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New Measurement Technologies: A Review and Application to Nuremberg and Justice Jackson a

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Abstract and Keywords

This chapter reviews measurement technologies that have rapidly invigorated the study of judicial behavior, examining the standard approach to measuring judicial "ideal points" and discussing how such measures have facilitated broad new lines of inquiry in understanding judicial decision-making. But the measures, as this chapter explains, are no panacea. Proper use and interpretation depend critically on qualitative assumptions and understanding of underlying case law. This chapter argues that the way forward combines jurisprudentially meaningful data collection with advances in measurement technologies. These concepts are illustrated by empirically informing a long-standing debate about the effect of the Nuremberg trial on Justice Jackson's jurisprudence.

Keywords: measurement, ideal points, judicial behavior, Nuremberg, Justice Jackson

WHEN C. Herman Pritchett published his volume on the Vinson Court, Justice Jackson was not amused. Disputing claims about the justice's ideological voting, Jackson wrote privately: "There is a unique way of determining whether a judge is 'liberal.' If he voted for the defendant in any case ... he is called a liberal; if he voted against ... he is called a conservative. [This] seems a rather naive standard" (Domnarski 2006: 36).¹

Addressing Jackson's skepticism of subjective coding of ideological positions, a vibrant advance in the study of judicial behavior over the past fifteen years has been the development and application of formal measurement technology to quantitatively capture principal dimensions of judicial decision-making. Stemming originally from psychometrics, with antecedents in the Congress literature (see Clinton et al. 2004; Heckman and Snyder 1997; Martin and Quinn 2002; Poole and Rosenthal 1985, 1991,

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1997), these methods and extensions have reinvigorated a wide range of research questions about courts.

This chapter provides a critical overview of these new measurement technologies. The second section presents the intuition of the now standard model, with technical details provided in the Technical Appendix. The third section discusses chief advances that have capitalized on this family of measurement techniques. While they are widely employed, the fourth section cautions against naïve reliance on these measures. They are no panacea. Inferences depend critically on qualitative assumptions that should be grounded and defended in a substantive understanding of law.

The fifth section illustrates how more jurisprudentially meaningful data collection coupled with measurement techniques provides one way forward. As a running illustration, we address long-standing questions about how Justice Jackson's one-year (p. 509) absence from the Supreme Court to serve as U.S. chief counsel in the Nuremberg Trial affected his jurisprudence. While many scholars have conjectured about Nuremberg's effect—with one camp asserting fundamental conservative change (e.g., Abraham 1999; Schubert 1965; Rodell 1955) and another positing consistency over time (e.g., Hockett 1990, 1996; Hutchinson 1996)—none have employed modern measurement techniques to study Jackson's voting patterns.² We show evidence that Jackson shifted to the right post-Nuremberg. The aggregate pattern, however, may (i) mask a more dramatic shift in economic regulation, and (ii) gloss over the Court's realignment on due process, but such inferences are sharply limited by the quality of extant data.

The Item Response Theoretic Approach

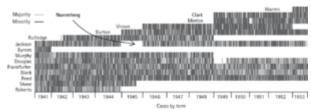
We here discuss informally the item response theoretic (IRT) approach to measuring differences between justices based on judicial voting patterns (Martin and Quinn 2002). As a running example, we use voting data from Justice Jackson's service on the Court from 1941 to 1953. For a spatial voting theory justification, see Clinton et al. (2004). For more extensive elaboration in the context of judicial voting, see Ho and Quinn (2010b). The Appendix provides technical details.

Voting Data

The primary input for IRT models are voting data by a multimember court, most commonly the U.S. Supreme Court. To illustrate, Figure 26.1 plots a representative data set of non-unanimous cases from Justice Jackson's tenure. Cases are sorted chronologically on the x-axis and justices are sorted from date of service on the y-axis. Light grey cells indicate a majority vote and dark grey cells indicate a minority vote, with white indicating that a justice did not vote on the case. As indicated by the white space

interrupting his service, Justice Jackson took leave from the Court in the 1945-6 term to serve as U.S. chief counsel in Nuremberg.

The IRT approach models individual votes in cases probabilistically as a function of an underlying dimension (θ) along which the justices are assumed arrayed. This dimension is commonly interpreted to represent the "liberal/conservative" spectrum. Figure 26.2 illustrates the intuition of the probability model at the case level. Each panel plots the justices' positions θ on the x-axis against votes on the y-axis, with the grey bands representing the estimated probability curve along ranges of θ . In *Pence v. United States*, 316 U.S. 332 (1941), the "conservative" majority held that the government was entitled to a directed verdict in its favor, given certain facts about fraud in the government life insurance policy, when the jury had initially ruled in favor of the beneficiary. The slope is positive, with the "liberal" coalition (in an opinion by Justice Murphy, joined by Douglas and Black) dissenting on the grounds that the question of fraud was a jury determination. The next two panels depict (p. 511) (p. 510) (p. 512) West Virginia State Board of Ed. v. Barnette, 319 U.S. 624 (1943), and Terminiello v. Chicago, 337 U.S. 1 (1949), which feature prominently in the scholarship about Justice Jackson. In Barnette, Justice Jackson, writing for the majority, found a school's compulsory flag salutation to violate the free speech clause of the First Amendment, overruling an earlier decision by Justice Frankfurter. In Terminiello, the majority found unconstitutional a Chicago ordinance banning inflammatory speech, but Justice Jackson famously dissented, writing that "the choice is not between order and liberty. It is between liberty with order and anarchy without either." The apparent inconsistency across this pair of cases is most commonly invoked to argue that Jackson shifted to the right post-Nuremberg.



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Figure 26.1 Votes in all non-unanimous cases for the 1941-53 terms

Source: Authors.

Note: Justices on the *y*-axis are sorted by years of service and cases are sorted by dates of decision. Light (dark) grey cells indicate a majority (minority) vote. The arrow labels the 1945–6 term, during which Justice Jackson took leave from the Court to serve in Nuremberg. The other mid-tenure interruption of judicial votes is for Justice Douglas, who was absent due to an injury for much of the 1949 term.

Figure 26.2 Illustration of probability (probit) model for judicial votes in three cases

Source: Authors.

