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The Impact of Supreme Court Precedent in a Judicial Hierarchy

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Dedication

This dissertation is dedicated to the memory of Don Songer (1945–2015). Don was like family and had a tremendous impact on my life. He was a truly remarkable person, and his loss is felt every day.

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Abstract

My dissertation explores three core questions. First, how is information regarding the preferences of judicial actors communicated within the American federal judiciary? Second, can U.S. Supreme Court justices meaningfully signal their policy preferences, *vis-á-vis* their decisions, to judges on the U.S. Courts of Appeals? Finally, what impact do such signals have on the propensity of lower courts judges to follow the precedents of the Supreme Court? The primary objective of this project is to identify the conditions that either increase or decrease the likelihood that judges on the courts of appeals comply with the precedents of the Supreme Court. I develop a theory in which information regarding the preferences of judicial actors flows dynamically within the courts. Specifically, I theorize that key Supreme Court signals and circuit-level influences, together, drive circuit court attentiveness to precedents. Lower court application of the Supreme Court's decisions, in turn, communicate information up the judicial ladder of the policy position of precedents. My findings demonstrate that not only is the Supreme Court capable of communicating information, but that such cues substantially influence lower federal court decision making and their interpretations of precedent. My results notably depart from earlier findings in that they demonstrate that ideological preferences has a more nuanced impact on the adoption of the Court's precedents. This study contributes to our understanding of learning within the judicial hierarchy by identifying new mechanisms through judicial decision makers are able to communicate their legal and policy preferences. The implications of my analysis offer new insights on the influence of *stare decisis* and decision-making behavior within the U.S. Supreme Court and the U.S. Courts of Appeals.

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Introduction

> "Unless we wish anarchy to prevail within the federal judicial system, a precedent of this Court must be followed by the lower federal courts."
>
> – U.S. Supreme Court, *Hutto v. Davis* (1983)

The American federal judiciary is a hierarchical entity. Hierarchical institutions frequently encounter the challenge of the principal's inability to monitor the actions of its subordinates. The prodigious amount of decisions issued by the lower courts, each year, make oversight a near impossible task for the U.S. Supreme Court. Given finite resources, how can Supreme Court justices monitor, much less, compel the lower courts to follow their precedents? The literature on judicial impact suggests that Supreme Court justices are concerned with the long term policy implications of their decisions (Baum 2006; Caldeira, Wright, and Zorn 1999; Maltzman, Spriggs, and Wahlbeck 2000; Segal and Spaeth 2002). As such, policy oriented Supreme Court justices should be particularity interested in maximizing the impact of their decisions on the lower courts, because it is in these venues where most legal disputes are ultimately adjudicated. The most effective way, then, for the justices to achieve their policy goals is to monitor aggregate levels of lower court compliance with their precedents.

Regrettably, little empirical work examines the impact of Supreme Court decisions from an aggregate perspective. Instead, most existing studies on judicial impact address a very different question. Generally, the research question is a variant of

the one posed by a recent important contribution to the impact literature, "why do lower courts defy (or alternatively, comply with) high court precedent?" (Westerland et al. 2010, 892). That is, the focus of most judicial impact studies is to analyze individual judge or panel decisions to follow or shirk from Supreme Court precedent. The primary objective of most existing research designs, then, is to identify the causal factors that increase, or decrease, the likelihood of a judge, or lower court panel, to comply with the precedents of the Supreme Court. Such a focus, while informative, does not assess the cumulative impact of Supreme Court decisions on the lower courts. As a consequence, critical questions on the overall policy impact of the Court remain unexplored.

Empirical work on the American courts generally suggests that the lower federal appellate courts adhere to the preferences of their Supreme Court superiors. Following the seminal work by Songer, Segal, and Cameron (1994), a number of studies suggest that the interactions between the U.S. Supreme Court and lower federal appellate courts is one that evinces characteristics of a principal-agent relationship. These principal-agent accounts suggest that the Supreme Court effectively achieves its policy preferences by strategically monitoring and correcting non-compliant lower court decision-making behavior, especially from ideologically distant lower court panels (see Boucher and Segal 1995; Cameron, Segal, and Songer 2000; Lindquist, Haire, and Songer 2007). However, the assertion that U.S. Courts of Appeals decision making is a function of a principal-agent relationship is disputed by a number of studies. Studies that examine the degree to which lower federal court judges modify their behavior to avoid reversal by the Supreme Court find little empirical support for such theoretical propositions (Klein 2002; Klein and Hume 2003; Luse et al. 2009). Instead, analyses of voting patterns indicate that court of appeals judges more frequently vote their sincere policy preferences in the cases most likely to be reviewed by the U.S. Supreme Court than in other cases (Hettinger, Lindquist, and Martinek

2006; Bowie and Songer 2009). While these studies improve our understanding of the impact of Supreme Court decision making, many important questions remain. First, can Supreme Court justices meaningfully signal their legal and policy preferences *vis-á-vis* their precedents to judges on the lower courts, particularly the U.S. Courts of Appeals? Second, what impact do such Supreme Court signals have on the likelihood and the propensity of the circuits to rely on the precedents of the Court? Finally, how is information regarding the legal and policy preferences of judicial actors communicated within the judicial hierarchy?

A Framework for Learning in the Judicial Hierarchy

In this dissertation, I offer a theory in which information regarding the preferences of judicial actors flows: top-down, from the Supreme Court to the lower courts, bottom-up, from the lower courts to the Supreme Court, and horizontally, within and across the jurisdictions of the circuits. I theorize that key Supreme Court signals and important circuit-level influences, together, drive circuit court attentiveness to the High Court's precedents. The lower court application of the Supreme Court's precedents, in turn, communicate information up the judicial ladder of the policy position of precedents. This upward transmission of information helps inform justices with their *certiorari* decisions. In addition to these conventional channels, I argue that judges on the courts of appeals also convey vital information that is transmitted horizontally to other judges within the same circuit and to judges across the various circuits within the U.S. Courts of Appeals. My framework suggests that information regarding the preferences of judicial actors flows dynamically across these three channels in a feedback loop that ultimately shapes the breadth and scope of precedent.

I make the case that a series of signals by justices of the Supreme Court provide important informational cues that influence the propensity of judges on the U.S. Courts of Appeals to rely on a given precedent of the High Court. Specifically, I the-

orize that the Supreme Court's use of summary decisions, which explicitly reference a recent plenary precedent in close proximity to the time the precedent is issued signals the import of a precedent to judges on the courts of appeals. The intuition behind this expectation is that when the Supreme Court is willing to grant *certiorari* to one or several additional petitions to issue summary decisions in conjunction with a plenary ruling, the Supreme Court not only overturns additional appeals court decisions, but demonstrates its willingness to grant review and overturn similar decisions by the courts of appeals in the future. While the various signals by the Supreme Court likely influence circuit reliance on the Supreme Court's precedents, I argue that the impact of such signals is moderated, to some extent, by influences at the circuit-level. My theory is premised on the belief that rather than a deference to the perceived preferences of the justices, judges in the Courts of Appeals take their roles as arbiters of law seriously. I argue that an important mechanism through which appeals court judges respond to the precedents of the Supreme Court is based on norm of horizontal *stare decisis*. That is, a seemingly important factor in determining the likelihood that a circuit relies on a Supreme Court precedent is influenced by how previous panels within the Courts of Appeals have interpreted a given precedent. Previous research demonstrates that the 'vitality,' or strength of a precedent, consistently impacts how the lower federal courts respond to the Supreme Court's precedents in future decisions (see Hansford and Spriggs 2006; Westerland et al. 2010).

Precedents that have been interpreted positively compared to the frequency of negative treatments impact the 'legal strength' of a precedent. I similarly hypothesize that as the ratio of previous positive to negative interpretations of a Supreme Court's precedent by the circuits increases, the likelihood that a circuit will rely on a precedent increases. I believe that such 'vital' precedents are more likely to be cited and followed by subsequent panels of judges in cases that come before the U.S. Courts of Appeals. This is because when appeals court judges either positively or negatively apply a

Supreme Court precedent, their action impacts circuit law. Additionally, I make the case that circuits responding to a Supreme Court precedent that emerges from the review of the same circuit increases the probability of future reliance of a precedent. My intuition here is that when the Supreme Court issues a precedent that is based on a review of an earlier decision by a circuit, in issuing the new precedent the Supreme Court not only sets broad national policy, but its actions directly impact existing circuit-law within the circuit in question. As such, I expect that circuits responding to a Supreme Court precedent that originates from the same circuit to have a higher likelihood to rely on a new precedent compared to the other circuits. Moreover, I argue that differences in ideological preferences at the Supreme Court and circuit-level moderate the propensity of a circuit to rely on a precedent of the Supreme Court.

In order to test the theoretical propositions, I rely on three major sources of data for the analysis. I obtain information on the Supreme Court's formally argued decisions from the expanded U.S. Supreme Court database. I obtain data for the Supreme Court's summary decisions by collecting original data on every summary decision issued by the Court via the bound volumes of the 'United States Reports.' Finally, I obtain data on courts of appeals citations and interpretations of the Supreme Court's precedents via the *Shepard's Citations* service. To test the utility of the Supreme Court's summary decisions signals, I examine the universe of all Supreme Court decisions between 1994-2005. This period represents the longest natural era of the modern U.S. Supreme Court. I depart from previous research designs by altering the unit of analysis to 'circuit-year-Supreme Court precedent.' This means that for each Supreme Court precedent in the sample, I examine the responses of each circuit to each individual Supreme Court precedent every year a precedent is available within the sample. My analysis suggests that the presence of such a summary decision signal serves a positive monotonic influence on the propensity of the courts of appeals to rely on a precedent of the Supreme Court. The implications of this new theoretical

finding offers an important development for future inquiries on judicial impact and shed new light on our understanding of the policy impact of the Court.

The Supreme Court's Summary Decisions

A fundamental shortcoming of decision analyses of the U.S. Supreme Court is exclusion of a large portion of the Court's decision-making docket, which are the summary decisions of the Supreme Court. The general belief among many scholars is that summary decisions are inconsequential to decision making analysis. With rare exception, much of the literature has altogether ignored any potential effect of including summary disposition as part of Supreme Court analysis (but see Benesh 2008; Brenner and Stier 1996; Bruhl 2009; Songer and Lindquist 1996). This, I argue, is attributable to a number of factors. Foremost is the fact that the nature of the Supreme Court's summary decisions is generally misunderstood. For instance, the strongest proponents of the attitudinal model equate the majority of summary decisions to *certiorari* denials. In their seminal work on the attitudinal model, Segal and Spaeth (2002, 247) proclaim that the U.S. Supreme Court's summary decisions are "meaningless because they are the same as cases in which *certiorari* is denied". Segal and Spaeth's position on High Court's summary decisions is unambiguous and one that they consistently repeat in their work (see also Segal and Spaeth 1993, 1996). However, the position that summary decisions are the same as *certiorari* denials is difficult to reconcile in light of the fact that summary decisions include an explicit statement by the justices that the "petition for *certiorari* is granted review." To put it another way, it is theoretically not possible for Supreme Court justices to issue a summary decision without granting *certiorari*.

A more credible authority in explaining the nature of summary decisions is the Supreme Court itself. In *Lawrence v. Charter* the Court provides important insight on the justices utility of these decisions. The justices state that a grant, vacate, and

remand (GVR) order, the most frequently employed form of summary decision, is the process to vacate "any judgment, decree, or order of a court lawfully brought before it for review" (166). The opinion in *Lawrence* adds that "this Court has the power to remand to a lower federal court any case raising a federal issue that is properly before us in our appellate capacity" (163). Summary decisions have been issued "in light of a wide range of developments, including our own decisions, State Supreme Court decisions, new federal statues, administrative reinterpretations of federal statues, new state statues, [and] changed factual circumstances" (164). In *Lawrence*, the justices go further to explain the use of summary decisions as a means to "[conserve] the scarce resources of this Court that might otherwise be expended on plenary consideration" and to "[alleviate] the potential for unequal treatment that is inherent in our inability to grant plenary review of all pending cases raising similar issues" (163).

The justices of the Supreme Court maintain that summary decisions, like all other cases granted *certiorari*, are granted review because the Court has decided that there are compelling reasons for it to take action. The implication of this argument is that in the absence of such compelling reasons, the Court would deny review rather than granting *certiorari* and then issuing a summary decision. The grant of review on *certiorari* separates both summary and plenary decisions from the thousands of *certiorari* petitions the Court receives and simply denies. More substantively, a *certiorari* denial allows the lower court decision to stand, whereas, a summary decision frequently disturbs the lower court by either vacating or reversing the previous decision of the court below. Thus, a denial of *certiorari* means that the Supreme Court does not create national precedent, the outcome for the parties remains unchanged, and the precedent established below as binding circuit law remains in place. By contrast, most summary decisions mean that the previous outcome no longer holds and a binding circuit precedent no longer has the force of law.

Another way to differentiate between denials of *certiorari* and summary decisions

is that while a *certiorari* denial has no effect on other decisions by either the same or other lower courts, summary decisions have a broader effect on the lower courts. For instance, the Supreme Court's summary decision in *Youngblood v. West Virginia*[1] vacates and remands an earlier ruling by the Supreme Court of Appeals of West Virginia. While this summary decision only disturbs the ruling of the court directly below, other district, circuit, and state courts either cite or follow the *Youngblood* decision on more than 150 occasions. This is a clear indication that lower courts in our judicial system consider summary decisions to be important relevant precedent. The Court's summary decision in *Lawrence* has similarly been cited by other lower courts. In fact, some lower courts interpret the *Lawrence* decision to give all appellate courts the authority to vacate (or reverse) and remand, any decision that the lower court believes to be incorrectly decided, has a strong likelihood to be erroneous, or does not take into consideration a recent intervening decision that could affect its outcome.

The Supreme Court's summary decisions are binding decisions that declare the prior lower court decision null and void. In *Hicks v. Miranda* the justices unambiguously declare that the "lower courts are bound by [the] summary decisions of this Court." As a matter of law, no party or court may rely on the prior precedent of the lower court which has been reversed or vacated by a Supreme Court summary decision. Through a summary decision the Supreme Court is instructing a lower court to take two actions. One, the lower court must issue a new decision, because the prior decision is no longer in force. Second, upon reconsideration, the lower court must address the precedent the Supreme Court references within its summary decision. As such, summary decisions provide lower court judges with important information on the legal authority to consider prior to issuing a new decision while simultaneously

[1] While *Youngblood* emanates from the Supreme Court reviewing a state court decision, the Supreme Court's actions in this case demonstrates its ability to review and issue important summary decisions from both state and federal courts.

communicating that the justices are more inclined to review, vacate, and remand lower court decisions in a particular area of law.

Given the discussion above, I argue that the Supreme Court's summary decisions are an important instrument for the Court's commitment to achieving legal consistency, legitimizing newly created precedent and correcting egregious legal errors by the lower courts in determining case outcomes and their interpretations of Supreme Court precedent. Specifically, I contend that the justices employ summary decisions as a low-cost alternative to granting a case formal review in pursuit of their legal policy goals. Since there are a finite number of sessions in which the justices may schedule and hear oral arguments to an accepted petition, the justices must be strategic in scheduling oral arguments for cases that hold the greatest import and cases where the application of the law is unclear. However, in instances where the direction of the law is clear but lower court responses are not in-line with the preferences of the justices, the Court may grant *certiorari* to a theoretically infinite number of petitions without expending their finite resources and systematically correcting the non-compliant actions of the lower courts. While these summary decisions come at a low cost they also provide a smaller policy benefit to the justices, in that summary decisions do not set broad national precedent. However, the aggregate impact of the collection of the Court's summary decisions is one that can broaden the scope of a given precedent and convey important information about the preferences of the justices to judges on the lower courts.

The efficacy of the Supreme Court's summary decisions to influence future judicial decision-making behavior and attentiveness to the Court's precedents remains unresolved and engenders some disagreement among judicial scholars. One view is that the Supreme Court's summary decisions are relatively minor, inconsequential decisions limited to a single case. This view suggests that beyond the instant case, a Supreme Court's summary decision has no legal value and does not impact attentive-

ness to the Court's precedents (i.e., see Segal and Spaeth 2002). The belief is that each Supreme Court summary decision should be viewed in isolation and when compared directly to a formally argued decision of the Court, the impact of any given summary decision is relatively minor. This conceptualization represents the traditional approach to modeling the impact of the Supreme Court's summary decisions. I argue that an alternative way to gauge the impact of the Supreme Court's summary decisions is to not consider these summary decisions in isolation but rather their collective impact. I argue that because the Supreme Court often issues several summary decisions "in light of" a given precedent in a given area of law there is a cumulative effect of these summary decisions. When the U.S. Supreme Court grants *certiorari* to several additional petitions, nullifies the previous lower court ruling, and directs lower court judges to issue a new ruling "in light of" of a specific plenary precedent this has important implications for the overall impact and attentiveness to a given precedent of the Court. In fact, a recent study by Benesh et al. (2014) finds that in 92% of the cases remanded to the courts of appeals with a GVR, the circuit court responded by issuing a new opinion that substantively interpreted the "in light of" precedent referenced within the GVR (171). The practical effect of this sequence of events is for appeals court judges to apply the Supreme Court's precedent to a wider set of cases as they address the Supreme Court's remands. Thus, the Supreme Court's summary decisions appear to be a useful mechanism for the justices to achieve greater adherence to the their precedents by the lower courts.

Overview of the Dissertation

While compliance and implementation of legal precedents is the subject of a growing number of studies, scholars have paid relatively scant attention to the cumulative impact of the Supreme Court on the lower courts. Moreover, little work highlights the process of learning within the judicial hierarchy. In the following chapters, I offer

a new theory and new empirical tests that provide novel insights on the nature of the relationship between the U.S. Supreme Court and the U.S. Courts of Appeals. In Chapter 2, I present a theoretical framework on how information flows dynamically within the federal judiciary that helps shape the scope of legal precedents. My theoretical starting point is grounded in the assumption that U.S. Supreme Court justices are policy entrepreneurs who are attentive to aggregate patterns of lower court implementation of their decisions. I argue that various explicit and implicit signals by the U.S. Supreme Court influence the decision-making behavior of judges on the U.S. Courts of Appeals. Circuit responses to the Supreme Court's precedents, in turn, provide important information to the justices from which they can strategically audit and reverse non-compliant decisions. From the general theoretical framework, I derive a number of new, falsifiable propositions, which I assess within the three empirical chapters of the dissertation.

In Chapter 3, I investigate various signals sent by the justices on the U.S. Supreme Court to judges on the U.S. Courts of Appeals. Principally, I argue that the U.S. Supreme Court's reversals convey important information on the preferences of the justices *vis-á-vis* their precedents. I hypothesize that policy oriented justices with finite resources can effectively monitor the lower courts by being attentive to aggregate trends of compliance. I make the case that Supreme Court justices can use this bottom-up flow of information to monitor the actions of individual circuits and then review and sanction the circuits that are least supportive of the Court's preferences. In doing so, the justices can demonstrate their willingness to sanction lower court behavior that consistently deviates from its legal and policy preferences. My results demonstrate Supreme Court reversals, indeed, exert a strong positive effect on future circuit court adherence to the Court's precedents.

Chapter 4 examines the efficacy of the Supreme Court's signals on future courts of appeals attentiveness to its precedents. More specifically, I investigate the prob-

ability of judges on the U.S. Courts of Appeals to either comply or shirk from the preferences of the Supreme Court in light of the various Supreme Court signals. The key expectation is that lower court implementation of Supreme Court precedent is most likely when the Supreme Court issues one or more summary decisions "in light of" a recently announced formally argued precedent. Further, within this chapter, I also consider a broader theoretical perspective in which influences at the circuit-level, such as ideological preferences of the judges within a given circuit, constrain the impact of the Supreme Court's signals. I design a new test for gauging the impact of Supreme Court signals on the principal circuit from which the justices draw the case against the sister circuits. My analysis demonstrates that not only is the Supreme Court capable of communicating information regarding their preferences but it is also able to substantially increase the probability with which all circuits comply with its precedents in the presence of such signals. The results suggests that the circuits learn about the policy space of precedents from both the Supreme Court and each other.

Chapter 5 explores the causal mechanisms that influence circuit court adherence with the Supreme Court's precedents. A shortcoming of previous analyses is the inability to address concerns of spuriousness and lack of causal tests. The lower courts have a general tendency to behave as good agents even in the absence of legal and policy directives from the Supreme Court. Therefore, it is necessary to assess whether signals by the Supreme Court have a causal relationship with the frequency with which the lower courts implement the precedents of the Court. This chapter provides both qualitative and quantitative evidence in support of the causal claims. My results demonstrate that in the absence of key Supreme Court signals, the Court's precedents are implemented with a substantively lower propensity within the decisions of the U.S. Courts of Appeals. Chapter 6 concludes with a discussion of other important findings, avenues for future research, and the theoretical and empirical implications of this project.

Chapter 2

A Theory on the Dynamic Flow of Information in the American Federal Judiciary

At the center of judicial politics is the analysis of judicial decision-making behavior. Most frequently the focus of such analyses are decisions by the U.S. Supreme Court (e.g., Baird 2007; Baum 1997; Caldeira and Wright 1988; Hall 2010; Pacelle, Curry, and Marshall 2011; Perry 1991; Pritchett 1948; Schubert 1965, 1974; Segal, Spaeth, and Benesh 2005). A voluminous literature examines the factors that influence the behavior of the justices of the U.S. Supreme Court. These studies find that several factors influence the decisions of Supreme Court justices, which include ideological preferences, legal and precedential stimuli, institutional constraints, and strategic considerations. A very large number of studies suggest that ideologically driven, policy-oriented preferences strongly influence on the decision-making behavior of Supreme Court justices (see Collins 2008; Rohde and Spaeth 1976; Segal 1997; Segal and Spaeth 1993, 1996, 2002; Spaeth 1979; Spaeth and Segal 1999). More recent work demonstrates that law and precedent exert an important influence on the decisions of the justices (see Bailey and Maltzman 2008; Bartels 2009; George and Epstein 1992; Hansford and Spriggs 2006; Lax 2007; Lindquist and Klein 2006; Richards and Kritzer 2002; Segal 1984; Wedeking 2012). Yet other studies suggest that strategic and institutional influences drive the decision-making behavior of Supreme Court justices (see Epstein and Knight 1998; Hammond, Bonneau, and Sheehan 2005; Murphy 1964; Randazzo and Waterman 2011, 2014; Wahlbeck, Spriggs, and Maltzman 1998).

Although the U.S. Supreme Court is the focus of most judicial studies, much of the law is adjudicated within the U.S. Courts of Appeals (Hettinger, Lindquist, and Martinek 2006; Klein 2002; Posner 2010). This is due to the fact that intermediate appellate court judges are effectively the final arbiters of most legal appeals within the federal courts (George 1999; Howard 1981). Given this reality, several studies on decision-making behavior within the U.S. Courts of Appeals indicate that ideological preferences influence the behavior of appeals court judges (Boyd, Epstein, and Martin 2010; Songer 1982; Songer and Haire 1992). Zorn and Bowie (2010) find that while ideological influences are prevalent in the lower federal courts, the impact of attitudes is less pervasive at lower levels of the judiciary. Most judicial scholars are in agreement that while ideology has some impact on decisions by the U.S. Courts of Appeals, its impact is not as vigorous as it is within the decision making behavior of the U.S. Supreme Court. Indeed, a large body of work confirms support for the the strength of legal influences in motivating the decisions of judges on the U.S. Courts of Appeals (Benesh 2002; Cross 2003, 2007; Klein 2002; Songer and Haire 1992; Songer, Sheehan, and Haire 2000, see). For instance, Cross and Tiller (1998, 2155) note that judges on the "lower courts are presumed to adhere to the self-enforcing principle of *stare decisis* and to apply the doctrines of higher courts to the particular facts of the underlying case." Corroborating this perspective are a series of interviews conducted by Klein (2002) and Bowie, Songer, and Szmer (2014) where circuit court judges claim that law and precedent exert a forceful influence, which often outweighs ideological considerations in motivating the behavior of judges on the U.S. Courts of Appeals. Yet other studies find that federal appellate court judges face a greater number of institutional constraints, which includes an adherence to collegial norms (Hettinger, Lindquist, and Martinek 2003*a*,*b*, 2006; Kastellec 2011; Kornhauser 1992; Lindquist, Martinek, and Hettinger 2007), large caseloads (Bowie, Songer, and Szmer 2014; Klein 2002; Songer, Sheehan, and Haire 2000) and the likelihood of review, either *en banc*

(Blackstone and Collins 2014; Clark 2009; Giles et al. 2007; Giles, Walker, and Zorn 2006) or by the U.S. Supreme Court (Black and Owens 2012; Caldeira, Wright, and Zorn 1999; Haire, Songer, and Lindquist 2003; Lax 2003; Lindquist, Haire, and Songer 2007; Songer, Ginn, and Sarver 2003; Songer, Segal, and Cameron 1994). The insights generated from these studies provide researchers with a thorough understanding of the key influences on decision-making behavior within these courts.

While scholars generally tend to examine decision-making behavior within the U.S. Supreme Court or the U.S. Courts of Appeals, in isolation, recent research sheds important light on the nature of the relationship among these courts. Studies of lower court interactions with the U.S. Supreme Court overwhelmingly suggest that the lower federal appellate courts are highly responsive to the precedents of the U.S. Supreme Court (Clark 2009; Corley 2009; Fowler et al. 2007; Klein and Hume 2003; Pacelle and Baum 1992; Songer, Segal, and Cameron 1994; Westerland et al. 2010). Judge Posner (2010, 145) explains that the reason for such constancy is due to the fact that "judges are strongly motivated to adhere to precedent, not only because they want to encourage adherence to the precedents they [themselves] create" but also "because they want to limit their workloads." Posner adds that, "adherence to precedent does this both directly, by reducing the amount of fresh analysis that the judges have to perform, and indirectly, by reducing the number of appeals" that would originate from non-adherence to the Supreme Court's precedents. To be sure, in a prominent recent analysis, Hansford and Spriggs (2006) find that the U.S. Supreme Court's preferred policy positions and treatment of its own precedents largely influence future lower court responses to precedent. Other empirical work on judicial impact also demonstrates that the lower federal courts frequently follow, and rarely defy the Supreme Court in terms of explicitly challenging the broader authority and legitimacy of a Supreme Court precedent (Benesh 2002; Benesh and Reddick 2002; Canon and Johnson 1998; Johnson 1979; Luse et al. 2009; Songer 1988;

Songer and Haire 1992; Songer and Sheehan 1992; Wahlbeck 1998). Thus, the general conclusion derived from these studies is that a principal-agent relationship is in effect within the American judiciary. These important studies are informative, but how exactly do Supreme Court justices communicate their preferences to judges on the lower courts? Additionally, are potential signals by the justices capable of increasing lower court compliance with the Supreme Court's decisions?

A key assumption within the existing impact literature is that Supreme Court justices are policy-maximizing individuals who are interested in the broader impact of their decisions especially within the judicial hierarchy. However, a pervasive problems in most hierarchical organizations is the inability of the principal to monitor the actions of all of its subordinates. The U.S. Supreme Court similarly faces significant resource constraints that limit the ability of the Supreme Court to monitor the actions of every three-judge panel on the courts of appeals. How then can policy oriented justices ensure that their preferences are largely followed by the courts below? I provide a framework in which the justices of the U.S. Supreme Court are able to signal their preferences regarding their precedents and demonstrate their willingness to sanction lower court behavior that deviates from its legal and policy preferences. Within this framework I also argue that the justices rely on important informational cues from judges on the U.S. Courts of Appeals and monitor the actions of courts of appeals by circuit rather than three-judge panels and then review and sanction the circuits that are least supportive of the Court's preferences. I then provide a broad framework in which I argue that information regarding legal precedents flows in not one, but three different directions. I offer a theory in which information regarding the preferences of judicial actors flows: (1) top-down, from the U.S. Supreme Court to the lower courts, (2) bottom-up, from the lower courts to the to the Supreme Court, and (3) horizontally, across the jurisdictions of the circuits within the U.S. Courts of Appeals. I argue that all three of these channels together influence the

development of legal doctrine within the federal judiciary. My theoretical framework is premised on the belief that informational cues from Supreme Court justices and judges on the courts of appeals provide decision makers at each level of the judiciary with opportunities to learn, which impacts future responses and attentiveness to legal precedents. From this general framework, I develop more precise theoretical propositions within the empirical chapters of this dissertation.

Information Diffusion and Learning in the Judicial Hierarchy

Students of the American judiciary have long sought an answer to the puzzle of judicial behavior. What factors drive the decision-making behavior of U.S. Supreme Court justices? Similarly, what elements influence the decisions of judges on the U.S. Courts of Appeals? A related puzzle that emerges from these questions is what factors determine attentiveness to legal precedents and how does law develop within the judicial hierarchy? Finally, if the U.S. Supreme Court is indeed 'supreme' and all decisions by it binding on the courts below, why do judges on the U.S. Courts of Appeals frequently follow some Supreme Court precedents but not others?

Previous studies demonstrate that both U.S. Supreme Court justices and judges on the U.S. Courts of Appeals have at least some policy preferences that they attempt to pursue within their decisions (see Baum 1997; Brenner and Stier 1996; Epstein and Knight 1998; Hettinger, Lindquist, and Martinek 2006; Maltzman and Wahlbeck 1996; Mishler and Sheehan 1993; Owens and Wedeking 2012; Segal and Spaeth 2002; Spaeth and Segal 1999). A growing number of studies suggest that while these judicial decision-makers have policy goals their policy ambitions are constrained, if not extensively, to some minor extent, by the law (see Bailey and Maltzman 2008, 2011; Bartels 2009; Kritzer and Richards 2005; Klein 2002; Lindquist and Klein 2006; Maltzman, Spriggs, and Wahlbeck 2000; Richards and Kritzer 2002; Songer and Lindquist 1996). What then drives attentiveness to legal precedents? Studies centering on lower court

and Supreme Court interactions are not uniform in their beliefs about the nature of the association and the mechanisms that entrench the durability of legal precedents. Existing studies, while informative, are often at odds with each other regarding the influence of legal and policy preferences at each level and the transmission of this information. There are two primary sets of accounts that attempt to explain how decision-makers at different levels of the judicial hierarchy learn and communicate their preferences.

Top-Down Influences within the Judicial Hierarchy

The traditional view is that the primary mechanism with which information is transmitted about legal and policy preferences is that the information flows from the top down the judicial ladder. That is, key information about the breadth and scope of a legal precedent flows from the U.S. Supreme Court down to the judges on the U.S. Courts of Appeals. This information can be interpreted as a number of explicit or implicit signals by the justices to circuit judges on how to apply the Supreme Court's precedents. For instance, one such signal is Supreme Court vitality, which is a measure that captures the propensity with which the U.S. Supreme Court positively or negatively applies its own precedents. Supreme Court vitality is the net difference between the total number of positive minus the total number of negative applications of a Supreme Court precedent in subsequent Supreme Court decisions. Hansford and Spriggs (2006) find that the Supreme Court's preferred policy positions and applications of its own precedent strongly influence both future Supreme Court and lower court responses to precedent, even after controlling for ideology (see also Corley 2009; Corley and Wedeking 2014; Kassow, Songer, and Fix 2012; Spriggs and Hansford 2002; Wedeking 2012; Westerland et al. 2010). Similarly, the important work by Fowler et al. (2007) demonstrates that the lower courts are significantly more likely to apply a Supreme Court precedent in subsequent cases if the precedent

is embedded in a broad and endogenous network of Supreme Court decisions (see also Fowler and Jeon 2008). Building on these existing theoretical frameworks, my expectation is that positive applications of the Supreme Courts precedents, by the Court itself, should serve as an important signal to lower court judges that a given Supreme Court precedent is still relevant, important, and good law. I contend, however, that signals such as precedent vitality are markedly conditioned by factors at the lower court level. I expand on the premise of this important institution later on in this chapter.

