

A Review of Quantitative Studies of Decision Making in the Supreme Court of Canada

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I. THE NEED FOR QUANTITATIVE RESEARCH ON JUDICIAL DECISION MAKING

What are the factors that influence judges in judging? The question continues to spark heated debates among legal scholars. Until the early 20th century, Anglo-American legal thought was dominated by the legal formalists, who assumed that judges mechanically deduce the law from abstract legal norms. In the early 20th century, such legal formalism was attacked by American legal realists, who argued that judges decide cases based on extra-legal factors including social, political and economic dimensions of the cases as well as idiosyncratic views on politics, and policies of the judges themselves.

The legal realists' claim that judges are influenced by extra-legal factors in deciding cases can be tested empirically. Since the late 1940s, American political scientists have used quantitative methods to examine judicial decision making in the U.S., especially that of the U.S. Supreme Court. Over the years these quantitative researchers have used increasingly advanced quantitative techniques, and they have developed a substantial body of knowledge on judicial decision making in the U.S. In contrast, Canadian and American researchers have only made sporadic attempts in producing quantitative studies on Canadian judicial decision making. Most of these existing studies focus on judicial decision making in the Supreme Court of Canada.

Following a review of quantitative research on judicial decision making in the U.S. and Canada, this paper concludes that more quantitative research on Canadian judicial decision making are needed to be undertaken because such

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research can enhance the understanding of the Canadian legal system. To that end, two initiatives are proposed to help develop a research environment in Canada that is more conducive to the pursuit of quantitative legal research.

The rest of the paper unfolds as follows. Part II of the paper highlights selected quantitative studies on judicial decision making in the U.S. The next three parts—III, IV and V—present an overview of quantitative analyses of judicial decision making in the Supreme Court of Canada. These quantitative studies can be divided into three groups, identified by the work of three principal investigators. Part III of the paper highlights the work of Sidney Peck, an Osgoode Hall Law School professor, and others who used scalogram analysis to map voting patterns of SCC justices in terms of their personal policy preferences. Part IV of the paper highlights the work of Peter Russell, a University of Toronto political scientist, and others who used descriptive statistics to depict the institutional workings of the SCC. Part V of this paper highlights the work of Neal Tate and other U.S.-based political scientists who used multiple regressions to explain the voting patterns of SCC justices with variables including the socio-economic attributes of the justices, the parties involved in the cases and their lawyers. Part VI of the paper concludes with an outlook for quantitative analysis of judicial decision making in Canada.

II. EMERGENCE OF FIVE MODELS OF JUDICIAL DECISION MAKING IN THE U.S.

Five models of judicial decision making can be constructed based on different explanations of judicial behaviour. They are the legal model, the attitudinal model, the personal attributes model, the strategic model and the institutionalist model. The groundbreaking scholarship of C. Herman Pritchett spurred the development of the models in the United States.¹ Observing that dissents started appearing in U.S. Supreme Court opinions in the 1930s and 1940s, the American political scientist conducted quantitative analysis of dissents and voting blocs in the Court. One of Pritchett's representative studies is *The Roosevelt Court: A Study in Judicial Politics and Values, 1937–1947*.² In the 1948 book,

¹ Lee Epstein, Jack Knight, and Andrew Martin argued that the work of Pritchett brazened the trail for quantitative research on judicial decision making in the U.S., even though he is not well known outside political science. See Lee Epstein, Jack Knight, and Andrew D. Martin, "The Political (Science) Context of Judging" (2003) 47 Saint Louis U.L.J. 783 at 786–788 [hereinafter Context of Judging]. For a recent overview of quantitative research on judicial decision making in the U.S., see Michael Heise, "The Past, Present, and Future of Empirical Legal Scholarship: Judicial Decision Making and the New Empiricism" (2002) U. Ill. L. Rev. 819.

² C. Herman Pritchett, *The Roosevelt Court: A Study in Judicial Politics and Values, 1937–1947* (New York: Macmillan, 1948).