Note: Each dot represents the vote of one justice, coded as 1 on the *y*-axis if for the majority and 0 if for the minority. The *x*-axis represents the latent dimension, with dots plotting each justice's position. The grey curves plot the predicted probability of a majority vote as a function of the position (with posterior interquartile range). Because Justice Roberts, who is the outlier on the right, retired in 1945, the range of the *x*-axis is more constrained in the third panel for visibility.

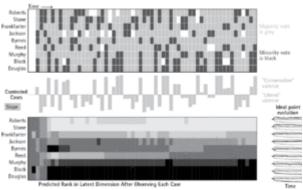
Figure 26.3 illustrates the intuition of the process of Bayesian learning about the relative placement of justices based on IRT models. The top panel plots data on votes cast chronologically in the 1941 term. Each column represents one case, with light grey and dark grey representing votes for the majority and minority, respectively, by each justice. The bottom panel represents the predicted rank of justices at each

point in time—that is, by fitting an IRT model using only the cases decided at that point. The first column of uniform grey represents our "prior" of no differences between the justices, associated with no votes on the top panel. The second column represents a "directional prior," which helps to fix the dimension, as we explain below. As each case is handed down, our beliefs about the parameters are "updated," resulting in more precise distinctions between the justices. The bars in the middle plot the value of β in each case, representing the estimated direction of the majority vote.

Advantages

Formal measurement models have several distinct advantages over previous classifications of justices. First, these models do not require subjective judgments about the "liberal" or "conservative" valence of a vote, the judgment that so much disturbed Justice Jackson. The most prominent measure of judicial ideology prior to the advent of such measurement technology were the Segal-Cover scores (Segal and Cover 1989). Widely deployed as a measure of "ideology" prior to Supreme Court appointment, these scores are based on coding paragraphs of editorials by five major newspapers on the confirmation process of each justice as liberal, moderate, or conservative. Segal-Cover scores predict voting patterns (also directionally coded) in civil rights and liberties cases fairly well, but have less predictive power in other areas of law (Epstein and Mershon 1996).

While Segal-Cover scores continue to be important—in part because using votes simultaneously as an outcome and as an input for a control variable of ideology is problematic—the virtue of measurement approaches is that coders do not have to make potentially subjective assessments about opinions (or editorials). The valence of case slope is instead empirically determined. As seen in Figure 26.3, it is, nonetheless, necessary to impose additional, albeit weaker, assumptions to assure "rotational invariance"—that is, to make sure that the dimension does not flip. One convention is (p. 513) (p. 514) to impose constraints on judges known to be quite dissimilar—for example, assuming Justices Frankfurter to be positive and Justice Black to be negative.



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Figure 26.3 Illustration of Bayesian updating with judicial votes from the 1941 term

Source: Authors.

Note: The top panel represents cases sorted by date of decision, with boxes indicating judicial votes for the majority (minority) in light grey (dark grey). The middle panel presents the estimated case slopes, estimating the association between the position and a vote for the majority. The bottom panel presents the estimated ranks of the justices in the unidimensional space. To identify the model, Justice Black is assumed to be negative and Justice Frankfurter is assumed to be positive, so lower ranks can be interpreted as more consistent with the "liberal" wing of the Court.

Second, the approach easily provides direct measures of uncertainty in quantities of interest. It is straightforward, for example, to calculate the probability that one justice is more "liberal" than another.³

Third, the model-based approach is flexible, potentially allowing, for instance, viewpoints to evolve over time. (Segal-Cover scores, in contrast, measure static views only around the time of nomination.) Additional dimensions can be modeled (Jackman 2001; Dunworth et al. 2009). Case parameters can be

used to detect dimensions orthogonal to conventional voting blocs (Gergen and Quinn 2012). Researchers can incorporate diverse data-generating processes (see Quinn 2004) and prior information (see Bafumi et al. 2005). And measurement models can ultimately be incorporated with analysis models (Gustafson 2003).

Contributions to Understanding Judicial Behavior

Given these advantages, it is not surprising that measurement approaches have had broad impact on the study of courts and judicial behavior. In its centenary, Oxford University Press included Martin and Quinn (2002) as one of "100 seminal papers" from 180 journals. Martin and Quinn (2002) and Clinton et al. (2004) have each been cited over 800 times to date.⁴ Research has focused on four main areas: refining descriptive inferences about courts; studying the effect of external or institutional factors (i.e., much of positive political theory as applied to the courts); understanding intra-court dynamics; and developing a more fine-grained understanding of the role of jurisprudence across discrete areas of law. The review that follows in this section is not a comprehensive meta-

analysis of research areas, but instead aims to provide a sense of the range of rich applications of these methods.

Research Areas

Descriptive Inferences

Many descriptive inferences about courts were difficult to answer in systematic fashion prior to the advent of measurement methods. Who is the median justice? How has the Supreme Court evolved over time?

Martin et al. (2004) show that IRT methods easily allow researchers to determine the (posterior) probability that a justice is the median in any term. Moreover, with straightforward application of the methods, they find that the median justice fluctuates over time, that Justice O'Connor trended to the left from 1994 to 2002, and that the (p. 515) methods help in predicting the impact of vacancies on the Court (see also Epstein and Jacobi 2008).

Epstein et al. (2007a) address the phenomenon of ideological drift, answering comprehensively how frequently the viewpoints of justices change over their tenure. They study voting patterns from 1937 to 2005, applying dynamic IRT, and find that drift occurs quite frequently. These results call into question how easily presidents can deploy the appointment power to entrench preferences in the judiciary.

Lauderdale and Clark (2012) deploy a measurement method similar in spirit and incorporate issue codes from the Supreme Court Judicial Database and case citation proximity to estimate the position of the median justice across cases and time. They find that the identity of the median justice is quite sensitive to the area of law.

Staudt et al. (2007) study whether majority coalition homogeneity is associated with how "consequential" a decision is. They measure homogeneity by the standard deviation of ideal points in the coalition and measure the consequential nature of a case by whether it is reported on the front page of *The New York Times*. They find that homogeneous coalitions result in more consequential decisions.⁵ In a related vein, Clark (2009) uses dynamic ideal points to propose a measure of polarization on the Court.

