keckler for providing me with the prototype of this Perl parsing program, as well as to Charles Dupont and Brian Turnbull for their tireless programming efforts.

include only those decisions that reflect violations of intertemporal *stare decisis;* overruling actions by the state legislature (i.e. superceding by statute) or by the U.S. Supreme Court are excluded.

The distribution of the dependent count variable demonstrates considerable variation across the states in terms of their propensity to overrule precedent. Figures 1a-1d enable comparison of the mean and median values on the count variable across the states, by region. Over the thirty year period presented in the dot plots, it appears that some states overruled existing precedent very infrequently, while others were quite active. In the Midwest, the Illinois Supreme Court almost never overruled precedent; its mean and median counts are both close to zero. Nebraska and Ohio, on the other hand, overruled more than six precedents per year on average. Northeastern states demonstrate less variation, with values clustering between zero and three for all states. Means and medians for the Western states reflect greater dispersion. Montana and Washington are particularly distinguished in terms of their propensity to overrule; in the case of Montana, this proclivity to overrule precedent has been recognized and criticized in the literature (Renz 2004). Southern states are also remarkably varied, with Texas (Criminal) and Alabama leading the pack with the largest median overrulings over the period (close to ten for Alabama, almost fifteen for Texas). These findings comport with existing research demonstrating a high rate of overruling behavior in Alabama (Lindquist and Pybas 1998). As for age of the overruled precedents, the average per year of the median age of overruled precedents was 21.17 years, with a minimum of .21 years and a maximum of 148.87 years.

Figures 1a - 1d about here.

Independent Variables: Research Hypotheses. The theoretical model and research hypotheses presented above directed attention to five variables of particular interest. These variables were measured as follows: (1) Tenure Length, measured as (a) the average number of years served by sitting justices on each supreme court per year and (b) the standard deviation in the tenure of justices on the bench each year; (2) Selection Method, measured as a dummy variable reflecting whether the state's formal selection mechanism involve (a) legislative or gubernatorial appointment (the reference category), (b) merit selection, (c) nonpartisan election, or (d) partisan election; (3) Court Size, measured as the number of authorized seats on each court per year; (4) Chief Justice Opinion Assignment, measured as a dummy variable coded as one if the chief justice has exclusive authority to assign the majority opinion; and (5) Ideological Change, measured as the absolute value of the change in each court's median ("PAJID") Scores[14] over the previous year.

Independent Variables: Controls. Additional variables were added to the model to control for alternative explanations or influences on overruling behavior. First, court dockets differ in terms of the mixture of cases on their agenda and their caseloads. To control for these differences, a dummy variable was added to the model reflecting the presence or absence of an intermediate appellate court. Where an intermediate court exists, supreme court justices typically exercise greater discretion to choose the cases on their dockets. This discretionary

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[14] PAJID scores were created by Paul Brace, Melinda Hall and Laura Langer (2000) based on elite and citizen ideology in the judges' state at the time of appointment or election, adjusted for party identification. The scores range from 0 to 100, with larger values associated with increased liberalism.

docket may lead to increased overruling behavior controlling for other factors, as justices in states with intermediate appellate courts may exercise their certiorari jurisdiction to identify cases as vehicles for legal change. Professionalization of the judiciary may also affect overruling behavior if professionalization carries with it an increased concern for institutional legitimacy. As a proxy for professionalization, therefore, the model includes a measure of the number of law clerks assigned to each associate justice. Increasing assistance by law clerks may cut both ways, of course, if these newly minted lawyers press their justices to innovate or provide justices with the necessary leisure time to craft opinions that change the legal status quo. As for caseload itself, a direct measure of the number of cases on each court's docket per year would be ideal. Unfortunately, comparable data across courts for the years analyzed here is extremely difficult to acquire.[15] For that reason, the model includes a control for state population, which is highly correlated with total supreme court filings (r = .75) for the years and states in which caseload date is available and reliable. Caseload mix may also be affected by the demographic characteristics of the states; a variable was therefore included in the model to reflect the level of urbanization in each state. Finally, the opportunity to overrule precedents may depend on the available pool of precedents in each state. To account for differences in the number of precedents available for review and invalidation, a measure reflecting the age of the state was incorporated into the model as well.