Pritchett argued against the orthodox explanation of judicial decision making under the traditional legal model. Starting with Chapter One entitled “At the Center of the Tornado” with subheadings including “The Nine Old Men” and “Justices Without Halos,” Pritchett argued that the judges decide cases based on their personal policy preferences rather than legal precedents, laying the foundation for the development of the attitudinal model.³

In addition to Pritchett, other American political scientists started testing the legal realists’ idea of judicial decision making in the late 1940s. Among them were Glendon Schubert and Harold Spaeth, both did research on the attitudinal model.⁴ Schubert advocated for the use of quantitative methods—notably scalogram analysis—in analyzing judicial decision making in his 1959 book *Quantitative Analysis of Judicial Behavior*.⁵ Applying the technique to analyze U.S. Supreme Court justices’ votes in his 1965 book *The Judicial Mind*, Schubert asked this question about the judges: “To what extent are their public acts influenced by their personal beliefs?”⁶ In his analysis, Schubert mainly categorized the attitudes of judges by whether they voted for or against legal out-

³ For recent descriptions of the legal model, see John M. Scheb II and William Lyons, “Judicial Behavior and Public Opinion: Popular Expectations Regarding the Factors That Influence Supreme Court Decisions” (2001) *Political Behavior* 181 at 182; Frank B. Cross, “Political Science and the New Legal Realism: A Case of Unfortunate Interdisciplinary Ignorance” (1997) 92 *Nw. U.L.Rev.* 251 at 255 and Frank B. Cross, “Decision-making in the U.S. Circuit Courts of Appeals” (2003) 91 *Cal. L. Rev.* 1457 at 1463. In the 2003 article, Frank Cross said he found both legal and political factors determined judicial decision making in his quantitative analysis, with the legal factors welding stronger influences than the political factors.

⁴ For profiles of pioneer researchers of judicial behaviour, see Nancy Maveety, ed., *The Pioneers of Judicial Behavior* (Ann Arbor: University of Michigan Press, 2003). In addition to Pritchett, Schubert and Spaeth, the book profiles Sidney Ulmer, Joseph Tanenhaus, Beverly Blair Cook, Walter Murphy, Woodward Howard, David Danelski, David Rohde, Edward Corwin, Alpheus Thomas Manson, Robert McCloskey, Robert Dahl and Martin Shapiro.

⁵ See Glendon A. Schubert, *Quantitative Analysis of Judicial Behavior* (Glencoe, Ill.: Free Press, 1959) [hereinafter *Quantitative Analysis*]. Neal Tate said: “The most substantial influence on the use of quantitative methods in judicial behavior came initially from *Quantitative Analysis of Judicial Behavior*.” Although Tate said the quantitative techniques proposed by Schubert in the book were not statistical methods in the strictest sense, he said “each does involve the systematic analysis of quantitative data.” See C. Neal Tate, “The Methodology of Judicial Behavior Research: A Review and Critique” (1983) *Political Behavior* 51 at 71 [hereinafter *Methodology*]. Tate said, “Perhaps no method is more closely associated with the development of judicial behavior research than cumulative or Guttman scaling, frequently called scalogram analysis” (at 65).

⁶ Glendon Schubert, *The Judicial Mind: The Attitudes and Ideologies of Supreme Court Justices 1946–1963* (Evanston: Northwestern University Press, 1965) at 15 [hereinafter *Judicial Mind*].

comes that might reflect political liberalism and economic liberalism.⁷ Based on consistent judicial voting patterns, Schubert characterized some U.S. Supreme Court justices as liberals (Justices Murphy, Black, Douglas, Rutledge, Brennan and Warren); some as pragmatic conservatives who were relatively liberal on political issues but conservative on economic issues (Justices Goldberg, Frankfurter, Jackson and Stewart); some as conservatives (Justices Harlan, Whittaker and Burton); and some as dogmatic conservatives (Justices Clark, White, Minton, Vinson and Reed).⁸

While Schubert was establishing himself as the main proponent of the use of quantitative methods in judicial behavioural analysis, Spaeth was developing an extensive database for quantitative research on judicial decision making. Spaeth's database project has become part of the S. Sidney Ulmer Project for Research in Law and Judicial Politics, now housed in University of Kentucky's Department of Political Science.⁹ In the past decade, Spaeth, along with Jeffrey Segal, argued forcibly for their attitudinal explanations of voting patterns of judges in three books.¹⁰ Spaeth and Segal conducted quantitative analysis of judicial votes to test the legal model with the use of data on dissents in the U.S. Supreme Court. They used the patterns of dissents to approximate violations of *stare decisis* based on the rationale that judges who had dissented in cases that became precedents will not agree with such precedents used in later cases if the attitudinal model correctly depicts judicial decision making.¹¹ Spaeth and Segal found support for the attitudinal model in the U.S. Supreme Court data.