While descriptive inferences based on measurement methods have primarily focused on the U.S. Supreme Court, these methods have applicability to all multimember courts. Alarie and Green (2007), for instance, apply IRT methods to study the Supreme Court of Canada, resolving competing claims about Justice Frank Iacobucci's career.

External and Institutional Factors

Many theories of courts posit that there are influences *external* to the court and/or that inter-institutional interactions structure judicial behavior. While ideal points provide only summaries of inter-judge differences within a court, they nonetheless have found wide applicability in studying external and institutional factors.

Public Opinion

Epstein and Martin (2010) formally test the proposition most recently associated with Friedman (2009) that public opinion influences Supreme Court decisions. If correct, this channel of influence might ease concerns about the countermajoritarian difficulty. Epstein and Martin (2010) model (using logistic regression) whether the Court reached a liberal or conservative decision, using the Stimson's quarterly public mood measure as the primary explanatory variable and ideal points as one of several control variables. They find that public mood is associated with the propensity of decisions, while noting that this correlation does not reflect the *influence* of public opinion per se.

Malhotra and Jessee (2014) deploy IRT methods to place public opinion and the Supreme Court directly in the same common space. They conduct a survey, polling (p. 516) respondents about their views on ten Supreme Court cases, which they jointly scale with the judicial votes over the same time period. They find the Court to be roughly representative of the median citizen.

Separation of Powers

Bailey (2007) and Bailey and Chang (2001) compile a new data set on "bridge" observations, that is, positions taken by presidents and members of Congress on Supreme Court cases. Capitalizing on such an augmented data set to fit an IRT model potentially allows researchers to place different institutions (i.e., the Congress, the presidency, and the judiciary) on a common scale, thereby opening up broad areas of inquiry about the separation of powers and positive political theory. Sala and Spriggs (2004), for example, use Nominate scores (Poole and Rosenthal 1997) and Supreme Court ideal point measures to test whether popular branches constrain judicial decision-making.

Harvey and Friedman (2009) show that discretionary jurisdiction matters for understanding congressional influence on judicial decisions: using ideal points, the Court appears much less likely to grant cert on cases where congressional preferences diverge from those of the Court. Ho and Quinn (2010a) address historical disagreements about the nature of the constitutional revolution of 1937. They show after FDR's landslide election of 1936 and executive threats on the judiciary in the form of the Court-packing plan, Justice Roberts shifted sharply to the left, but trended gradually back to the right

once FDR gained control of the Court. This calls into question "internalist" accounts of the New Deal Court, which emphasize gradual and foreseeable jurisprudential development (e.g., Cushman 1998).

Bonica and Woodruff (2015) use campaign finance records to scale state Supreme Court justices on a common dimension and demonstrate the usefulness of these scores for testing separation of powers models. Because the approach does not rely on voting records, it holds great promise as a more exogenous measure of preferences.

Judicial Hierarchy

Epstein et al. (2007b) extend Supreme Court ideal points to provide Judicial Common Space (JCS) scores for all justices and Court of Appeals judges sitting from 1953 to 2000. They combine data from Nominate scores and Giles et al. (2001), and use unconstrained confirmed Supreme Court nominees to transform ideal points onto the Nominate scale. JCS scores thereby allow researchers to address questions about lower court compliance with higher courts. Westerland et al. (2010) use the JCS scores to study how the Courts of Appeals treat Supreme Court precedent and find strong evidence of hierarchical control by the contemporary (but not "enacting") Court.

(p. 517) Intra-Court Dynamics

Ideal points have also been useful for understanding dynamics internal to courts. Black and Boyd (2012) study whether "litigant status" affects the likelihood of cert grants, using ideal points as a control variable. Carrubba et al. (2012) find evidence consistent with the notion that the median justice in the majority coalition—instead of, as often conventionally assumed, the median justice overall or the opinion author—most influences a decision. Lauderdale and Clark (2014) find similar results.

Fischman (2011) develops a closely related measurement method that has the virtue of endogenizing the cost of dissent. Using a sample of immigration asylum cases in the Ninth Circuit, he recovers preferences with respect to asylum relief and finds evidence consistent with consensus voting.

Jurisprudence

One of the most exciting areas of application of measurement methods lies in the intersection of politics, jurisprudence, and judicial doctrine (Lax 2011). Lindquist and Klein (2006) study Supreme Court cases resolving a circuit split from 1985 to 1995 and find that jurisprudential considerations, such as the number of circuits supporting one side, are important, controlling for ideal points.

While automated methods to determine specific doctrinal areas of cases are promising (e.g., Clark and Lauderdale 2010 use citation data to locate cases in "doctrine space"), other work combines ideal points with directly meaningful data about jurisprudence or specific doctrinal areas. Law (2004) collects nearly 2,000 immigration asylum cases in the Ninth Circuit from 1992 to 2001. He documents strategic publication: Republican judges, for instance, appear more likely to grant asylum relief in published cases, but overwhelmingly deny relief in unpublished cases. Epstein and Segal (2006) show that ideological voting in First Amendment cases is muted when other values, such as privacy or equality, are at stake. Sag et al. (2009) use ideal points to examine intellectual property decisions.

Raso and Eskridge (2010) use an exhaustive database on standards of review applied by the Supreme Court in administrative law cases from 1984 to 2006. While they present evidence that the application of deference standards are associated with ideal points, the *announced* deference standard also substantially influences the likelihood to affirm an agency. Ho and Ross (2010) study the history of the standing doctrine to test the counterintuitive proposition that standing was invented by liberal justices to insulate the New Deal from judicial review. Collecting and coding the population of standing disagreements in the Supreme Court from 1921 to 2006, they show there is indeed a distinct historical period around the New Deal where liberal justices systematically vote to deny standing relative to conservative justices (as measured by ideal points), a pattern that reverses post-New Deal.

(p. 518) Gergen and Quinn (2012) collect cases decided by the New York Court of Appeals from 1900 to 1941, applying IRT methods to non-unanimous cases. While there is a dominant dimension that characterizes voting differences, they show that cases also changed substantially over the observation period and that judges appeared to divide along three orthogonal dimensions: moralism, legalism, and pragmatism. By applying fine-grained models to temporal subsets, they discover differences in torts, constitutional, and labor cases. Torts, for instance, did not appear to be ideologically shaped during this historical period.