Other signals or informational cues that the justices provide to lower court judges include the size of the majority coalition with which a Supreme Court decision is announced. For instance, a unanimously decided Supreme Court decision communicates to lower court judges that the justices are in agreement on the disposition of a particular case and how the given precedent should be applied in similar factual situations. A unanimous decision also conveys that if a panel of lower court judges shirks from such a precedent there is a higher probability that the justices will reverse a lower court decision if it is granted review. By contrast, a 5-4 Supreme Court decision that is split along ideological lines conveys the information that there is a lack of consensus on how to apply a given precedent in related disputes. Previous research in fact suggests that increases in the size of the voting coalition that issues a precedent has a demonstrable impact on how much support a Supreme Court decision receives from the lower courts (Canon and Johnson 1998; Collins 2011; Corley, Steigerwalt, and Ward 2013; Hansford and Spriggs 2006; Johnson 1979, 1987; Spriggs and Hansford 2001; Wedeking 2012). In particular, Kassow, Songer, and Fix (2012) find that for state high court application of Supreme Court precedent, the margin by which the justices issue a decision predicts the likelihood of positive treatment. Similarly, Corley (2009) finds that plurality decisions by the U.S. Supreme Court have a significantly lower likelihood of positive treatment by the U.S. Courts of Appeals compared

with decisions that are based on majority opinions. Other analyses note that the size of the majority coalition that issues a given precedent may also signal that the Court is less likely to overturn or modify precedent in subsequent decisions (Benesh and Reddick 2002; Black and Spriggs 2013; Corley 2010; Spriggs and Hansford 2001).

Split decisions often lack clarity and dissents may invite lower courts to not comply because dissents offer an alternative rationale for a lower court to proceed that is separate from the majority opinion. Unanimous decisions provide the greatest clarity and constrain judges from maneuvering and legally distinguishing the precedent. Thus, compliance should be highest in unanimous opinions and should require fewer exposures for positive treatment compared to non-unanimous decisions (i.e., any decision with at least one dissent). Conversely, split decisions (i.e., 5-4 decisions) should take longer for lower courts to comply with and should require a comparatively higher number of exposures for positive application than a unanimous decisions by the Supreme Court. As such, I argue that Supreme Court justices implicitly signal the clarity of a given precedent by the margin with which they adopt a precedent. The intuition behind this expectation is that a split decision may signal extreme ideological divisiveness or signify problems with the legal authority on which the precedent is grounded and, as such, may provide less purchase for judges to rely on such divided precedents in future decisions. Therefore, there is sufficient reason to expect that the size of the majority coalition exerts some influence on lower court utility of the Supreme Court's precedents. My theory incorporates this argument, in that I expect Supreme Court decisions issued with a broader coalition of justices to positively influence lower court adoption of the High Court's precedents.

Top-down cues also include whether the justices explicitly alter existing precedent, which provides lower court judges with new guidance on the logic to resolve similar disputes. Corley (2010) argues that the formal alteration of precedent by the U.S. Supreme Court, which she refers to as measure of legal salience, sends a strong signal

to the lower courts that the lower courts should cease to rely on a prior precedent announced by the Court. An empirical analysis by Wahlbeck (1998) similarly finds that such an explicit signal is received and promptly followed by the lower courts in the area of common law doctrines of nuisance, suggesting a strong "norm" of lower court compliance. Moreover, Benesh and Reddick (2002) provide compelling evidence that a signal by the justices usually receives clear support from the lower courts and that once the Supreme Court specifically overrules or alters a precedent, the lower courts cease to adhere to a given Supreme Court decision. Specifically, these scholars find that when the Supreme Court overrules an older precedent the circuits quickly comply compared to when the Court overrules a more recent decision. Nevertheless, in both instances the lower courts follow the Supreme Court's lead. The overturning of a precedent, however, is a relatively rare event. In the vast majority of its cases the U.S. Supreme Court affirms existing precedent.

Table 2.1: Alteration of Precedent by the U.S. Supreme Court

Court	**Affirmed**	**Altered**	**Altered %**
Vinson Court	799	12	1.48
Warren Court	2151	46	2.09
Burger Court	2711	56	2.02
Rehnquist Court	1983	45	2.22
Roberts Court	780	15	1.89
Total	**8424**	**174**	**2.02**

Note: Data obtained from the U.S. Supreme Court Database (Spaeth et al. 2013). The Roberts Court data covers all decisions until the 2014 term, which covers the full scope of the current database.

Table 2.1 presents the frequency of formal alterations to its precedents by U.S. Supreme Court era. As the data indicate, the justices affirm their precedents in approximately 98% of their decisions. These trends suggest extensive continuity in the High Court's precedents even when the membership of the Court changes. I

contend that when the Supreme Court explicitly alters a precedent, such an action has important implications for motivating lower court decision-making behavior. My intuition is that when the Supreme Court overturns or formally alters a precedent, lower court judges should (1) cease relying on the altered Supreme Court precedent, and (2) strongly adhere to the new precedent in similar cases that come before the U.S. Courts of Appeals. It is worth noting that lower court application of altered precedent may not necessarily be immediate due to a learning period. Lower courts take time to develop initial circuit precedent. Circuits may also employ a 'wait-and-see' approach where judges wait to see how other circuits initially treat a new Court precedent. Such an approach would favor many judges initially distinguishing or altogether omitting references to the altered precedent. However, it is reasonable to expect that any adherence to the altered precedent should cease immediately. Altering a precedent certainly provides an important cue to judges on the lower courts.

The Supreme Court reversing a lower court decision also conveys potentially important information to judges on the U.S. Courts of Appeals. Table 2.2 presents the frequency with which the Supreme Court reverses the total number of decisions it reviews from the U.S. Courts of Appeals. The data highlight the reality that when the justices grant *certiorari* to a decision from the U.S. Courts of Appeals, the most likely outcome is a reversing, rather than upholding, the lower court decision. Even though a growing number of studies conclude that a fear of reversal by the U.S. Supreme Court does not influence lower court decison-making behavior (see Bowie and Songer 2009; Hettinger, Lindquist, and Martinek 2006; Klein 2002; Smith 2014; Songer, Ginn, and Sarver 2003). For instance, (Klein and Hume 2003) find that the probability a particular dispute is reviewed by the U.S. Supreme Court has no meaningful relationship to whether a lower court panel issued a decision in a manner that is consistent with the ideological preferences of the contemporary Supreme Court. The notion that the votes of inferior court judges are not swayed by the threat of

Supreme Court reversal is one that should be distinguished from the argument that Supreme Court reversals of lower court decisions can influence subsequent decisions by judges on the U.S. Courts of Appeals. When Supreme Court justices review and explicitly reverse a lower court decision, the justices are communicating to the panel of lower court judges that their decision is not in-line with the policy preferences of the principal. When the Supreme Court issues a decision by reversing a lower court, in addition to establishing broad national policy, the justices simultaneously alter inter-circuit precedent within the instant court that is reversed. A Supreme Court reversal is a particularly consequential action by the justices, as it communicates that not only did the lower court get it wrong, but that reviewing and reversing the decision was important enough for the Court to expend its limited resources. Therefore, when Supreme Court justices explicitly reverse a decision by the U.S. Courts of Appeals, lower court judges should more frequently comply with such a precedent compared to when the Court affirms an existing precedent.

Table 2.2: Reversal of U.S. Courts of Appeals Decision by the U.S. Supreme Court

Court	**Decisions Reviewed**	**Reversed**	**Reversal %**
Vinson Court	452	260	57.52
Warren Court	1170	780	66.67
Burger Court	1681	1124	66.86
Rehnquist Court	1468	928	63.22
Roberts Court	629	448	71.22
Total	**5400**	**3540**	**65.56**

Note: Data obtained from the U.S. Supreme Court Database (Spaeth et al. 2013). The Roberts Court data reflects all decisions until the 2014 term, which covers the full scope of the current database. The reversals figure includes decisions that are vacated and remanded.

As the discussion above indicates, Supreme Court justices are capable of communicating their preferences regarding their precedents to judges on inferior courts in a variety of ways. Building on these accounts, I contend that there are other means

through which the justices can effectively transmit their preferences and increase the level of compliance with their decisions. As I allude to earlier in this dissertation, one key mechanism through which the justices can compel lower court judges to rely on a given precedent is through the Court's summary decisions. The potential of these summary decisions to serve as an additional vehicle to convey the legal preferences of the justices is lacking from the theoretical literature. I argue that an important action Supreme Court justices can take to enhance the impact of a particular precedent is to issue one or more summary decisions "in light of" of a formally argued precedent. I argue that when the Supreme Court issues a summary decision, it serves as a directive to judges on the U.S. Courts of Appeals. The Court's summary decisions, most often, vacate a lower court decision and explicitly mandate that lower court judges reconsider their earlier decision, in light of a new precedent announced by the Court. By nullifying an earlier lower court decision and referencing a specific precedent that should be considered, the justices communicate that a given Supreme Court precedent is widely applicable to diverse factual situations in cases that are likely to come before the federal courts of appeals and should be more broadly applied compared to precedents with no associated summary decisions. Moreover, the deliberate action by the Court in granting multiple petitions *certiorari* to issue each summary decision signals an increased willingness of the justices to grant review to future petitions that raise similar legal arguments but lack consideration of the Court's new precedent. Thus, when Supreme Court justices grant *certiorari* to more than one petition, the judges on the circuit courts should interpret the actions of the Supreme Court as a stronger likelihood that related decisions by circuit panels will be granted review, hence offering inferior court judges comparatively less agency to shirk. Table 2.3 presents a comparison of the Supreme Court' summary and formally argued decision. These data highlight the reality that in light of a growing docket, the contemporary Court is increasingly reliant on its summary decisions.

Table 2.3: Decisions by the U.S. Supreme Court, 1995-2005

Decision Type	**Count**
Summary Decisions	1583
Formally Argued Decisions	865
Total	**2448**

Note: Original data collected from the volumes of the United States Reports. The 1995-2005 terms reflect the years that are analyzed within the empirical chapters of the dissertation.

An important implication of the Supreme Court issuing one or more summary decisions is quicker dissemination and diffusion of information regarding the Supreme Court's precedents within the lower courts. When the Supreme Court issues a new precedent following oral arguments, the Court typically reviews a single decision by one of the circuits below. Thus, in issuing its decision and setting new national precedent the Court either affirms or alters an earlier decision by one of the twelve circuits. This has direct implications for circuit law within the circuit in question and all judges within the affected circuit should be expected to quickly become aware of the Court's new precedent and should quickly begin applying the precedent in relevant, future decisions. By contrast, judges in all other circuits should be expected to apply the same precedent more slowly as these judges and their clerks become aware of the new rule and its potential applicability over time. However, when the Supreme Court issues one or more summary decisions associated with a formally argued precedent, the Court often issues the summary decision by reviewing a case from a different circuit. Since most Supreme Court summary decisions involve a remand back to the circuit, the practical effect of the summary decision is affirmation or alteration of circuit law for another circuit with an added directive to consider the authority of a new precedent. Thus, a Supreme Court precedent with one or more summary decisions directly impacts inter-circuit law within at least two circuits, which allows for quicker dissemination of information and a greater propensity that a

given Supreme Court precedent is adopted compared to when no summary decisions accompany a precedent. Expanding on this notion, I contend that as the volume of the Court's summary decisions increase and as the number of jurisdictions (i.e., the number of circuits) from which the Court draws a case, to issue each summary decision increase, I expect the preferences of the justices *vis-á-vis* their precedents to more expeditiously diffuse within the judicial hierarchy.

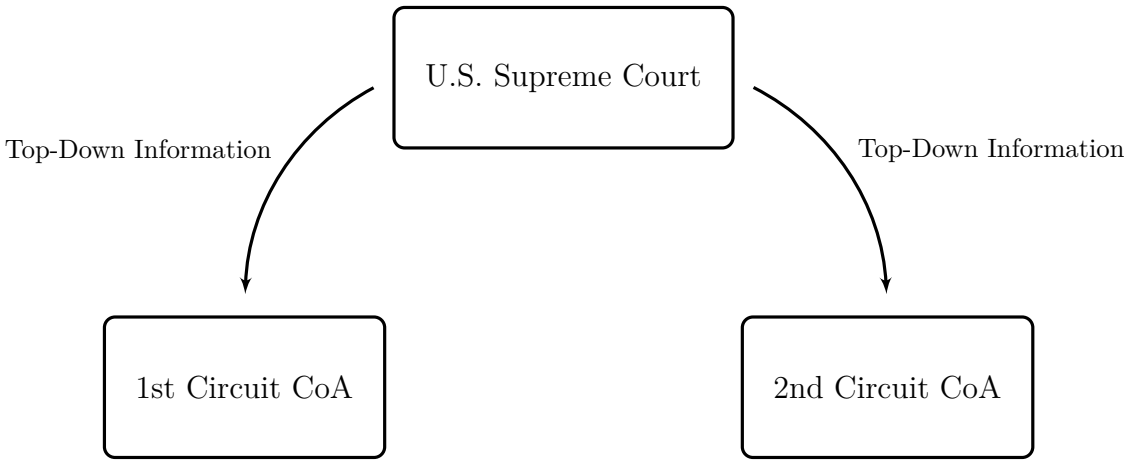

Figure 2.1: Top-Down Transmission of Information

Yet additional signals from the Supreme offer explicit guidance on how and when to apply precedents within the content of the majority opinion, and separate opinions that provide information on conditions where distinguishing or deviating from the fundamentals of a given precedent may be appropriate (see Benesh and Reddick 2002; Corley 2009). The key notion here is that these explicit and implicit signals convey information that flows downward to the circuits and influences the decision-making behavior on the U.S. Courts of Appeals in subsequent cases. Indeed, a number of studies demonstrate that the lower federal courts adhere to the legal and policy preferences of the U.S. Supreme Court (see Clark 2009; Fowler et al. 2007; Haire, Songer, and Lindquist 2003; Black and Owens 2012; Randazzo 2008; Songer, Segal, and Cameron 1994). Figure 2.1 graphically presents how information flows top-

down within the judiciary hierarchy. As the preceding discussion indicates, the U.S. Supreme Court, is capable of transmitting various important informational cues via explicit and implicit signals down the judicial ladder.

Bottom-Up Influences in the Judicial Hierarchy

A second view on how legal doctrine and law evolves is that information flows from the bottom up. That is, judges on the U.S. Courts of Appeals in their collective application of Supreme Court precedents, the content of their majority opinions, the content of separate opinions, dissenting votes, decision *en banc*, and conflict among the circuits transmit important information to Supreme Court justices on how the lower courts may apply a given precedent in future cases and the lack of uniformity in lower court application of the High Court's precedents. Westerland et al. (2010) find that it is positive and negative interpretations of Supreme Court precedents at the circuit level that most strongly influence the manner of future circuit applications of precedent. Recent work by Corley, Collins, and Calvin (2011) employs a novel approach by relying on plagiarism software to assess just how much of the lower court language the Supreme Court borrows in issuing a new precedent. Their analysis suggests that the content of opinions at the circuit level are often adopted within the future opinion of the U.S. Supreme Court. This suggests that when Supreme Court justices make their decisions they are relying at least in part on some of the arguments from the lower court decision. Thus, it appears the the Supreme Court's precedents are often directly influenced by information communicated from below. In addition, Clark and Kastellec (2013) find that circuit conflict and percolation at lower levels of the judicial hierarchy provides the justices with vital information on what cases to ultimately review. Taken together, the argument proffered from this series of studies is that the causal arrow can point in the other direction and that information is transmitted up the judicial hierarchy from the lower courts as Figure 2.2 depicts.

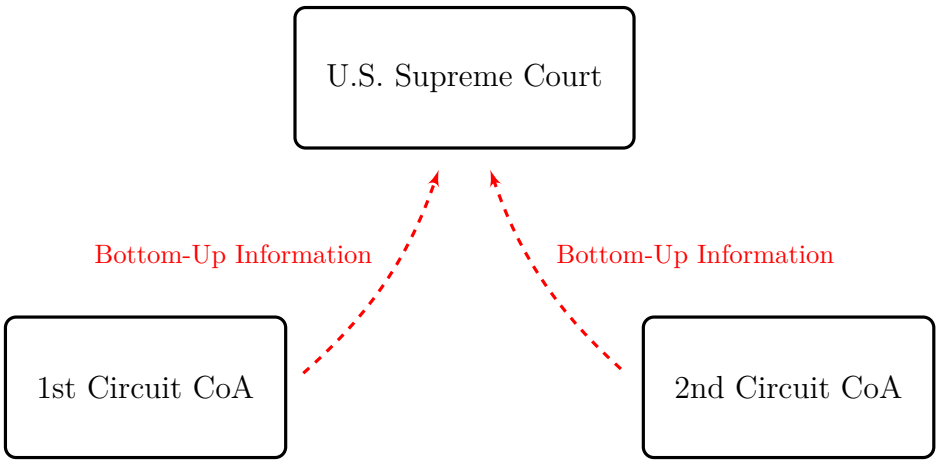

Figure 2.2: Bottom-Up Transmission of Information

Several scholars explore whether a lower court judge's decision to dissent serves as a signal to either the circuit, to consider a decision *en banc*, or for the U.S. Supreme Court, to review the lower court panel decision. George (1999) finds that dissents as signals are effective in securing *en banc* circuit review. In a different study, Van Winkle (1997) finds that there is strong evidence that appeals court judges use dissent to signal the need for review by the Supreme Court. Cross and Tiller (1998) suggest that the potential for the use of dissent as a signal for review is used by minority judges on a panel who agree with a Supreme Court precedent to prevent their colleagues in the panel majority from following their ideological preferences that are divergent from the precedent. A number of other studies find that the presence of panel conflict (i.e., dissents) have a statistically significant and positive effect on the increased likelihood of *en banc* or Supreme Court review (see Bowie and Songer 2009; Caldeira, Wright, and Zorn 1999). Kim (2009, 1331-1332) notes that a dissent by an appellate court judge "requires time and effort" and "has no substantive effect on the outcome of the case" yet under certain conditions appeals court judge dissent nevertheless. Kim's analysis suggests that while dissents by appellate judges are an effective signal for *en banc* review such a signal is not credible for an increased likelihood of review by

the U.S. Supreme Court. Similarly, Hettinger, Lindquist, and Martinek (2006) find no evidence that appeals court judges use dissent as a signaling mechanism for the U.S. Supreme Court to grant *certiorari* (see also Hettinger, Lindquist, and Martinek 2004). Recent work by Beim, Hirsch, and Kastellec (2015) suggests that the primary motivation for a circuit court judge decision in issuing a dissent is to send a signal to the other judges within the circuit to induce reversal via *en banc* review (see also Beim, Hirsch, and Kastellec 2014). Intuitively, a circuit judge may reasonably accept to notify and even persuade her circuit colleagues that a panel decision is problematic. It is a considerably steeper challenge to have the Supreme Court review one's decision simply based on a dissent given the small number of cases the High Court reviews each term. Taken together, the evidence on whether lower court judges strategically employ dissents as a signaling mechanism to Supreme Court justices appears to be mixed, at best. Nevertheless, when a lower court judge decides to author a dissenting opinion, such an action has potential to communicate important information to the justices. For instance, the justices may be be more inclined to review a lower court decision due to the mere presence of a dissent. Even if the dissent does not factor in to the justices' decision to review a case, once accepted, the dissent offers the justices critical information about the policy position of the lower court decision. As such, the content of all lower court opinions, both majority and separate, are able to transmit information up the judicial ladder.

One important mode through which information flows up the judicial system is in how judges on the U.S. Courts of Appeal apply the precedents of the U.S. Supreme Court. Policy oriented Supreme Court justices should desire that, *ceteris paribus*, their precedents be relied on rather than ignored. Similarly, such policy motivated justices should want their precedents to be followed rather than negatively applied. How the lower courts apply the Supreme Court's precedents can communicate important information to the justices about the policy scope of their precedents. The-

oretically, one rationale for lower court judges to positively apply a Supreme Court precedent is that the precedent is clear, binding, and provides little or no room for circuit judges to shirk. Alternatively, judges on the U.S. Courts of Appeals can choose to negatively apply or completely ignore the precedent because the the lower court judges may disagree with the policy preferences of the Supreme Court. Whether lower court judges positively apply the Court' precedents, shirk from them, or ignore them, this information is eventually transmitted up the judicial ladder. Such information can be communicated from the bottom up in a number of ways. A judge on the U.S. Courts of Appeals could author a dissent that highlights the panel majority's overt defiance of Supreme Court precedent or its failure to consider a binding and relevant precedent. Supreme Court justices may also receive information regarding lower court application of its precedents via litigants and interest groups.

As I allude to above, Hansford and Spriggs (2006) make the case that Supreme Court justices desire to set legal doctrine that will reflect the justices' preferences. Hansford and Spriggs see this as a continual process in which the Court is constantly re-considering the applicability of past precedent to new legal disputes. In the process, the Court provides either a positive treatment of existing precedent that invigorates its legal authority or a negative treatment that restricts its reach or calls into question the continuing importance of the precedent. These signals on increasing or decreasing vitality of precedent are not contemporaneous with the initial declaration of the precedent. Instead the signals are often sent over a period of many years as the Court re-evaluates its prior actions. Using this logic, such information can be communicated the other way. For instance, lower court judges positively or negatively applying the Supreme Court's precedents within their decisions can communicate vital information about the broader scope of the High Court's precedents within the federal judiciary. In a recent analysis, Hansford, Spriggs, and Stenger (2013) find that negative application of precedent by the lower courts does indeed provide the justices with information

on the policy content of a precedent as applied to contemporary disputes. While justices cannot pay attention to each specific positive or negative application of their precedents in the ten of thousands of lower court decisions, the justices can pay attention to aggregate patterns of both citations (or lack thereof) as well as aggregate trends of positive and negative applications. If the justices announce a new decision for which they desire strong adherence by the lower courts, the justices can simply monitor how the circuits cumulatively interpret the given precedent. I posit that in light of severe resource limitations to monitor all the actions of the lower federal courts, the justices can strategically audit and reverse the circuits that are least supportive of the Court's preferences regarding its precedents. Thus, information flowing from the bottom up can help substantially shape the scope and breadth of legal precedents.

An important implication of information flowing from the bottom up is that it can help justices identify the extent to which lower court application of precedents is influenced by ideological preferences, especially in relation to the preferences of the principal. A number of studies find that ideological differences between the lower court agent and the principal are a key driver in influencing compliance with precedents (see Benesh and Reddick 2002; Black and Owens 2012; Cameron, Segal, and Songer 2000; Clark 2009; Carrubba and Clark 2012; Haire, Songer, and Lindquist 2003; Lindquist, Haire, and Songer 2007; Randazzo 2008). As the preferences of the lower court agent converge with the preferences of the principal, the agent is more likely to act in line with the preferences of the principal. Conversely, as the preferences of the principal and agent diverge the incentive to shirk increases, all else being equal. I expect that as the distance in ideology between the Court and the lower court increases, I expect a reduced likelihood of positive treatment and a delay in lower court compliance.

In addition to identifying the extent to which the lower courts rely on a given precedent, through their ability to monitor lower court decisions, the justices can also locate the ideological position of their precedents within the lower courts based on the direction of case outcomes. By now it is widely accepted, that ideology impacts the decision-making behavior of judges on the U.S. Courts of Appeals, especially in their decision to adhere or shirk from the Supreme Court's precedents (Cross 2007; Kastellec 2007; Posner 2010; Songer and Davis 1990; Songer and Sheehan 1990; Westerland et al. 2010). Given the presence of ideological influences, lower court judges can be selective of which Supreme Court precedents to apply to achieve a certain outcome. When circuit judges repeatedly apply certain Supreme Court precedents to reach conservative outcomes and other precedents to reach liberal outcomes, the aggregate application of the High Court's precedents can communicate the policy position of a given precedent to the justices. If the application of a precedent and the final outcome is at odds with the preferences of the median member of the Court, the justices can audit and sanction such non-compliant lower court applications of precedent. As such, key information flowing up the judicial ladder is able to influence the actions of the High Court.

Horizontal Influences in the Judicial Hierarchy

I argue that a critical mechanism through which appeals court judges respond to the precedents of the Supreme Court is based on norm of horizontal *stare decisis*. While the prominence of *stare decisis* is well established within the theoretical literature, there are only a handful of studies that address its potential impact on the decision to follow or shirk from the Supreme Court's precedents (e.g., Hansford and Spriggs 2006; Westerland et al. 2010). I argue that U.S. Courts of Appeals attentiveness to the U.S. Supreme Court's precedents is moderated by important influences at the circuit-level. More specifically, I contend that judges on the circuit courts reconcile

legal, ideological, and institutional influences within their own courts with external influences from the U.S. Supreme Court. Both empirical analyses (Hettinger, Lindquist, and Martinek 2006; Klein 2002) and interviews with judges on the U.S. Courts of Appeals (Bowie, Songer, and Szmer 2014) suggest that circuit-level influences mediate, in important ways, the impact of the Supreme Court to influence the decision-making actions of appellate court judges.

I make the case that the prior decision-making behavior of circuit judges serve as an important influence on the decisions of other appellate judges in how they respond to the Supreme Court's precedents. I argue that this effect manifests both within the judge's own circuit and across the other circuits. This is because when a circuit panel makes a decision, that decision becomes binding precedent within the instant circuit. In subsequent decisions that deal with similar issues and factual situations, a panel of judges must adhere to existing inter-circuit precedent. Thus, whenever a circuit panel issues a decision, information of how to resolve similar cases is transmitted horizontally to the other judges (and their clerks) within the same circuit. One way information can be communicated horizontally is through prior applications of a Supreme Court precedent within a circuit. For instance, if judges within the First Circuit Court of Appeals consistently follow a given Supreme Court precedent it should positively influence the likelihood that a panel of judges from the circuit will adhere to the precedent in a future decision. Previous empirical research indeed suggests that prior applications of precedent at the lower court level impact the future propensity of lower court to follow or shirk from the Supreme Court's precedents. In a recent study, Westerland et al. (2010) find that circuit vitality has a substantial impact on subsequent positive and negative applications of Supreme Court precedents within the U.S. Courts of Appeals. That is, when judges within a given circuit positively apply a precedent it increases subsequent positive applications of the precedent. On the other hand, when judges in a circuit negatively

interpret a precedent it increases the probability of negative application in future cases. I similarly expect that as the ratio of positive to negative applications of a Supreme Court's precedent within a circuit increase, the likelihood that the same circuit relies on the precedent in future decisions will increase. The intuition behind this expectation is that when circuit judges positively or negatively apply a Supreme Court precedent, their action impacts circuit law and circuit judges adhere to circuit form and follow circuit law.

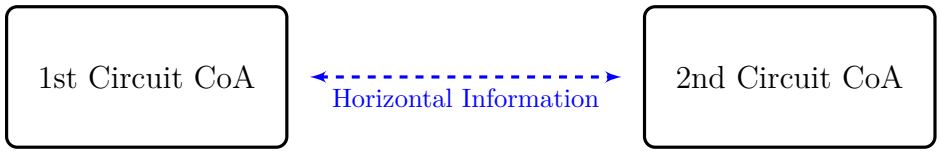

Figure 2.3: Horizontal Transmission of Information

In addition to influencing applications of precedent within the same circuit, prior application of the Supreme Court's precedent in any of the circuits can also exert some influence on the actions of judges across the other circuits. This is because decisions within the U.S. Courts of Appeals are not made in isolation. Litigants frequently reference decisions by other circuit judges within their briefs and oral arguments to achieve a favorable outcome. Similarly, judges frequently cite, not only Supreme Court precedent and inter-circuit precedent, but all recent decisions by judges in other circuits within their opinions in justifying an outcome. In this sense, information often travels horizontally across the jurisdictional lines of the circuits. While a decision by another circuit is never binding, it is persuasive and circuit judges acknowledge relying on this information (see Bowie, Songer, and Szmer 2014; Klein 2002). Figure 2.3 offers an abbreviated depiction of how information can flow horizontally across two circuits. In this hypothetical scenario, judges in the Second Circuit Court of Appeals can learn from how a panel of judges in the First Circuit applied a precedent. While there is little concern about how information might be communicated within the same circuit,

as judges often circulate drafts of their opinions to other judges, some may question how information flows across the circuits. One vehicle through which information is quickly transmitted across the different circuits is through litigants. Litigants and lawyers will often highlight the decisions of other circuit courts within their written briefs and oral arguments. Moreover, judges and their clerks, will quickly learn of recent decisions by other circuit panels in the process of researching and writing their own opinions. I argue that such a horizontal transmission of information within the circuits serves a meaningful influence on the extent to which circuit judges comply with the Supreme Court's precedents.

Circuit-level factors can facilitate the horizontal flow of information in other ways. Specifically, when a Supreme Court precedent originates from the review of a particular circuit, the circuit the Supreme Court 'takes the case from,' in issuing the precedent, might feel especially compelled to address the precedent in future decisions. The intuition behind this expectation is that when the Supreme Court reviews a lower court's decision, the Supreme Court decides to either uphold or overturn the lower court's decision, which affects not only the instant case but also inter-circuit law within the circuit that is reviewed. When this happens, even if judges within a circuit that is reviewed ideologically at odds with the Supreme Court decision, that circuit will be compelled to address the new precedent because the Supreme Court's action altered inter-circuit precedent. Such positive responses to the Supreme Court should be particularly evident when the Supreme Court issues a decision and remands the case back to the lower court. Thus, I argue that the flow information with the 'circuit of origin' is particularly influential. I expect over time other circuits will learn about these decisions and apply them within their own decisions. As such, important informational cues can effectively flow horizontally within and across the circuits in the U.S. Courts of Appeals.

Dynamic Influences in the Judicial Hierarchy

I offer a unified framework in which informational cues flow in not one but several directions: top to bottom, from the bottom up, and horizontally within and across the circuits in the U.S. Courts of Appeals. I make the case that the U.S. Supreme Court provides judges on the U.S. Courts of Appeals with important signals on its legal and policy preferences regarding its precedents. Circuit judges process these informational cues and reconcile them with their own legal and ideological preferences, which ultimately guide their decision on how to interpret a given precedent of the U.S. Supreme Court. The lower court application of the Supreme Court's precedents, in turn, communicate information of the policy space of each precedent within contemporary disputes. In addition to these conventional channels of information, I argue that judges on the courts of appeals also convey vital information that is transmitted horizontally to other judges within the same circuit and to judges across the various circuits throughout the U.S. Courts of Appeals. I make the case that the information that flows across these three channels is dynamic. This forms a feedback loop and that this is how law develops and the scope of precedent ultimately takes shape. Figure 2.4 depicts this feedback loop. Below, I summarize how signals and informational cues from both the top and lower levels of the federal judiciary shape attentiveness to precedents within the judicial hierarchy.

As the extensive discussion above outlines, my theory is premised on the belief that important informational cues dynamically flow up, down, and horizontally within the judicial hierarchy. On top-down influences, I contend that a series of signals by justices of the Supreme Court communicate their preferences, which in turn influence the propensity of judges on the U.S. Courts of Appeals to adhere to the Supreme Court's precedents. My key theoretical contention is that the Supreme Court's use of summary decisions, which explicitly reference a recent plenary precedent in close proximity to the time the precedent is issued, signals the import of a precedent to

judges on the courts of appeals. The intuition here is that when the Supreme Court is willing to grant *certiorari* to one or several additional petitions to issue summary decisions in conjunction with a formally argued decision, the Supreme Court not only overturns additional appeals court decisions, but demonstrates its willingness to grant review and overturn similar decisions by the courts of appeals in the future. I also expect other top-down cues such as Supreme Court precedent vitality, which is the net difference between positive and negative applications of a precedent by the Court itself, the size of the majority coalition that issues a precedent, and explicit Supreme Court reversals of a lower court decision to influence the extent to which judges on the U.S. Courts of Appeals follow the the precedents of the Supreme Court.