⁷ Later in his 1974 book *The Judicial Mind Revisited*, Schubert noted that the general question asked in the 1965 book was about "the relationship between political belief systems and political behavior. Indeed, my title for the original book was originally, and remained until the book was in an advanced stage of publication, *The Liberal Mind*." See Glendon Schubert, *The Judicial Mind Revisited: Psychometric Analysis of Supreme Court Analysis* (New York: Oxford University Press, 1974) at 17.

⁸ See *Judicial Mind*, *supra* note 6 at 270, Table 41.

⁹ See <http://www.as.uky.edu/polisci/ulmerproject/UlmerProject/index.htm>.

¹⁰ See Harold J. Spaeth and Jeffrey A. Segal, *Majority Rule or Minority Will: Adherence to Precedence on the U.S. Supreme Court* (Cambridge; New York: Cambridge University Press, 1999). Also, see Jeffrey A. Segal and Harold J. Spaeth, *The Supreme Court and the Attitudinal Model* (Cambridge; New York: Cambridge University Press, 1993); and Jeffrey A. Segal and Harold J. Spaeth, *The Supreme Court and the Attitudinal Model Revisited* (Cambridge; New York: Cambridge University Press, 2002). For a recent critical analysis of the attitudinal model, see Lawrence Baum, *The Puzzle of Judicial Behavior* (Ann Arbor: University of Michigan Press, 1997).

¹¹ For a recent comment on the Spaeth-Segal approach, see Howard Gillman, "What's Law Got to Do With It? Judicial Behavioralists Test the 'Legal Model' of Judicial Decision Making," review essay of *Majority Rule or Minority Will* by Harold J. Spaeth and Jeffrey A. Segal, in (2001) *Law & Soc. Inq.* 465 at 477-479.

A spin-off from the attitudinal model is the personal attributes model. According to the explanations of judicial decision making under the personal attributes model, judges are influenced by their socio-economic backgrounds including regional ties and political affiliations in deciding cases.¹² Among researchers who tested the personal attributes model with U.S. data was Tracey George. She found that former law professors who were appointed to the U.S. appellate bench exhibited stronger propensities than other judges to write opinions and to reverse lower court opinions in order to advance new legal ideas.¹³ In addition, she found that former law professors who were appointed to the U.S. appellate bench because of their ideological leanings exhibited strong propensities to act consistently with their prior scholarly positions.¹⁴ James Brudney, Sara Schiavoni, and Deborah Merritt also tested the personal attributes model on U.S. data, and they found that Democratic judges tended to vote for unions more than Republican judges, while female Republican judges tended to vote for unions more than male Republican judges.¹⁵

In addition to his attitudinal insight, Pritchett realized that judges may agree to support their brethren on rulings that are close to but not exactly in line with their personal policy preferences in order to advance at least part of their personal policy agenda. Such judicial actions constitute the basis of the strategic model, which hadn't been fully developed until Pritchett's student Walter Murphy produced a seminal analysis of strategic judicial behaviour.¹⁶ A recent authoritative work on strategic judicial behaviour was written by Lee Epstein and Jack Knight. In *The Choices Justices Make*, Epstein and Knight analyzed two sets

¹² The list of personal attributes that might influence judicial decision making include age, gender, race, religion, education, prior judicial experience, prior prosecutorial experience, prior public/elected office, appointing president and political party affiliation. See Tracey E. George, "Court Fixing" (2001) 43 *Ariz. L.Rev.* 9 [hereinafter *Court Fixing*]. Neal Tate explained the use of variables such as appointing presidents and regional affiliation in building personal attributes model in Neal Tate and Roger Handberg, "Time Binding and Theory Building in Personal Attribute Models of Supreme Court Voting Behavior" (1991) 35 *Am. J. Political Science* 460.

¹³ *Court Fixing*, *ibid.* at 53.

¹⁴ *Ibid.* at 59.

¹⁵ James J. Brudney, Sara Schiavoni, and Deborah J. Merritt, "Judicial Hostility Toward Labor Unions? Applying the Social Background Model to a Celebrated Concern" (1999) 60 *Ohio St. L.J.* 1675.