Methodological Role

While we've discussed the four main areas shaped by measurement methods, this subsection provides a typology to understand what methodological role ideal points play in those studies. Although the typology is not exhaustive and mutually exclusive, roughly four different roles can be gleaned from the literature. First, for many studies, ideal points are themselves the direct quantity of interest. Epstein et al. (2007a), for instance, examine whether Justice Blackmun trended to the left over his tenure. Second, in the vast majority of studies using ideal points, they are deployed as control variables or as measures of ideological influence, typically in a regression analysis. Third, a number of studies calculate transformations of ideal points, such as to measure homogeneity of the majority coalition (Staudt et al. 2007). Fourth, a number of studies augment conventional

voting data with other information, typically at the case level, refitting the IRT model to derive new quantities of interest. Table 26.1 places the studies discussed above in the typology. While the frequency in Table 26.1 does not necessarily correspond to the frequency in the published literature, a predominant usage of ideal point models (certainly of Martin Quinn scores) appears to be (2).

Limitations

While much has been learned using measurement methods, there are also considerable limitations with the use and interpretation of the scores.

First, while one virtue of IRT approaches is that they can be motivated by a theory of spatial voting in some contexts, such approaches may not be directly applicable to judicial voting. Conventional assumptions, such as sincere voting, quadratic utility functions over policies located in a unidimensional space, and a discrete choice between the status quo and a proposal, may be less plausible for courts than for legislatures.

Second, if spatial voting does not apply directly, the estimated positions of θ cannot easily be interpreted as *policy* positions (or revealed preferences) per se. θ could just as well capture *jurisprudential* differences. Despite these limitations, θ can still be useful in the study of judicial behavior, by providing a summary of the principal differences of judges based on voting patterns. (p. 519)

Role of ideal points	Studies	
(1) Direct quantity of interest	Alarie and Green (2007); Bonica and Woodruff (2015); Epstein et al. (2007a); Gergen and Quinn (2012); Ho and Quinn (2010a); Lauderdale and Clark (2012); Law (2004); Martin et al. (2004)	
(2) Control variable/"ideological influence"	Black and Boyd (2012); Epstein and Martin (2010); Epstein and Segal (2006); Harvey and Friedman (2009); Lindquist and Klein (2006); Raso and Eskridge (2010); Sag et al. (2009); Sala and Spriggs (2004)	
(3) Transformation	Carrubba et al. (2012); Clark (2009); Epstein and Jacobi (2008); Epstein et al. (2007b); Staudt et al. (2007); Westerland et al. (2010)	
(4) Baseline augmented with other data	Bailey (2007); Ho and Quinn (2008); Ho and Ross (2010); Malhotra and Jessee (2014)	

Notes: (1) "Direct quantity of interest" indicates that the primary goal of the paper is to draw inferences about the position of judges, using ideal points; (2) "Control variable/ 'ideological influence'" indicates that the primary use of ideal points is to model the effect of ideology or control for it; (3) "Transformation" indicates that a transformation of ideal points is used (e.g., to place judges on a common scale with other political actors); (4) "Baseline augmented with other data" indicates that judicial voting data are augmented with other information, typically at the case level, reestimating ideal points.

Third, because ideal points are identified solely by dispositional votes in non-unanimous cases—typically aggregated over all issue areas—the approach ignores information that may be of greatest interest to scholars of courts, that is, the content of judicial decisions in distinct areas of law. While ideal points succinctly summarize voting differences, they do not directly capture jurisprudentially meaningful dimensions, such as judicial restraint, formalism versus functionalism, textualism versus purposivism, due process, and incorporation. And the latter dimensions are often of greater interest to scholars interested in law and doctrine.

A Way Forward: An Illustration with Justice Jackson and Nuremberg

We posit that one way forward lies in deploying both measurement models and more fine-grained, jurisprudentially meaningful, data collection. To illustrate, we address a long-standing question about Justice Jackson's service on the Court: Did his views shift

(p. 520) substantially after he served at Nuremberg? Did it matter by area of law?

Understanding Jackson also informs a much broader and fundamental debate about judicial behavior (White 2005): Do *external* experiences affect the internal jurisprudence of the Court?

The "Scholarly Disagreement" subsection discusses the prior literature on the subject, which is characterized by intense disagreement about whether Nuremberg changed Jackson, and, if so, in what parts of his jurisprudence. Most scholars have relied principally on a handful of cases, chiefly *Barnette* and *Terminiello*, with only a few attempts to study voting patterns, none deploying modern measurement methods.

The section "Aggregate Evidence" discusses results for aggregate cases, confirming that Jackson indeed appeared to shift to the right post-Nuremberg. The "Granular Evidence" subsection develops a data collection protocol to study more specific claims about Justice Jackson's First Amendment, civil liberties, and due process jurisprudence.

Scholarly Disagreement

Scholars have opined widely about the impact of Nuremberg on Jackson. One school posits that Jackson became sharply more conservative post-Nuremberg. Upon Jackson's death, Justice Frankfurter wrote that Nuremberg had a "profound influence" on Jackson, teaching him "how ultimately fragile the forces of reason are and how precious the safeguards of law" (Frankfurter 1955). Louis Jaffe wrote that Nuremberg "awakened him to the basic problem of order" (Jaffe 1955: 997). Henry Abraham concluded that "the one liberal judicial activist, who had so often sided with Black, Douglas, Murphy, and Rutledge, had become profoundly cautious, a markedly narrow interpreter of the Bill of Rights. He now more often than not sided with the Frankfurter wing of the Court" (Abraham 1999: 178). Glendon Schubert, tallying conservative and liberal decisions, concluded that Jackson's "behavior changed sharply and significantly" after Nuremberg (Schubert 1965: 963). Many others conjectured similarly (e.g., Rodell (labeling Jackson a "turncoat-to-conservatism") (Rodell 1955: 279)). The "Two Jacksons" hypothesis has become so engrained that scholars have simply divided his jurisprudence into two distinct periods: before and after Nuremberg (see, e.g., Ray 1995).