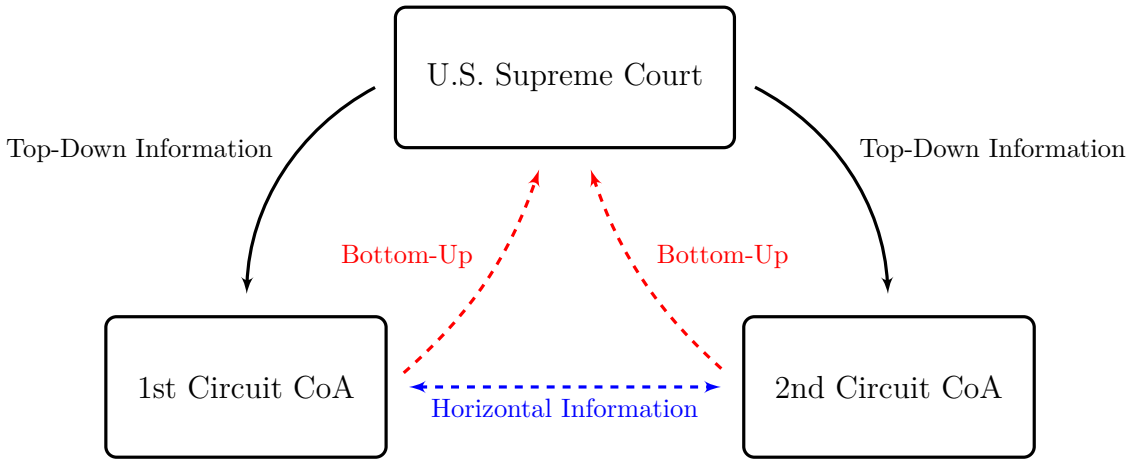

Figure 2.4: The Dynamic Transmission of Information in the American Judiciary

The subsequent decision of circuit judges to positively or negatively apply the Supreme Court's precedents will in turn communicate information up the judicial ladder from the lower courts. Based on aggregate trends of lower court interpretation of their precedents, the justices can choose to review decisions where they can (1) alter an existing precedent, (2) clarify the correct application of an existing precedent, or (3) explicitly sanction non-compliant behavior to induce greater adherence to their precedent. Moreover, I make the case that differences in ideological preferences at

the Supreme Court and circuit-level moderate the propensity of a circuit to rely on a precedent of the Supreme Court. Justices can review this information and reverse applications of their precedent that are at odds with their preferences.

The third component of my theoretical framework is the horizontal transmission of information. While various signals by the Supreme Court likely influence circuit adherence on the Supreme Court's precedents, I contend that the impact of such signals is moderated by influences at the circuit-level. My theory is premised on the belief that rather than a deference to the perceived preferences of the justices, judges in the Courts of Appeals take their roles as arbiters of law seriously. I argue that an important mechanism through which appeals court judges respond to the precedents of the Supreme Court is based on the norm of horizontal *stare decisis*. I make the case that a key factor in determining the likelihood that a circuit relies on a Supreme Court precedent is influenced by how previous panels within the Courts of Appeals have interpreted a given precedent. Previous research demonstrates that the 'vitality' of a precedent, consistently impacts how the lower courts respond to the Supreme Court's precedents in future decisions (see Hansford and Spriggs 2006; Westerland et al. 2010). I also theorize that circuits responding to a Supreme Court precedent that emerges from the review of the same circuit increases the probability of future reliance of a precedent. The intuition behind this expectation is that when the Supreme Court issues a precedent that is based on a review of an earlier decision by a circuit, in issuing the new precedent the Supreme Court not only sets broad national policy but its actions directly impact existing circuit-law within the circuit in question. Therefore, my expectation is that circuits responding to a precedent that originates from the same circuit have a greater propensity to rely on the new precedent compared to the other circuits. The final aspect of my theory is that informational cues from all directions are dynamic in nature and update continuously. This how legal doctrine develops. I test these propositions in the empirical chapters that follow.

Chapter 3

Supreme Court Monitoring, Reversals, and Compliance in the U.S. Courts of Appeals

Studies on the U.S. Supreme Court generally make the claim that Supreme Court justices are rational decision-makers who are strongly concerned with the policy impact of their decisions (Baum 2006; Maltzman, Spriggs, and Wahlbeck 2000; McAtee and McGuire 2007; Segal and Spaeth 2002; Songer, Segal, and Cameron 1994; Spaeth and Segal 1999; Zorn and Bowie 2010). Such policy oriented Supreme Court justices are often assumed to be particularly attentive to the impact of their decisions on the lower courts. Such an assumption is understandable given the large number of legal disputes that come before the lower courts and the unique position the U.S. Courts of Appeals occupy within the judiciary as the final arbiter of most judicial outcomes (Cross 2007; George 1999). As such, the lower federal courts are frequently confronted with the choice of implementing the policy pronouncements of the High Court (see Hansford and Spriggs 2006; Maltzman, Spriggs, and Wahlbeck 2000; Westerland et al. 2010). But in spite of the interest in the overall policy impact of their decisions, Supreme Court justices face two major constraints in their ability to effectively monitor the implementation of their policies by the courts below. First, the Supreme Court faces severe resource limitations in its ability to review the large number of decisions produced by the lower courts. For instance, in recent years the U.S. Courts of Appeals adjudicated over 60,000 cases each year, of which the Supreme Court reviews fewer

than one half of one-percent.[1] Given the exceedingly low probability of a Supreme Court reversal of a decision produced by the intermediate appellate courts combined with the perception of Courts of Appeals judges that it is very difficult for them to accurately predict which cases will be reviewed and ultimately reversed by the High Court, recent research finds that there is little evidence to support the proposition that the decision-making behavior of lower court judges is motivated, in any meaningful way, by a fear of reversal by the U.S. Supreme Court (Bowie and Songer 2009; Klein 2002; Klein and Hume 2003; Hettinger, Lindquist, and Martinek 2006).[2]

The U.S. Supreme Court can only review a small number of decisions in any given term. Given significant constraints in the ability to monitor the actions of the lower courts, can Supreme Court justices, in any meaningful way, increase the policy impact of their decisions on the U.S. Courts of Appeals? One recent analysis suggests that in order to increase the impact of their policies on the courts below, the justices take an institutional approach, monitoring the responses of circuits as key organizational units rather than attempting to monitor all of the decisions of individual judges (see Lindquist, Haire, and Songer 2007). These scholars suggest that the Supreme Court then responds to circuits in the aggregate, allocating its limited institutional resources to review circuits that are least supportive of the Court's policy preferences by frequently reversing their decisions, while affirming or simply not reviewing the decisions of more ideologically congruent circuits. Missing from existing analyses is how the individual circuits are likely to respond to such strategic actions by the Supreme Court. That is, does the prior rate of reversal of each individual circuit by the U.S. Supreme Court in any meaningful way influence the extent to which judges within a given circuit adhere to the Supreme Court's precedents in subsequent terms?

[1] Data obtained from the Administrative Office of the U.S. Courts, which is available at: http://www.uscourts.gov.

[2] Further reducing the fear of reversal rationale is the widespread perception among appeals court judges that even when they are reviewed and reversed by the Supreme Court, the actual cost of such reversal is very small (see Bowie, Songer, and Szmer 2014).

I offer a framework in which Supreme Court justices monitor the circuits as organizational units given the feasibility in monitoring such centralized units instead of the large number of panels or individual judges within the U.S. Courts of Appeals. I argue that Supreme Court justices recognize the importance of circuits as units, understand the role of circuit-level precedents on future decisions within each circuit, and are familiar with the psychological identity of appeals court judges within each circuit. As such, I contend that aggregate circuit responses to Supreme Court precedents are influenced by the frequency with which the Supreme Court reviews and reverses the decision of a circuit in previous terms. Supreme Court reversal of a circuit is a consequential and highly visible action for all judges within the circuit. This is because Supreme Court reversals have a direct impact on circuit law and frequently require the circuit to respond to a new precedent when a case is remanded by the Supreme Court (Benesh et al. 2014; Pacelle and Baum 1992). I test the predictions by examining the extent to which the pattern of reversals by the Supreme Court at the aggregate circuit-level impact the tendency of a given circuit to adhere to the Supreme Court's precedents in subsequent terms. I find that the prior rate of reversal serves a positive influence on the future utility of a Supreme Court precedent by a given circuit. Notably, the empirical results also challenge the efficacy of previous findings on the import of ideological preferences in driving lower court attentiveness to the Supreme Court's precedents. This analysis helps improve our understanding of the factors that influence judges on the U.S. Courts of Appeals in how they respond to the precedents of the U.S. Supreme Court.

The Importance of Policy Preferences

While debate continues over the extent to which the policy preferences of Supreme Court justices influence their behavior, even critics of the Attitudinal Model (e.g., Kritzer and Richards 2005; Masood and Songer 2013; Richards and Kritzer 2002;

Songer and Lindquist 1996) agree that such policy preferences exert an important influence on the votes of the justices in salient cases and that the justices are more concerned with the broad policy consequences of their decisions than with the outcome of most cases for the particular litigants in the case. Such a concern for policy implications suggests that Supreme Court justices can be assumed to be interested in maximizing the impact of their decisions within the judicial hierarchy. The ability of the justices to create precedents that reflect their policy preferences would be of little consequence if the lower courts refused to implement those policies throughout the judicial system.

Since the justices are assumed to care about the policy impact of their decisions as reflected in the precedents they create, it is important to understand both the extent of that impact and the factors that may increase or decrease that policy impact. A large body of research finds conclusively that the overall level of compliance by lower courts with Supreme Court precedent is high. Outright rejection of the authority of a precedent or the overt refusal of a lower court to follow precedent is, in fact, relatively rare (Benesh 2002; Benesh and Reddick 2002; Corley 2009; Hansford and Spriggs 2006; Kassow, Songer, and Fix 2012; Klein 2002; Songer and Haire 1992; Songer and Sheehan 1990; Wahlbeck 1998; Westerland et al. 2010). These empirical findings are reinforced by the statements of the judges themselves. A series of studies based on interviews with judges on the courts of appeals have repeatedly found that the judges are nearly unanimous in their assertions that they and their colleagues will "of course" follow the precedents announced by the Supreme Court when those precedents are clear (Bowie, Songer, and Szmer 2014; Howard 1981; Klein 2002). But precedents are not always clear and when they are not, there are a number of ways for judges to modify or restrict the practical impact of a broad policy announced in a precedent without overtly defying the precedent. The primary way in which a lower court can reduce the policy impact of a precedent is by "distinguishing" the

precedent in their opinion explaining the way they resolved the legal issues in their case. When a judge distinguishes a precedent, he or she accepts the general authority of that precedent but then explains that because of differences in the facts of the case confronting the judge and the factual context of the precedent, the given precedent is not the appropriate legal rule to follow in the case. One judge interviewed for a recent study explained that there is usually a substantial amount of discretion in deciding which precedent controls a case and that "all of us are pretty good at being able to distinguish precedent" (Bowie, Songer, and Szmer 2014).

Consequently, Supreme Court justices who are concerned with the policy impact of their decisions should not worry very much about the possibility that the lower courts will overtly refuse to abide by the Court's precedents. Rather, policy oriented justices need to be concerned with how frequently their precedents will be relied upon by the lower courts in future decisions. That is, if a justice wants to see a given precedent have a major impact on the development of law and policy in the lower courts, the justice should be concerned that their precedent will be used as the essential basis for lower court opinions in a variety of diverse fact situations rather being modified or limited in opinions that distinguish the precedent or simply conclude that the precedent is not applicable, and thus need not be even cited in the lower court's opinion. Thus, in order to empirically assess the extent of the impact of the policies created in Supreme Court precedents on the policy output of the U.s. Courts of Appeals, one needs a more refined measure of policy impact than just counting the number of decisions below that were overtly non-compliant with the precedents. *Shepard's Citations* provides a suitable measure by categorizing the interpretation or "treatment" of every Supreme Court precedent in all subsequent decisions by the U.S. Courts of Appeals.

The Role of Circuits in Theories of Judicial Hierarchy

Theoretical accounts on the interactions between the upper and lower courts, within the federal judicial hierarchy, typically employ one of two approaches. Some scholars examine whether individual Supreme Court precedents are followed in individual decisions by the lower courts. The specific focus in these studies is often whether a given lower court decision is in 'compliance' with the Supreme Court precedent (Canon and Johnson 1998; Cross and Tiller 1998; Johnson 1979). Employing a compliance focus, these studies examine specific lower court decisions to see if those decisions overtly refused to accept the legal authority announced by the U.S. Supreme Court.

Quantitative analyses, on the other hand, often assess whether a pattern of lower court decisions is consistent with the expectations of a principal agent perspective (Benesh 2002; Hansford and Spriggs 2006; Songer, Segal, and Cameron 1994; Westerland et al. 2010). Principal agent studies typically assume that Supreme Court precedents are driven by the policy of the justices and then examine whether lower court outcomes reflect similar patterns of liberal or conservative decisions. In such principal agent studies it is expected that ideological preferences and rational expectations about the policy responses of other actors drive the behavior of judges at multiple levels of the judicial hierarchy (see Clark 2009; Kastellec 2011; Randazzo 2008; Zorn and Bowie 2010). While both approaches advance our understanding of the nature of relationships within the judicial hierarchy, they have several shortcomings which limit their insights into the factors that shape the influence of the policy preferences of the Supreme Court on the courts below. First, noncompliance is a small part of the problem. Thus, an exclusive focus on noncompliance does not tell us very much about the extent of lower court responsiveness to Supreme Court policy preferences or about the factors that may mitigate or enhance the impact of the policies announced by the Court.

Principal agent accounts typically make critical assumptions about the capability of the Supreme Court to successfully monitor the tens of thousands of decisions below every year. Moreover, they typically assume that a decision below whose outcome is coded as different from the ideology of the median member of the Supreme Court is a decision that does not support the policy preferences of the Court. But such an assumption is often in error because it does not take into account the extent to which other actors (e.g., trial court judges, police, and prosecutors) have modified their behavior to conform to new Supreme Court precedent. For example, although *Miranda v. Arizona* (384 U.S. 436, 1966) is traditionally considered a liberal decision, Songer and Sheehan (1990) discover that a large majority of subsequent decisions by the courts of appeals that interpreted and applied Miranda faithfully supported the policy announced in Miranda even though they made decisions whose outcomes were coded as conservative (i.e., pro-prosecution). This counter-intuitive, at least from a principal agent perspective, finding is perhaps due to the fact that many prosecutors stopped bringing cases involving confessions obtained under conditions that were inconsistent with *Miranda* but when such cases resulted in convictions the defendants still appealed and lost because the appeals court judges faithfully abided by the *Miranda* rules.

The challenge for the the U.S. Supreme Court in attempting to monitor individual decisions starts with the difficulty in being able to take cues from the judge who authored the opinion of the court. If the Supreme Court is continually reviewing decisions from a small number of judges, they might soon identify a group of judges that they trust as sharing their own policy preferences and another group of judges who they might assume do not support their preferences. But in fact the Supreme Court must review decisions from a very large group of judges. At any moment in time, there are about 160 regular appeals court judges, another 30 to 50 judges on senior status, and an even larger number of judges from other courts, especially

federal district court judges, sitting by designation and any of these judges might be the opinion author whose decision is challenged in a cert petition. Supreme Court justices will only have an opportunity to gain knowledge about individual judges whose decisions are given full, formal review. Since the Supreme Court rarely grants formal review to more than 60 to 70 petitions per year from the courts of appeals, they will frequently only review a given appeals judge once every three or four years. Developing knowledge about individual appeals court judges that provides useful cues, which can be used in monitoring appeals court decisions is made more difficult by the fact that ideology has a smaller effect on the decisions of appeals court judges than it does on the decisions of Supreme Court justices (Zorn and Bowie 2010).

The difficulty in monitoring individual decisions is made more difficult by the nature of most decisions that do not fully support the policy preferences of the Supreme Court. As noted above, the lower courts rarely defy precedent, instead the policy preferences of the Supreme Court are most likely to be limited or modified by a lower court decision that distinguishes precedent. That is to say, the refusal to support the core policies of the Supreme Court is usually embedded in an extended discussion of facts and the Supreme Court is reluctant to review decisions that appear to be fact driven. As a result, it is difficult for the Supreme Court to effectively monitor cases that do not support the most important aspects of the Court's policy. Therefore, I argue that instead of undertaking the very difficult task of trying to monitor all individual lower court decisions that might be inconsistent with the Supreme Court's median policy preferences, the justices are better off in focusing on the overall patterns of response by each circuit, reviewing and reversing circuits that are the least supportive of the Court's policy goals. While it is easier for the Court to identify which circuits are least supportive of the overall preferences of the Court, a circuit oriented strategy is only be effective if circuits respond to increased monitoring by the Supreme Court by increasing their support for the policy of the Court. I contend that

judges within a circuit are likely respond more positively to the Court's precedents when the rate of reversal of the circuit is high.

Supreme Court reversal of a circuit is a highly visible action to all judges on the circuit as such reversals typically produce a change in inter-circuit precedent. It is reasonable to assume that judges on the courts of appeals monitor all Supreme Court decisions that either affirm or reverse a decision that emanates from their circuit. First, all Supreme Court decisions, both formally argued and summary decisions, that reverse or vacate appeals court decisions are legally consequential (see Masood and Songer 2013). Even a summary decision (e.g., a GVR that grants *certiorari*, vacates the lower court decision and remands the case to the appeals court for further action in light of a specified precedent) that overturns the precedent of a given circuit is an authoritative pronouncement that the previous circuit precedent is no longer good law. After interviewing 60 judges on the U.S. Courts of Appeals, Bowie, Songer, and Szmer (2014) note that the judges unanimously maintain that they take precedent very seriously when it is clearly relevant to any case before them. All of the judges indicate that circuit precedent is particularly important to them and that they routinely read the opinions of other panels in their circuit.[3] Given the relative infrequency that circuit precedent is overturned by the Supreme Court, it is reasonable to expect that any time one of their own circuit's precedents is struck down, even by a summary decision, the judges and their clerks will become aware of it and will expect to follow it in their own future decisions. A large majority of all Supreme Court decisions that overturn circuit precedent with either a reversal or vacating a decision of a lower court also include a remand to the circuit. By definition, a re-

[3] It is worth noting that in approximately 50% of the circuits, each panel is expected to send to all other judges in the circuit all of their tentative opinions and then wait for comments from the judges for about two weeks before formally releasing their opinion. In this period, circuit judges not on the panel are asked to comment on any problems Thus, in at least these circuits, it is clear that any GVR of a circuit precedent would come to the attention of the other judges within the circuit.

mand directs the panel of the court of appeals whose decision is disturbed to issue a new decision where the majority opinion explicitly considers the meaning of the Supreme Court precedent cited in the remanded case. Thus, at a minimum, each remand produces one circuit court precedent that explicitly discusses the meaning of the Supreme Court precedent cited within the Court's summary decision.

In interviews, appeals court judges indicate that they depend to a substantial degree on the briefs of opposing counsel to bring to their attention the precedents that are most relevant for the case under consideration (Bowie, Songer, and Szmer 2014; Klein 2002). Knowing the importance of circuit law to appeals court judges, it is expected that when the law of the circuit is changed by a reversal from the Supreme Court, attorneys will be quick to argue that new circuit law in any subsequent case in which the new precedent might be relevant and such action by attorneys will increase the awareness of judges on the circuit to the implications of the Supreme Court action. As a result, one can expect that courts of appeals judges will quickly become aware of Supreme Court reversals of their own circuit precedent and that such reversals will then lead to the increased likelihood that judges in the circuit will more positively treat the new Supreme Court precedent.

Finally, I theorize that Supreme Court reversals of the circuit will lead to an increase in the positive treatment of the policy of the Supreme Court because judges tend to strongly identify with their circuit. Recent interviews with appeals court judges consistently indicated that the judges feel a strong emotional or psychological tie to their circuit as an institution that is central to their professional lives. When discussing the differences in procedures and practices across the circuits, almost all of the judges identified with the practices of their circuit and defended the way their circuit did things (Bowie, Songer, and Szmer 2014; Klein 2002). Consequently, a reasonable expectation is that judges are concerned with the standing of their circuit as an institution and that this institutional loyalty will incline the judges to attempt to

protect the reputation of their circuit by avoiding frequent reversals by the Supreme Court. My expectation is that the prior rate of reversal of a given circuit by the Supreme Court has the potential to influence the future decision-making behavior of appeals court judges. Specifically, I believe that a higher rate of reversal should produce more supportive decisions by a given circuit in future decisions. Thus, an arguably effective strategy for increasing circuit-level utility of Supreme Court policies is to more frequently reverse decisions by those circuits that least frequently cite and follow the policy pronouncements of Supreme Court justices. Moreover, I argue, that since the effects of reversals are related to institutional characteristics of the circuits, they can be expected to have an effect that is independent of other factors previously found to influence the response of appeals court judges to Supreme Court policy. In particular, the concern for circuit law and the reputation of the circuit appear to be factors that will operate independently of the ideological preferences of individual judges and thus should affect the tendency of judges in a given circuit to support Supreme Court policy regardless of how close or distant the preferences of the median appeals court judge are to the policy preferences of the Supreme Court.

Research Design

I examine the universe of U.S. Courts of Appeals responses to the precedents of the U.S Supreme Court to the test the propositions. I examine courts of appeals responses from a stratified random sample of U.S. Supreme Court precedents issued between 1994 and 2005. I stratify the sample of Supreme Court precedents to assess lower court responses to precedents with and without associated summary decisions. Specifically, I examine courts of appeals responses to a sample of 150 Supreme Court precedents with no associated summary decisions and a second sample of 150 Supreme Court precedents. The data for the formally argued decisions of the Court are obtained from

the expanded U.S. Supreme Court database (Spaeth et al. 2013).[4] The summary decisions data is original data collected on the universe of Supreme Court summary decisions issued during the period of the analysis. In collecting this data, I identify the formally argued precedent each Supreme Court summary decision is issued "in light of." I then randomly select 150 formally argued Court precedents, from the same time period, with at least one associated Supreme Court summary decision. Since the proportion of Supreme Court decisions with an associated summary decision is relatively small I over-sample Supreme Court precedents with associated summary decisions. To account for the oversampling, I assign weights based on the proportion of cases that are in the dataset compared to the actual proportion of decisions by the Supreme Court. To create the weights, I calculate the number of observations for the two samples and then take the inverse (reciprocal) of the proportion.

To examine courts of appeals responses to the Supreme Court's precedents, I examine court of appeals citations and positive interpretations from the twelve "regular" circuits of the U.S. Courts of Appeals courts of appeals responses from 1995 to 2008.[5] These years allow me to assess courts of appeals responses to the Supreme Court's precedents from the time each Supreme Court decision is issued to a minimum of three years for the latest appearing Supreme Court precedent in the sample. My unit of analysis is the 'Supreme Court Precedent-Circuit-Year.' This means that there is a single observation for a lower court response from each circuit for every year a precedent is available for every Supreme Court precedent in the sample.[6] The

[4] The current version of the U.S. Supreme Court database is maintained by the Center for Empirical Research in the Law at Washington University in St. Louis and is available at: http://www.scdb.wustl.edu.

[5] Decisions of the Federal Circuit are not included in the analysis, because the Federal Circuit only hears cases in specific issue areas (i.e., patent and trademarks) and its inclusion would likely bias the results (c.f., Hansford and Spriggs 2006).

[6] For example, there is a single observation for the Courts of Appeals of the First Circuit for 1995 for *Bailey v. United States* (516 U.S. 137), which is one of the Supreme Court precedents in my sample. There is also an observation for the First Circuit for *Bailey* in 1996 and additional observations for each year until 2008. Similarly, there is an observation for *Bailey* for each year between 1995 and

resulting dataset yields approximately 15,000 observations.

I test my predictions over two outcome variables. The first variable captures the number of courts of appeals citations of a Supreme Court precedent. The second outcome variable captures the number of positive interpretations of a Supreme Court decision by the courts of appeals. I obtain information for the outcome variables from *Shepard's Citations* via Lexis-Nexis for both citations and positive interpretations of Supreme Court precedents by the courts of appeals.[7] Following the conventions in *Shepard's*, I count the designation "Cited," "Explained," or "Harmonized," and any explicit positive interpretation of the Supreme Court's majority opinion as an appeals court citation of a Supreme Court precedent, coded as 1, and 0 otherwise.[8] I count the designation that a circuit "Followed" the Supreme Court's majority opinion as a positive interpretation of the precedent, coded as 1, and 0 otherwise.[9]

My key theoretical expectation is that the individual circuits respond differently to Supreme Court precedents, in their propensity to reference and follow Supreme Court precedents, based on the prior rate of reversal of the individual circuit by the Supreme Court. Therefore, my first explanatory variable captures the rate of the reversal of each circuit. This variable is based on the total number of reversals for

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2008 for each of the remaining eleven circuits.

[7] *Shepard's Citations* is a service that collects information on all citations and interpretations of U.S. Supreme Court precedents. *Shepard's* includes a typology of interpretations, with specific categories within each part of the typology. A courts of appeals citation of a Supreme Court's decision that does not include any type of substantive interpretation is simply categorized as "Cited." A circuit decision that substantially applies a particular Supreme Court decision, is categorized as "Following" the precedent, in that a lower court decision is relying on the Supreme Court decision to reach a similar legal conclusion in a subsequent case.

[8] I am careful in excluding Supreme Court citations that result from explicit negative interpretation of a Supreme Court precedent, because such negative citations capture something fundamentally different from my central theoretical claims. For the sake of robustness, I estimate models with all citations neutral, positive, and negative. Given the very small number of negative interpretations, it is not surprising that the results of the full citations model are consistent with estimates of the empirical model I report.

[9] The values of the outcome variables do not include citations from dissenting or concurring opinions, as these do not directly relate to the Supreme Court's majority opinion (c.f., Hansford and Spriggs 2006).

each individual circuit for all cases granted *certiorari* by the Supreme Court. Thus, this variable is a count of the number of formally argued and summary reversals for each circuit for each year.[10] To account for the extreme range of this variable, and because I expect non-linearity in the data, I take the natural logarithm of the number of Supreme Court reversals.[11] In addition, since it is not possible to take the logarithm of zero, I add one to each value of the number of reversals. Finally, to prevent any issues of simultaneity I lag this variable by one year.[12]

The next variable of interest is whether or not the Supreme Court precedent has any associated summary decisions, which the Supreme Court issues "in light" of a given Supreme Court precedent. In previous co-authored analyses, I find that when a Supreme Court precedent is accompanied by at least one summary decision, this is the strongest predictor of future lower court utility of Supreme Court precedent. Thus, I include an indicator variable that captures whether or not a Supreme Court precedent is accompanied by a Supreme Court summary decision. I also include a variable that captures the vote margin by which justices decide a Supreme Court precedent. While the preponderance of evidence suggests that the size of the winning coalition should increase future reliance on a precedent, this finding is not unequivocal, as some studies find that even upon controlling for precedent vitality Supreme Court vote margin no longer exerts a substantively meaningful effect (Corley 2009; Johnson 1979; Kassow, Songer, and Fix 2012; but see Hansford and Spriggs 2006; Wedeking 2012).[13] The values for the 'vote margin' variable are obtained from the U.S. Supreme

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[10] I count as reversals, any decision of the Supreme Court that "reversed," "vacated," "reversed and remanded," or "vacated and remanded" the decision of the courts of appeals.

[11] I also run models using a non-transformed variable of the raw number of circuit reversals by the Supreme Court, the results are extremely similar to the models report in the paper.

[12] I also run models using three year and five year lags and find very similar results.

[13] I estimate models where I alternatively use an indicator variable that captures whether the justices decide a precedent unanimously rather than the vote margin. The results are similar; I ultimately settle on 'vote margin' rather than the dichotomous indicator variable, because of the added degrees of freedom the vote margin variable provides.

Court database.

I include a variable that captures the 'vitality' of a Supreme Court precedent. Previous research on the utility of Supreme Court precedents consistently find that precedent vitality significantly influences citation and treatment patterns (Hansford and Spriggs 2006; Wedeking 2012; Westerland et al. 2010). The Supreme Court vitality variable is based on the number of positive Supreme Court treatments of its own precedents minus the negative treatments by the Court (Hansford and Spriggs 2006). Positive values of the vitality variable indicate that the Supreme Court has interpreted a precedent more positively than negatively. Negative values of this variable indicate that the Supreme Court has interpreted a precedent more negatively than positively. Data for this variable are obtained via *Shepard's Citations*. I follow Spriggs and Hansford (2000) where "Followed" Supreme Court interpretations are coded as positive, whereas "Criticized," "Distinguished," "Limited," "Overruled," and "Questioned," are coded as negative interpretations. I additionally code "Superseded" designations as negative interpretations of precedent, because such interpretations are inherently negative.[14] I lag the Supreme Court vitality variable by one year to prevent issues of simultaneity.

To assess the impact of circuit-level influences and horizontal *stare decisis*, I include a variable for circuit vitality that captures the difference between prior positive and negative Courts of Appeals interpretations of the Supreme Court's precedents (Westerland et al. 2010).[15] This variable is based on the total number of prior positive interpretations in a given circuit minus the total number of prior negative interpretations within the same circuit for circuit and year in the sample. This variable is

[14] While "Superseded" interpretations are not included in Spriggs and Hansford's analysis, I construct vitality variables with and without the "Superseded" designation and find that the results do not change. Additionally, I estimate models using a vitality variable that excludes "Distinguished" interpretations and again find the results to be highly robust.

[15] A potential concern may be that the Supreme Court vitality and circuit vitality Supreme Court and circuit vitality variables correlate at 0.112.

constructed the same way as the variable for Supreme Court vitality where "Followed" Supreme Court interpretations are coded as positive, whereas "Criticized," "Distinguished," "Limited," "Overruled," "Questioned," and "Superseded" are coded as negative interpretations.[16] I lag this variable by one year to avoid issues of simultaneity. The data for the circuit vitality variable are obtained from *Shepard's Citations*. Like Supreme Court vitality, the circuit vitality variable is lagged by one year to mitigate issues of simultaneity.

My next circuit-level variable is a dichotomous indicator that accounts for whether the circuit responding to a precedent is the circuit of origin. This variable captures whether the circuit responding to a Supreme Court precedent is the same circuit which the Supreme Court reviewed in using its precedent. An as example, if a formally argued Supreme Court decision is the product of the justices reviewing a decision from the First Circuit Courts of Appeals and in a future term the responding lower court is a panel from the same First Circuit then the variable is coded 1. If the circuit responding to the same precedent that emerged via review of the First Circuit is one of the eleven circuits, the variable is coded 0. Data for this variable are obtained from the U.S. Supreme Court database. I also include an indicator variable for whether a circuit responding to a given Supreme Court precedent is the recipient of Supreme Court summary decision remand "in light of" of the same Supreme Court precedent. If the responding circuit receives one or more Supreme Court summary decisions issued "in light of" the same precedent it is responding to the variable is coded 1, and 0 otherwise. Data for this variable are obtained via the *United States Reports* and the U.S. Supreme Court Database.

I also include a number of control variables. First, I include a variable to account for the salience of a Supreme Precedent. I obtain data for this variable from Collins

[16] Again, I estimate models with and without "Superseded" and "Distinguished" treatments for the circuit vitality variable and find that the results remain robust.

and Cooper (2012), which captures whether a Supreme Court decision is cited on the front page, or any subsequent pages, of one of the four leading newspapers in the country. This measure expands on the indicator initially developed by Epstein and Segal (2000) to include whether a Supreme Court decision appears on the front page of the *Chicago Tribune*, the *Los Angeles Times*, or the *Washington Post* in addition to the *New York Times*. Next, I include an indicator variable to account for the large number of criminal cases in the data. I also control for the caseload of each circuit by including a variable that accounts for the number of merit terminations within each circuit by year. Finally, I include a count variable to account for the age of the Supreme Court precedent. This variable is coded as the number of years a precedent is in the dataset from the time the Supreme Court establishes a precedent to correspond with each observation for the full duration of the data.[17] The data for these control variables come from the U.S. Supreme Court database.