Furthermore, state supreme court justices' responsiveness to precedent may be affected by the state's political environment. Where the state legislature is highly professional and active, for example, obsolete judicial decisions may be superceded by statute, obviating the need for the court to overrule its own decisions. For that reason, the model controls for legislative professionalism in each state based on a measure developed by Squire (2007). Other institutional constraints may affect the justices' behavior as well. Where constitutional amendments are easily obtained, it may affect the justices' adherence to precedent, either because it narrows their policy making authority or because they must overturn precedent to bring judicial doctrines into conformity with changing constitutional principles. For that reason, a measure of the rate of constitutional amendment in each state since 1975, created by Donald Lutz (1994), was incorporated into the model as well. Finally, regional effects were controlled with dummy variables reflecting the state's geographic location, with the South omitted as the reference category. Descriptive statistics for the dependent and independent variables are presented in the appendix.

In the model of overruled decisions per year, the dependent variable constitutes a count of the number of such decisions truncated at zero; as such, it conforms to a poisson distribution. Given overdispersion in the data, the model was fitted using negative binomial regression (NBMR), with fixed effects for each state. As in many cross sectional time series models, however, several of the variables were invariant or largely invariant over time.[16] These "sluggish" variables are often correlated with unit effects and thus reduce the efficiency of the model and inflate standard errors. To address this concern, the count model was also estimated using a panel fixed effects vector decomposition (FEVD)

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[15] The National Center for State Courts compiles such data, but the states report the information in different formats and occasionally fail to report it altogether.

[16] These sluggish variables include (1) the rate of constitutional amendment, (2) chief justice opinion assignment, (3) legislative professionalism, and (4) the clerks assigned to each associate justice.

procedure developed by Plumper and Troeger (2007).[17] Although this model is not ideal—as it employs an ordinary least squares estimator to model count data that conform to a poisson distribution—the results are presented for purposes of comparison. (No FEVD procedure has yet been developed to model cross-sectional time-series count data.) The FEVD model may provide a more accurate assessment of the influence of the time-invariant and rarely changing variables in the model. The results of these count models are presented in Tables 1a and 1b. The model of the median age of precedents overruled per year, given its essentially continuous dependent variable, was also estimated using FEVD, with the dependent variable weighted to reflect the number of overruling decisions in each year. The results of the age model are presented in Table 2.

Tables 1a, 1b and 2 about here.

V.   Results

A.   Tenure Length, Court Size, Selection Method

All three models provide support for the hypothesis that longer tenure lengths promote more stable precedent. This measure evaluates the notion that justices may structure their behavior in relation to the likelihood of continued interaction with their colleagues currently on the bench. Note that this measure is superior to one based solely on formal term length, since even in states with short terms, competition for seats may be minimal In contrast, the tenure variable measures the *actual average tenure* experienced by justices in each court. As tenure length increases, the number of cases overruled decreases. Moreover, as tenure length increases, justices are less likely to overturn younger precedents. The measure of central tendency (average tenure length) appears to capture the variable's complete effect in the count models; the variability of tenure in a given year has no effect on the justices' propensity to overrule precedent. On the other hand, the variability of tenure does appear to influence a court's willingness to overturn younger precedents (in a one-tailed test of statistical significance). Where judges vary in their length of time on the bench, younger precedent becomes more vulnerable to invalidation.

In addition to tenure length, court size is also significantly associated with overruling behavior, suggesting a free rider effect on the cooperative norm. Richard Posner noted this possibility in 1993. In discussing adherence to precedent, he observed that a serious free-rider problem exists but that members of higher courts "are few enough to be concerned about the impact of their behavior with respect to precedent on the survival of the practice of decision according to precedent in their jurisdiction" (1993, 18 n. 30). He added a caveat, however: "We might expect, therefore, that a comparison of the different state supreme courts (which differ in size) would show that the smaller the court, the less frequently it overrules its previous decisions" (ibid.). In fact, this hypothesis is strongly supported in the data. Larger courts overrule precedent more frequently and overrule younger precedents as well.