¹⁶ Walter F. Murphy, *Elements of Judicial Strategy* (Chicago: University of Chicago Press, 1964). For recent descriptions of the strategic model, see H.W. Perry, "Taking Political Science Seriously" (2003) 47 *Saint Louis U.L.J.* 889 at 894; Lee Epstein, Nancy Staudt, and Peter Wiedenbeck, "Judging Statutes: Thoughts on Statutory Interpretation and Notes for a Project on the Internal Revenue Code" (2003) 13 *Wash. U.J.L. & Pol'y* 305 at 314-315; and Context of Judging, *supra* note 1 at 798.

of U.S. Supreme Court case data to show how law evolves from judicial action.¹⁷ The two datasets were (1) cases in Justice Brennan's register in the 1983 term and (2) landmark cases decided under the Burger Court from 1969 to 1985. Using the data, Epstein and Knight argued that U.S. Supreme Court justices such as Brennan advanced their personal policy goals by voting strategically to determine whether certiorari was granted and building majority coalitions after certiorari was granted. As the justices acted strategically in the institutional process of judging, Epstein and Knight also referred to the institutional context of judicial decision making in their book.

The institutionalist model is closely tied to the strategic model. Under the institutionalist model, routine policies and standard procedures concerning the operation of the court influence judicial decision making. They include policies and procedures for the selection of cases to be heard and the assignment of opinion writing responsibilities by the Chief Justice.¹⁸ Although the institutionalist and strategic models can be seen as cousins if not siblings, one can adopt the institutionalist model but reject the strategic model. Judge Harry Edwards, who has propounded on the importance of institutional influences on judicial decision making, doubts the usefulness of quantitative analysis of judicial decision making and dismisses both the strategic model as well as the attitudinal model.¹⁹ Under his own theory of collegiality, judges work together in a collegial environment, which institutionalizes them to work for the common interest in getting the law right by pursuing principled agreement with uncensored expression and sincere consideration of different views in the judicial decision making process.²⁰

In sum, the five models of judicial decision making represent a broad range of explanations of judicial behavior. Offering an alternative to the legal model, the attitudinal model focuses on judges instead of the law in explaining judicial decision making. Building on the attitudinal model, the personal attributes model expands the list of decision-influencing factors from personal policy preferences of judges to include social backgrounds of judges. As judges decide cases amidst their brethren in the institutional setting of courts, the strategic model

¹⁷ Lee Epstein and Jack Knight, *The Choices Justices Make* (Washington, D.C.: CQ Press, 1998).

¹⁸ For a recent description of the institutionalist model, see Kevin T. McGuire, "The Institutionalization of the U.S. Supreme Court" (2004) 12 *Political Analysis* 128 at 129.

¹⁹ Harry T. Edwards, "The Effects of Collegiality on Judicial Decision Making" (2003) 151 *U. Pa. L. Rev.* 1639 at 1662—1664 [hereinafter *Collegiality*]. He is a Circuit Judge at the United States Court of Appeals for the D.C. Circuit. He served as Chief Judge of the D.C. Circuit from October 1994 to July 2001. For his challenge of the usefulness of quantitative analysis of judicial decision making, see *infra* note 112.

²⁰ See *Collegiality. ibid.* at 1644—1645.

captures the effects of strategic interactions among judges, and the institutionalist model highlights the impact of policies and procedures of the courts.

III. USING SCALOGRAM ANALYSIS TO MAP VOTING PATTERNS OF CANADIAN JUSTICES

Sidney Peck is the first Canadian legal scholar who used a quantitative technique to map Canadian judicial voting patterns in accordance with the attitudinal model. Influenced by U.S. attitudinal pioneers such as Schubert, Peck adapted scalogram analysis, also called cumulative scaling, to analyze judicial decision making in the Supreme Court of Canada.²¹ The objective of scalogram analysis is to show that judges voted consistently in terms of their personal policy preferences. The way scalogram works can be illustrated by the use of a simple hypothetical example.²²

In this hypothetical example, five non-unanimous cases involving the Canadian federal government and a nuclear energy company are used to construct a scale. In all five cases the legal dispute is whether the government should allow a nuclear plant to be built near densely populated areas. In Case A the location in dispute was Yellowknife, in Case B it was Regina, in Case C it was Winnipeg, in Case D it was Vancouver, while in Case E it was Toronto. The research question is whether Judge X or Judge Y tended to give the nuclear company more freedom in placing its nuclear plant.