Since both dependent variables are count outcomes any linear model specification is likely to produce inefficient, inconsistent, and biased estimates (King 1988, 1989; Long and Freese 2006). In addition, a common issue with most count data is that the conditional variance often exceeds the conditional mean (i.e., over-dispersion), which violates the assumption of equidispersion of the most parsimonious count model, the Poisson regression. This concern can be addressed by adding an additional parameter, α, to the equation which can be modeled through a negative binomial regression (Cameron and Trivedi 2013; Kennedy 2008). A second issue with count outcomes is that the number of zero values in the sample often exceeds the number predicted by a standard count (i.e., Poisson or negative binomial) model. By modeling two latent groups, one which always takes a zero value and the other that takes on count values (i.e., 0,1,2,3 and is not in the "always zero" group) from the count density, I can

[17] I also run additional models with squared, quadratic, and cubic polynomials of age. Compared to the linear age variable inclusion of the transformation of these variables do not substantially improve the model.

compute the overall probabilities as a mixture of the probabilities of the two groups to confidently predict the count outcomes Long (1997); Long and Freese (2006). To account for any potential issues of serial correlation or heteroskedasticity, I cluster the standard errors on each circuit by each Supreme Court precedent. I cluster the standard errors on 'Circuit-Precedent' because I expect variation between the individual circuits and between Supreme Court precedents.[18]

Empirical Results

I begin with a brief discussion of the descriptive statistics. I note here that a large proportion of the values of both outcome variables take zero values. The excess in zero values suggests that a zero-inflated model is more appropriate than a standard negative binomial model. I therefore estimate zero-inflated models. However, assessments of model fit and close inspection of the substantive results indicate that the standard negative binomial and zero-inflated models, for both outcome variables, produce very similar results.[19] This is not particularly surprising given that several studies that model either citation or treatment of Supreme Court precedent find that the more parsimonious negative binomial model produces very similar results to the zero-inflated model (see Black and Spriggs 2013; Cross and Spriggs 2010; Cross et al. 2010; Fowler et al. 2007; Fowler and Jeon 2008; Hansford and Spriggs 2006). Given

[18] A unique aspect of the empirical assessment is that I model the influences on lower court citation and treatment of Supreme Court precedent at two different levels of analysis. While the primary unit-of-analysis is the 'Supreme Court precedent-Circuit-Year,' that is how a given circuit responds to a Supreme Court precedent within a given year, I also analyze lower court responsiveness to Supreme Court precedents by aggregating all the circuits. This approach allows me assess not only individual circuits respond to Supreme Court precedents, but also how all the circuits cumulatively respond to the precedents of the Supreme Court. Both sets of results tell a similar story.

[19] To determine model fit, I follow Long and Freese (2006) by plotting the mean predicted probability for each count model, the standard negative binomial and the zero-inflated negative binomial model against the observed values. The models perform very similarly. An additional instrument to determine model fit is the Vuong (1989) statistic, but the Vuong statistic is not tractable when the standard errors are clustered. It is necessary to cluster the errors so as not to not to underestimate the inherent uncertainty around the quantities of interest.

the similarity between the models, I report the estimates of the more parsimonious negative binomial model (see Cameron and Trivedi 2013).

Table 3.1: Negative Binomial Model of Influences on U.S. Courts of Appeals Citation of U.S. Supreme Court Precedent

Variable	**Coefficient**	**S.E.**
Supreme Court Reversal	0.065*	0.020
Summary Decision	0.802*	0.072
Vote Margin	0.018	0.011
Supreme Court Vitality	0.268*	0.072
Court of Appeals Vitality	0.099*	0.033
Circuit of Origin	0.600*	0.126
Ideological Distance	0.051	0.191
Case Salience	0.164*	0.015
Criminal Case	1.203*	0.085
Merit Terminations	0.068*	0.015
Age of Precedent	-0.098*	0.014
Constant	-1.513*	0.129
Model Fit Statistics		
Observations	15,914	
X^2 Statistic	603.94	
Probability $> X^2$	0.000*	

Note: The outcome variable is citations of Supreme Court precedent. The standard errors are clustered on the Circuit-Supreme Court Precedent combination. All p-values reflect two-tailed tests unless directionality is hypothesized. *p < 0.05

Table 3.1 presents the model estimates of the influences on citations to Supreme Court precedent per circuit-year.[20] My primary expectation is that as the number of Supreme Court reversals increases, the number of lower court citations are expected to increase per circuit-year. The empirical results support this expectation. The effect of the logged number of Supreme Court reversals of the circuits is positive and statistically significant at conventional levels of significance. A number of additional covariates exert a statistically significant effect; however, the margin by which the Court decides a precedent and the ideological distance between the lower court panel and the Supreme Court, notably, does not exert a substantively meaningful effect.

Since the model coefficients are not directly interpretable, I calculate predicted counts for each of the continuous and interval variable of interest. For the indicator variables I compute the discrete change in the expected count going from 0 to 1. In computing the substantive effect for each covariate of interest, I hold all continuous and interval variables constant at their means and the indicator variables constant at their modal values. The substantive results demonstrate that the logged number of Supreme Court reversals of each circuit, going from its minimum to its maximum value produces approximately .3 additional citations per precedent per circuit per year. Figure 3.1 illustrates this effect. The figure demonstrates that an increased in the logged number of Supreme Court reversals positively corresponds with an increase in the number of lower court citations of a Supreme Court precedent. While the substantive effect seems modest on the surface, recall that the unit-of-analysis is citations circuit-year-precedent. Since the average of a precedent in the data is approximately five years and there are twelve circuits below, this means that going from the minimum to the maximum value of Supreme Court reversals results in ap-

[20] I also estimate models where the standard errors are clustered on the Supreme Court majority opinion writer, on the Supreme Court term, and the circuit. The results are highly robust. The concern with employing these alternative clusters is the small number of clustering units each of these variables offers. For instance, the Supreme Court majority opinion writer variable offers only 9 units, whereas the combination cluster unit I use provides over a thousand units.

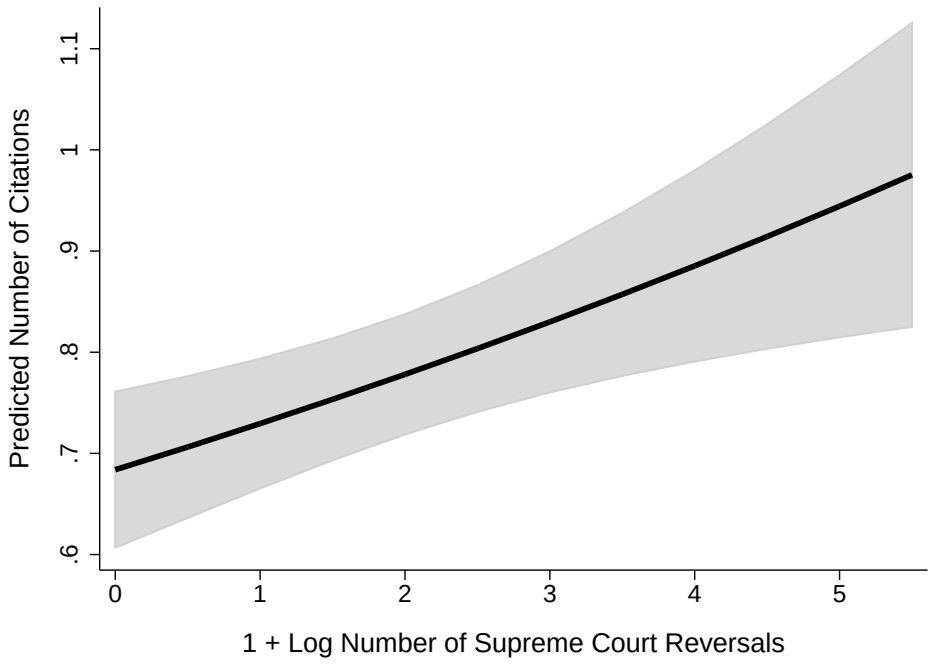

Figure 3.1: Impact of Supreme Court Reversals on Citations of Supreme Court

Note: To plot these effects, I generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of citations of Supreme Court precedent per circuit-year. The shaded area represents the 95% confidence intervals.

proximately 18 additional citations by the lower courts to a Supreme Court precedent over the average time a precedent is in existence. This finding suggests that the prior rate of reversal of the individual circuits by the Supreme Court does in fact influence the circuits to more frequently cite their precedents in subsequent terms.

The results in Table 3.1 also demonstrate that a Supreme Court precedent accompanied by a Supreme Court summary decision results in an increase of approximately .75 citations per circuit-year-precedent. This represents an increase of approximately 45 additional citations to a Supreme Court precedent by all the circuits combined over the average of a precedent. This represents a very large effect. Supreme Court vitality also exerts a positive effect. Holding all else constant, going from the minimum to the maximal value represents an increase of approximately .73 citations per

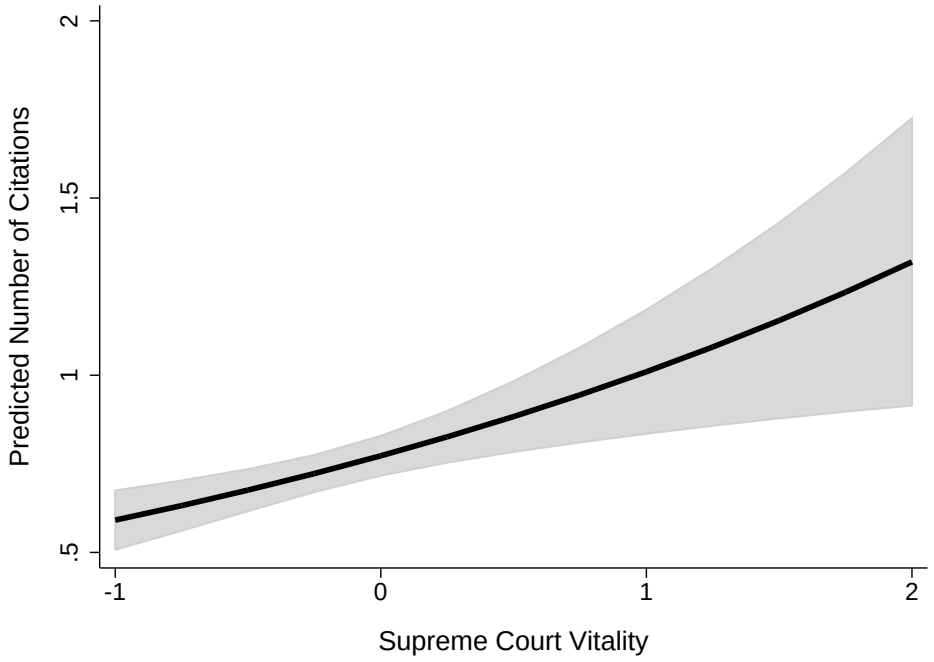

Figure 3.2: Impact of Supreme Court Vitality on Citations of Supreme Court

Note: To plot these effects, I generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of citations of Supreme Court precedent per circuit-year. The shaded area represents the 95% confidence intervals

circuit-year-precedent. Figure 3.2 illustrates this effect. This represents an increase of approximately 44 additional citations to a Supreme Court precedent by all the circuits over the time a precedent is in existence.

Court of appeals vitality also exerts a substantively meaningful effect. The courts of appeals vitality variable has a very large range from a minimum of .22 to a maximum of 102. However, very little of the data are observed at the extreme ranges. In fact, 99% of the data range between a vitality score of -2 and 6. To interpret the results for the full range of the Court of Appeals vitality variable would mean to significantly overstate is effect. Going from a vitality score of -2 to 6, which represents 99% of the data, results in increase of approximately .75 citations per circuit-year-

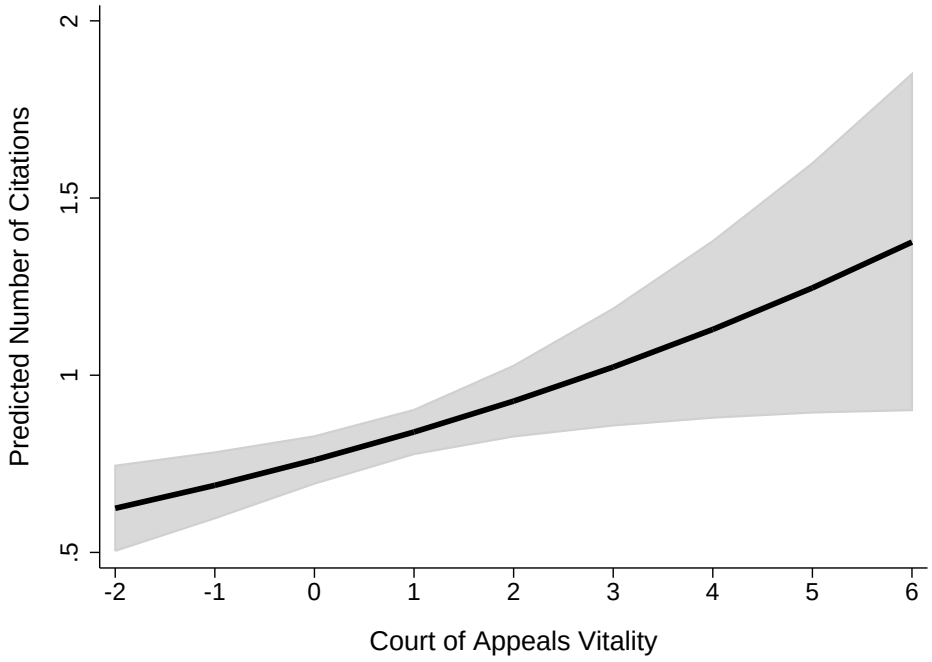

Figure 3.3: Impact of Court of Appeals Vitality on Citations of Supreme Court

Note: To plot these effects, I generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of citations of Supreme Court precedent per circuit-year. The shaded area represents the 95% confidence intervals

precedent. I graph this effect in Figure 3.3. This means that over the average age of a precedent the combined effect of Court of Appeals vitality, going from a vitality score of -2 to 6, results in an increase of approximately 45 lower court citations of Supreme Court precedent. In addition, a circuit that addresses a precedent that originates from a Supreme Court review of the same circuit results in a discrete change of approximately .63 additional circuit-year citations or compared with circuits addressing precedents that originate from a Supreme Court review of a different circuit. That is, whether or not the originating circuit addresses a precedent results in a difference of approximately of 38 citations to a given precedent over time. Finally, all of the control variables also exert a meaningful effect.

Table 3.2: Negative Binomial Model of Influences on U.S. Courts of Appeals Positive Interpretation of U.S. Supreme Court Precedent

Variable	**Coefficient**	**S.E.**
Supreme Court Reversal	0.087*	0.032
Summary Decision	0.769*	0.086
Vote Margin	0.002	0.012
Supreme Court Vitality	0.208*	0.104
Court of Appeals Vitality	0.210*	0.041
Circuit of Origin	0.468*	0.121
Ideological Distance	-0.170	0.206
Case Salience	0.138*	0.015
Criminal Case	0.764*	0.088
Merit Terminations	0.064*	0.015
Age of Precedent	-0.102*	0.019
Constant	-3.209*	0.150
Model Fit Statistics		
Observations	15,914	
X^2 Statistic	661.04	
Probability $> X^2$	0.000*	

Note: The outcome variable is positive interpretation of Supreme Court precedent per circuit-year. The standard errors are clustered on the Circuit-Supreme Court Precedent combination. All p-values reflect two-tailed tests unless directionality is hypothesized. *p < 0.05

Table 3.2 presents the results of positive treatment model of Supreme Court precedent per circuit-year. The model results are similar to the citation model. The same

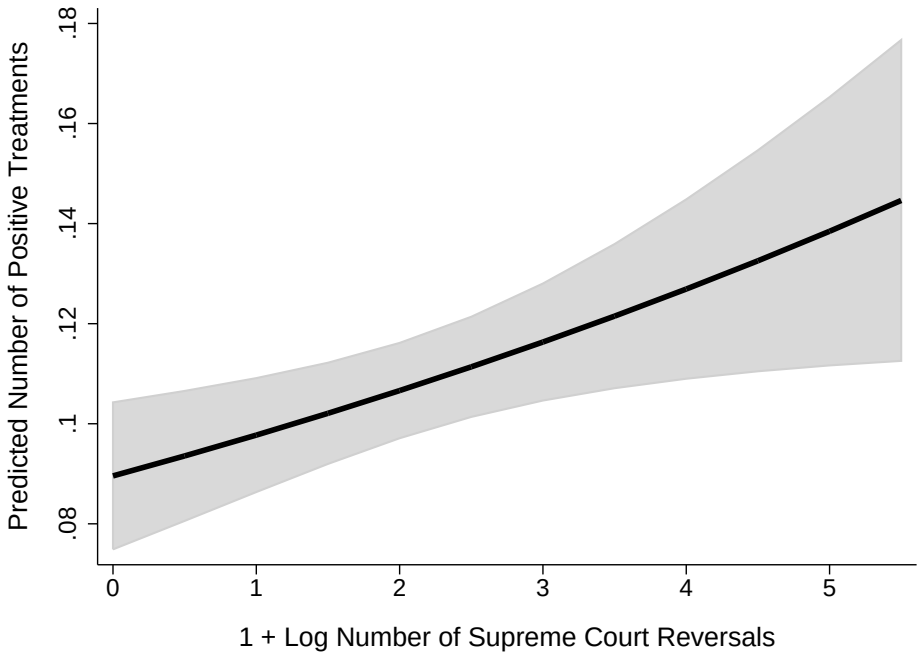

Figure 3.4: Impact of Supreme Court Reversals on Positive Treatment of Supreme Court

Note: To plot these effects, I generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of positive interpretations of Supreme Court precedent per circuit-year. The shaded area represents the 95% confidence intervals

covariates, as in the citation model, are statistically significant and in the same direction. Supreme Court vote margin and ideological distance again do not exert a statistically significant or substantively meaningful effect. Going from the minimum to the maximal value of the logged number of Supreme Court reversals, results in an increase of .06 additional positive treatments to Supreme Court precedent per circuit-year. Figure 3.4 presents this effect. This represents an effective increase of approximately 4 additional positive treatments of Supreme Court precedent for the lower courts over time. This result suggests that the prior rate of reversal of the individual circuits by the Supreme Court influences the lower courts to more frequently follow Supreme Court precedents in subsequent terms.

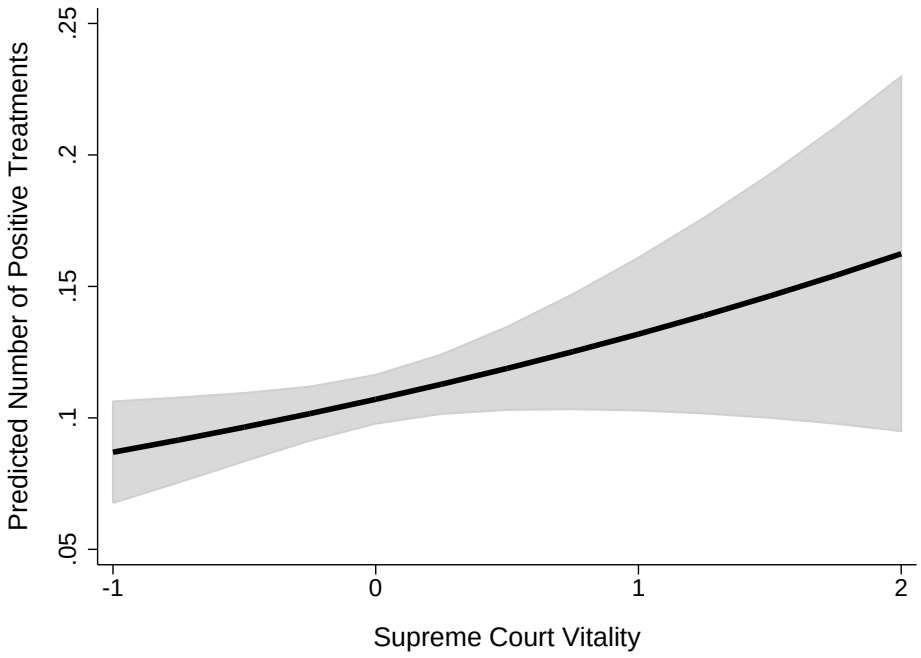

Figure 3.5: Impact of Supreme Court Vitality on Positive Treatment of Supreme Court

Note: To plot these effects, I generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of positive interpretations of Supreme Court precedent per circuit-year. The shaded area represents the 95% confidence intervals

A Supreme Court precedent with at least one summary decision increases positive treatment of the precedent by approximately .11 per circuit-year-precedent compared to precedents that have no associated summary decisions. Effectively, this represents an increase of approximately 7 additional positive treatments of a Supreme Court precedent by the lower courts over the average age of a precedent. Similarly, Supreme Court vitality exerts a positive influence on the propensity of a lower court to follow a Supreme Court precedent. I graph this effect in Figure 3.5. Going from a vitality score of -1 to 2 increases positive treatment of precedent by .07 per circuit-year. This represents an increase of approximately 4 positive treatments by the circuits over the age of a precedent. Court of Appeals vitality also exerts an important effect.

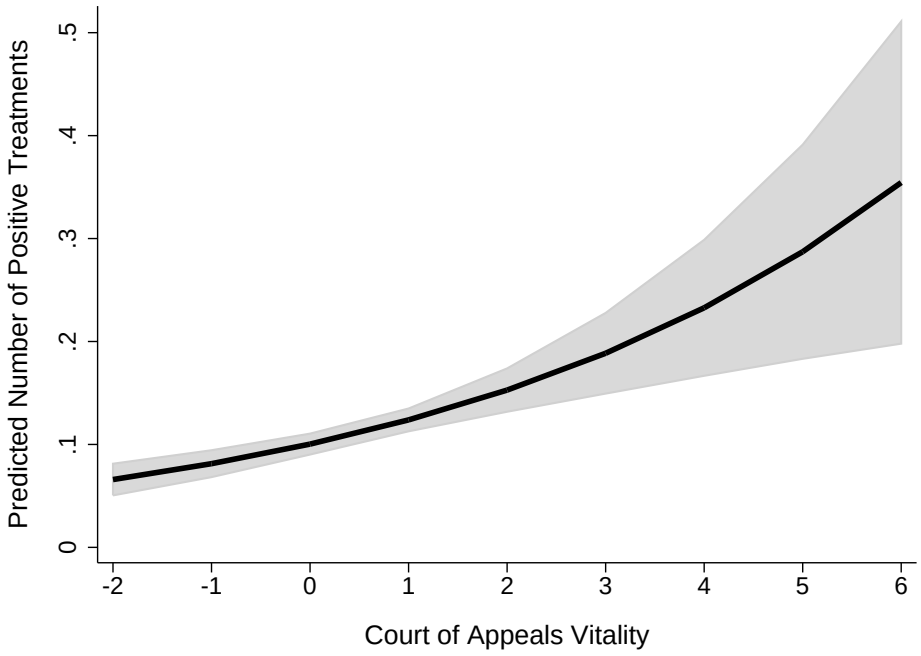

Figure 3.6: Impact of Court of Appeals Vitality on Positive Treatment of Supreme Court

Note: To plot these effects, I generate the predicted counts based on the average of the predicted counts across all real values in the data. The solid line represents the predicted number of positive interpretations of Supreme Court precedent per circuit-year. The shaded area represents the 95% confidence intervals

This effect is illustrated in Figure 3.6. Going from a vitality score of -2 to 6 results in an increase of approximately .28 positive treatments; this represents an effective increase of 16 additional positive treatments of Supreme Court precedent by the circuits over the average time a precedent is in existence. The impact of the circuit of origin responding to a Supreme Court precedent increases positive treatment by .06 per circuit-year. This represents an increase of approximately 4 additional positive treatments of Supreme Court precedent by the circuits combined over time. Similar to the citation model, all of the control variables also reach conventional levels of statistical significance.

Discussion and Implications

I began this paper with a seemingly straightforward question. Does the rate of reversal of each individual circuit by the U.S. Supreme Court influence the extent to which judges within a circuit adhere to the Supreme Court's precedents in subsequent terms? The short answer is yes. Previous examinations of the Court suggest that a variety of Supreme Court and circuit attributes affect the number of exposures it takes for lower courts to comply (Hansford and Spriggs 2006; Westerland et al. 2010). Despite substantial theoretical and empirical progress previous studies largely focus on the impact of the Supreme Court's overruled decisions on how lower courts may alter their responses to High Court's precedents (Benesh and Reddick 2002). Decisions that overrule precedent are not representative of the majority of the Court's decisions. Moreover, we should expect to see different lower court reactions to alterations and affirmations of precedent. What the Supreme Court does most often when it grants a petition *certiorari* is to reverse a decision by the lower court. When the justices reverse a lower court decision, the action is not only consequential for the parties involved, in terms of who wins and who loses, but it is also significant for the circuit from which the justices draw the case. This is because when the Supreme Court affirms or reverses an appeals court decision, the justices are also affirming or overturning inter-circuit precedent in the lower court.

I offer a new, more refined, framework for circuit-level responses to Supreme Court precedent. I argue that given the finite ability of the Supreme Court to review the large number of lower court decisions, justices should primarily be interested in aggregate patterns of compliance in the form of citations and positive interpretations to their precedents by the individual circuits, rather than individual panels or individual judges. I make the case that Supreme Court justices can influence circuit responses to their precedents in a number of ways including positively interpreting their own precedents and by issuing summary decisions that explicitly reference a

given formally argued precedent of the Court. I also theorize that given the inability of the Court to monitor, much less correct all instances of negative interpretations of their precedents, the justices can selectively review and reverse the least supportive circuits. By doing so the Supreme Court can effectively increase reliance on its precedents by both ideologically proximate and ideologically distant circuits. While such a strategy by the Supreme Court is likely to be ineffective at the individual judge level given the low prospect of review and reversal, a series of reversals for a given circuit are likely to be noticed by the judges that reside within the circuit and likely alter the extent to which they overtly the Court.

My central claim is that circuits that are more frequently reversed by the Supreme Court, compared to circuits that are less frequently reversed, are likely to more frequently rely on vital precedents of the Court in the following year. I contend that such a 'reversal' effect is not conditioned by the ideological disposition of the circuit relative to the policy preferences of the median member of the U.S. Supreme Court. Using data on Supreme Court reversals and data on the application of Supreme Court precedent by the U.S. Courts of Appeals, my analysis demonstrates that the prior rate of reversal serves a positive and substantively meaningful influence on the extent to which a given circuit within the U.S. Courts of Appeals relies on a Supreme Court precedent. My results empirically corroborate prior interviews with judges on the U.S. Courts of Appeals where circuit judges collectively claim to faithfully implement the High Court's precedents (see Bowie, Songer, and Szmer 2014; Klein 2002). Finally, my analysis challenges previous findings on the prominence of ideological preferences in driving future lower court compliance to the Supreme Court's precedents. The implication of this important (lack of) finding on the influence of ideology merits further exploration to disentangle the conditions under which judges on inferior courts, both federal and state, are most likely to comply with the decisions of the U.S. Supreme Court.

Chapter 4

The Impact of Supreme Court Precedent on the U.S. Courts of Appeals

The policy implications of the U.S. Supreme Court's decision in *Brown v. Board of Education* and more recently in *Citizens United v. Federal Election Commission* are difficult to ignore. In *Brown* and *Citizens United*, the justices, respectively, ordered the desegregation of public schools and removed restrictions on corporate contributions to independent political expenditures that play a major role in both state and federal elections. These decisions highlight the critical role the U.S. Supreme Court often plays within the American political landscape. The empirical literature corroborates this view and suggests that Supreme Court justices are policy oriented individuals who are strongly concerned with the broader impact of their decisions (Caldeira, Wright, and Zorn 1999; Maltzman, Spriggs, and Wahlbeck 2000; Segal and Spaeth 2002; Songer, Segal, and Cameron 1994; Spaeth and Segal 1999; Zorn and Bowie 2010). An important assumption within previous research is that such policy-seeking justices pay particular attention to the impact of their decisions within the judiciary (Cameron, Segal, and Songer 2000; Corley 2008; Hansford and Spriggs 2006). This proposition is understandable given that if the lower courts regularly defy the pronouncements of the justices, such actions would significantly undermine the legitimacy of the Supreme Court. As a practical matter, the ability of the justices to establish precedents that reflect their policy preferences would be of little consequence if the lower courts refused to implement those policies throughout the

judicial system. This concern is particularly germane given that the vast majority of legal disputes, ultimately, never reach the U.S. Supreme Court. It is, thus, within the lower courts, where the Supreme Court's decisions matter most and legal doctrine most substantially takes shape.

If Supreme Court justices are policy oriented individuals, then within the judiciary, such policy seeking justices should desire that lower court judges largely adhere to their precedents and policy pronouncements. Yet, the legal and policy preferences of Supreme Court justices and judges on the lower courts do not always converge. For instance, a panel of judges on the U.S. Courts of Appeals that is ideologically distant from the Supreme Court's median member is likely to prefer not following a precedent of the contemporary Supreme Court. Since the Supreme Court exerts no influence on the ideological composition of the lower courts, the main recourse available to the justices to ensure that the lower courts follow their preferences is to strategically audit lower court decisions that shirk from the preferences of the justices on the Supreme Court. Supreme Court justices cannot, however, conceivably monitor all the decisions of the judges on the lower courts. In recent years, the federal circuits adjudicate over 60,000 cases each term, of which the Supreme Court reviews fewer than one half of one-percent. The inability of the justices to review the large number of lower court decisions provides these lower courts with agency to shirk from the policy preferences of the Supreme Court. As with many other hierarchical organizations, the U.S. Supreme Court faces a significant moral hazard dilemma. Given significant resource constraints in the ability to review the large number of lower court decisions, I make the case that policy oriented Supreme Court justices should principally be concerned with the aggregate impact of their precedents within the judicial hierarchy.

Previous work on lower court interactions with the U.S. Supreme Court almost exclusively rely on principal-agent approaches to explain the behavior of lower court

judges to follow or shirk from the preferences of the Supreme Court. While existing accounts are important and informative, in that they convey important information about the frequency with which judges on the lower courts adhere to the policy pronouncements of the U.S. Supreme Court, by comparison, relatively little is known about the conditions under which lower court judges are more (or less) likely to rely on the precedents of the U.S. Supreme Court. Since all Supreme Court decisions are binding on the lower courts, why do lower court judges rely on Supreme Court decisions but not others? Related to this query is perhaps a more intriguing puzzle, can Supreme Court justices in any meaningful way influence lower court utility of its precedents? Studies on lower court interactions with the U.S. Supreme Court, in fact, demonstrate that lower court judges largely adhere to the legal and policy preferences of Supreme Court justices (Benesh and Reddick 2002; Hansford and Spriggs 2006; Songer and Sheehan 1990; Wahlbeck 1998). Often the theoretical account associated with such empirical examinations is some variant of a principal-agent model or more broadly a strategic action framework. The central challenge in maintaining the efficacy of the principal-agent approach within the American judiciary is that the rate of review and reversal of lower court decisions by the Supreme Court is consistently lower than 1% of all decisions issued by the lower courts in any given term. How do we reconcile this discrepancy? Herein lies the purpose of this paper, which is two-fold. First, I offer a new theory on hierarchical interactions between the U.S. Supreme Court and the U.S. Courts of Appeals that provides new insights not available from principal-agent theory. Second, I evaluate empirically whether it is top-down or horizontal (lower court-level) factors that most meaningfully influence the actions of judges on the lower courts *vis-á-vis* their decision to rely on the Supreme Court's precedents.

I offer a framework in which both Supreme Court and circuit-level influences drive lower court attentiveness to the Supreme Court's precedents. I make the case that

in addition to the conventional findings on the importance of ideological preferences and the strength of a precedent, other, previously overlooked, Supreme Court and circuit-level influences affect courts of appeal responsiveness to precedents of the U.S. Supreme Court. Using original data with over 29,000 observations, my analysis sheds new light on the decision-making relationship between the U.S. Supreme Court and the U.S. Courts of Appeals. I find that Supreme Court's use of its summary decision that explicitly reference its formally argued precedents, the prior history of positive interpretations of a precedent by appeals court judges within each circuit, and the circuit from which a Supreme Court case originates are the strongest predictors of the courts of appeals relying on the Supreme Court's precedents. My results notably depart from previous findings in that they demonstrate that the vitality of a precedent does not substantially influence lower court citations nor positive interpretations of Supreme Court precedent. I also find that ideological differences between the different levels of the judicial hierarchy to have a more nuanced effect on the adoption of the Supreme Court's precedents. The theoretical implications of my analysis offer an important way forward for empirical inquiries modeling the impact of Supreme Court precedent and future examinations that explore hierarchical interactions within the American judiciary.