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[17] The FEVD procedure proceeds in three steps: (1) it runs a fixed effects model to obtain the unit effects, (2) breaks down the unit effects into the part explained by the time-invariant or rarely changing variables and an error term, and (3) re-estimates the first stage by pooled OLS including the time-invariant variables plus the error term of stage two, which accounts for the unexplained part of the unit effects.

Figure 2 provides a graphical depiction of the impact of court size on overruling frequency, controlling for tenure length. To create the figure, all other variables were held at their means. Note the substantively large impact of moving from a court with five or seven justices to one with nine justices. It appears that the addition of two judges to a seven member court has the potential to significantly alter justices' willingness to adhere to existing precedent. In addition, the graph illustrates that tenure length has the more pronounced influence on these larger courts; justices' overruling behavior on smaller courts seem impervious to considerations regarding the time horizon on service with fellow judges on the bench. The influence of court size on the age of overruled precedents is substantively less profound yet not inconsequential: for every one judge increase on the bench, the court overturns precedent that is about two years younger on average.

Selection method also plays an important role in terms of the stability of precedent. Partisan elected courts are far more likely to overturn existing precedent than courts selected by other methods. This finding stands in interesting contrast to Hanssen's conclusions based on appeal rates in state supreme courts. Hanssen (1999) concluded that appeal rates in elected states are significantly lower than in other states because litigants are able to predict case outcomes based on ideological or partisan cues created by these selection mechanisms. The findings in this study support Hanssen's conclusions to the extent they show that elected judges are less willing to allow precedent to bind their decisions. In this sense, their behavior may be quite predictable on ideological grounds. Figure 3 graphically illustrates the relationship between selection method, tenure length and overruling behavior, holding all other variables constant at their means, and demonstrates the profound influence selection method exercises over adherence to precedent.

As for the age of the overruled precedents, partisan elected courts overrule significantly younger precedents: almost seven years younger on average. Even after controlling for the vulnerability of elected judges' seats via the tenure variable, it appears that partisan elected judges are far more willing to overrule precedents and to overrule them at a rapid pace.

B.   Other Institutional Effects

It was also hypothesized that certain "punishment" mechanisms may enhance justices' respect for the reciprocity norm of *stare decisis*. In particular, where the chief justice exercises complete control over opinion assignment, it may offer her the opportunity to sanction justices who fail to cooperate by deviating from precedent. This variable does not perform as expected, however. In states where the chief has exclusive authority to assign opinions, it results in the more frequent overturning of younger precedents and, according to the FEVD count model, the more frequent overruling of precedents in general. Since the chief justice assignment variable is invariant over time, the FEVD model may provide the better assessment of its effects. The result for the age model also suggests that chief justice opinion assignment is correlated with overruling of younger rather than older precedents. The performance of this variable thus does not support the hypothesis that chief justices with sanctioning capacities promote adherence to *stare decisis*.

Other institutional variables were significant in one or all of the models. The existence of an intermediate appellate court promotes overruling behavior and results in the overruling of younger precedents, all else being equal. Docket composition could provide one explanation for this result. Where an intermediate appellate court exists, supreme court justices have greater discretion over their own dockets and may be inclined to choose cases that trigger more intense ideological preferences. On the other hand, professionalization of the judiciary, as measured by the number of clerks assigned to each justice, appears to promote adherence to *stare decisis*. In the FEVD count model, the number of law clerks is negatively related to the count of overruled decisions per year. The sign of the coefficient is also negative in the NBMR count model, although not significant. Similarly, as the number of clerks increases, the justices demonstrate a reduced propensity to overturn newer decisions. For each additional law clerk assigned, the median age of overturned precedents increases by about 2.5 years.