In the scalogram analysis, the cases might be ranked in an ascending order by the size of the population of the locations in dispute. Therefore, Case A is ranked first, Case B second, Case C third, Case D fourth and Case E fifth. A judicial voting pattern would be deemed consistent if a judge who voted in favour of the nuclear energy company in Case C also voted in favour of it in Cases A and B while a judge who voted against the nuclear energy company in Case C also voted against it in Cases D and E. A nuclear energy company win in Case C means that the company is allowed to build a nuclear plant in Winnipeg. As Winnipeg has a larger population than Regina (Case B) and Yellow-

²¹ Peck referred to Schubert extensively in his three articles on judicial decision making in the Supreme Court of Canada. See Sidney Raymond Peck, "A Behavioural Approach to the Judicial Process: Scalogram Analysis" (1967) 5(1) *Osgoode Hall L.J.* 1 [hereinafter *Behavioural Approach*]; S. R. Peck, "The Supreme Court of Canada, 1958-1966: A Search for Policy through Scalogram Analysis" (1967) 45 *Can. Bar. Rev.* 666 [hereinafter *Supreme Court of Canada*]; and Sidney R. Peck, "A Scalogram Analysis of the Supreme Court of Canada, 1958-1967" in Glendon Schubert and David J. Danelski, eds., *Comparative Judicial Behavior: Cross-Cultural Studies of Political Decision-Making in the East and West* (New York: Oxford University Press, 1969), 314-316 [hereinafter *Scalogram*].

²² Peck used an example of attitudes toward foreigners to illustrate how scalogram analysis works. See *Behavioural Approach*, *supra* note 21 at 5.

knife (Case A), a nuclear energy company win in Case C means that the company should be allowed to build a nuclear plant in the two less densely populated cities too. A nuclear energy company loss in Case C means that the company is not allowed to build a nuclear plant in Winnipeg. As Winnipeg has a smaller population than Vancouver (Case D) and Toronto (Case E), the nuclear energy company should not be allowed to build a nuclear plant in the two more densely populated cities too.

One objective of ordering the cases is to map visually identifiable voting patterns of judges. In the current example, the voting patterns of Judge X and Judge Y would be presented in a five-by-two matrix with cases as row headings and the judges as column headings. A vote in favour of the nuclear energy company is recorded as a plus sign, while a vote against it is recorded as a minus sign. Assuming that Judge X voted in favour of the nuclear energy company in Cases A and B, while Judge Y voted in favour of it in Cases A, B, C and D, the scale would show clearly that Judge Y recorded more plus signs near the top of her column. Therefore, Judge Y can be viewed as having given the nuclear energy company more freedom in placing its nuclear plant.

In scalogram analysis, only non-unanimous cases are used because they suggest that the answers to the legal questions raised in the cases were uncertain and thus personal policy preferences of judges might have influenced judicial decision making. Scalogram analysis is based on the assumption that judges decide a certain category of cases with legal uncertainty based on one dominant attitude. Peck realized from the outset that judges do not make decisions based on only one dominant attitude even in similar cases.²³ Moreover, Peck knew that simply ordering the cases according to the researchers' subjective rankings does not prove anything objectively. According to Schubert, Peck accepted "the method of cumulative scaling while rejecting its theory."²⁴ Still, Peck saw the usefulness of scalogram analysis as a descriptive device of the factors that influence judicial decision making in non-unanimous cases but not as an explanatory tool of judicial behaviour.²⁵

As ordering cases is of such importance in scaling, and whether an order fits the requirement of scaling is more subjective than objective, Peck avoided the uncertainty by devising a classification system of voting tendencies to turn scalogram analysis into descriptive statistics of judicial votes in terms of judicial preferences.²⁶ For example, assuming that the research question is whether

²³ See Behavioural Approach, *supra* note 21 at 19–20.

²⁴ See Glendon Schubert & David J. Danelski, eds., *Comparative Judicial Behavior: Cross-Cultural Studies of Political Decision-Making in the East and West* (New York: Oxford University Press, 1969) at 14.

²⁵ See "Supreme Court of Canada", *supra* note 21 at 679.

²⁶ *Ibid.*

judges tended to vote for "big" business, a scale is constructed to rank a number of cases about disputes between government and corporations based on the valuation of the corporations. As valuation could be performed in many different ways, a corporation that is ranked first in terms of valuation based on free cash flow may not be ranked first in terms of valuation based on earnings. Under Peck's classification system, judges who voted for big business in 80% or more of all non-unanimous cases they decided are classified as "strongly in favour of" big business, those who voted for big business in 60%–79% of all non-unanimous cases are classified as "in favour of" big business, those who voted for big business in 41%–59% of the cases are classified as "neutral", those who voted for big business in 21%–40% of the cases are classified as against big business, while those who voted for big business in 20% or less cases are classified as strongly against big business.