Theoretical Framework

Central to the study of judicial politics is analysis of judicial decision-making behavior. Most frequently the focus of such analyses are decisions by the U.S. Supreme Court (e.g., Maltzman, Spriggs, and Wahlbeck 2000; Pacelle, Curry, and Marshall 2011; Pritchett 1948; Schubert 1965, 1974). An extensive literature examines the factors that influence the behavior of the justices of the U.S. Supreme Court. These studies find that several factors influence the decisions of Supreme Court justices, which include ideological preferences, legal and precedential stimuli, institutional con-

straints, and strategic considerations. A large number of studies suggest that ideologically driven, policy-oriented preferences strongly influence on the decision-making behavior of Supreme Court justices (see Rohde and Spaeth 1976; Segal 1997; Segal and Spaeth 1993, 1996, 2002; Spaeth 1979; Spaeth and Segal 1999). More recent work demonstrates that law and precedent exert an important influence on the decisions of the justices (see Bailey and Maltzman 2008; Bartels 2009; Hansford and Spriggs 2006; Richards and Kritzer 2002; Wedeking 2012). Yet other studies suggest that strategic and institutional influences drive the behavior of Supreme Court justices (see Epstein and Knight 1998; Hammond, Bonneau, and Sheehan 2005; Maltzman, Spriggs, and Wahlbeck 2000; Murphy 1964; Randazzo and Waterman 2011; Wahlbeck, Spriggs, and Maltzman 1998).

Even though the U.S. Supreme Court receives the preponderance of attention within the literature, the vast majority of federal case law is adjudicated by the intermediate courts below (Cross 2007; George 1999; Hettinger, Lindquist, and Martinek 2006; Klein 2002; Howard 1981). The past two decades represent a paradigmatic shift in the scholarship through a rising and equally rigorous attentiveness to the decision making process of other courts within the judicial hierarchy. Of particular note is the growing body of work on the nature of decision making within the U.S. Courts of Appeals. Empirical assessments of decision-making behavior within the U.S. Courts of Appeals indicate that ideological preferences have some effect on the behavior of appeals court judges (Boyd, Epstein, and Martin 2010; Songer 1982; Songer and Haire 1992). Other studies find that circuit judges face a greater number of institutional constraints, which includes an adherence to collegial norms (Hettinger, Lindquist, and Martinek 2006; Kastellec 2011), large caseloads (Bowie, Songer, and Szmer 2014; Klein 2002; Songer, Sheehan, and Haire 2000) and, albeit a very low probability, some likelihood of review, either en banc (Clark 2009; Giles et al. 2007; Giles, Walker, and Zorn 2006) or by the U.S. Supreme Court (Black and Owens 2012; Haire, Songer, and

Lindquist 2003; Lindquist, Haire, and Songer 2007; Songer, Ginn, and Sarver 2003; Songer, Segal, and Cameron 1994).

While scholars regularly examine decision-making behavior within the U.S. Supreme Court and the U.S. Courts of Appeals, independently, recent research sheds new light on the interactions among these courts. Studies of lower court interactions with the U.S. Supreme Court suggest that the lower federal appellate courts are highly responsive to the policy pronouncements of the U.S. Supreme Court (Clark 2009; Fowler et al. 2007; Songer, Segal, and Cameron 1994; Westerland et al. 2010). Hansford and Spriggs (2006) notably find that the U.S. Supreme Court's preferred policy positions and treatment of its own precedents largely influence future lower court responses to precedent. Other empirical work on judicial impact also demonstrates that the lower federal courts frequently follow, and rarely defy the Supreme Court in terms of explicitly challenging the broader authority and legitimacy of a Supreme Court precedent (Benesh and Reddick 2002; Johnson 1979; Canon and Johnson 1998; Songer 1988; Songer and Haire 1992; Songer and Sheehan 1992; Wahlbeck 1998). Thus, the general conclusion derived from these studies, collectively, is that a principal-agent relationship is in effect within the American judiciary. These studies are important and informative, but how do Supreme Court justices communicate their preferences to judges on the lower courts? Additionally, are potential signals by the justices capable of increasing lower court compliance with the Supreme Court's decisions?

The Policy Preferences of Supreme Court Justices

Although there are disagreements among scholars on the extent to which the policy preferences of Supreme Court justices influence their behavior, by now, there is ample empirical evidence that such policy preferences exert an important influence on the votes of the justices in salient cases and that the justices are more concerned with the broad policy consequences of their decisions than with the outcome of most cases

for the particular litigants in the case Rohde and Spaeth (1976); Segal and Spaeth (2002) (but see Kritzer and Richards 2005; Masood and Songer 2013; Richards and Kritzer 2002; Songer and Lindquist 1996). Such a concern for policy implications suggests that Supreme Court justices can be assumed to be interested in maximizing the impact of their decisions particularly within the judicial hierarchy. The ability of the justices to create precedents that reflect their policy preferences would be of little consequence if the lower courts refused to implement those policies throughout the judicial system.

An extensive literature provides compelling empirical evidence lower court adherence to the Supreme Court's decisions is high. Outright rejection of the authority of a precedent or the overt refusal of a lower court to follow precedent is, in fact, relatively rare (see Benesh and Reddick 2002; Hansford and Spriggs 2006; Kassow, Songer, and Fix 2012; Klein 2002; Songer 1988; Songer and Haire 1992; Songer and Sheehan 1990; Wahlbeck 1998; Westerland et al. 2010). The empirical findings in these important studies are reinforced by the statements of the judges themselves. A series of studies based on interviews with judges on the courts of appeals repeatedly find that the judges are nearly unanimous in their assertions that they and their colleagues will "of course" follow the precedents announced by the Supreme Court when those precedents are clear (Howard 1981; Klein 2002). But precedents are not always clear and when they are not, there are a number of ways for judges to modify or restrict the practical impact of a broad policy announced in a precedent without overtly defying the precedent. The primary way in which a lower court can reduce the policy impact of a precedent is by "distinguishing" the precedent in their opinion explaining the way they resolved the legal issues in their case. When a judge distinguishes a precedent, he or she accepts the general authority of that precedent but then explains that because of differences in the facts of the case confronting the judge and the factual context of the precedent, the given precedent is not the appropriate legal rule to follow in

the case. One judge interviewed for a recent study explained that there is usually a substantial amount of discretion in deciding which precedent controls a case and that "all of us are pretty good at being able to distinguish precedent" (Bowie, Songer, and Szmer 2014).

A key problem the justices face is their inability to monitor the actions of all of its subordinates. How then can policy oriented justices ensure that their preferences are adhered to by the courts below? My theoretical starting point is the assumption that policy maximizing justices should be particularly interested in having their precedents frequently cited and followed by the courts directly below. Given the very large number of decisions produced by the lower courts and finite resources to monitor these decisions, I argue that Supreme Court justices are interested in aggregate responses to their precedents. That is, the justices should be attentive to the fact that any given decision of the Court is frequently relied on by the lower courts collectively. I offer a framework in which Supreme Court signals are able to influence aggregate lower court responses to its precedents. In the sub-sections that follow I first highlight the importance of the Supreme Court's summary decisions, which I contend provide the Court an important utility in signaling its preferences regarding its precedents to the lower federal courts. I then provide a broader framework in which I argue that information regarding legal precedents flows both top-down, from the U.S. Supreme Court to the U.S. Courts of Appeals, and horizontally both within and across the circuits, which together influences the propensity of lower court judges to rely or ignore Supreme Court precedent.

I argue that a series of signals by justices of the Supreme Court provide important informational cues that influence the propensity of judges on the U.S. Courts of Appeals to rely on a given precedent of the High Court. Specifically, I theorize that the Supreme Court's use of summary decisions, which explicitly reference a recent plenary precedent in close proximity to the time the precedent is issued signals the

import of a precedent to judges on the courts of appeals. The intuition behind this expectation is that when the Supreme Court is willing to grant *certiorari* to one or several additional petitions to issue summary decisions in conjunction with a plenary ruling, the Supreme Court not only overturns additional appeals court decisions, but demonstrates its willingness to grant review and overturn similar decisions by the courts of appeals in the future.

Given the nature of the Supreme Court's summary decisions, I argue that these decisions by the Court communicate to the lower courts that a formally argued precedent of the Supreme Court is applicable to a diverse fact patterns and issue areas. When the Supreme Court receives multiple *certiorari* petitions that raise similar issues, the Court can resolve these appeals a few different ways. The most common way of handling similar, multiple petitions is to grant *certiorari* to one and schedule it for oral argument and then deny *certiorari* to the other petitions (Perry 1991). Alternatively, the Court may consolidate several of the petitions and schedule an oral argument for the combined cases (e.g., as it did in *Brown v. Board of Education*). But on occasion, the Court will grant *certiorari* to several of the petitions but only schedule one of the cases for oral argument. In such an instance, when the Supreme Court issues a decision and a formally argued opinion, the justices then issue orders to "Grant, Vacate, and Remand" (GVR) the other cases. Since the cases receiving a GVR typically have different fact patterns than the case that receive oral arguments, I contend that by issuing summary decisions rather than denying *certiorari* the Supreme Court intends to communicate that a given precedent should be considered and applied to many disputes involving diverse factual patterns in cases that come before the lower courts. Therefore I expect that as the number of Supreme Court summary decisions associated with a formally argued precedent increases, there is a greater probability the lower courts will rely on the given Supreme Court precedent.

> **Vertical Hypothesis 1:** As the number of summary decisions issued "in light of" a formally argued Supreme Court decision increases, the propensity with which the courts of appeals cite and follow a Supreme Court precedent increases.

Previous research on the utility of Supreme Court precedents consistently find that prior Supreme Court interpretations influences future citation and interpretations in both the Supreme Court and the lower courts (Corley and Wedeking 2014; Hansford and Spriggs 2006; Wedeking 2012; Westerland et al. 2010). Hansford and Spriggs find that positive Supreme Court interpretations of a precedent increases the likelihood that a precedent is cited and followed in subsequent decisions by both the Supreme Court and the lower courts (Hansford and Spriggs 2006). These scholars argue that the Court enhances the strength, or 'vitality,' of a precedent by explicitly reaffirming the precedent in subsequent decisions (see also Corley 2009; Westerland et al. 2010; Wedeking 2012). An important indication of the policy preferences of the Supreme Court is how the justices themselves interpret their precedents within their subsequent decisions. Thus, positive application of a given precedent by the justices may serve as an important signal to lower court judges that a given precedent is still relevant, important, and good law.

> **Vertical Hypothesis 2:** As the vitality of a Supreme Court decision increases, the propensity of the courts of appeals to cite and follow a Supreme Court precedent increases.

Maltzman, Spriggs, and Wahlbeck (2000) find that as the size of the Supreme Court's majority coalition decreases, the majority opinion writer is more likely to accommodate requests by wavering justices to alter the content of the majority opinion to minimize dissent. In addition, recent work by Corley, Steigerwalt, and Ward (2013) demonstrates that cases with a high degree of legal certainty are most likely to exhibit a high degree of consensus or unanimity. An expectation that flows from these insightful findings is that Supreme Court decisions with larger winning coalitions accommodate a broader spectrum of legal and ideological perspectives. The

incorporation of such broad perspectives in Supreme Court decisions with larger winning coalitions arguably provide lower court judges with opportunities that are more malleable to apply the Court's precedent in future decisions. Cases with smaller winning coalitions may be seen by lower court judges as more controversial, unsound, or divisive decisions compared to decisions that are unanimous, which may reduce lower court reliance on such divided precedents. Indeed, previous work by Benesh and Reddick (2002) provides empirical evidence that consensus among the voting behavior of justices is related to higher levels of lower court compliance with precedent, whereas precedents decided by a minimum winning coalition does not induce higher levels of lower court adherence. While most studies suggest that the size of the winning coalition that issues a precedent should increase future reliance of a precedent, this finding is not unequivocal, as some studies find that upon accounting for the vitality of a precedent, the margin by which justices issue a precedent no longer exerts a substantively meaningful effect (Corley 2009; Johnson 1979; Kassow, Songer, and Fix 2012) (but see Corley and Wedeking 2014; Hansford and Spriggs 2006; Wedeking 2012). Given the belief that strategic lower court decision-makers may be more inclined to rely on Supreme Court precedents issued by a wider margin, I assess the potential influence of the size of the majority coalition that issues a formally argued precedent. Thus, I test the theoretical expectation that a Supreme Court precedent issued with a larger winning coalition is likely to induce greater levels of reliance by judges on the courts of appeals compared to precedents that result from a decision in which the justices are divided.

> **Vertical Hypothesis 3:** As the size of the majority coalition that issues a Supreme Court decision increases, the propensity of the courts of appeals to cite and follow Supreme Court precedent increases.

A cornerstone of the principal-agent framework in studies of the American courts centers around the belief that judges on the lower courts are attentive to the policy preferences of the contemporary Supreme Court that may review their decision. As

such, previous work demonstrates that the ideological distance between the enacting and contemporary Supreme Court is an important factor that conditions the behavior of lower court judges. Westerland et al. argue that such a distance is an important consideration for lower court judges, and ultimately guides their behavior (Westerland et al. 2010). These scholars conclude that lower court judges respond to Supreme Court precedents in accordance with the preferences of the contemporary court. Thus, I test the expectation that the courts of appeals should be less likely to rely on a Supreme precedent when the Supreme Court is ideologically distant from the lower court.

> **Vertical Hypothesis 4:** As the ideological distance between the courts of appeals and the median Supreme Court justice increases, the probability of the courts of appeals to cite and follow Supreme Court precedent decreases.

Impact of Circuit-Level Influences on Responses to Precedent

While the various signals by the Supreme Court likely influence circuit reliance on the Supreme Court's precedents, I argue that the impact of such signals is moderated, to some extent, by influences at the circuit-level. My theory is premised on the belief that rather than a deference to the perceived preferences of the justices, judges in the Courts of Appeals take their roles as arbiters of law seriously. I argue that an important mechanism through which appeals court judges respond to the precedents of the Supreme Court is based on norm of horizontal *stare decisis*. That is, a seemingly important factor in determining the likelihood that a circuit relies on a Supreme Court precedent is influenced by how previous panels within the Courts of Appeals have interpreted a given precedent. Previous research demonstrates that the 'vitality,' or strength of a precedent, consistently impacts how the lower federal appellate courts respond to the Supreme Court's precedents in future decisions (see Hansford and Spriggs 2006; Westerland et al. 2010).

Precedents that have been interpreted positively compared to the frequency of negative treatments impact the 'legal strength' of a precedent. I similarly hypothesize that as the ratio of previous positive to negative interpretations of a Supreme Court's precedent by the circuits increase, the likelihood that a circuit will rely on a precedent increases. I believe that such 'vital' precedents are more likely to be cited and followed by subsequent panels of judges in cases that come before the U.S. Courts of Appeals. The intuition behind this expectation is based on the fact that when appeals court judges either positively or negatively apply a Supreme Court precedent, their action impacts circuit law.

> **Horizontal Hypothesis 1:** As the circuit vitality of a Supreme Court decision increases, the propensity with which the courts of appeals cite and follow a Supreme Court precedent increases.

A further implication of the importance of circuit law is that circuits responding to a Supreme Court precedent that emerges from the review of the same circuit should increase the probability of relying on a given precedent. The intuition behind this expectation is that when the Supreme Court issues a precedent that is based on a review of an earlier decision by a circuit, in issuing the new precedent the Supreme Court not only sets broad national policy but its actions directly impact existing circuit-law within the circuit in question. For instance, if the Supreme Court announces a new precedent by reviewing an earlier decision of the Fifth Circuit, then the Supreme Court not only sets a new national precedent for all circuits, but directly alters the existing law within the Fifth Circuit. A precedent established from a case originating from a given circuit thus simultaneously carries the weight of new circuit law as well as national law. Moreover, judges on the circuit of origin, even those that were not on the original panel whose decision the Court reviewed, are likely to pay particular attention to the new Court precedent given that the Supreme Court made a decision that directly affected their circuit precedent. Moreover, these judges may conclude that the Supreme Court is specifically sending a message to their circuit that

such non-compliant application of Court precedent is subject to review and reversal – in the form of additional summary or formally argued decisions of the Court. As such, I expect that circuits responding a Supreme Court precedent that originates from the same circuit to have a higher likelihood to rely on a new precedent compared to the other circuits.

> **Horizontal Hypothesis 2:** A circuit is more likely to cite and follow a Supreme Court precedent if the precedent originates from the Supreme Court's review of a decision from the same circuit.

In addition, I expect that a circuit that directly receives a Supreme Court's summary decision is likely to increase the propensity of the judges within the circuit to rely on a given Supreme Court precedent. When the Supreme Court issues a formally argued precedent it draws a case from a lower court. The lower court from which the Supreme Court takes has direct implications as the Supreme Court's decision impacts both national and circuit law. However, the other circuits may not feel as compelled to rely on the precedent especially if it conflicts with their existing circuit law. However, if the Supreme Court issues a summary decision referencing a new formally argued precedent to a different circuit, the Court instantaneously alters the law within the circuit that receives the summary decision. Thus, I expect such an action to increase the likelihood that circuit judges will rely on the Supreme Court's precedents.

> **Horizontal Hypothesis 3:** A circuit is more likely to cite and follow a Supreme Court precedent if the Supreme Court directs a summary decision associated with the precedent to a circuit.

Thus far, I have made the case that policy oriented justices are able to communicate the applicability of their precedents towards future decisions in cases that come before the courts of appeals through both explicit and implicit signals. In addition, I argue that certain important factors at the circuit-level condition the actions of judges on the courts of appeals in their decision to rely on a given precedent of the Supreme

Court. With respect to signaling by the Supreme Court, my principal argument is that the Supreme Court's use of its summary decisions, which explicitly reference a recent formally precedent signals the import of the precedent to judges on the courts of appeals. That is, all else being equal, my theoretical expectation is that when the Supreme Court issues one or more summary decisions "in light of" of a given formally argued precedent, the likelihood that the circuits will rely on the formally argued precedent will be greater compared to a precedent with which such a summary decision signal is absent. One may, however, take issue with such an expectation in that any increase in lower court adoption of a formally argued precedent may be attributed to a direct order by the justices to the judges on the courts of appeals. That is, when Supreme Court justices issue a summary decision, they vacate the previous circuit decision and order the lower court judges to issue a new decision "in light of" of a specific formally argument precedent. As such, there is little discretion available to the judges on the courts of appeal panel in that they must issue a new decision and do so only upon thoroughly considering the referenced Supreme Court precedent. In order for the Supreme Court's summary decision(s) to be an effective signal it is essential that there is an increase in the probability of adoption of the precedent beyond the panel of judges that directly receives the summary decision. This means that in order for the Supreme Court's action to be an effective signal not only must there be a higher likelihood of reliance on the formally argued precedent by the judges that directly receives the summary decision but there must also be an increase in the probability to rely on the precedent by the other judges within the courts of appeals.

Following the argument outlined in the theory above, I argue that when Supreme Court justices issue one or more summary decisions "in light of" of one of its formally argued precedents the Court is able to effectively communicate the added import and broad applicability of its precedent to all judges on the courts of appeals. For

judges that directly receive the summary decision the directive by the Supreme Court is clear. The previous decision by the courts of appeal panel is nullified, and these judge must issue a new ruling upon considering the merits of the formally argued precedent referenced in the summary decision. As such, the action of the justices to directly issue a summary decision to a panel of judges produces a direct effect. I posit that when the justices issue a summary decision the impact of this action also has an indirect effect on the remaining judges within the courts of appeal. That is, even if a panel of judges do not directly receive a Supreme Court remand via a summary decision, judges on the courts of appeal take notice of the fact that the Supreme Court has issued a summary decision that directs other circuit judges to consider a specific formally argued precedent of the Court. The intuition behind this expectation is that even if a judge on the courts of appeals does not directly receive a summary decision, the action by the justices to grant an additional petition *certiorari*, vacate the ruling, and issue a remand is consequential. I argue that at the very least this conveys to circuit judges that similar cases that are petitioned to the Supreme Court have a higher likelihood to receive *certiorari* and that this can be done at a relatively low cost to the justices. The decision by the Supreme Court to issue a summary decision "in light of" a formally argued precedent also sends a signal to lower court judges that the justices believe that certain precedents may be particularly relevant to certain to certain issues and factual situations. Thus, even if circuit judges are not motivated by a fear of reversal by the Court, circuit judges may interpret the action of the justices to highlight the potential applicability of a given precedent within a summary decision as an important cue to consider the precedent in future cases with similar factual situations. Moreover, since the decision of each courts of appeal panel is binding within its circuit, one may reasonably expect other panels within the same circuit that receives a summary decision by the Supreme Court to rely on a formally argued precedent with greater propensity. However, since my expectation is that

judges within all circuits are attentive to the Supreme Court's summary decision, I expect that even circuits that do not directly receive a summary decision will be more likely to rely on a Supreme Court precedent when the justices issue a summary decision "in light of" its formally argued precedent.

> **Horizontal Hypothesis 4:** A sister circuit that does not directly receive a summary decision is more likely to cite and follow a Supreme Court precedent with one or more associated summary decisions compared to a precedent with no associated summary decisions.

Research Design

I analyze the universe of U.S. Courts of Appeals responses to a sample of precedents from the U.S. Supreme Court to test my predictions. I examine courts of appeals responses to a stratified random sample of Supreme Court decisions issued between the 1994 to 2005 terms. I draw these cases from the longest natural Court in the modern history of the U.S. Supreme Court. Since a key aspect of my theory is that the courts of appeals respond differently to Supreme Court precedents with and without associated summary decisions, I take two samples of Supreme Court decisions.[1] I analyze courts of appeals responses to a sample of 150 formally argued Supreme Court decisions with no associated summary decisions and a second sample of 150 Supreme Court precedents with at least one associated summary decision. The data for the Supreme Court's formally argued decisions are obtained from the U.S. Supreme Court database (Spaeth et al. 2013).[2] The summary decisions data are original data I collect on the universe of the Supreme Court's summary decisions issued between 1994 and

[1] The concern with taking a purely random sample of all Supreme Court cases is whether enough precedents with summary decisions are included in the analysis to be confident in the inferences from the empirical estimation (see Campbell, Julious, and Altman 1995). Such a concern is especially germane as cases with summary decisions comprise a smaller portion of the Supreme Court's overall docket. Ultimately, the two seed sample allows me to obtain reduced sampling errors compared with a truly random sample.

[2] The U.S. Supreme Court Database is maintained by the Center for Empirical Research in the Law at the Washington University in St. Louis and is available at: http://www.scdb.wustl.edu.

2005 from the *United States Reports*.[3] In assembling the summary decisions dataset, I identify the formally argued precedent each Supreme Court summary decision is issued "in light of," the Supreme Court term in which the summary decision is issued, and the identify of the circuit to which each summary decision is directed. I then randomly select 150 Supreme Court precedents with at least one summary decision directed to the courts of appeals from the full population of cases between 1994 and 2005. Since the proportion of Supreme Court decisions with an associated summary decision is relatively small, I over-sample Supreme Court precedents with summary decisions. To account for the oversampling, I assign sampling weights to account for the true frequency with which these cases occur in the Supreme Court.[4]

To examine courts of appeals responses to the Supreme Court's precedents, I examine court of appeals citations and positive interpretations from the twelve "regular" circuits of the U.S. Courts of Appeals courts of appeals responses from 1995 to 2008.[5] These years allow me to assess courts of appeals responses to the Supreme Court's precedents from the time each Supreme Court decision is issued to a minimum of three years for the latest appearing Supreme Court precedent in the sample. My unit of analysis is the 'Supreme Court Precedent-Circuit-Year.' This means that there is a single observation for a lower court response from each circuit for every year a precedent is available for every Supreme Court precedent in the sample.[6] The

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[3] A very small number of summary decisions direct the lower courts to rely on precedents announced before the 1995 term and some were based on other authority (e.g., Solicitor General). These decisions are not included in the analysis as they may potentially bias the results.

[4] In generating the sampling weights, I calculate the number of observations for the two samples and then take the multiplicative inverse (reciprocal) of the proportion.

[5] Decisions of the Federal Circuit are not included in the analysis, because the Federal Circuit only hears cases in specific issue areas (i.e., patent and trademarks) and its inclusion would likely bias the results (c.f., Hansford and Spriggs 2006).

[6] For example, there is a single observation for the Courts of Appeals of the First Circuit for 1995 for *Bailey v. United States* (516 U.S. 137), which is one of the Supreme Court precedents in my sample. There is also an observation for the First Circuit for *Bailey* in 1996 and additional observations for each year until 2008. Similarly, there is an observation for *Bailey* for each year between 1995 and 2008 for each of the remaining eleven circuits.

resulting dataset yields approximately 32,000 observations.

I test my predictions over two outcome variables. The first variable captures the likelihood of a courts of appeals citation of a Supreme Court precedent. The second outcome variable captures the probability of a positive interpretation a Supreme Court decision by the courts of appeals. I obtain information for the outcome variables from *Shepard's Citations* via Lexis-Nexis for both citations and positive interpretations of Supreme Court precedents by the courts of appeals.[7] Following the conventions in *Shepard's*, I count the designation "Cited," "Explained," or "Harmonized," and any explicit positive interpretation of the Supreme Court's majority opinion as an appeals court citation of a Supreme Court precedent, coded as 1, and 0 otherwise.[8] I count the designation that a circuit "Followed" the Supreme Court's majority opinion as a positive interpretation of the precedent, coded as 1, and 0 otherwise.[9]

My key theoretical expectation is that the courts of appeals respond differently to a Supreme Court precedent when a formally argued precedent is accompanied by one more Supreme Court summary decisions compared to a precedent with no associated summary decisions. There are several ways to appropriately operationalize the summary decisions variable. For instance, I can construct an indicator variable denoting the presence or absence of a summary decision. Even though an indicator

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[7] *Shepard's Citations* is a service that collects information on all citations and interpretations of U.S. Supreme Court precedents. *Shepard's* includes a typology of interpretations, with specific categories within each part of the typology. A lower court citation of a Supreme Court's decision that does not include any type of substantive interpretation is simply categorized as "Cited." A lower court decision that substantially applies a particular Supreme Court decision, is categorized as "Following" the precedent, in that a lower court decision is relying on the Supreme Court decision to reach a similar legal conclusion in a subsequent case.

[8] I am careful in excluding Supreme Court citations that result from explicit negative interpretation of a Supreme Court precedent, because such negative citations capture something fundamentally different from my central theoretical claims. For the sake of robustness, I estimate models with all citations neutral, positive, and negative. Given the very small number of negative interpretations, it is not surprising that the results of the full citations model are consistent with estimates of the empirical model I report.

[9] The values of the outcome variables do not include citations from dissenting or concurring opinions, as these do not directly relate to the Supreme Court's majority opinion (c.f., Hansford and Spriggs 2006).

variable allows me assess my prediction on the influence of summary decisions, it does not allow me to leverage the data to delineate the impact between a single summary decision versus multiple summary decisions on the propensity of the courts of appeals to rely on a Supreme Court precedent. A binary variable is also less fine-grained than a measure that is not dichotomously collapsed. Therefore, my first explanatory variable captures the number of summary decisions issued "in light of" each formally argued precedent of the Supreme Court. The values of this variable are a count of the raw number of summary decisions associated with each formally argued Supreme Court precedent.

My second explanatory variable is a variable for Supreme Court vitality that captures the effect of prior Supreme Court interpretations of a given precedent on future court of appeals interpretations of the same precedent. This variable is based on the difference between the number of positive Supreme Court interpretations of its own precedents minus the negative interpretations by the Court (Hansford and Spriggs 2006). Positive values of the vitality variable indicate that the Supreme Court has interpreted a precedent more positively than negatively. Negative values of this variable indicate that the Supreme Court has interpreted a precedent more negatively than positively. Data for this variable are obtained via *Shepard's Citations*. I follow Spriggs and Hansford (2000) where "Followed" Supreme Court interpretations are coded as positive, whereas "Criticized," "Distinguished," "Limited," "Overruled," and "Questioned," are coded as negative interpretations. I additionally code "Superseded" designations as negative interpretations of precedent, because such interpretations are inherently negative.[10] I lag the Supreme Court vitality variable by one year to prevent issues of simultaneity.

[10] While "Superseded" interpretations are not included in Spriggs and Hansford's analysis, I construct vitality variables with and without the "Superseded" designation and find that the results do not change. Additionally, I estimate models using a vitality variable that excludes "Distinguished" interpretations and again find the results to be highly robust.

A number of studies suggest that the size of the Supreme Court's majority coalition may influence the propensity of lower court judges or the Supreme Court, itself, to rely on a given precedent in future cases (see Corley 2009; Corley, Steigerwalt, and Ward 2013; Corley and Wedeking 2014; Hansford and Spriggs 2006; Kassow, Songer, and Fix 2012; Wedeking 2012). To test this expectation, I include a variable that captures the size of the majority coalition that issues a formally argued precedent. This variable is computed by subtracting the number of dissents from the number of majority votes.[11] I obtain data for this variable via the U.S. Supreme Court database. Additionally, to account for the case salience of a precedent, I include a variable using data from Collins and Cooper (2012) to gauge whether a Supreme Court decision is cited on the front page, or any subsequent pages, of one of the four leading newspapers in the country. This measure expands the binary measure initially developed by Epstein and Segal (2000) to include whether a Supreme Court decision appears on the front page of the *Chicago Tribune*, the *Los Angeles Times*, or the *Washington Post* in addition to the *New York Times*. I obtain data for this variable from Collins and Cooper.

I include two variables to capture the impact of ideology on the propensity of the courts of appeals to cite and follow Supreme Court precedent. The first variable accounts for the ideological distance between the Supreme Court's majority opinion author and the median member of the Court. The underlying ideology measure for each judges ranges from -1 (liberal) to 1 (conservative) and is based on the Judicial Common Space (JCS) (Epstein et al. 2007).[12] In order to calculate the distance

[11] I also estimate models where I alternatively include a dichotomous variable that captures whether a Supreme Court precedent is issued by a unanimous or non-unanimous vote. The results remain highly robust. Therefore, I report the model estimates with the vote margin variable as it provides additional degrees of freedom compared to the indicator variable.

[12] It is worth noting that while the Judicial Common Space (JCS) is frequently employed in hierarchical assessments of judicial decision-making behavior, the measure assumes that presidents have no influence on the selection of courts of appeals judges when there is a home senator from the same party as the president. In reality, when a home senator and the president are from the

between the majority opinon writer and the median member I take the absolute value of the difference in JCS scores. This variable is, therefore, negatively bounded at zero with higher values denoting greater levels of ideological incongruity. I include a second variable to capture the difference between ideological preferences at the Supreme Court and the circuit-level. More specifically, this variable accounts for the ideological distance between the median member of the enacting Supreme Court and the median of the responding circuit panel. The variable for the ideological distance between the Supreme Court median and responding circuit panel median is the absolute value of the difference in JCS scores between the Supreme Court and panel medians.[13]

To assess the impact of circuit-level influences and horizontal *stare decisis*, I include a variable for circuit vitality that captures the difference between prior positive and negative Courts of Appeals interpretations of the Supreme Court's precedents

same political party both are involved in the selection of the judicial nominee. To account for this reality, it is necessary to take the median of the original JCS score along with the president's DW-NOMINATE score. I employ this strategy but find no substantial differences in the impact of ideological distance when comparing the original JCS score to the modified score. Therefore, I use the original JCS score to gauge the impact of ideological preferences to make the results more directly comparable to previous assessments on judicial impact.