But the hypothesis remains contested. What we could dub the "continuity school" posits that Jackson remained "fundamentally the same justice" before and after Nuremberg (Hockett 1990: 281). To begin, Hockett argues that Jackson's positions in *Terminiello* and *Barnett* are easily reconciled: both decisions deploy a balancing test, weighing private speech interests against public order. Moreover, Hockett points to a number of pre-Nuremberg cases that similarly rely on a balancing test and reject a strong "preferred freedoms" doctrine (Hockett 1990, 1996). Dennis Hutchinson argues that Jackson is "misestimated to misunderstood" (Hutchinson 1996: 108). "If anything, Nuremberg provided powerful cumulative evidence supporting views Jackson was developing *before* he went overseas" (Hutchinson 1996: 114, emphasis added). The continuity school is not without some empirical support. Domnarski (2006), who discusses some change, calculates Jackson's agreement rate with Justice Frankfurter, and finds that rate is comparable pre- and post-Nuremberg.

(p. 521) Two common challenges are pointed out by the continuity school. Pritchett notes that "the rather erratic nature of [Jackson's] opinions ma[kes] it difficult to catalog him" (Pritchett 1954: 18). In addition, while the European experience appears vividly in Jackson's post-Nuremberg opinions, 6 Nuremberg's impact may have been more on the pen than in the disposition. As Paul Freund notes, "his acquaintance with European experience colored his opinions, if it was not actually decisive in his judgments" (Freund 1955: 17).

Another possibility is that the two schools talk at cross-purposes. Sweeping statements about Jackson's jurisprudence at large may miss distinct and divergent effects of Nuremberg on Jackson's jurisprudence. Louis Jaffe (1955: 967–8, 982), for instance, conjectures that Nuremberg taught Jackson about the importance of public order, affecting distinctly his civil liberties decisions. Schubert, on the other hand, argues that the shift is pronounced in economic cases and not civil liberties.

Indeed, more fine-grained jurisprudential claims feature in the qualitative scholarship about Jackson. First, with *Terminiello* and *Barnette*, many scholars focus particularly on Jackson's First Amendment jurisprudence. By that account, Nuremberg taught Jackson about the failures of the Weimar Republic to tamp down offensive speech. Second, others have argued that Nuremberg caused Jackson to take a more limited view on incorporation of the Bill of Rights against the states (Jaffe 1955: 981). Indeed, Jackson himself attributed his increased deference to local officials to Nuremberg (Jackson 1955: 573). Third, some scholars identify a more general disposition favoring judicial restraint (Hutchinson 1996: 115–16), as Nuremberg may have heightened Jackson's sense of the limitations of judicial process.

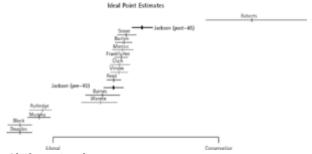
While First Amendment, Fourth Amendment, and judicial restraint views would be associated with a conservative shift (at this historical juncture), scholars have also identified areas of law seemingly associated with a liberal shift. Hockett argues that Nuremberg, by highlighting the dangers of government intervention, caused Jackson to

become more liberal in procedural due process cases. In addition, Hockett notes that Nuremberg strengthened Jackson's view of the Fourth Amendment as a protection against arbitrary government (Hockett 1990: 294–5).

In short, there is little empirical agreement on whether and how Nuremberg affected Jackson. Aggregated evidence of voting patterns may even mask effects in particular areas of jurisprudence. While some scholars have studied voting patterns (e.g., Schubert, Domnarski), none have deployed modern measurement methods.

Aggregate Evidence

We first investigate the broadest claim about Jackson's change. Figure 26.4 presents static ideal point estimates, allowing for separate ideal points for Jackson pre- and post-Nuremberg, with horizontal lines plotting 95 percent credible intervals. Placements of the justices comport with conventional understandings of the Court. For instance, pre-Nuremberg, the "liberal" coalition of Black, Douglas, Rutledge, and Murphy often squared off against the more "conservative" coalition of Stone, Frankfurter, Reed, and Jackson, with Roberts frequently in solo dissent. The measures, as expected, corroborate (p. 522) and formalize qualitative understandings of the voting blocs of the Court. Most importantly, the model also confirms the "Two Jacksons" hypothesis: pre-Nuremberg, Jackson is close to the median position on the Court; post-Nuremberg (with Roberts's retirement), he occupies the right-most side of the Court (posterior *p*-value < 0.001). The shift indeed appears substantial.



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Figure 26.4 Static (median) ideal point estimates with 95 percent credible intervals for the 1941-53 terms

Source: Authors.

Note: Justices are sorted from left to right by median ideal point, with separate ideal points for Jackson pre and post-Nuremberg. Justices in dark grey first served on the Stone Court; those in light grey first served under Vinson. To identify the model, the ideal point priors for Justices Black and Frankfurter are assumed to be negative and positive, respectively.

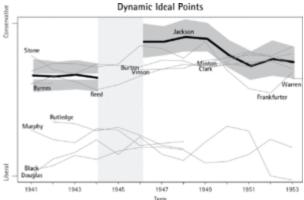
To allow for more general shifts in jurisprudence over time (as well as to avoid Type I error that can result from static pre-post comparison), Figure 26.5 plots results from a dynamic ideal point model. Because we are interested primarily in Justice Jackson, we set the smoothness of evolution such that estimates of the justices other than Jackson comport with received wisdom. Again, the model reveals that Justice Jackson shifts substantially

to the right post-Nuremberg.

Granular Evidence

Vigorous disagreements about Justice Jackson, however, focus not just on changes over time across all cases, but specifically about the impact of Nuremberg on particular aspects of his jurisprudence. To study this, we collected new data to test the most common conjectures about Jackson's evolution. Our approach does not provide a generalized way to define issue areas; instead, the lynchpin for our case selection was whether the criteria accord with the ones implicit in Jackson scholarship.