C.   Legal Environment

Judges' decisions to alter the legal status quo may also be affected by the activities of other institutional players. Judges may believe it necessary to overrule precedent in order to bring public policy into conformity with prevailing social or economic conditions. But where another law-making institution performs that function effectively, the judiciary's need to overrule precedent may be reduced. Consider the variable in these models that measures legislative professionalism. In the count models the variable's coefficient is negative (and significant in the FEVD model), indicating that the existence of a professional legislature is associated with a greater adherence to *stare decisis* in the state supreme court. Yet at the same time, legislative professionalism has a significant impact on the age of precedents overruled in state supreme courts as well. Professional legislatures are associated with the overruling of *younger* precedents. Although further exploration is necessary to sort out any causal relationship between these variables, one might speculate that active legislatures (1) reduce the policy-making space available to judiciaries, thus rendering some overruling decisions unnecessary, and (2) eliminate obsolete doctrinal rules, thus obviating the need for the judiciary itself to correct outdated (older) precedents.

The ease with which the state constitution is amended is also related to overruling behavior. In the FEVD count model, the variable is positive and statistically significant, suggesting that frequent constitutional amendments drive more frequent overruling behavior by state supreme courts. Because the FEVD model more accurately assesses the influence of variables that are invariant across time (as is the constitutional amendment rate), this result is probably the more reliable statistic. As for the age of overruled decisions, more frequent constitutional amendment is related to the invalidation of younger precedents. Thus, where the legal context is one of frequent constitutional change, it appears to promote an environment in which the supreme court responds accordingly.

VI. Discussion

These findings provide some empirical support for the strategic model of overruling behavior. More fundamentally, it also reflects the importance of judicial institutions for the rule of law as manifested through precedent. The data support the hypotheses that court size, tenure length and selection method, in particular, will influence courts' adherence to the norm of *stare decisis*. At this point, however, it is important to pause and consider alternative

explanations for these results. With respect to judges selected by partisan election, it is very possible that selection effects explain the results found here. Posner has observed that adherence to judicial norms is part of the judicial "game": "if you don't obey them, your not playing the judicial 'game." According to Judge Posner, the rules of the game are imparted in law school, and "judicial selection procedures select for persons who *want* to play the judicial game rather than some other game, such as partisan politics" (2997, 365). Yet judges elected via partisan ballot may indeed be playing the game of partisan politics and may be less willing to adhere to precedent as a result. In their recent study of elected and appointed courts, Choi, Gulati and E. Posner find that elected judges make more campaign contributions and are more likely to have gone to law school in a lower ranked law school in the state in which they sit (2007, 41). According to these authors, elected judges "are more like politicians and less like professionals" (ibid.). Perhaps we should not be surprised that they overturn precedent more often. The influence of selection method, therefore, may itself be due to selection bias in that *certain types of judges* are more likely to participate in judicial elections.

As for the influence of tenure length, one explanation is that cooperative norms are more likely to form when judges expect to serve longer terms with each other, thus providing the sanctioning opportunities for those judges seeking to enforce the norm. At the same time, however, the impact of this variable may have a simpler explanation: where judges serve for longer periods with each other, they are more likely to have participated in the production of precedent with which they continue to agree over time. Courts with stable judiciaries are more likely to produce stable precedent. This latter explanation is undermined to some extent, however, by the model's control for ideological change on the court.

The variable reflecting court size is less amenable to alternative explanations. It is difficult to conceptualize why court size should be related to overruling behavior except through reference to free rider considerations. Controlling for other factors, court size is positively related to the propensity to overrule and negatively related to the age of overruled precedents. More simply, larger courts overrule more often and overrule younger precedents. This result is most easily explained in reference to the collective action problems experienced by larger groups.

Other variables suggest some interesting institutional or contextual influences on the norm of *stare decisis* in these courts. Professionalization of the judiciary and the legislature appear to shape courts' willingness to overrule precedent. Where the judiciary is professionalized, it promotes adherence to the norm. Perhaps professional judiciaries are more sensitive to their institutional legitimacy, which translates into a greater willingness to follow precedent. Since professionalization is measured in terms of the number of law clerks assigned to each justice, it is also possible that law clerks provide a check on judges' propensity to overrule. Indeed, clerks emerge directly from law school where they are drilled in the common law method. Professional legislatures may also promote adherence to the norm because they "crowd out" judicial policy making. And the legal environment within which judges operate may be affected by the ease with which constitutional amendments may be obtained. These findings indicate that judicial behavior is shaped within a larger legal environment that either promotes or undermines rule of law values. Indeed, where the judiciary and legislature are highly professional and the constitution remains stable over time, these factors may work in tandem to produce a stable legal environment. Such larger institutional dynamics deserve further exploration in future research.