Adapting Schubert's approach, Peck used data from non-unanimous Supreme Court of Canada cases from 1958 to 1966 to construct scales for taxation, negligence and criminal law cases.²⁷ He divided judicial votes into two groups—voting for or against one party (*e.g.* voting for the government or voting against the government). Based on the scales, Peck found that Justice Cartwright sided with individuals most of the time because he voted in favour of taxpayers in tax appeals, in favour of plaintiffs in negligence appeals and strongly in favour of the accused in criminal appeals.²⁸ Casting Justice Abbott as the mirror image of Cartwright, Peck found that he voted in favour of the government in tax appeals, in favour of defendants in negligence appeals and in favour of the Crown in criminal law appeals. With respect to Justices Ritchie and Martland, Peck found that they were the neutral justices.²⁹ Ritchie was neutral on all three scales, while Martland was neutral in tax and negligence appeals but in favour of the Crown in criminal law appeals.

Donald Fouts, a Northern Illinois University political scientist, supported Peck's general finding on the existence of consistent judicial voting patterns.³⁰ Like Schubert, Fouts divided the non-unanimous Supreme Court of Canada cases from 1950 to 1960 into cases about civil liberties and economic liberalism. He defined civil liberties cases as those with conflicts between (1) personal

²⁷ *Ibid.* at 682.

²⁸ *Ibid.* at 723.

²⁹ *Ibid.* at 725.

³⁰ Donald E. Fouts, "Policy-Making in the Supreme Court of Canada, 1950–1960" in Glendon Schubert & David J. Danelski, eds., *Comparative Judicial Behavior: Cross-Cultural Studies of Political Decision-Making in the East and West* (New York: Oxford University Press, 1969). Fouts may be the only U.S. political scientist who has published scalogram analysis of judicial decision making in the SCC.

rights and liberty claims and (2) governmental authority.³¹ In addition, he defined economic liberalism cases as those with conflicts between (1) “underprivileged economic interests” such as the general public and (2) “those of affluence and monopoly power” such as private corporations.³² Fouts found that Justice Rand exhibited strong support for civil liberties and economic regulation, and he labeled him a liberal and equated him to the likes of Justices Douglas, Black, Warren and Brennan in the 1960–1962 term of the U.S. Supreme Court.³³ Furthermore, Fouts found that highly consistent voting records of Quebec justices as a group—Abbott, Rinfret, Fauteux and Taschereau—infused the SCC in the 1950s with “a pro-economic liberalism orientation and slight anti-civil liberties tendencies.”³⁴ In general, Fouts found that SCC justices were twice more likely to disagree on public policy cases than in private law cases from 1950 to 1960, suggesting the presence of an attitudinal variable in judicial decision making for such cases.³⁵

Peck’s findings of consistent judicial voting patterns were also supported by the scalogram analysis of judicial decision making in the SCC in an earlier period performed by two of his students at Osgoode Hall Law School. Mapping voting patterns in Chief Justice Strong’s court from 1892 to 1902, Michael Bader and Edward Burstein scaled voting patterns in five types of cases: negligence, petition of right (compensation claims for injuries made by government acting in a quasi-private capacity), railways, insurance and jurisdiction (whether the SCC in its early days had jurisdiction to decide a case).³⁶ Bader and Burstein found that Justice Fournier, who was a member of the federal Liberal Party that sought to distinguish itself from MacDonald’s Conservatives by attacking influences of railways and business in the government and standing by farming interests, voted in favour of individuals most of the time.³⁷ They also found that Chief Justice Strong exhibited similar voting patterns.³⁸ Moreover, Bader and Burstein found that Justice Gwynne, who was a successful businessman, voted in favour of railway and insurance companies as well as the government but did

³¹ *Ibid.* at 268.

³² *Ibid.* at 273.

³³ *Ibid.* at 279.

³⁴ *Ibid.* at 283.

³⁵ *Ibid.* at 267.

³⁶ Michael Bader and Edward Burstein, “The Supreme Court of Canada 1892–1902: A Study of the Men and the Times” (1970) Osgoode Hall L.J. 503.