Our data collection process worked as follows. First, we collected the superset of all cases cited in the Jackson literature for discrete areas of law. Second, we used a data set of (p. 523) all Westlaw (WL) Key Numbers for each case, merged with the Supreme Court Judicial Database (SCDB) issue and law codes to determine which key numbers and SCDB codes best predicted the presence of a case discussed in the literature. WL has the particular virtue of employing actual attorneys that key cases. The goal here was to enumerate the population of cases in which specific issues were at stake, overcoming some of the weaknesses of SCDB issue codes, chiefly the fact that only one issue is assigned to a case (when Supreme Court cases often involve multiple issues) and that issue codes are assigned based on the perceived policy issue, not necessarily the jurisprudential issue (Harvey and Woodruff 2011; Ho and Quinn 2010b).



Click to view larger

Figure 26.5 Median dynamic ideal points for all justices, with separate pre- and post-Nuremberg trends for Jackson

Source: Authors.

Note: The solid lines represent the (pointwise) posterior median ideal points. The grey bands provide pointwise 95 percent credible regions for Justice Jackson. For ease of visibility, Justice Roberts is omitted from this figure (but included in the estimation). The results suggest that Jackson shifted to the right post-Nuremberg.

Table 26.2 presents an overview of the cases resulting from this data collection procedure for First Amendment, due process, and incorporation. We present data for the 1946-53 terms because SCDB data is not yet available pre-Nuremberg. The first column indicates the number of cases coded as in these areas by conventional SCDB issue codes. One difficulty associated with the conventional approach lies in distinguishing procedural due process, substantive due process,

and incorporation cases, especially as individual cases can raise multiple, interrelated issues. Table 26.2 hence provides distinct rows for capturing different subsets of cases.

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The second column indicates the number of cases captured by deploying WL searches and key numbers to approximate the issue (p. 524) area contemplated by Jackson scholars. WL returns a much higher number of cases involving these issues, likely because SCDB reduces each case down to a single issue. For instance, SCDB returns fifty-six cases involving due process, compared to 139 via WL.

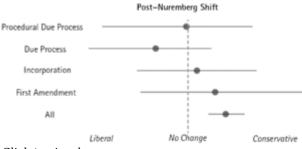
Table 26.2 Differential case classification in the 1946-53 period				
Subset	Convention	Westlaw	Total	
First Amendment	26	28	48	
Due process	56	139	139	
Procedural due process	56	76	121	
Incorporation	0	43	43	

Notes: "Convention" indicates the number of cases by SCDB issueArea codes and lawSupp codes. For First Amendment cases, we use the "First Amendment" issueArea, as well as the five lawSupp codes that specify a provision of the First Amendment (e.g., "First Amendment (speech, press, and assembly)"). Due process cases are based on the "due process" issueArea plus two due process lawSupp codes. An alternative version, which is not shown, includes cases from the criminal procedure issueArea. "Procedural due process" employs the same search as "due process," as SCDB does not allow for easy distinction between procedural and substantive due process. Incorporation cases are not easily captured in the SCDB for similar reasons. "Westlaw" indicates WL key numbers and Boolean searches for First Amendment (92X, 92XI, 92XIII, 92XIV, 92XV, 92XVI, 92XVII, 92XVIII), due process (92XXVII), procedural due process (92XXVII, with the condition that one of the following conditions are also met: (i) due process or a similar phrase is proximate to "procedur!" within the headnote or within the body of the text and in the same paragraph, or (ii) the key numbers of Criminal Law (92XXVII(H), (iii) Civil Actions and Proceedings (92XXVII(E)), or (iv) Search, Seizure, and Confiscation (92XXVII(G)23), which are all nested under "due process"), and incorporation (a pure Boolean search centered around the Fourteenth Amendment, with the additional requirement that either certain words appear in close proximity to "incorporat!" or the key number for "Relationship to Other Constitutional Provisions—Incorporation" (92k3848) is used.

Our approach is by no means ideal, but it shows one path forward. It may be over-inclusive, capturing cases that involve a particular issue when the voting disagreement may not have centered on that issue. In reviewing samples of SCDB-identified cases, however, we determined that the conventional approach was under-inclusive relative to

the cases discussed in the scholarly literature. Ombining these two sources provides an avenue forward by incorporating better measurement (via Westlaw attorneys) of the legal disputes at issue.

One basic trade-off in applying measurement methods to subsets of cases is biasvariance. Smaller subsets of cases will decrease bias of ideal points in particular areas of law, but will increase the variability of estimates. Because of this trade-off, Figure 26.7 plots static results on the subset of First Amendment cases, where the total number of (p. 525) cases is small (n = 48). The results reveal little evidence of any broader shift in Jackson's views toward the First Amendment based on the voting record. Figure 26.6 plots the difference in Jackson's ideal point before and after Nuremberg in other areas, revealing much uncertainty.



Click to view larger

Figure 26.6 Median post-Nuremburg shift for subsets of cases and all cases, 1941–53

Source: Authors.

Note: The dotted vertical line tracks the origin. The grey dots are plotted at the median shift mark, representing the median change between Jackson's pre-Nuremberg and post-Nuremberg jurisprudence. The horizontal seems show the confidence interval.



Figure 26.7 Static ideal points in First Amendment cases, 1941–53

Source: Authors.

We now examine the hypothesis that there were distinct patterns in civil liberties cases more broadly. Glendon Schubert was the first to compare decisions in civil (p. 526) liberties and economics cases. Although we contacted numerous scholars who collaborated with Schubert, we were unable to recover the full data he originally analyzed. We were, however, able to recover Schubert's data for Jackson's post-Nuremberg tenure as well as his original codebook (Schubert 1959). We replicated his coding by classifying non-unanimous cases for the earlier 1941-5 period. The goal here was not to determine afresh the coding standard for what constitutes a civil liberties or economics case

(not an incontrovertible data collection protocol), but simply to replicate Schubert's original classification, which deviates from SCDB's classification. We did this by first reading all cases (up until 1954) for which we observed Schubert's coding classification

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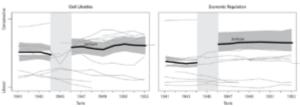
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and then supplementing his codebook. We then read all non-unanimous decisions between 1941 and 1945 and categorized them as pertaining to civil liberties, economic regulation, or neither. This resulted in a total of 257 civil liberties cases and 323 economics cases during Jackson's time on the Court. Instead of Schubert's manual coding of case votes as liberal or conservative, we use measurement methods to formalize whether there is a statistically distinguishable effect in these subsets.