In total, the models provide some preliminary support for the strategic model of precedent, but they are not dispositive. Adherence to the norm of *stare decisis* may depend in part on institutional mechanisms or structures that enable judges to promote cooperation and sanction defectors, as suggested by the theory. Nevertheless, reasonable alternative explanations exist for the influence of at least some of the variables in the model. Moreover, the chief judge opinion assignment variable—hypothesized to promote adherence to the norm—fails to perform in the manner predicted by theory. Yet the results do indicate clearly that the strength of *stare decisis* is affected by a number of institutional and contextual factors, whether or not their influence is specifically related to strategic behavior by individual judges. In that sense, the model highlights the importance of institutional structures to the development of consensual behaviors within courts.

From a normative perspective, interpretation of these results may depend on one's perspective regarding the value of *stare decisis*. Social science cannot assist observers in drawing conclusions about optimal levels of adherence to the norm. Stability and predictability in the rule of law is certainly valuable, but so is the law's adaptation to changing circumstances. To the extent that one values strong adherence to precedent, institutional structures that favor that result include judicial appointment with longer tenure lengths and a smaller court. On the other hand, for those who prefer legal rules that reflect the preferences of constituents and that are more easily adapted to change, different institutional structures are preferable.

That having been said, this research provides only a starting point for considering the influence of institutional structures on adherence to *stare decisis*. Because the available data is limited at this point to aggregate measures of court performance, the study's results must be interpreted as provisional only. Judge-level and case-level data is likely to shed additional light on the influences that shape the development of this important reciprocity norm in appellate courts.

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**Table 1a: Panel Fixed Effects Negative Binomial Regression Model
Count of Overruled Decisions in State Supreme Courts 1975-2004**

Variable	Coef.	Robust SE	z	p-value
Court Institutional Characteristics				
Tenure	-.042	.014	-2.88	.004
Tenure (standard deviation)	.011	.018	.59	.555
Court Size	.591	.089	6.61	.000
Partisan Election	1.454	.455	3.19	.001
Nonpartisan Election	.332	.404	.82	.410
Merit Selection	.444	.334	1.33	.184
CJ Opinion Assignment	-.161	.682	-.24	.813
Ideological Change	-.005	.003	-1.85	.064
Intermediate Appellate Court	.396	.129	3.06	.002
Number Law Clerks	-.148	.156	-.95	.343
Legal Environment				
Legislative Professionalism	-1.184	.801	-1.48	.139
Const'l Amendment (Rate)	-.256	.125	-2.05	.040
State Characteristics				
State Population	.00002	.00003	.88	.379
Urbanization	-.005	.013	-.38	.706
State Age	-.012	.005	-2.15	.032
Regional Controls				
West	.365	1.055	.35	.729
Northeast	.935	.788	1.19	.235
Midwest	-2.07	.960	-2.16	.031
Constant	.401	1.302	.31	.758

Note: N=1483. Panel dummies omitted; fifteen outliers omitted from model. Model specified with dispersion (mean). Wald Chi-Square =763.62, log-likelihood = -3246.64, p<.000. Significance tests are two-tailed.

Table 1b: Panel Fixed Effects with Vector Decomposition (OLS)
Count of Overruled Decisions in State Supreme Courts 1975-2004