[13] Recent studies provide strong evidence that appeals court judges do not respond strategically to the possibility of threat of reversal by the Supreme Court. The judges also consistently report in interviews that they do not possess the information needed to determine the likelihood of review in a large majority of their cases and that there are few costs associated with reversal. Additionally, game-theoretic analyses indicate that a rational judge concerned with the policy consequences of their decisions will consistently vote sincerely rather than strategically, and statistical analyses of voting patterns indicate that court of appeals judges frequently vote their sincere policy preferences in cases most likely to be reviewed by the Court (see Bowie and Songer 2009; Hettinger, Lindquist, and Martinek 2006). There is, therefore, no compelling theoretical reason to include a variable to account for the distance between the enacting Supreme Court and the contemporary Supreme Court in a model for aggregate citation and treatment patterns. Nevertheless, given the findings reported by Westerland et al. (2010) that the distance between the enacting Supreme Court and the contemporary Supreme Court is related to individual judge decisions to cite or positively treat precedents, we ran additional models that include the ideological distance between the enacting and contemporary Supreme Court (lagged one year). Consistent with my expectations, I find no evidence that increasing ideological distance impacts the propensity of the circuits to rely on the Supreme Court's precedents. Yet further, I also consider models that account for the ideological distance between the contemporary Supreme Court and contemporary responding court of appeal, and find very similar results to the included measure of ideological distance. I cannot include both of these distance variables in the same model due to concerns of multicollinearity as they correlate at over 90%.

(Westerland et al. 2010).[14] This variable is based on the total number of prior positive interpretations in a given circuit minus the total number of prior negative interpretations within the same circuit for circuit and year in the sample. This variable is constructed the same way as the variable for Supreme Court vitality where "Followed" Supreme Court interpretations are coded as positive, whereas "Criticized," "Distinguished," "Limited," "Overruled," "Questioned," and "Superseded" are coded as negative interpretations.[15] I lag this variable by one year to avoid issues of simultaneity. The data for the circuit vitality variable are obtained from *Shepard's Citations*. Like Supreme Court vitality, the circuit vitality variable is lagged by one year to mitigate issues of simultaneity.

My next circuit-level variable is a dichotomous indicator that accounts for whether the circuit responding to a precedent is the circuit of origin. This variable captures whether the circuit responding to a Supreme Court precedent is the same circuit which the Supreme Court reviewed in using its precedent. An as example, if a formally argued Supreme Court decision is the product of the justices reviewing a decision from the First Circuit Courts of Appeals and in a future term the responding lower court is a panel from the same First Circuit then the variable is coded 1. If the circuit responding to the same precedent that emerged via review of the First Circuit is one of the eleven circuits, the variable is coded 0. Data for this variable are obtained from the U.S. Supreme Court database. I also include an indicator variable for whether a circuit responding to a given Supreme Court precedent is the recipient of Supreme Court summary decision remand "in light of" of the same Supreme Court precedent. If the responding circuit receives one or more Supreme Court summary decisions issued "in light of" the same precedent it is responding to the variable is coded 1,

[14] A potential concern may be that the Supreme Court vitality and circuit vitality Supreme Court and circuit vitality variables correlate at 0.112.

[15] Again, I estimate models with and without "Superseded" and "Distinguished" treatments for the circuit vitality variable and find that the results remain robust.

and 0 otherwise. Data for this variable are obtained via the *United States Reports* and the U.S. Supreme Court Database.

In addition to the variables of interest, I include several controls to account for any potential confounding effects. To control for the case complexity or the breadth of a precedent, I include a variable that captures the number of legal provisions raised in a case. Next, I include a variable to control for *per curium* formally argued decisions. This control variable is necessary to account for the fact that not all formally argued Supreme Court decisions are signed by a particular justice. The variable for ideological distance between the Supreme Court's majority opinion writer and the Court's median includes a small number of majority opinions that are per curium. This control variable allows me to adequately account for *per curium* decisions without dropping them from the empirical models lowering the total observations.[16] To mitigate any bias from the relatively large number of criminal cases that are litigated in the courts, I include a control variable for Supreme Court precedents that address a criminal issue. I also control for the caseload of each circuit by including a variable that accounts for the number of merit terminations within each circuit by year. Due to the extreme range of the 'Circuit Caseload' variable, I divide the values of the variable by 1000. Finally, I include a variable to account for the age of the Supreme Court precedent (Black and Spriggs 2013; Hansford and Spriggs 2006; Reddick and Benesh 1999). This variable is count of the number of years a precedent is in the dataset from the time the Supreme Court establishes a precedent to correspond with each observation for the full duration of the circuit response data.[17]

Given that both outcome variables, the likelihood of lower court citation and

[16] I note here that models excluding the *per curium* opinions from the distance variable does not alter the results. This is not surprising given that per curium opinions account for a very small number of the overall sample.

[17] I estimate additional models with squared, cubic polynomials, and quadratic functions of age. Compared to the linear age variable, the inclusion of these transformations of age of precedent variable do not substantially improve the model.

positive interpretation of Supreme Court precedent, are dichotomous in nature, I estimate probit regression models. The structure of these data are such that the observations are nested – in fact, Supreme Court citation and interpretation data almost always have a clustered or hierarchical structure. In order to make sound inferences, it is necessary for me to account for the clustered nature of these data (Zorn 2006). Not accounting for the hierarchical structure is likely to result in overstating the precision and understating the uncertainty around the quantities of interest. One consequence of underestimating the degree of uncertainty around the estimates is an increased probability of committing a Type I error (Arceneaux and Nickerson 2009). Recall, that my unit of analysis is the 'Supreme Court Precedent-Circuit-Year' triad. This means that each courts of appeals response to a Supreme Court precedent is nested within each circuit for each response year.[18] One potential approach to account for the hierarchical structure of the data is to cluster the standard errors on each Supreme Court precedent by each circuit using the 'Supreme Court precedent-Circuit' combination cluster. However, a multilevel model is likely to result in slightly more precise estimates.[19] Therefore, I estimate the influences on the outcome variables by estimating multilevel probit regression models where lower citations and positive interpretations (level 1) are nested within each 'Supreme Court precedent-Circuit' combination (level 2).[20] I estimate the multilevel models with random intercepts.

[18] Not accounting for the nested structure of the data requires making the assumption that there are no differences across circuits for every lower court response to a Supreme Court precedent. Such an assumption is untenable.

[19] Either clustering the standard errors or estimating a multilevel model mitigates potential concerns of serial autocorrelation and heteroskedasticity (see Arellano 2003; Stock and Watson 2008; Wooldridge 2012).

[20] I can, in theory, estimate three-level models where lower court responses to the Supreme Court (level 1) are nested within each circuit (level 2) for each Supreme Court precedent (level 3). I do not report three-level model estimates for three practical reasons. First, models beyond two-levels provide little gains in precision at the cost of significantly higher computational complexity. Second, the level-two (circuits) units, individually, do not have a sufficiently large number of clusters (12), to be confident in the estimates (see Arceneaux and Nickerson 2009). Finally, the results of the two-level models are nearly identical to three-level models, therefore, I side with convention and employ the more parsimonious approach.

This decision is theoretically premised in that I expect that the initial probability of citation and positive interpretation to vary between the circuits and Supreme Court precedents, however, I have no theoretical expectation, *a priori*, that the explanatory variables will produce differences in coefficients across the units.

Empirical Results

Does the U.S. Supreme Court influence the likelihood that judges on the U.S. Courts of Appeals rely on the Supreme Court's precedents? The short answer is yes. Table 4.1 presents the coefficient estimates on the influences on the likelihood of courts of appeals citation of Supreme Court precedent. Three sets of models are reported within Table 4.1, the 'Principal Circuit' model provides estimates for the circuit that directly receives a Supreme Court summary decision "in light of" of each Supreme Court precedent within the sample. The 'Sister Circuits' model reports estimates for all other circuits that do not receive a summary decision by the Supreme Court. The 'All Circuits' model provides estimates on the influences on citation to Supreme Court precedent for the entire courts of appeals. The primary discussion of results is based on the 'All Circuits' model because the predictions are for entire full courts of appeals. The purpose of the 'Principal Circuit' and 'Sister Circuits' models is to shed light on the direct and indirect impact of the Court's summary decisions, which I discuss later in this section. My main expectation is that as the number of Supreme Court summary decisions issued relating to a formally argued precedent increase, I expect a higher probability of a court of appeals citation to a Supreme Court precedent. The empirical results strongly support this expectation. The variable that captures the effect of the number of summary decisions associated with each Supreme Court precedent on the likelihood of citation is positive and statistically significant at conventional levels of significance. In fact, most of the covariates in the model exert a statistically significant effect on the probability of citation to a Supreme

Court precedent. The notable exception is the covariate that captures the impact of Supreme Court vitality, which does not reach conventional levels of statistical significance. I discuss the implications of this new finding in the conclusion.

Since maximum likelihood estimates are not directly interpretable, I estimate predicted probabilities for each variable of the continuous and interval variables of interest. I compute the discrete change change in the outcome probability going from 0 to 1 for all indicator variables.[21] The substantive results demonstrate that as the count of summary decisions goes from a minimum of 0 to a maximum value of 13, the probability of citation increases from approximately 0.20 to approximately 0.90. This change represents a substantial increase in the likelihood of a Supreme Court citation by the courts of appeals. However, such an interpretation may slightly exaggerate the true substantive effect as less than one percent of the observations occur at the maximum value of the summary decisions variable. Since 99% of the observations occur at or below eleven summary decisions, the impact of the absence of a summary decisions versus the true maximum value (11 summary decisions) results in an increase from a 0.20 probability to approximately 0.85 probability of citation. This approximates to an improvement of 325%, which represents a very large substantive effect. I plot this effect in Figure 4.1. From a practical perspective, this result demonstrates that in the absence of a Supreme Court summary decision, *ceteris paribus*, judges on the courts of appeals are unlikely to cite a Supreme Court precedent within a given circuit in any given year. However, as the justices issue one or more summary decisions associated with their formally argued decisions, the probability of citation by the courts of appeals increases substantially. The key result here is that when the Supreme Court issues multiple summary decisions, the probability of lower court citation to a Supreme Court precedent changes from a statistical improbability

[21] In computing the substantive effects, I hold all continuous and interval variables constant at their mean, while all indicator variables are held constant at their modal values.

Table 4.1: Multilevel Probit Regression of U.S. Courts of Appeals Citation of U.S. Supreme Court Precedent

Variable	**All Circuits**	**Principal Circuit**	**Sister Circuits**
Summary Decision	0.164* (0.011)	0.080* (0.021)	0.167* (0.012)
Supreme Court Vitality	-0.010 (0.031)	0.147 (0.101)	-0.017 (0.032)
Supreme Court Vote Margin	0.012 (0.006)	0.046 (0.023)	0.011 (0.007)
Ideol Dist - SC Author to SC Median	-0.060* (0.017)	-0.041 (0.061)	-0.060* (0.017)
Ideol Dist - CoA Panel to SC Median	-0.332* (0.120)	-0.691 (0.503)	-0.327* (0.122)
Circuit Vitality	0.111* (0.013)	0.117* (0.022)	0.113* (0.014)
Circuit of Origin	0.690* (0.081)	0.473* (0.181)	0.680* (0.086)
Case Salience Index	0.113* (0.009)	0.081* (0.031)	0.114* (0.009)
Case Complexity	-0.263* (0.056)	-0.007 (0.257)	-0.270* (0.057)
Per Curium Decision	-0.712* (0.102)	0.985* (0.453)	-0.718* (0.103)
Criminal Decision	0.613* (0.048)	0.505* (0.170)	0.609* (0.049)
Circuit Caseload	0.043* (0.006)	0.019 (0.021)	0.042* (0.007)
Age of Precedent	-0.040* (0.004)	-0.101* (0.016)	-0.039* (0.004)
Constant	-0.958* (0.076)	-0.047 (0.336)	-0.962* (0.077)
Model Fit Statistics			
Observations	29,055	1,495	27,560
Cluster Units	3,589	181	3,408
χ^2 Statistic	1273.74	127.25	1100.82
Probability $> \chi^2$	0.000*	0.000*	0.000*

Note: The outcome variable is the probability of U.S. Courts of Appeals citation of Supreme Court precedent per circuit-year. The 'All Circuits' model includes all circuits of the U.S. Courts of Appeals. The 'Principal Circuit' model presents results for the circuit that directly receives a Supreme Court summary decision, whereas, the 'Sister Circuits' model presents the results for all circuits that do not receive an explicit summary decision by the U.S. Supreme Court. The estimates of the multilevel models are based on random intercepts for each circuit and each Supreme Court precedent with the standard errors reported in parentheses. *p < 0.05

(0.20) to a near statistical certainty (0.85). Yet further, recall that the unit of analysis is the 'Supreme Court Precedent-Circuit-Year' triad. This means that rather than an

aggregate increase in the probability of citation to the Supreme Court's precedents by the courts of appeals collectively, the substantive results represent an increase in the probability for an individual circuit to cite a Supreme Court precedent within a given year. This finding has important implications for the empirical literature given the sheer size of the effect of the covariate in increasing the likelihood of citation to the Supreme Court's precedents.

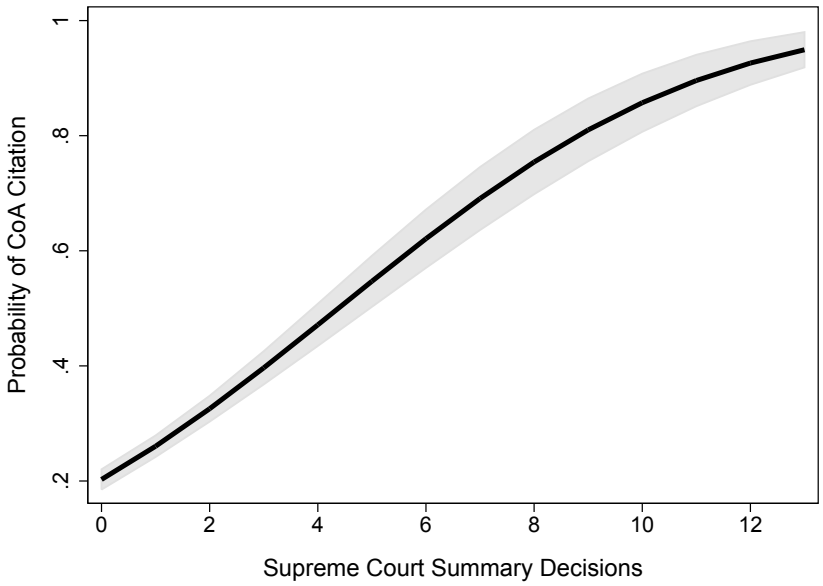

Figure 4.1: Impact of Summary Decision on U.S. Courts of Appeals Citation to Precedent

Note: To plot this effect, I generate the predicted probabilities. Continuous and indicator variables are held constant at their mean and modal values, respectively. The solid line represents the likelihood of citation to a Supreme Court Precedent in each circuit within each year. The shaded area represent the 95% confidence intervals.

The estimates of the citation model notably demonstrate that the variable for Supreme Court vitality does not exert exert a statistically meaningful effect ($P = .74$) on the probability of the courts of appeals to cite a Supreme Court precedent. The variable for vote margin or the size of the Supreme Court's majority coalition that issues a decision also does not exert a statistically meaningful effect on the propensity of the courts of appeals to cite the Supreme Court's precedents. While

the result for the vote margin variable is not overly surprising given mixed support in previous studies, the statistical and substantive results for the Supreme Court vitality variable conflict with many previous empirical studies that consistently demonstrate that the Supreme Court's own patterns of positive versus negative interpretations of its precedents strongly influence the propensity of the lower courts to rely on the High Court's precedents (see Black and Spriggs 2013; Corley 2009; Corley and Wedeking 2014; Cross and Spriggs 2010; Fowler et al. 2007; Fowler and Jeon 2008; Hansford and Spriggs 2006). The results here suggest that judges on the courts of appeals either pay little attention or are not substantially moved by the Supreme Court's own repeated positive or negative interpretations of its decisions. I discuss both the theoretical implications of this important new finding in the conclusion.

Both ideological distance variables exert a statistically meaningful effect on the probability of lower court citation of the Supreme Court's precedents and as expected are negatively signed. Substantively, the first variable that is the distance between the Supreme Court's majority opinion author and the median member of the Court results in a decrease in the probability of citation from approximately .34 to .33. This result suggests that as the distance between the majority opinion writer and the median member increases there is an extremely modest decrease in the likelihood of lower court citation. Of greater interest is the distance between the median member of the responding lower court panel and the median member of the Supreme Court. As Figure 4.2 demonstrates, that as the distance between the panel and Supreme Court medians increase there is a lower probability of citation to a precedent by the circuits. Going from the maximum to the minimum value results in a change of probability from .34 to .28. In context to the influence of the Supreme Court's summary decisions and previous analyses of lower and higher court distance, this is a very modest effect. While an increase in ideological distance between the circuit panel and the Supreme Court correspond with a lower probability of citation, the raw

change in probability is only .06. This result suggests that the impact of ideological differences on the propensity of the circuits to cite the Supreme Court's precedent is perhaps more nuanced than previously understood.

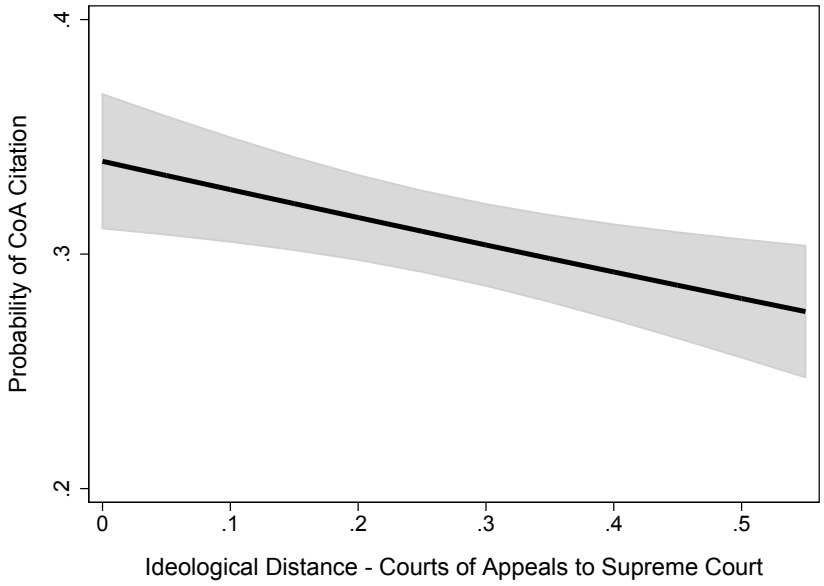

Figure 4.2: Impact of Ideological Distance on U.S. Courts of Appeals Citation to Precedent

Note: The solid line represents the likelihood of citation to a Supreme Court Precedent in each circuit within each year. The shaded area represent the 95% confidence intervals.

Next, I turn to the to the predictions on the impact of horizontal stare decisis and circuit-level factors on the probability of citation to the Supreme Court's precedents. As hypothesized, the variable for circuit vitality exerts a statistically significant and positive effect on the propensity of the courts of appeals to cite the Supreme Court's precedents. The circuit vitality variable has a very large range from a minimum of -22 to a maximum of 102. However, very little of the data are observed at the extreme ranges. In fact, 99% of the data range between a vitality score of -2 and 8. To interpret the results for the full range of the Court of Appeals vitality variable would mean to significantly overstate is effect. Substantively, going from a circuit vitality score of -2 to 8, which represents 99% of the data, results in a positive change in prob-

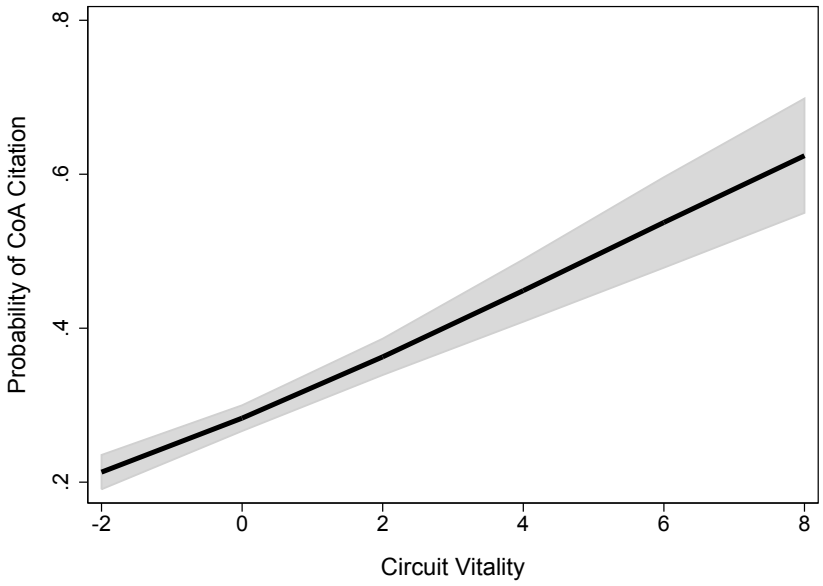

Figure 4.3: Impact of Circuit Vitality on U.S. Courts of Appeals Citation to Precedent

Note: The solid line represents the likelihood of citation to a Supreme Court Precedent in each circuit within each year. The shaded area represent the 95% confidence intervals.

ability from approximately .20 to .61. This result corroborates, in principal, previous work by (Westerland et al. 2010) on the importance of prior circuit interpretations in influencing future responses to precedent. The results in my analysis add to Westerland et al.'s work in two ways. First, Westerland et al. do not analyze the impact of prior lower court interpretations on the probability of lower court citation, instead, their analysis models the probability of explicit positive, neutral, or negative interpretation by the lower courts. Second, Westerland et al. do not assess the impact of the difference between positive and negative circuit interpretations of Supreme Court precedents. Instead, these scholars include separate count variables for the number of positive and negative interpretations and find that higher values of positive lower court interpretations correspond with a higher probability of positive interpretation, whereas higher negative values of prior negative interpretations increase the prospect of future negative interpretation by the lower courts. My results demonstrate that

the net difference between prior positive and negative interpretations also impacts the probability of citation to the Supreme Court's precedents and that the force of prior circuit interpretations is such that they substantively alter the probability of citation even when the analysis is dis-aggregated by circuit and year, as Figure 4.3 illustrates.

The variable for a circuit addressing a precedent that originates from the Supreme Court's review of the same circuit exerts a significant and positive effect on the likelihood of citation precedent. Put differently, the likelihood of citation to a Supreme Court precedent is greater for the circuit of origin than a circuit addressing a precedent that emerges from the review of a different circuit. The probability of citation originating from the review of a different circuit is approximately .31, whereas, the probability of citation increases to .58 if a precedent originates from the same circuit. This represents a discrete change of a .27 higher probability in citation of Supreme Court precedent, which represents a large effect. This result provides support to the notion that horizontal *stare decisis*, and, more specifically, the law within each circuit strongly influences the decision-making behavior of circuit judges (see Bowie, Songer, and Szmer 2014; Hettinger, Lindquist, and Martinek 2003*a*,*b*, 2006; Klein 2002). The new, but intuitive, finding here is that judges within each circuit are significantly more likely to consider a formally argued Supreme Court precedent if the precedent emerges from the review of panel's own circuit than a precedent emerging from the review of another circuit within the courts of appeals. This result is easy to reconcile from a practical standpoint given that when the Supreme Court affirms or reverses a lower court decision, the Supreme Court is simultaneously affirming or overturning circuit law within the circuit whose decision is reviewed.

The citation model includes a series of control variables all of which are statistically significant. Most notably, the variable for case salience is positively signed. Supreme Court decisions with higher levels of salience correspond with a higher probability of

citation by the courts of appeals. Going from the minimum to the maximum value of the salience variable results in an increase in probability from approximately .20 to .55. This results suggest that Supreme Court precedents that are not salient are unlikely to be cited per circuit-year, while precedents that are highly salient are significantly more likely to be cited. The variables for case complexity and per curium decisions are both negatively signed, meaning that complex cases and Supreme Court decisions without an identified majority opinion writer are less likely to be cited when the analysis is dis-aggregated by circuit and year. Supreme Court precedents that relate to criminal cases are significantly more likely to be cited than non-criminal precedents. The control for circuit caseload is significant and positive, which indicates that as the caseload in each circuit and each year increases, the likelihood of citation also increases. Finally, the variable for the age of precedent is significant and negatively signed as one would expect, because as Supreme Court decisions age over time, they are often replaced with new and more prevalent Supreme Court decisions.

Table 4.2 presents the coefficient estimates of the positive interpretation model. The results for the positive interpretation model are very similar to the citation model. The variable for the Supreme Court's summary decisions is again significant and positive. As Figure 4.4 illustrates, the probability that the courts of appeals will positively interpret a Supreme Court precedent is .04 if no summary decision is associated with a precedent. Going to the maximum value of the summary decisions variable for 99% of the observations increases the probability of positive interpretation to .40. A number of studies elucidate the reality that explicit positive interpretation of precedent is relatively infrequent. For instance, Fowler et al. (2007, 328) note that, "positive or negative interpretation of precedent is a rare event as compared to the string citation of precedent. Given that positive interpretations of Supreme Court precedents by the lower courts are a rare event, the net increase in probability of .36 represents a very large effect, as Figure 4.4 illustrates.

Table 4.2: Multilevel Probit Regression of U.S. Courts of Appeals Positive Interpretation of U.S. Supreme Court Precedent

Variable	All Circuits	Principal Circuit	Sister Circuits
Summary Decision	0.140* (0.009)	0.043* (0.015)	0.144* (0.010)
Supreme Court Vitality	-0.014 (0.034)	0.021 (0.077)	-0.012 (0.036)
Supreme Court Vote Margin	0.006 (0.007)	0.032 (0.017)	0.005 (0.007)
Ideol Dist - SC Author to SC Median	-0.044* (0.017)	-0.000 (0.043)	-0.046* (0.018)
Ideol Dist - CoA Panel to SC Median	-0.435* (0.138)	-0.209 (0.355)	-0.432* (0.143)
Circuit Vitality	0.038* (0.008)	0.063* (0.012)	0.043* (0.010)
Circuit of Origin	0.491* (0.085)	0.135 (0.137)	0.487* (0.092)
Case Salience Index	0.077* (0.009)	0.093* (0.027)	0.075* (0.010)
Case Complexity	-0.197* (0.056)	0.160 (0.196)	-0.210* (0.058)
Per Curium Decision	-0.300* (0.102)	-0.998* (0.462)	-0.321* (0.104)
Criminal Decision	0.367* (0.048)	0.178 (0.137)	0.371* (0.049)
Circuit Caseload	0.046* (0.007)	0.027 (0.015)	0.045* (0.007)
Age of Precedent	-0.008* (0.005)	-0.103* (0.017)	-0.004* (0.006)
Constant	-2.067* (0.088)	-1.115* (0.267)	-2.076* (0.091)
Model Fit Statistics			
Observations	29,055	1,495	27,560
Cluster Units	3,589	181	3,408
χ^2 Statistic	760.53	112.00	648.66
Probability $> \chi^2$	0.000*	0.000*	0.000*

Note: The outcome variable is the probability of U.S. Courts of Appeals citation of Supreme Court precedent per circuit-year. The 'All Circuits' model includes all circuits of the U.S. Courts of Appeals. The 'Principal Circuit' model presents results for the circuit that directly receives a Supreme Court summary decision, whereas, the 'Sister Circuits' model presents the results for all circuits that do not receive an explicit summary decision by the U.S. Supreme Court. The estimates of the multilevel models are based on random intercepts for each circuit and each Supreme Court precedent with the standard errors reported in parentheses. *p < 0.05

The variables for Supreme Court vitality and vote margin are again not statistically significant in the positive interpretation model. The finding that Supreme

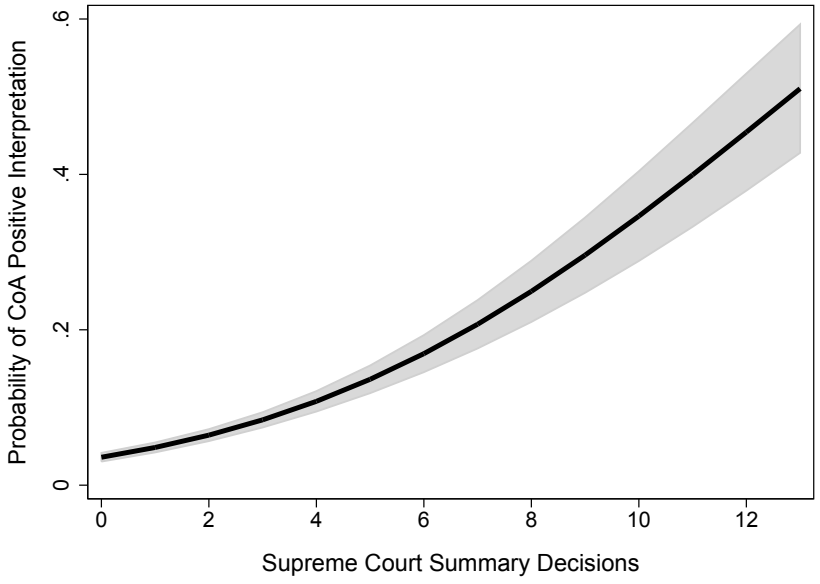

Figure 4.4: Impact of Summary Decisions on Positive Interpretation of Supreme Court Precedent

Note: The solid line represents the likelihood of positive interpretation of a Supreme Court Precedent in each circuit within each year. The shaded area represent the 95% confidence intervals.

Court vitality does not substantively influence the propensity of the courts of appeals to follow the High Court's precedents stands in contrast to previous analyses that demonstrate that prior positive and negative interpretations by the Supreme Court itself strongly influences the extent to which the lower courts follow the High Court's precedents (see Black and Spriggs 2013; Corley 2009; Corley and Wedeking 2014; Cross and Spriggs 2010; Fowler et al. 2007; Hansford and Spriggs 2006; Westerland et al. 2010).