Figure 26.8 plots results from dynamic estimates. The left panel displays ideal points in civil liberties cases, showing that there is in fact little evidence of a shift in Jackson's civil liberties record. Justices other than Jackson, however, exhibit substantial movement in civil liberties, with Black and Douglas switching conventional positions compared to Rutledge and Murphy. These shifts challenge the conventional (and often useful) unidimensionality assumption. The right panel displays ideal points for economic regulation cases, confirming Schubert's original insight that Jackson moves from being in the center of the conservative coalition to being the most right-leaning justice post-Nuremberg.

Lastly, we study the differential effects on due process cases. As Table 26.2 showed, a conventional coding may miss nearly three quarters of cases involving due process issues. Figure 26.9 plots results from a model fitting votes in 138 due process cases, assuming essentially fixed ideal points over time. The results provide suggestive evidence that Jackson shifted to the *left* on due process. The analysis also reveals, however, the sensitivity of interpretation to qualitative knowledge about the Court's due process jurisprudence. The right panel shows that when the viewpoints are allowed to vary over time, Jackson's shift may, counterintuitively, in fact be driven by changes in Justices Frankfurter and Reed. Frankfurter and Reed switch positions on due process over time, with Reed evolving to the right and Frankfurter seemingly evolving to the left. Assuming Reed to be constant essentially drives a kind of wedge between pre- and post-Nuremberg Jackson in the static model.

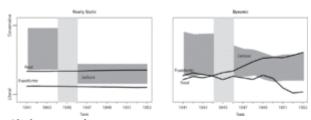
Methodologically, this example demonstrates the importance of conducting sensitivity analyses of measurement models. Substantively, which results (and priors) are more credible? This is where deeper understanding of due process jurisprudence and more meaningful understanding of case law, with a particular focus on Frankfurter and Reed, becomes critical. Pre-Nuremberg, Jackson and Roberts, for instance, joined a dissenting opinion written by Justice Frankfurter in *Rice v. Olson*, 324 U.S. 786 (1945), in which the majority found that a petitioner was entitled to a hearing about whether he (p. 527) (p. 528) was unconstitutionally deprived of his right to counsel. Yet did Frankfurter shift or stay constant?



Click to view larger

Figure 26.8 Ideal point estimates for economic regulation cases and civil liberties cases

Source: Authors.



Click to view larger

Figure 26.9 Divergent inferences about Nuremberg's effect on Jackson's due process views

Source: Authors.

Note: The left panel fits nearly static ideal points, while the right panel allows for ideal point evolution, resulting in divergent inferences about Nuremberg's effect on Jackson's due process views. Only auxiliary information can resolve which inference to believe.

Frankfurter's evolution is driven by numerous cases where he is in dissent with Justices Black and Douglas. But the dichotomization by SCDB into majority versus minority positions overlooks critical differences between their positions on several cases. In Adler v. Board of Educ. of City of New York, 342 U.S. 485 (1952), for instance, the majority upheld a state law making a member of a subversive organization ineligible for public school employment. To be sure, Frankfurter, Black, and Douglas dissented. But on very different grounds.

Frankfurter dissented on the grounds that the case in not justiciable. Black and Douglas, on the other hand, dissented on the merits, finding that the state law violated the First Amendment.

The ideal point evolution of Frankfurter to the left may hence be partly an artifact of failure by SCDB voting data to distinguish distinct jurisprudential decisions, for example, Frankfurter's judicial restraint is mistaken for a merits decision in *Adler* and in two other due process cases, *Burns v. Wilson*, 346 U.S. 137 (1953) and *Garner v. Board of Public Works of City of Los Angeles*, 341 U.S. 716 (1951). The way forward would be to develop a better way to distinguish and classify these types of positions taken by judges. It is perhaps not a surprise that by aggregating and dichotomizing complex decisions, scholars have been limited in capturing other dimensions of decision-making.

On the other hand, in ten of thirteen due process cases, Frankfurter dissented on the merits with Douglas and Black. While this defies one historical view of Frankfurter's increasingly conservative role on the Court (see, e.g., Domnarski 2006: 69; Urofsky 1991: 94–5), there are reasons to believe the dynamic model over the static one. First, Domnarski (2006) notes that "with the new, more conservative Truman appointees of Clark, Minton, Vinson, and Burton, Frankfurter became by contrast more liberal and dissented in a number of important cases" (p. 68), particularly with his rivals Douglas and

Black.¹¹ Second, Justice Jackson also increasingly voted on the merits with Douglas and Black in due process cases, but only starting in the early 1950s (i.e., not immediately after Nuremberg).¹²

While there is hence suggestive evidence that Jackson diverged in due process cases, the inference depends critically on better measurement of due process cases and qualitatively grounding identification assumptions.

Nonetheless, the broad evidence provides support for the view that Jackson's jurisprudence was at its core altered after Nuremberg.

Conclusion

Our study of Jackson has illustrated the virtues and limitations of measurement methods. While such approaches have the virtue of formalizing what other scholars are already engaged in when counting cases, the approach cannot displace more detailed study of case law. For instance, this approach tells us little about the (p. 530) mechanism that could have driven Jackson's change. An alternative hypothesis, for instance, is that Jackson changed not because of Nuremberg, but because he had been passed over for the position of Chief Justice at the same time. Our voting results complement and inform, rather than substitute for, the qualitative historical literature on Jackson.

Although measurement technology has invigorated the study of judicial politics, the next generation of work cannot proceed by technology alone. As Epstein et al. (2007b) described research on the judicial hierarchy, the field remains "theory rich and data poor." The path forward involves jurisprudentially meaningful issue coding, tailored to voting disagreement in a case, coupled with advances in measurement technology.

Put differently by Pritchett: "There is no method by which an IBM machine can be used as a substitute for scholarship" alone (Pritchett 1954: 189 (quoting John P. Frank 1948)).