Variable	Coef.	SE	z	p-value
Court Institutional Characteristics				
Tenure	-.115	.045	-2.51	.012
Tenure (standard deviation)	.076	.053	1.43	.152
Court Size	2.058	.126	16.23	.000
Partisan Election	6.499	.553	11.74	.000
Nonpartisan Election	.350	.406	.86	.389
Merit Selection	.732	.408	1.79	.073
CJ Opinion Assignment	.605	.264	2.29	.022
Ideological Change	-.011	.013	-.90	.369
Intermediate Appellate Court	1.078	.294	3.66	.000
Number Law Clerks	-1.026	.181	-5.65	.000
Legal Environment				
Legislative Professionalism	-5.734	1.311	-4.37	.000
Const'l Amendment (Rate)	.506	.082	6.14	.000
State Characteristics				
State Population	.00009	.00003	2.72	.007
Urbanization	-.070	.009	-7.33	.000
State Age	-.006	.003	-1.70	.089
Regional Controls				
West	4.987	.498	10.00	.000
Northeast	4.090	.552	7.41	.000
Midwest	2.636	.341	7.71	.000
Constant	-6.743	1.145	-5.89	.000

Note: N=1483. Fifteen outliers omitted from model.   Significance tests are two-tailed.
Adjusted R-squared = .287.

Table 2: Panel Fixed Effects with Vector Decomposition (OLS)
Median Age of Overruled Decisions in State Supreme Courts 1975-2004

Variable	Coef.	SE	z	p-value
Court Institutional Characteristics				
Tenure	.652	.285	2.28	.023
Tenure (standard deviation)	-.545	.320	-1.70	.089
Court Size	-1.619	.543	-2.98	.003
Partisan Election	-6.792	2.733	-2.48	.013
Nonpartisan Election	2.806	2.627	1.07	.286
Merit Selection	.876	2.604	0.34	.737
CJ Opinion Assignment	-4.553	1.593	-2.86	.004
Ideological Change	-.078	.078	-1.00	.318
Intermediate Appellate Court	-4.192	1.647	-2.55	.011
Number Law Clerks	2.449	.886	2.76	.006
Legal Environment				
Legislative Professionalism	-23.246	8.397	-2.77	.006
Const'l Amendment (Rate)	-1.23	.453	-2.71	.007
State Characteristics				
State Population	.009	.0002	4.81	.000
Urbanization	.432	.062	6.92	.000
State Age	-.052	.024	-2.18	.030
Regional Controls				
West	-20.067	2.991	-6.71	.000
Northeast	-9.137	2.698	-3.39	.001
Midwest	-7.950	1.973	-4.03	.000
Constant	18.407	6.59	2.79	.005

Note: N=1107. Fifteen outliers omitted from model; age weighted by count of overruled decisions in each year. Significance tests are two-tailed. Adjusted R-squared = .164.

Figure 1a: Mean/Median Frequency of Overrulings
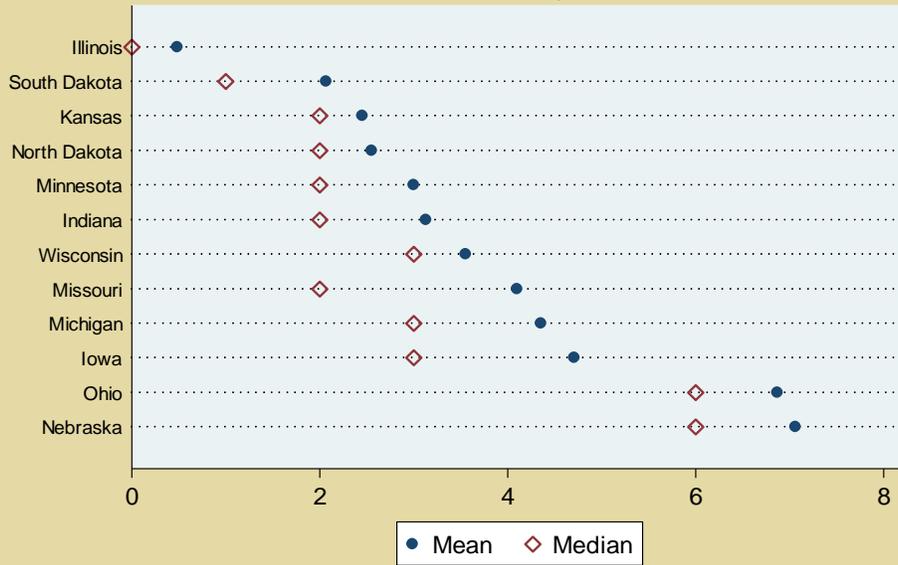Midwestern States, 1975-2004