Supreme Court case salience is significant and positive. Figure 4.5 illustrates the effect of Supreme Court case salience on the propensity of the courts of appeals to follow a Supreme Court precedent. Going from the minimum to the maximum value of the salience variable results in an increase from .08 probability to approximately .17. For positive interpretations, this represents a fairly sizable effect. The ideological

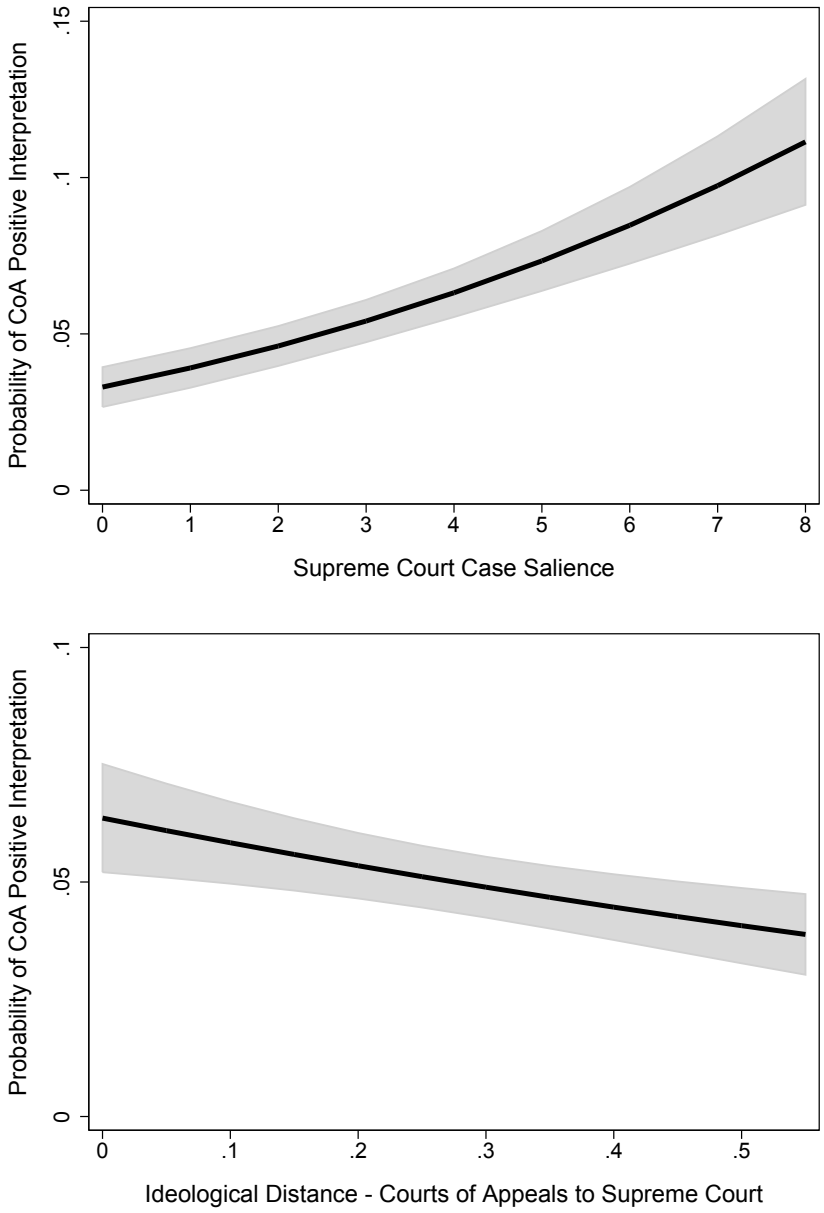

Figure 4.5: Impact of Case Salience and Ideological Distance on Positive Interpretation of Supreme Court Precedent

Note: The solid line represents the likelihood of positive interpretation of a Supreme Court Precedent in each circuit within each year. The shaded area represent the 95% confidence intervals.

distance between the Supreme Court's majority opinion writer and the median member of the Court does not influence lower court positive interpretations of Supreme

Court decisions. However, the ideological distance between the median members of the lower court panel and the Supreme Court exerts a statistically significant effect. Figure 4.5 also presents the effect of ideological distance between the lower court and Supreme Court medians on the likelihood to positively interpret precedent. The effect of the distance variable is small. When ideological distance between the lower court panel and the Supreme Court is at its minimum, the probability of positive interpretation is approximately .06, whereas, when ideological distance is at its maximum, the probability of positive interpretation decreases to approximately .04.

Circuit vitality exerts a meaningful effect on the propensity of a lower courts to follow Supreme Court precedent. This effect is plotted in Figure 4.6. Going from a vitality score of -2 to 6 increases the probability of positive interpretation of Supreme Court precedent from .05 to .27. Going from the minimum to the maximum value for 99% of the observations results in is a raw increase in probability of .22. This is a very large substantive effect. The impact of the circuit of origin responding to a Supreme Court precedent increases the probability to approximately .16 from .10, which is the probability of positive interpretation for the peer circuits. Similar to the citation model, all of the control variables also reach conventional levels of statistical significance. The circuit of summary decision is also significant in the positive interpretation model, however, substantively the variable's impact is very modest changing from .10 to .11 when a circuit directly receives a Supreme Court summary decision. Finally, among the control variables, criminal cases, circuit caseload, and the age of precedent reach conventional levels of statistical significance, whereas, case complexity and per curium decisions do not exert a statistically meaningful effect.

An important aspect of my theoretical argument is the idea that in order for any action by the justices to be an effective Supreme Court signal we must observe both direct and indirect effects in increases in the probability of the circuits to cite and follow a formally precedent. Therefore, it is necessary to empirically assess the impact

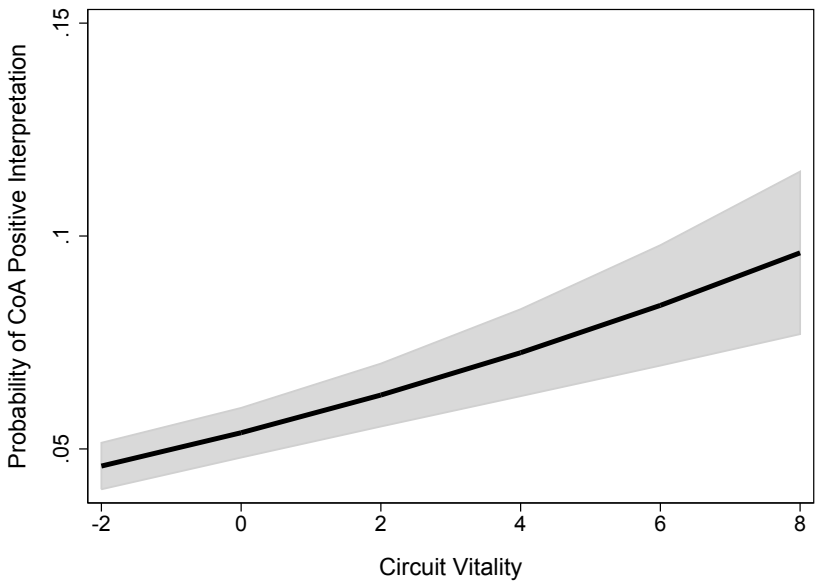

Figure 4.6: Impact of Circuit Vitality on Positive Interpretation of Supreme Court Precedent

Note: The solid line represents the likelihood of positive interpretation of a Supreme Court Precedent in each circuit within each year. The shaded area represent the 95% confidence intervals.

of the Supreme Court's summary decision signal on both the circuit that directly receives a summary decision as well assessing the impact on the remaining circuits that do not directly receive a summary decision. If the impact of the Supreme Court's action is realized by the circuit that directly receives a summary decision but not the sister circuits, then the Supreme Court's action is not an effective signal, because in such a scenario the Court's actions have no practical effect in increasing reliance to their precedents. However, if the Supreme Court's summary decision increases the probability of citation and positive interpretation in the circuit that directly receives a summary decision and the sister circuit only then can the Supreme Court's action be characterized as effective signals. To evaluate such an effect empirically, I estimate models for the 'Principal Circuit' that directly receives a Supreme Court summary decision. I also estimate models for the 'Sister Circuit,' which are the remaining circuits that do not receive the Court's summary decision.

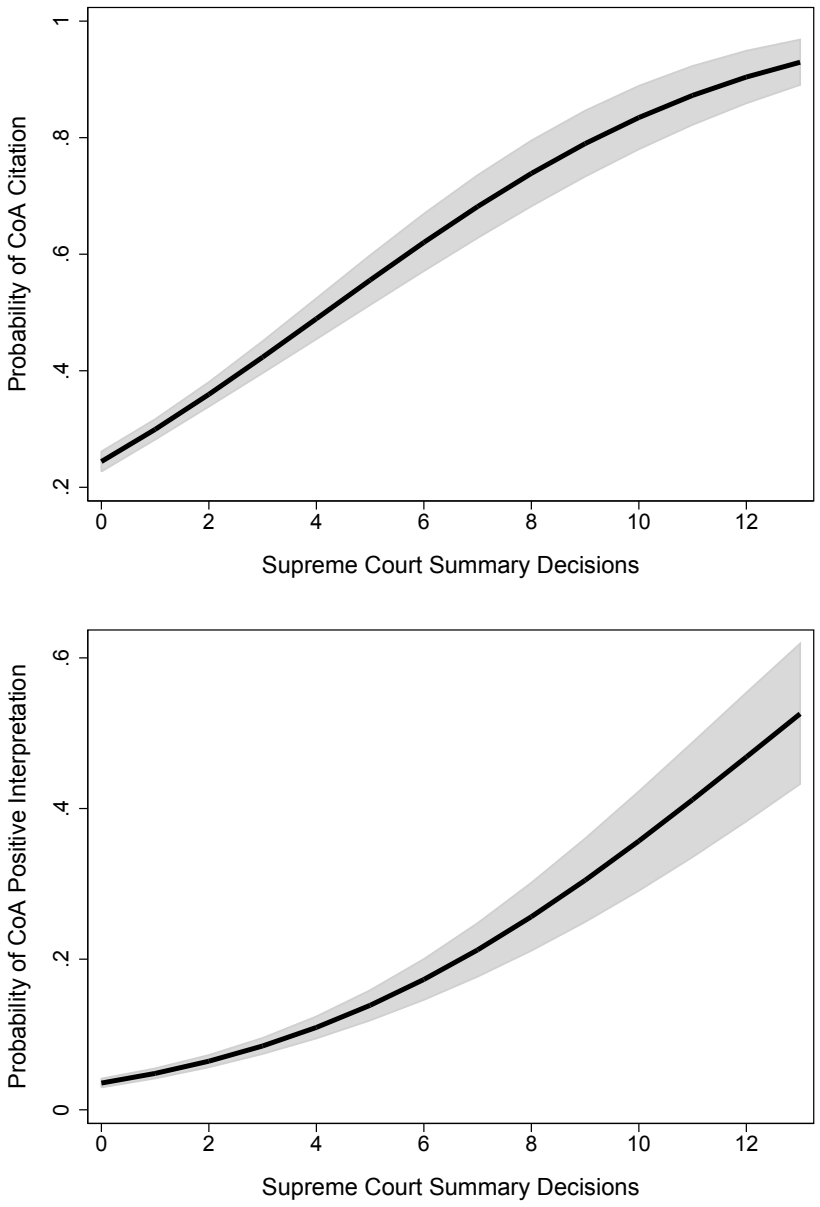

Figure 4.7: Impact of Summary Decisions on Citation and Positive Interpretation of Supreme Court Precedent in 'Sister Circuits'

Note: The solid lines represent the likelihood of citation and positive interpretation to a precedent in each circuit within each year that is not the circuit that directly receives a summary decision. The shaded area represent the 95% confidence intervals.

Recall that Table 4.1 also presents the influences on citations to the Supreme Court's precedents. On the surface, the coefficient estimates demonstrate that the Supreme Court's summary decisions exert a statistically significant and positive effect

on both the "Principal" and the "Sister Circuits." Thus, if the Supreme Court issues a formally argued precedent with a summary decision to any one of the circuits, the remaining circuits that do not directly receive a summary decision are statistically more likely to cite the precedent of the Court compared to when such a summary decision signal is absent. Interestingly, the substantive impact of the Summary decisions signal is stronger within the 'Sister Circuits.' That is, going from the minimum to the maximum value of the summary decisions variable in the 'Principal Circuit' model results in a positive change in probability from approximately .44 to .77. The substantive impact of the summary decisions variable in the 'Sister Circuits' model results in a positive change in probability from approximately .24 to .87. This means that for the 'Sister Circuits' when other circuits receive summary decisions, the non affected circuits go from a statistical improbability to a near statistical certainty in the probability of citing a precedent of the Court. This effect is plotted in Figure 4.7.

The results for the influences on positive interpretations to precedent corroborate the results of the citation models. As Table 4.2 reports, in both the 'Principal Circuit' and 'Sister Circuits' models the impact of the Supreme Court's summary decisions is significant and positively signed. The substantive impact of the summary decisions variable in the 'Principal Circuit' model results in a positive change in probability from approximately .14 to .27, whereas, the substantive impact of the summary decisions variable in the 'Sister Circuits' model results in a positive change in probability from approximately .14 to .41. Once again, the impact of the Supreme Court's actions is stronger in the non-affected circuits than the circuit that directly receives a summary decision. These results suggest that not only is the Supreme Court able to meaningfully influence the propensity of the courts of appeals to rely on its precedents, but when the Court send such signals there is significant learning within the circuits that results in both direct and indirect increases in lower court utility of the High Court's precedents.

Conclusion and Implications

Judicial scholars give regular attention to hierarchical interactions among the courts. Of particular interest to students of the judiciary are theoretical accounts that inform how the lower federal courts respond to the policy pronouncements of the U.S. Supreme Court. Often the theoretical account associated with such research inquiries is some variant of a principal-agent framework. However, the studies on the interactions between the U.S. Supreme Court and the lower courts produce conflicting accounts on the existence of a principal-agent relationship in the American courts. Where existing studies fall short is in providing an explanation of how information regarding preferences for policy and precedents is communicated between judicial actors up and down the judicial hierarchy.

My analysis addresses this void and offers several new contributions to the literature. First, I offer a theory on the factors that influence lower court responses to the Supreme Court's precedents that incorporates both Supreme Court signals and circuit-level influences. Specifically, I argue that policy-oriented justices seek that the lower courts adhere to their policy preferences in the form of citations and positive interpretations to their precedents. My analysis demonstrates that, in fact, the Supreme Court is capable of not only communicating information regarding their preferences but to also substantially increase the probability of lower court adherence to its decisions. Thus, even if it is difficult for the Court to monitor all of the specific individual treatments of its precedents by the myriad of lower courts, it is possible for the Court to influence the aggregate impact of its precedents. The Supreme Court can increase lower court utility of its precedents by taking one of several actions. The justices can announce one or more summary dispositions that direct a lower court to re-consider its earlier decision "in light of" a formally argued precedent of the Supreme Court. The more summary decisions the Supreme Court issues associated with a precedent, in a given area of law, the more the justices demonstrate their

willingness to grant similar petitions *certiorari* that are likely to emerge from the decisions of judges on the lower courts. Additionally, as previous studies argue, the Supreme Court can also increase the vitality of its precedents by positively interpreting its precedents in its own future decisions. My analysis, however, provides evidence against this important expectation. The results suggest that the lower courts are not substantially motivated by how the Supreme Court tends to interpret its own precedents. The Supreme Court may also demonstrate wide-support among the justices by adopting a precedent by a large margin. A precedent issued by a large majority coalition potentially sends the signal that a given precedent is particularly unlikely to be overturned given the level of support among the justices.

While my analysis demonstrates that these are effective strategies that are available to the Court, the Court's impact is also constrained to some degree by circuit level factors. First, circuits that are ideologically at odds with the Supreme Court may be less likely to cite and positively interpret its precedents. However, my analysis demonstrates that the impact of this ideological constraint is of less substantive significance than the impact of the positive steps that the Court can take to increase the impact of its precedents. Similarly, whether a given circuit takes prior action to reinforce the vitality of a precedent and whether the precedent generating case arose in a given circuit will independently affect the prospect of lower court reliance on precedent regardless of the actions taken by the Supreme Court. But these circuit actions also tend to have less substantive impact on the overall impact of a precedent than the actions taken by the Supreme Court itself, namely the justices decision to issue one ore more summary decisions that explicitly reference its formally argued precedents. I believe that this is a significant finding with important implications for future research that examine hierarchical interactions in the courts. Yet further, even though the constraining effect of ideology has been noted before, the finding that the originating circuit from which a Supreme Court precedent eventually emerges will

more frequently cite and positively interpret that precedent than precedents originating in other circuits is new. I argue that the decision of the Court to review a decision from a particular circuit has important implications for a circuit's law in that the Supreme Court's review either affirms or overturns existing circuit law. Such a direct treatment of a circuit's decision by the Supreme Court serves an important signal to members of the circuit, which is likely to increase the likelihood that judges within such a circuit cite and follow the Supreme Court's precedent.

My results contribute to a broad literature on the circumstances under which judicial decision-makers lower down the hierarchical ladder choose to rely on the precedents and policy preferences of the U.S. Supreme Court. Many scholars have argued that various factors at the Supreme Court-level influence the decisions actions of judges on the lower courts. Importantly, I find that upon accounting for the Supreme Court's summary decisions and prior interpretations of the Supreme Court precedents within each circuit, Supreme Court vitality no longer exerts a meaningful effect on the propensity of the lower courts to cite or follow the precedents of the Supreme Court. My findings challenge a prevailing theoretical account that the Supreme Court can increase lower court reliance on its precedents by frequently interpreting its precedents positively. My study contributes to the literature by providing an important update to our understanding of the mechanisms that influence the decisions of judges on the lower courts to rely on the Supreme Court's precedents. The analysis presented in this paper confirm the import of some substantive findings while notably challenging the efficacy of others. My framework additionally contributes by suggesting new, previously unconsidered theoretical factors that impact the interactions between U.S. Supreme Court and the U.S. Courts of Appeals. This analysis, thus, allows for stronger conclusions and a more nuanced understanding of the mechanisms at work within the American judiciary.

Chapter 5

Exploring the Causal Mechanisms of U.S. Courts of Appeals Attentiveness to the Supreme Court's Precedents

A persistent theme in judicial scholarship is examination of the extent to which that lower courts comply with the U.S. Supreme Court. Central to these examinations is the principal-agent interaction between the Supreme Court as a principal and the lower court as agents. Indeed, a large body of work examines the hierarchical dynamic in the American judiciary. To understand hierarchical interactions, scholars focus their examination in two areas. One line of research examines the Supreme Court's supervision of the lower courts (Haire, Songer, and Lindquist 2003; Songer, Segal, and Cameron 1994). This includes the principal's strategic auditing of the lower courts when there is non-compliant behavior (Black and Owens 2012; Boucher and Segal 1995; Cameron, Segal, and Songer 2000; Lindquist, Haire, and Songer 2007). Another line of research investigates the extent that lower courts follow Supreme Court precedent (Benesh 2002; Benesh and Reddick 2002; Songer and Sheehan 1990). Judicial scholars find conflicting support for motivations for the lower courts to comply (or defy) Supreme Court precedent. Some scholars find empirical support for the idea that lower courts consider the likelihood of review by the Court (Baum 1997; Songer, Segal, and Cameron 1994). In contrast, other studies conclude that the prospect of review and reversal, is so unlikely that fear of reversal does not factor in to lower court considerations of treatment of Court precedent (Bowie and Songer 2009; Klein

and Hume 2003; Songer, Ginn, and Sarver 2003). These studies suggest that instead of a fear of reversal, ideological (Westerland et al. 2010), legal (Hansford and Spriggs 2006; Klein 2002), and institutional considerations (Hettinger, Lindquist, and Martinek 2006) influence lower court judges and how lower courts apply the Supreme Court's precedent. Overall, the compliance literature provides multiple theoretical accounts on the motivations for lower court behavior in responding to the preferences of the Supreme Court. While these studies improve our understanding of the hierarchical dynamic within the courts, many important questions remain.

I contend that given finite resources and the inability of the U.S. Supreme Court to examine each instance of lower court defiance or misapplication of precedent, Supreme Court justices should primarily be attentive to aggregate patterns of lower court interpretations of their precedents. As I allude to throughout this dissertation, the studies that examine lower court responses to precedents of the Supreme Court find that the lower courts generally follow the authority of the Supreme Court's precedent (Benesh and Reddick 2002; Hansford and Spriggs 2006; Klein 2002; Kassow, Songer, and Fix 2012; Songer 1988; Songer and Haire 1992; Songer and Sheehan 1990; Wahlbeck 1998; Westerland et al. 2010). Yet, my analysis suggests that substantial variance exists among the circuit courts in yearly circuit citation and treatment patterns. In some instances, a Supreme Court precedent may have over 100 lower court citations and dozens of positive treatments.[1] Yet other Supreme Court precedents may not be cited or followed at all, within the same circuit-year. Given the increasing import of precedent for contemporary judicial research the large variance in citation and treatment patterns raise an important puzzle, 'why?'

In the previous chapter, I find that the Supreme Court's summary decisions, prior circuit interpretations of precedent, and the circuit from which the Supreme Court draws a case are the factors that most strongly influence judges on the courts of ap-

[1] For instance, see *Bailey v. United States*, 516 U.S. 137 (1995).

peals to rely on a given precedent of the Court. Notably, I also find that ideological differences between courts have a muted effect and that Supreme Court vitality does not exert a meaningful influence on circuit court reactions to the Supreme Court's precedents. Given that my results challenge the efficacy of previous findings, there may be skepticism on the robustness of the results. In this chapter, I address important concerns of spuriousness and explore the causal mechanisms that impact lower court attentiveness to the Supreme Court's precedents. I provide both qualitative and quantitative evidence and replicate an existing dataset to demonstrate the strength and consistency of my results.

Lower Court Attentiveness to Summary Decisions

A key argument I make throughout this dissertation is that the Supreme Court's summary decisions impact lower court reactions to the Supreme Court's precedents. An implicit assumption of this argument is that the lower courts actually know and care about the fact that the Supreme Court issues many summary decisions "in light of" of a formally precedent announced by the Court. To respond to potential concerns about whether this assumption is plausible, I first address the causal mechanisms by which judges are expected to become aware of summary decisions directed at 1) their own circuit and 2) within other circuits. I then present evidence that judges do in fact pay attention to the Supreme Court's summary decisions. First, it is worth noting that 95% of the summary decisions in my data are "grant, vacate, and remand orders" (GVRs) that nullify the ruling in an earlier lower court decision and, as a result, alters circuit precedent that is in effect prior to justices issuing the summary decision. While it is difficult for circuit judges to pay attention to every formally argued and summary decision issued by the Supreme Court, it is reasonable to assume that judges do, in fact, monitor all Supreme Court decisions that impact precedents of their own circuit. This is especially true when the justices alter the precedent

within a circuit. A summary decision that overturns the precedent within a particular circuit is binding precedent, an authoritative pronouncement that the previous circuit precedent is no longer good law and should not be used in future decisions by lower court panels within that circuit (Masood and Songer 2013). Consequently, even if a summary decision is not directed towards a particular panel of judges, all judges within the circuit that receives a summary decision will quickly become aware of it, because such an action alters inter-circuit law. Even if a judge does not directly read the Supreme Court's orders, other judges, clerks, and the lawyers of litigants will make this known to the circuit panel prior to the adjudication of a future, related case. In their recent book, Bowie, Songer, and Szmer (2014) interviewed 60 judges on the U.S. Courts of Appeals where judges unanimously maintained that they took changes to precedent seriously when it was clearly relevant to any case before them. All of the judges indicated that circuit precedent was particularly important to them and that they routinely read the opinions of other panels in their circuit.[2] Given the relative infrequency with which circuit precedent is overturned by the Supreme Court, it is reasonable to expect that in any circumstance when one of their own circuit's precedents is affected, either by a formally argued decision or a summary decision by the Supreme Court, the judges and the clerks in the affected circuit will quickly become aware of it.

In addition, when a summary decision strikes down the precedent of a circuit different from a judge's own circuit, the judge may still learn of the summary decision through the actions of attorneys in subsequent cases. In interviews with Bowie, Songer, and Szmer (2014), circuit judges indicate that they rely on to a substantial

[2] In approximately half of the circuits, each panel is expected to send to all other judges in the circuit all of their tentative opinions and then wait for comments from the other judges for about two weeks before formally releasing the final opinion. During this period, circuit judges not on the three-judge panel are asked to comment on any concerns on the authority for which of the panel's decision is based. Thus, in at least these circuits, it is clear that any GVR of a circuit precedent would quickly come to the attention of the other judges within the circuit.

degree on the briefs of counsel to bring to their attention the precedents that are most relevant for the case under consideration. By definition, a GVR directs the panel of the court of appeals whose decision is overturned to issue a new opinion and explicitly consider the formally argued precedent of the Supreme Court cited within the GVR order. Thus, at a minimum, each summary decision that is a GVR produces at least one new circuit court decision that explicitly discusses the meaning of the Supreme Court precedent cited within the Supreme Court's summary decision. Both the original summary decision and the subsequent circuit decision responding to the GVR are likely to be discovered and referenced by any competent attorney arguing a case raising a similar issue.

These precedents presumably will be cited by the party whose case will be strengthened by the new precedent. While attorneys will generally prefer a precedent from their own circuit that supports their argument, they routinely discuss precedents from other circuits, whenever those precedents are relevant. As a result, it should be expected that even in circuits other than the circuit that directly receives the summary decision of the Supreme Court, judges hearing any future case with a similar issue will be made aware of the summary decision and any alteration to circuit precedent resulting from the Supreme Court's GVR order. At times, the Supreme Court issues multiple summary decisions within several circuits "in light of" of the same formally precedent. In such a situation, there is an even greater expectation that the attorneys will reference the actions by the justices that affects circuit precedent in one or all of the circuits to whom the Supreme Court's summary decisions are directed.

Several pieces of empirical evidence, both qualitative and quantitative, are consistent with this understanding of the causal mechanism by which appeals court judges become aware of the Supreme Court's summary decisions. This account of how judges become aware of summary decisions and the subsequent appeals court precedent created on remand is consistent with the actual citation practices of the courts. To

conduct one test, I take a sample of twenty summary decisions of the Supreme Court and *Shepardized* them to see how often they were cited by the courts below. 17 of the 20 GVR orders were directly cited in at least one subsequent lower court decision with an average of 8.2 citations for each of these GVRs. The subsequent precedent created by the court of appeals on remand from the Supreme Court also received at least one citation in 17 of the 20 cases with an average of 80.3 citations per appeals court precedent. These numbers suggest strongly that circuit court judges are paying attention both directly to the Supreme Court's summary decisions and perhaps more importantly to the subsequent circuit precedents created as a result of the remand that explicitly apply the precedent referenced in the Court's summary decision.

To provide yet another test of whether judges are paying attention to summary decisions that reverse or vacate decisions of circuits other than their own, in Chapter 4 I analyze both citations and positive treatments generated in the circuit that received the summary decision by the Supreme Court. Within these sister circuits, the impact of having a summary decision at one of the the other circuits, still impacts aggregate citation and positive treatment patterns. This results provides strong evidence that non impacted, sister circuits are in fact learning about the Supreme Court's summary decisions and that judges are more likely to cite and follow the Supreme Court's formally argued precedents that are referenced in summary decisions sent to other circuits compared with Supreme Court precedents that have no associated summary decisions. Taken together, there should be little doubt that the Supreme Court's summary decisions impact compliance within the U.S. Courts of Appeals.

Exploring Causal Mechanisms

A potential concern with the empirical results presented in this dissertation is that lower court responses are not driven by the U.S. Supreme Court's summary decisions, instead they may be driven by an alternative based on the Supreme Court's pipeline

of cases. In other words, what we might think is being caused by summary decisions may in fact be caused by similar cases in litigation at either the U.S. Supreme Court or at the U.S. Courts of Appeals. For instance,Clark and Kastellec (2013) explore a theoretical model on how similar cases can percolate within the courts. In such a pipeline alternative, one may expect to find that there should be an increase in the number of citations and lower court positive treatments even without having a summary decision signal from the Supreme Court.

While this alternative explanation has some plausibility, it is not consistent with what is known about the practice and process of *certiorari* decisions and the decisions to issue summary judgments. First, there are a very large number of cases in the pipeline that encompass many issue areas. In recent years the number of *certiorari* petitions has been over 10,000 cases per year. But in spite of the large number of cases appealed, both the decision to grant *certiorari* and the decision to issue a summary judgment remain rare events with 97% of the petitions denied review. We know from interviews with the justices and their clerks that *certiorari* petitions in a given year often include many cases that raise very similar issues (Perry 1991). The interviews indicate that even when there are multiple petitions in a single year that raise similar issues, most of those petitions will be denied review. According to these interviews, the justices issuing a summary decision is not considered standard operating procedure even when multiple petitions raise similar issues (Perry 1991, 99). Hellman (1984, 395) concurs, concluding that there is nothing automatic about the justices issuing a summary decision regardless of the nature of the issue. Below I provide several tests to corroborate this claim. The four tests include two qualitative examinations of a series of cases from the 2000 Supreme Court term, as well as a quantitative assessment restricted to precedents with few associated summary decisions.

Qualitative Analysis

The first qualitative examination focuses on the plausability of issue similarity between formally argued precedents and lower court cases that receive a summary decision. The pipeline alternative seems to assume that summary decisions are likely only to focus on lower court cases that have the same, or a related issue, to the original precedent. Table 5.1 presents examples from the 2000 term based on a random sample of twenty summary decisions from that term. Interestingly, on qualitative inspection of these cases, I find that six of the cases from the sample that had summary decisions used summary decisions on cases with different issues from the original precedent. Importantly, the difference of issues is present regardless of what method one uses to classify issue areas. What this means is that the basis for the summary decision is not simply based on giving summary decisions to a variety of petitions that have the same, or closely related issue area, but rather that the basis for issuing these decisions is demonstrably different.

For the second analysis, I obtain a random sample of twenty precedents with no associated associated summary decisions from the 2000 Supreme Court term. With these two formally argued cases, I rely on *Westlaw* to examine the *certiorari* pool of similar petitions for a restricted time period, shortly prior to a particular decision being issued. In particular, I am interested in denials of *certiorari* as these would indicate similar issues that were being appealed to the U.S. Supreme Court, but that were not being heard by the Court, as part of an active decision by the Court. For the sample of cases, 13 of the 18 cases had issues similar to the issues in an appeals court decision that was later denied *certiorari* by the U.S. Supreme Court. Table 5.2 lists each specific Supreme Court precedent, along with accompanying petitions of *certiorari* that were denied *certiorari* in close proximity to a plenary case. In fact, what I find is that for a large portion of the Supreme Court cases that were in the sample, which ultimately were granted *certiorari* by the Court, there were

other similar cases that the justices could have plausibly heard, but chose not to. This qualitative examination reveals that even for cases that do not have associated summary decisions, there is still much variation in terms of petitions to the U.S. Supreme Court, which may vary in certain ways. To put it simply, the act of issuing a summary decision is a deliberate and procedurally different action for the justices; it represents a conscious choice rather than a way to deal with multiple petitions raising similar issues.