Technical Appendix

Let *J* denote the set of judges and *K* the set of cases, the voting data **Y** is comprised of:

$$y_{jk} = \begin{cases} 0 & \text{if } j \text{ voted in the minority on } k \\ 1 & \text{if } j \text{ voted in the majority on } k \\ \text{missing if } j \text{ did not vote on } k \end{cases}$$

The probability of a judicial vote for the majority is conventionally modeled via a probit link:

$$P(y_{jk} = 1) = \Phi(-\alpha_k + \beta_k \theta_{jk}) \quad j \in J, \quad k \in K$$

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where $\Phi(\cdot)$ is the standard normal CDF and t represents the term in which case k was decided. The probability of a majority vote thereby depends on three latent (unobserved) parameters:

- **1.** α , which can be roughly thought of as the dissent parameter (in IRT terms, the "item difficulty" parameter), modeling how much dissensus a case will generate;
- $2.\beta$, which can be thought of as the valence parameter (in IRT terms, the "item discrimination" parameter), modeling how much dissent is driven by a common underlying dimension; and
- $3. \theta$, which captures the position of the justices in the common dimension (often times referred to as the ideal point), which may, but does not necessarily, vary by term.

(p. 531) The sampling density can then be written as:

$$p(\mathbf{Y} \mid \alpha, \beta, \theta) \propto \prod_{k \in K} \prod_{j \in J} \boldsymbol{\Phi} \left(-\alpha_k + \beta_k \theta_{jt} \right)^{y_{jk}} \left[1 - f \left(-\alpha_k + \beta_k \theta_{jt} \right)^{\left(1 - y_{jk} \right)} \right]$$

with $J_k = \{j \in J: y_{jk} \neq missing\}$ representing the set of justices participating on case k. The point at which $P(y_{jk} = 1) = 0.5$ is often referred to as the cutpoint, namely the location that divides the majority and the minority in a case (and is a simple function of the dissent and valence parameters: $\frac{\alpha_k}{\beta_k}$).

Measurement methods jointly estimate the parameters $(\alpha, \beta, \text{ and } \theta)$. To fit the model in a fully Bayesian framework, prior distributions on the parameters are required. The priors for θ are that:

$$\theta_{i0}$$
 iid N(0, 1).

which reflect prior "ignorance" about the justice locations at the time of appointment, and, in conjunction with priors on α and β , determine the cardinal scale of the common dimension. To allow for viewpoints to change, θ_{jt} may follow a Gaussian random walk in time:

$$\theta_{jt} \stackrel{ind}{\sim} \mathbf{N} \left(\theta_{j(t-1)}, \ \tau_j^2 \right)$$

The "smoothness" of the walk is determined by τ , which follows an inverse gamma distribution with parameters c_j and d_j setting the prior mean and variance:

$$\tau_{i}^{2} \stackrel{ind}{\sim} IG(c_{i}/2, d_{i}/2).$$

The parameters c_j and d_j are determined a priori by the researcher, with lower (higher) values corresponding to less (more) variability over terms. Martin and Quinn (2002) were the first to generalize the model to allow for evolving ideal points, often now dubbed the Martin-Quinn scores. When $\tau_j = 0 \,\forall\, j$, the ideal points are "static" for each justice, converging to the model by Clinton et al. (2004). Greater values of τ (as determined by c_j and d_j) allow for more term-by-term variability.

The priors for α and β reflect prior "ignorance" about the cases:¹⁵

$$\alpha_k \stackrel{\text{iid}}{\sim} N(0, 5), k \in K$$

 $\beta_{i} \stackrel{\text{iid}}{\sim} N(0, 5), k \in K$

(p. 532) These classes of models can be fit using Markov Chain Monte Carlo methods, as in the MCMC-pack implementation in the R programming language (Martin and Quinn 2013).

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Notes:

(1.) We thank Nick Parrillo for encouraging us to study Justice Jackson, Aubrey Jones for outstanding research assistance, and Rebecca Morris for helpful comments. Many of the

ideas (but none of the errors) are drawn from joint work with Ho's long-time collaborator Kevin Quinn.

- (2.) The only study deploying measurement techniques coming close to the question about Jackson is Epstein et al. (2007a), which notes that Jackson's jurisprudence trended to the right over time. Epstein et al., however, did not specifically address the question about Nuremberg's effect on Jackson, presenting aggregate results on ideological drift across all justices serving from 1937–2005.
- (3.) With a sample of M = 1,000 draws of θ from the posterior distribution, each simulated draw denoted by θ^m , the quantity can be readily calculated by:

$$P(\theta_{j1} > \theta_{i1}) \approx \frac{1}{M} \sum_{m=1}^{M} \Pi(\theta_{j1}^{m} > \theta_{i1}^{m}).$$

- (4.) These are based on citation counts in Google Scholar from September 2015.
- (5.) See also Ho and Quinn (2008) (finding that close decisions are far more likely to be covered by newspaper editorials).
- (6.) See, e.g., Terminiello, 337 U.S. 1 (1949); Shaughnessy v. Mezei, 345 U.S. 206 (1953); Dennis v. United States, 341 U.S. 494 (1941); Kunz v. New York, 340 U.S. 290 (1951).
- (7.) In the terminology of SCDB, these were the "issueArea" and "lawSupp" codes.
- (8.) Incorporation, for instance, obviously happens via the due process clause. The Jackson scholarship does not define these categories in exhaustive and mutually exclusive ways.
- (9.) More ideal would be a data collection process closer to that of Ho and Ross (2010).
- (10.) We were unable to establish a pattern between Schubert's classification system and other classification systems, such as Westlaw's Key Numbers or the United States Supreme Court Database. This makes sense because Schubert admits that his classification system does not "correspond to those employed by constitutional law scholars" (Schubert 1959: 159).
- (11.) This is potentially an example of bridging sensitivity.
- (12.) Relatively little scholarship exists on Reed. See Note (1949).
- (13.) A logistic link could alternatively also be used.
- (14.) See also Bailey (2007) (developing a parametric approach to modeling moving ideal points).
- (15.) Ho and Quinn (2010a) develop an alternate parameterization, assuming (α_k, β_k) to be independently drawn from a uniform distribution on the region

 $\{\alpha_k, \beta_k : \alpha_k \in [-4, 4], \beta_k \in [-2, 2], \alpha_k/\beta_k \in [-2, 2]\}$. This has the convenient interpretation that the prior on the cutpoints dividing the majority and minority in a case are a uniform distribution.

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