Figure 1b: Mean/Median Frequency of Overrulings
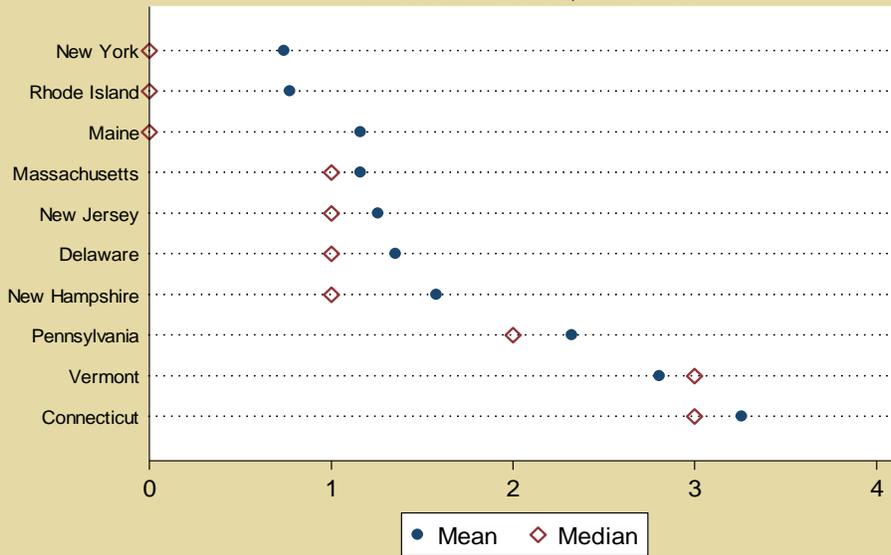Northeastern States, 1975-2004

Figure 1c: Mean/Median Frequency of Overrulings
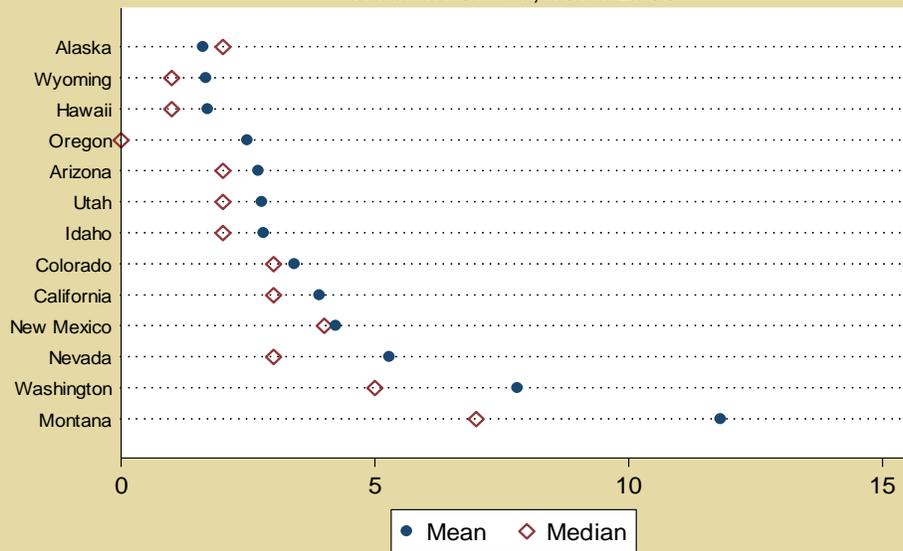Western States, 1974-2005