Table 5.1: Formally Argued Decisions with Different Issues in Summary Decisions

Case Name	**Citation**	**Key Note #**	**Spaeth Coding**	**Songer Coding**
Waste Agency	531 U.S. 159	149Ek127	80130 (environment protection)	753 (environment protection)
U.S. v. Rapanos	235 F.3d 256	350Hk909	10560 (sentencing)	116 (white collar crime)
Glover v. U.S.	531 U.S. 198	110k1519	10120 (counsel)	112 (tax evasion)
Robinson v. U.S.	196 F.3d 748	135Hk202	10170 (double jeopardy)	112 (narcotics)
Lujan v. G&G	532 U.S. 189	92k4179	40020 (due process)	706 (other federal tax)
DeBoer	206 F.3d 857	78k1376	80110 (local regulation of business)	752 (local economic regulation)
Cooper Industries	532 U.S. 424	90k4427	80080 economic (punitive damages)	712 (trademarks)
Time Warner v. Six Flags	245 Ga. App 334	289k1156	140030 contracts (breach fiduciary duty)	736 (breach fiduciary duty)
Duncan v. Sherman	533 U.S. 167	197k894 (AEDPA)	10020 habeas	125 (robbery)
Allen v. Hofbauer	111FedAppx363	197k380	10200 prosecutorial misconduct	121 (murder)
U.S. v. Mead Corp.	533 U.S. 218	92k2405	90120 (judicial review of administrative action	706 (other federal tax)
Matz v. TIP	227 F.3d 971	36k1007	70180 Labor (ERISA)	610 (other labor disputes)

Table 5.2: Appeals Court Cases Denied *Certiorari*

Supreme Court Citation	**Case Name**	**Issue - West Topic & Key Number**	**Appeals Court Cases**
513 U.S. 28	*Sinkfield v. Kelly*	92VI(A) Equal Protection-Standing	165 F.3d 973
513 U.S. 356	*Uni. of Alabama Bd. of Trustees v. Garrett*	92k3140 Discrimination (ADA)	136 F.3d 430, 166 F.3d 698 184 F.3d 999, 191 F.3d 1167 207 F.3d 94, 210 F.3d 732
531 U.S. 438	*Lewis v. Marina*	354k208 Admirality	- -
532 U.S. 200	*United States v. Cleveland Indians*	200k4374 Employment Taxes	- -
		Collective Bargaining	195 F.3d 1201, 196 F.3d 117 205 F.3d 922, 224 F.3d 316
532 U.S. 645	*Atkinson v. Shirley*	209k223 Native American Reservations	196 F.3d 1059, 211 F.3d 1280
532 U.S. 769	*Arkansas v. Sullivan*	48Ak349 Stop or Arrest as Ruse	182 F.3d 643, 195 F.3d 258
533 U.S. 158	*Kushner v. King*	319Hk33 Racketeering Enterprise	184 F.3d 74, 191 F.3d 799 193 F.3d 85, 208 F.3d 1073 214 F.3d 776, 219 F.3d 1271
533 U.S. 405	*United States v. United Foods*	92k1564 Compelled Speech	- -
533 U.S. 656	*Tyler v. Cain*	197k898 Habeas Corpus	215 F.3d 1233, 227 F.3d 331 244 F.3d 803
531 U.S. 278	*City News v. Waukesha*	92k980 Case and Controversy	168 F.3d 705, 196 F.3d 727
531 U.S. 326	*Illinois v. McArthur*	35k60 Duration of Detention	167 F.3d 739, 178 F.3d 334 181 F.3d 774, 187 F.3d 663 188 F.3d 829, 189 F.3d 88 209 F.3d 1153
531 U.S. 425	*Central Green Co. v. United States*	405k2885 Immunity for Damage	- -
531 U.S. 497	*Semtek v. Lockheed Martin*	170Bk3045 Conclusiveness of Judgment	171 F.3d 638, 173 F.3d 1376 178 F.3d 132, 189 F.3d 1107 195 F.3d 1225, 200 F.3d 1356 203 F.3d 1190, 208 F.3d 741
532 U.S. 275	*Alexander v. Sandoval*	78k1330 Civil Rights (Private Action)	191 F.3d 1020
532 U.S. 59	*Buford v.* 110k1158 *United States*	171 F.3d 514, 173 F.3d 974 Sentencing	177 F.3d 617, 179 F.3d 1056 183 F.3d 374, 195 F.3d 402 196 F.3d 884, 204 F.3d 1021 214 F.3d 908
532 U.S. 706	*NLRB v. Kentucky Community Care*	231Hk982 Labor law (supervisory)	- -
533 U.S. 262	*Idaho v. United States*	209k158 Lands on Reservations	188 F.3d 1010 219 F.3d 1127

Quantitative Analysis

The argument that the effect of summary decisions on lower court responses to precedent are driven by the number of cases in the pipeline is most plausible for those precedents which are accompanied by a large number of summary decisions, and thus the presumption that there are a large number of cases in the pipeline raising similar issues. However, when the Supreme Court has issued only a small number of summary decisions "in light of" a given precedent in a given year, it would be implausible to argue that in spite of that small number of summary decisions there are actually a large number of cases in the pipeline raising the same issue. Consequently, if one is to maintain that the number of citations and positive treatments by the lower courts is driven by the number of cases raising issues similar to the issues in a given precedent, one would expect the effects to be greatest in those situations in which there are a large number of cases in the pipeline raising a given issue. In Tables 5.3 and 5.4, I estimate models that exclude Supreme Court precedents with a large number of summary decisions. In Table 5.3, I limit the analysis to precedents with fewer than five summary decisions. In Table 5.4, I restrict the analysis to Supreme Court precedents with either one or no summary decisions. The two models excluding cases with a large number of summary decisions demonstrate that that the coefficient for summary decisions is statistically significant. These results demonstrate that summary decisions do not only have a statistically significant effect when the number of summary decisions is high. The effect is present even if a precedent has a single summary decision issued in light of it. The finding that summary decisions always matter, even when comparing zero to one summary decision only, greatly reduces the likelihood that the pipeline alternative is what is driving the results. The substantive results here show that the impact of summary decisions on lower court responses is large and consistent with the analysis in the previous chapter.

Table 5.3: Multilevel Probit Regression of U.S. Courts of Appeals Responses to U.S. Supreme Court Precedent with Fewer than Five Summary Decisions

Variable	**Citation Model**	**Positive Treatment Model**
Summary Decision	0.230* (0.019)	0.203* (0.018)
Supreme Court Vitality	-0.009 (0.032)	-0.011 (0.037)
Supreme Court Vote Margin	0.011 (0.006)	0.005 (0.007)
Ideol Dist - SC Author to SC Median	-0.063* (0.017)	-0.050* (0.017)
Ideol Dist - CoA Panel to SC Median	-0.320* (0.122)	-0.397* (0.141)
Circuit Vitality	0.127* (0.014)	0.058* (0.013)
Circuit of Origin	0.706* (0.082)	0.498* (0.084)
Case Salience Index	0.112* (0.009)	0.716* (0.009)
Case Complexity	-0.260* (0.056)	-0.182* (0.056)
Per Curium Decision	-0.701* (0.102)	-0.298* (0.101)
Criminal Decision	0.589* (0.049)	0.349* (0.048)
Circuit Caseload	0.042* (0.006)	0.043* (0.007)
Age of Precedent	-0.041* (0.004)	-0.008* (0.005)
Constant	-0.959* (0.076)	-2.052 (0.091)
Model Fit Statistics		
Observations	27,713	27,713
Cluster Units	3,433	3,433
χ^2 Statistic	1075.80	576.01
Probability $> \chi^2$	0.000*	0.000*

Note: The outcome variables are the probability of U.S. Courts of Appeals citation and positive treatment of Supreme Court precedent per circuit-year. The estimates of the multilevel models are based on random intercepts for each circuit and each Supreme Court precedent with the standard errors reported in parentheses. *p < 0.05

Table 5.4: Multilevel Probit Regression of U.S. Courts of Appeals Responses to U.S. Supreme Court Precedent with One Summary Decision

Variable	**Citation Model**	**Positive Treatment Model**
Summary Decision	0.421* (0.042)	0.375* (0.045)
Supreme Court Vitality	-0.036 (0.038)	-0.044 (0.047)
Supreme Court Vote Margin	0.008 (0.007)	0.012 (0.008)
Ideol Dist - SC Author to SC Median	-0.051* (0.019)	-0.046* (0.020)
Ideol Dist - CoA Panel to SC Median	-0.323* (0.130)	-0.451* (0.157)
Circuit Vitality	0.141* (0.016)	0.058* (0.015)
Circuit of Origin	0.697* (0.087)	0.510* (0.093)
Case Salience Index	0.108* (0.010)	0.068* (0.107)
Case Complexity	-0.332* (0.059)	-0.269* (0.063)
Per Curium Decision	-0.750* (0.107)	-0.362* (0.113)
Criminal Decision	0.608* (0.053)	0.373* (0.054)
Circuit Caseload	0.040* (0.007)	0.043* (0.007)
Age of Precedent	-0.041* (0.005)	-0.003* (0.006)
Constant	-0.959* (0.082)	-2.066 (0.102)
Model Fit Statistics		
Observations	23,431	23,431
Cluster Units	2,868	2,868
χ^2 Statistic	918.71	415.87
Probability $> \chi^2$	0.000*	0.000*

Note: The outcome variables are the probability of U.S. Courts of Appeals citation and positive treatment of Supreme Court precedent per circuit-year. The estimates of the multilevel models are based on random intercepts for each circuit and each Supreme Court precedent with the standard errors reported in parentheses. *p < 0.05

Causation is always difficult to prove. But the analysis in this section makes it much more plausible to believe that the increase in citations and positive treatments by the courts of appeals is much more directly the result of the deliberate use of summary decisions by the justices. The justices seemingly employ summary decisions

when they deem that a precedent should be applied in a broad array of situations. When the justices issue one or more summary decisions, there is a sizable increase in the probability of lower court citation and positive application of the Supreme Court's precedents.

Replication Analysis to Assess Robustness of Findings

In the previous discussion, I provide strong evidence that the Supreme Court's summary decisions are not just a function of the cases that come before the courts. Summary decisions represent a conscious choice by the justices and they meaningfully impact the extent to which the circuits cite and positively apply the Supreme Court's precedents. In the absence of the summary decisions, there is a demonstrably lower rate of adherence by the lower federal courts. Another aspect of my empirical analysis that merits further exploration are my findings on the lack of influence of Supreme Court vitality and the muted influence of ideology. A number of studies empirically demonstrate that the difference between prior positive and negative interpretations of a precedent by the Supreme Court, itself, strongly influences the extent to which the lower courts adhere to the Supreme Court's precedents (see Black and Spriggs 2013; Corley 2009; Corley and Wedeking 2014; Cross and Spriggs 2010; Fowler et al. 2007; Hansford and Spriggs 2006; Westerland et al. 2010). In every model I estimate, I find evidence against this expectation. Could it be that the results are a function of the data that I collect? To address this concern, I use an existing public dataset from Westerland et al. (2010), on lower courts treatments of the Supreme Court, and re-analyze the data.

Table 5.5 presents two models. The 'Original Model' is an exact replication of the model Westerland et al. (2010) report in their article in the *American Journal of Political Science*. This model suggests that several factors impact U.S. Courts of Appeals treatment of the Supreme Court's precedents. First, these authors find that

Table 5.5: Westerland et al. (2010) Replication Model of Lower Court Compliance with U.S. Supreme Court Precedent

Variable	**Original Model**	**Clustered Model**
Contemporary SC-Enacting SC Distance	-.635* (.141)	-.635 (.364)
Panel-Enacting SC Distance	-.069 (.099)	-.069 (.126)
Panel-Contemporary Distance	.013 (.125)	.013 (.142)
Age of SC precedent	-.011* (.003)	-.011 (.005)
Case Complexity	-.008 (.028)	-.008 (.067)
Dissenting Opinions	-.002 (.031)	-.001 (.089)
Concurring Opinions	.065* (.032)	.065 (.082)
Positive SC treatments	.014* (.007)	.014 (.018)
Negative SC treatments	-.006 (.011)	-.006 (.028)
Positive LC treatments	-.088* (.006)	.088* (.016)
Negative LC treatments	.051* (.006)	-.051 (.013)
Tau1	-1.013 (.079)	-1.012 (.179)
Tau2	-.079 (.079)	-.079 (.189)
N	10198	10198

Note: The 'Original Model' is the model Westerland el al. report. The 'Clustered Model' clusters the errors on the Supreme Court Precedent. Westerland et al. include the following note: "[t]he dependent variable is whether the lower court complies with Supreme Court precedent (=3), treats the precedent neutrally (=2), or deviates from the precedent (=1). Ordered logit estimates, robust standard errors in parentheses. *p $<$ .05. LC = lower court; SC = Supreme Court."

the ideological distance between the contemporary Supreme Court and the Supreme Court that enacts the precedent exerts a negative influence on the probability of positive treatment by the circuit courts. This result is in line with their main hypothesis. Westerland et al. note that "[p]erhaps the central prediction is that ideological estrangement between the Contemporary and Enacting Supreme Courts should be reflected in harsher treatments of the Enacting Court's precedents by the Contemporary Lower Court (902). These authors add that "indeed, the empirical findings

strongly support this central prediction." The implication of this finding is that it evinces characteristics of a principal-agent relationship. The lower court's positive or negative treatment is influenced by the ideological proximity of the current Court relative to the Court that issued the precedent. Westerland et al. make additional predictions on the age of the precedent, concurring opinions, prior positive applications by the Supreme Court itself, and prior applications at the circuit level that all appear to have a statistically significant effect in the predicted direction.

A critical shortcoming of Westerland et al.'s research design is that these authors assume uniformity among all the circuits, all years, and all Supreme Court precedents. These assumptions are untenable as these are inherently nested data. Each lower court treatment is nested within each circuit, which is nested within each year and each Supreme Court precedent. A consequence of not accounting for the nested nature of the data is underestimating the degree of uncertainty around the estimates, which increases the probability of committing a Type I error. One can account for the hierarchical nature of these data by estimating a model that clusters the errors. Upon doing so, we see substantially different results. The coefficient estimates in the 'Clustered Model' suggest that ideological differences between the contemporary and enacting Supreme Court do not meaningfully influence lower court treatments of the Supreme Court's precedents. In fact, none of the variables for ideology exert a statistically significant effect. This suggests that ideological differences are not a key driver of lower court responses. This finding is in line with my results in Chapter 4, where I find that ideological differences have a more muted and a more nuanced effect than the scholarship suggests.

The prediction by Westerland et al. (2010) on the impact of prior positive treatments by the Supreme Court is noteworthy and the main purpose behind this replication analysis. Westerland et al. find that prior Supreme Court positive treatments exert a positive and significant effect on lower court treatments. Their result, in fact,

corroborates the key finding of Hansford and Spriggs (2006) on the prominence of precedent vitality driving lower court reactions to Supreme Court precedent. However, as the clustered model demonstrates prior positive Supreme Court treatments is not a statistically significant predictor of lower court treatments of precedent. This updated result contradicts the finding by Hansford and Spriggs (2006). Instead, these results lend support to my own analysis in that I find that Supreme Court vitality, or the frequency of prior positive treatments by the Supreme Court do not influence lower court responses to precedent.

Discussion

Previous studies of judicial impact demonstrate that the overall rate of adherence to the Supreme Court's precedents is high and is reasonably predictable (Baum 1997; Songer and Sheehan 1990; Songer, Segal, and Cameron 1994). Several factors that predict the likelihood of lower court positive treatment of U.S. Supreme Court include the margin of the U.S. Supreme Court decision, how the Supreme Court has treated the opinion since it made an initial decision, the ideological congruence between the U.S. Supreme Court and the lower court, as well as other case factors, such as case complexity, and the political salience of a Supreme Court decision. These studies show that when the U.S. Supreme Court reinforces its precedents, lower courts tend to follow their lead. Specifically, Hansford and Spriggs (2006) find that the strength of precedent based on Supreme Court interpretations of existing decisions corresponds with the yearly number of citations and positive treatments of these precedents by the lower courts. My findings challenge this notion.

In this chapter, I address important questions of causality and the robustness of the empirical work that are lacking from the existing literature. I design alternate tests to gauge the impact of Supreme Court signals in motivating U.S. Courts of Appeals attentiveness to the Supreme Court's precedents. First, I address the concern

whether the Supreme Court's summary decision are a mechanism to increase attentiveness to precedents or if they are simply a byproduct of the cases that come before the courts. On potential argument is that summary decisions relate to existing cases within the judicial pipeline. I provide both qualitative and quantitative evidence that this is not the case. The act of issuing a summary decision represents a conscious choice by the justices, and it separates these decisions from the thousands of cases that are denied *certiorari* each term. Second, I provide evidence that in the absence of the Court's summary decisions there is a notable decline in lower court adoption of the Supreme Court's precedent.

My analysis systematically uncovers the influences on lower court adherence to precedent. My findings demonstrate that not only is the U.S. Supreme Court capable of sending various explicit and implicit signals to the circuits, but that such signals meaningfully influence lower federal court decision making and their interpretations of the Supreme Court's precedents, and from these interpretations of precedent the justices can then decide whether or not to sanction a decision by one or several of the circuits. My analysis also reveals that ideological differences between the Supreme Court and the lower courts have a more nuanced impact on the adoption of the Supreme Court's precedents than previous studies suggest (see Westerland et al. 2010). An additional empirical implication of my analysis is the finding that Supreme Court vitality does not exert a meaningful influence on the likelihood that the circuit courts will cite or follow a Supreme Court precedent. This result suggests that judges on the courts of appeals pay little attention or are not moved by the Supreme Court's own repeated positive or negative interpretations of its decisions. Instead these judges appear to be more compelled when the justices direct their attention to a specific precedent through their summary decisions. The finding on the lack of influence of Supreme Court vitality conflicts with many previous empirical studies that consistently demonstrate that the Supreme Court's own treatment of

precedents motivate lower court responses. My analysis along with examination of Westerland et al.'s (2010) data suggest that it is the Supreme Court's summary decisions, and not the Court's treatment of its precedents, that promote horizontal *stare decisis* and drive lower court responses. The theoretical implications of my analysis offer a new way forward for modeling the impact of legal precedent and improve our understanding of the dynamics of decision making in both the U.S. Supreme Court and the U.S. Courts of Appeals.

Chapter 6

Conclusion

Empirical inquiries on the U.S. Supreme Court and the U.S. Courts of Appeals elicit the majority of attention from judicial scholars. Of particular interest to students of the judiciary are hierarchical interactions among the courts, especially the nature of the relationship between the U.S. Supreme Court and the circuit courts. Most often the theoretical account accompanying such analyses is some variant of a strategic action framework (see Lax 2003; Songer, Segal, and Cameron 1994; Westerland et al. 2010). Collectively, these studies produce a prodigious amount of information on the conditions that influence a particular court or judge to follow or shirk from the legal and policy preferences of the Court. Surprisingly, the scholarship devotes little attention to examining the cumulative impact of Supreme Court decisions on the U.S. Courts of Appeals. Notably lacking from this rich body of work on the courts are theories, and the accompanying empirical investigations, of many important questions on the overall policy impact of Supreme Court decisions on the lower federal courts. This raises a number of puzzles. First, under what conditions do Court precedents have the broadest impact on the lower courts, especially on judges within the U.S. Courts of Appeals? Second, what motivates the circuits to follow some Supreme Court precedents but not others? Third, what mechanisms are available to Supreme Court justices to increase circuit court compliance with their decisions? Perhaps most importantly, how is information regarding the legal and policy preferences of judicial actors communicated within the American judicial hierarchy?

My dissertation seeks to answer these critical questions by exploring the nature of the relationship between judges on the U.S. Courts of Appeals and their judicial superiors on the U.S. Supreme Court. My analysis focuses on the interaction between these courts centers on circuit court implementation of the Supreme Court's precedents. The principal objective of this project is to identify the causal conditions that either increase or decrease the propensity of judges on the courts of appeals to comply with the precedents of the U.S. Supreme Court. In this endeavor, I offer a new theory on how information regarding precedents and policy preferences is communicated dynamically within the American judiciary. From this broad theoretical framework, I derive more precise predictions that I systematically test within the empirical chapters of this dissertation.

I investigate various potential signals by Supreme Court justices to judges on the U.S. Courts of Appeals in the first empirical chapter. I offer a theory in which, given the limited ability of the Supreme Court to review the large number of lower court decisions, the justices should primarily be interested in aggregate patterns of compliance in the form of citations and positive interpretations to their precedents by the individual circuits. I theorize that Supreme Court justices are able to effectively monitor the U.S. Courts of Appeals by focusing on the circuits as individual organizational units. The justices then allocate their limited resources to review and reverse the least compliant circuits. The empirical results support my predictions and demonstrate that patterns of reversals by the Supreme Court at the circuit level positively affects the future tendency of a circuit to rely on the Supreme Court's precedents. The second empirical chapter examines the efficacy of the Supreme Court's signals on lower court attentiveness to the Supreme Court's decisions. Specifically, I investigate the factors that increase or minimize the likelihood that judges on the courts of appeals rely on the precedents of the U.S. Supreme Court. I test this assumption by examining both trends in citation and positive applications of the High

Court's precedents. The key finding in this chapter is that lower court compliance to a Supreme Court precedent is most likely when a precedent is accompanied by one or more summary decision and when the preferences of the lower court are ideologically aligned with the median member of the U.S Supreme Court. The third empirical chapter identifies fundamental challenges with existing empirical examinations on judicial impact. In order to address these concerns, I provide new, alternate tests that address the causal mechanisms that influence the extent to which the circuit courts comply with the precedents of the Supreme Court.

Contributions to the Literature

My project contributes to the scholarship on judicial impact and judicial decision-making behavior in a number of ways. First, I advance the theoretical literature by offering a new perspective on how information regarding preferences is communicated within the American judiciary. I develop a theory in which information regarding the preferences of judicial actors flows: (1) top-down, from the Supreme Court to the lower courts, (2) bottom-up, from the lower courts to the Supreme Court, and (3) horizontally, within and across the jurisdictions of the circuits. I theorize that key Supreme Court signals and important circuit-level influences, together, drive circuit court attentiveness to the High Court's precedents. The lower court application of the Supreme Court's precedents, in turn, communicate information up the judicial ladder of the policy position of precedents. This upward transmission of information helps inform justices in setting their agenda. In addition to these conventional channels, I argue that judges on the courts of appeals also convey vital information, transmitted horizontally to other judges within the same circuit and to judges across the circuits within the U.S. Courts of Appeals. My framework suggests that information regarding the preferences of judicial actors flows dynamically across these three channels, which forms a feedback loop that ultimately shapes the scope of precedent.

Second, this study contributes to our understanding of learning in the judicial hierarchy by identifying new mechanisms through which Supreme Court justices are able to communicate their preferences that influence the behavior of judges on the U.S. Courts of Appeals. One such factor that dramatically strengthens the influence of horizontal *stare decisis* is the Supreme Court's summary decisions. Specifically, I argue that when the Supreme Court issues one or more summary decisions that directly reference its formally argued precedents, the Supreme Court is able to signal that a given precedent is particularly important and broadly applicable to diverse factual situations that come before courts. I find that when the justices issue one or more summary decisions that direct a lower court to re-consider its earlier decision, there is a significant increase in circuit court adoption and positive application of the Supreme Court's precedents. In fact, my analysis suggests the most meaningful action the justices can take, *vis-á-vis* the future decision-making of a circuit to rely on a precedent, is to reference a precedent within their summary decisions. The decision of the justices to not deny *certiorari* and issue a separate summary decision is unambiguously conscious and distinguishes these decisions from the thousands of petitions that are ultimately denied review each term. My work on this aspect of decision making puts the Court's summary decisions in broader perspective. While most judicial studies ignore these decisions, summary decisions today make up a significant portion of the Court's decision making docket (but see Bruhl 2009; Benesh et al. 2014; Masood and Songer 2013; Songer and Lindquist 1996). Summary decisions provide the justices with a low-cost alternative to correct non-compliant behavior and direct lower court judges to consider a specific precedent. As such, summary decisions are an important instrument for the justices to achieve legal consistency, legitimize new precedent, and correct egregious legal errors by the lower courts. By excluding these consequential decisions from our analyses, we get a systematically incomplete picture of the overall output of the Supreme Court.

Third, this project offers a theory on how Supreme Court justices can effectively monitor the large number of decisions produced by the lower courts, particularly within the U.S. Courts of Appeals. A central dilemma the hierarchical structure of the federal judiciary poses is the principal's inability to monitor all the actions of its subordinates. The U.S. Supreme Court has limited resources, which constrain its ability to correct all instances of non-compliance by the lower courts. I argue that policy oriented justices with finite resources can have effective oversight of the lower courts by being attentive to aggregate trends of compliance to their precedents. I make the case that Supreme Court justices can use this bottom-up flow of information to monitor the actions of individual circuits rather than three-judge panels and then review and sanction the circuits that are least supportive of the Court's preferences. As such, the justices can demonstrate their willingness to sanction lower court behavior that consistently deviates from its legal and policy preferences. The empirical findings demonstrate the Supreme Court can, in fact, induce greater levels compliance by reviewing and reversing the least compliant circuits. Such Supreme Court reversals exert a positive effect on future circuit court adherence to the Supreme Court's precedents. While an extensive number of studies examine the impact of the Supreme Court's reversals, the finding that circuits that receive comparatively higher rates of reversals are the most likely to follow the Court's precedents in the following term is new.

This dissertation also offers empirical contributions. An extensive amount of original data is collected to conduct the analysis. The first stage of data collection involved coding the full universe of the Supreme Court's summary decisions for the period of the analysis. Regrettably, summary decisions are not part of a public dataset, such as the expanded U.S. Supreme Court Database (Spaeth et al. 2013). But as the summary statistics in Chapter 2 demonstrate, these decisions today outnumber the Supreme Court's formally argued decisions. The second stage of data collection

encompassed coding all instances of citations, and positive and negative applications of the Supreme Court's precedents by the lower federal appellate courts. Citation and treatment data have been collected before, however, since I introduce a new unit of analysis, I code each circuit response to each Supreme Court precedent for every year that is in the analysis. This strategy yields approximately 30,000 observations and allows me to offer a more precise test of my predictions than previous attempts.

My dissertation also addresses important questions of causality and the robustness of the empirical work that are lacking from the existing literature. By designing alternate tests, my empirical analysis systematically uncovers the influences on lower court adherence to precedent. My findings demonstrate that not only is the U.S. Supreme Court capable of sending various explicit and implicit signals to the circuits, but that such signals meaningfully influence lower federal court decision making and their interpretations of the Supreme Court's precedents, and from these interpretations of precedent the justices can then decide whether or not to sanction a decision by one or several of the circuits. My analysis also reveals that ideological differences between the Supreme Court and the lower courts have a more nuanced impact on the adoption of the Supreme Court's precedents than previous studies suggest (see Westerland et al. 2010). An additional empirical implication of my analysis is the finding that Supreme Court vitality does not exert a meaningful influence on the likelihood that the circuit courts will cite or follow a Supreme Court precedent. This result suggests that judges on the courts of appeals pay little attention or are not moved by the Supreme Court's own repeated positive or negative interpretations of its decisions. Instead these judges appear to be more compelled when the justices direct their attention to a specific precedent through their summary decisions. The finding on the lack of influence of Supreme Court vitality conflicts with many previous empirical studies that consistently demonstrate that the Supreme Court's own patterns of positive versus negative interpretations of its precedents strongly influence

the propensity of the lower courts to rely on the High Court's precedents (see Black and Spriggs 2013; Corley 2009; Corley and Wedeking 2014; Cross and Spriggs 2010; Fowler et al. 2007; Fowler and Jeon 2008; Hansford and Spriggs 2006).

Avenues for Future Research

The analysis presented in this project raises new questions. One fruitful avenue of research building on this work is examining why and when the circuit courts decide to start interpreting a precedent favorably. Specifically, why do some lower courts comply with a Supreme Court precedent more quickly than others? Current research suggests that a variety of Supreme Court and circuit-level attributes affect the number of exposures it takes for lower courts to comply with the Supreme Court's precedents (Benesh and Reddick 2002; Hansford and Spriggs 2006). Prior examinations on this subject are limited to the Supreme Court's overruled precedents. But decisions that explicitly overrule a prior precedent constitute a very small sample of the Supreme Court's full output of decisions. Should we expect to see differences in the time it takes to implement Supreme Court precedents that emerge from alterations to past precedents versus decisions that affirm existing Court precedent? The U.S. Supreme Court in the vast majority of its decisions affirms existing precedent. Since an affirmed precedent is always more 'vital' than a newly created precedent, one may expect that lower courts will interpret such precedents positively more quickly than new, less vital precedents. Research designs exploring the differences in exposure rates between altered and unaltered precedents can provide important insight on the conditions under which the circuit courts are likely to promptly implement the Supreme Court's decisions within their own. For now, this assumption remains untested.

Future research should also explore citation and treatment patterns within the district courts. While a rich literature examines the extent to which judges on the U.S. Courts of Appeals follow the decisions of the U.S. Supreme Court, relatively

little is known about the dynamics that motivate the actions of district court judges to follow or shirk from the precedents of higher courts. A unique aspect of decision making at the the district level is that trial court judges must be attentive to two sets of authorities: (1) the binding precedents of the circuit in which they reside and (2) the national precedents of the U.S. Supreme Court. Ignoring a critical precedent or reaching a decision that is in conflict with the precedents of either the circuit or the Supreme Court should increase the probability of a successful appeal of the district court decision. Recent scholarship reveals that factors such as ideology exert a varying degree of influence on decision-making behavior at different levels of the federal judiciary (Zorn and Bowie 2010). Namely, these scholars find that the impact of ideological influences meaningfully depreciates at lower levels of the judicial hierarchy. Judges on district courts, who are the bottom of the federal judiciary, face considerable constraints, which significantly limit their ability to pursue individual policy goals. The principal constraint for these judges is mandatory review of any appeal filed with the U.S. Courts of Appeals. Indeed, empirical work by Randazzo (2008, 669) demonstrates that when "federal trial judges anticipate a negative response on appeal, they then curtail their ideological influences." Building on these important studies can help answer many questions. How does a strong principal-agent environment impact district court attentiveness to circuit-level precedents? Moreover, when there are differences between the ideological median of the circuit and the median member of the Supreme Court, are district court judges more likely to follow the preferences of their circuit superiors or the Supreme Court? Intuitively, one may assume that judges are most likely to follow the precedents of the court directly above, however, random panel assignments in the U.S. Courts of Appeals and ideological differences between the circuit and Supreme Court medians may provide strategic opportunities for district judges to shirk. The literature requires more rigorous empirical analysis to adjudicate the efficacy of principal-agent claims.

Similar to research designs examining applications of precedents within the district courts, there is a need for substantially more work to be done on compliance and implementation within state courts. Only a handful of studies examine state court responses to the U.S. Supreme Court's precedents; moreover, these few studies focus exclusively on inquiries on state courts of last resort. In one such study, Comparato and McClurg (2007) find that there is substantial variation in adherence to precedents among state supreme courts. A recent analysis by Kassow, Songer, and Fix (2012, 65) offers that "state supreme courts generally provided positive treatments of the U.S. Supreme Court precedents, using the [Supreme Court] precedent as the basis for their decision in slightly over three-fifths of their cases." But these scholars also find that state supreme courts routinely engage in "negative treatment that modified the practical meaning of the precedent." Why is this the case and how does this compare to trends in negative applications of precedent within the lower federal courts? A single study within the law and courts literature undertakes this challenge comparing state high court and circuit behavior in levels of compliance with the Supreme Court's precedents (see Benesh and Martinek 2009). The findings in this analysis, however, are limited to a single issue area. Clearly, a lot of work remains in exploring the impact of precedent within state courts. To date, there are no studies that examine the extent to which state trial and intermediate appellate courts rely on the precedents of the U.S. Supreme Court. Such a study would greatly improve our understanding of how state courts, at various levels, reconcile the influence of national Supreme Court precedents with inter-state *stare decisis*. One other promising avenue of research is the examination of intermediate state court adherence to State Supreme Court precedents. Is there significant variation in levels of lower court compliance among state judicial systems? A theoretical account premised on how different modes of judicial selection may impact levels of lower court compliance within state courts would be a particularly worthy endeavor.

The theoretical and empirical work in this dissertation raise yet additional questions pertaining to high and lower court interactions in comparative settings. First, are the empirical findings on judicial impact within the American federal courts idiosyncratic or are similar trends prevalent in other common law judiciaries? Second, should judicial scholars export decision-making theories developed specifically for the U.S. courts and apply them to studies on courts in comparative environments? Applying U.S. centric attitudinal and strategic frameworks in comparative courts appears to be a common trend in the nascent, but growing comparative judicial literature. Taking such an approach opens the door to criticism since there are significant differences between the U.S. courts and other national courts in the institutional designs, selection processes, and incentives available to justices to induce greater levels of compliance. For instance, within the Supreme Courts of Canada, the justices are able to select from a pool of a comparatively smaller number of lower court decisions and review many more decisions because the justices in Canada decide cases in panels rather than sitting *en banc*. Does the increased probability of review evoke greater levels of compliance within judicial systems? In addition, do ideological influences play a similar role in motivating lower court responses to precedents within comparative courts? Future studies on hierarchical interactions in comparative courts would be well served in pursuing these puzzles.

Returning to inquiries within the American courts, an important question that emerges from this dissertation is the extent to which the U.S. Supreme Court audits and sanctions non-compliance to its precedent. While principal-agent models are ubiquitous in the study of courts, existing studies often fall short in examining the prospect of the Supreme Court sanctioning negative applications of Supreme Court precedent by judges on the U.S. Courts of Appeals. Thus, the conclusions derived by most previous examinations of principal-agent accounts fall short of offering a direct test of principal agency. One strategy to address this void and account for the

Court's moral hazard dilemma is to test whether the justices are more likely to grant *certiorari* when a circuit explicitly shirks from a Supreme Court precedent. While a large literature explores agenda setting on the Supreme Court, little is known about how positive and negative applications of precedent can influence the decisions of the justices to grant a petition review. Such research designs can unearth whether lower court actions that run counter to the preferences of the justices are most likely to induce audit and reversal by the U.S. Supreme Court.

To conclude, while there has been significant development in the study of the judicial hierarchy more work lies ahead. This dissertation builds on existing scholarship to make both theoretical and empirical advances in improving our understanding of the nature of the relationship between the U.S. Supreme Court and the U.S. Courts of Appeals. In exploring this relationship, my theoretical framework yields new predictions and novel findings, some of which challenge the efficacy of previous results. The impetus for this project is to provide a more compelling account of hierarchical interactions within the American judiciary and a more extensive assessment of the policy impact of the U.S. Supreme Court on the U.S. Courts of Appeals. Overall, the implications of my analysis offer an important development for future inquiries on compliance and implementation, shed new light on our understanding of judicial decision-making behavior within the American courts, and hold importance for students of law and American institutions.

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