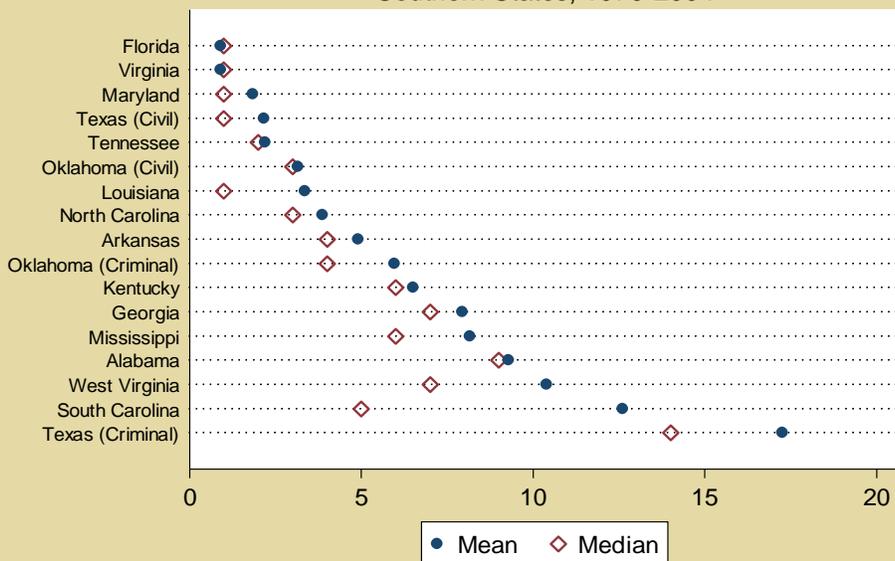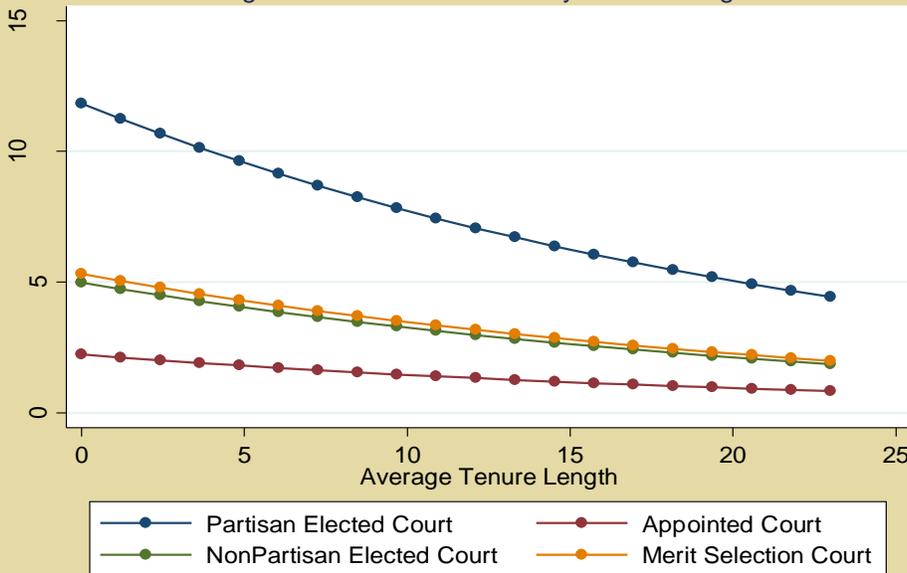Figure 1d: Mean/Median Frequency of Overrulings
Southern States, 1975-2004

Figure 2: Court Size by Tenure Length

Figure 3: Selection Method by Tenure Length

Appendix: Descriptive Statistics

Variable	Mean	Std. Dev.	Min.	Max.
Count	3.69	4.63	0	29
Median Age	21.17	20.15	.21	148.87
Court Size	6.51	1.39	3	9
IAC	.73	.44	0	1
Partisan Election	.24	.42	0	1
Nonpartisan Election	.24	.42	0	1
Merit Selection	.30	.45	0	1
Clerks per Justice	2.07	.94	1	6
Chief Opinion Assignment	.21	.40	0	1
Average Tenure	8.21	2.93	1.4	23.33
Tenure (SD)	5.32	2.43	0	14.31
Urban	69.07	14.32	32.2	94.4
Population	5234.89	5636.72	370	36154
State Age	148.98	48.29	16	218
Legislative Professionalism	.20	.12	.02	.65
Ideological Change	2.31	7.43	0	58.12
Constitutional Amendment	1.30	1.29	.25	8.07