³⁷ *Ibid.* at 540–541.

³⁸ *Ibid.* at 542.

not vote in favour of individuals.³⁹ Justice King, who once was the leader of the Conservative Party and prime minister of New Brunswick, along with Justices Taschereau, Sedgewick and Girouard recorded mixed voting patterns that could not be interpreted to be clearly for or against individuals or the government most of the time.⁴⁰

In sum, the studies by Peck, Fouts as well as Bader and Burstein contributed to the empirical testing of the attitudinal model in Canada. They took the first collective step to empirically test the idea that Canadian judges voted consistently in terms of their personal policy preferences and confirmed the existence of consistent judicial voting patterns. Also, Peck and others paved the way for future studies by collecting the data, which was used in the multiple regression studies by Panu Sittiwong as outlined in Part V of the paper.⁴¹

IV. USING DESCRIPTIVE STATISTICS TO PROFILE THE SUPREME COURT OF CANADA AS AN INSTITUTION

Peter Russell, one of Canada's premier political scientists, did not focus only on the relationships between judicial votes and personal policy preferences; instead, Russell described the workings of the Supreme Court of Canada, of which judicial decision making is an integral part. His work can be seen as part of institutionalist/strategic studies. In the quantitative portion of his work Russell relied on descriptive statistics. One way to highlight the quantitative work of Russell is to review two of his studies on the Supreme Court of Canada together; one was done before and one was done after the introduction of the

³⁹ *Ibid.* at 542–544.

⁴⁰ *Ibid.* at 544–545.

⁴¹ See *infra* note 71. One notable study at the time of Peck that didn't involve scalogram was conducted by George Adams and Paul Cavalluzzo. The two Osgoode students of Peck produced a classification system of social backgrounds of judges, and the variables they produced look similar to those used in regression analysis of judicial decision making in Canada years later as depicted in Part V of the paper. Adams and Cavalluzzo divided the years from 1867 to 1963 into seven periods and further broke down the make-up of the court by regional representation (Quebec, Ontario, Maritimes, West); ethnicity (French, English, Scottish, Irish, bi-cultural); religion (Roman Catholic, Anglican, Presbyterian, Methodist, Huguenot, Baptist, Protestant, unknown); political party affiliation (Liberal, Conservative, unknown); prior office (prior political office, prior public office, no public office, unknown); prior judicial office (justices with prior judicial experience and their years of experience, justices with no prior judicial office); and father's occupation (clergyman, politician, lawyer, judge, doctor, landowner-farmer, ship captain, shipbuilder, druggist, merchant, architect, unknown). See George Adams and Paul J. Cavalluzzo, "The Supreme Court of Canada A Biographical Study" (1969) 7(1) *Osgoode Hall L.J.* 61.

Charter.⁴² In both studies, Russell found, among other things, tension between justices from Quebec and justices from other parts of Canada as reflected in their voting patterns. In Russell's 1969 study of the SCC, in which he analyzed 1 031 reported cases from 1950 to 1964, he found that, among other things, "there was a greater tendency for the Supreme Court to reverse Quebec appellate court" in cases "when common-law judges constituted a majority or wrote the Court's judgment."⁴³ Analyzing 100 Charter cases from 1984 to 1989, Russell, F. L. Morton and Michael J. Withey found in their 1992 study that, among other things, 11 of 19 appeals from Quebec were reversed, while 17 of 19 appeals from British Columbia and 25 of 31 appeals from Ontario were upheld.⁴⁴ They found that the Charter "was promoted as an instrument of national unity" but it has become "a source of disunity with respect to Quebec".⁴⁵ Russell and company also found increased conflicts among SCC justices. Based on their data, the percentage of unanimously decided cases per year dropped from 100% (4 of 4) in 1984 to slightly over 60% in 1989, (16 of 26).⁴⁶ Russell and his colleagues attributed the rise of dissents to the schism in the Court between Justices Wilson and Lamer on one side and Justices McIntyre and L'Heureux-Dubé on another side since 1986.⁴⁷ According to Russell, Morton and Withey, "such

⁴² *Canadian Charter of Rights and Freedoms*, part I of the *Constitutional Act*, 1982, being schedule B to the *Canada Act 1982* (U.K.), 1982, c.11. Russell has also produced a lot of non-quantitative work on the Supreme Court of Canada. See e.g. Peter H. Russell, *The Judiciary in Canada: The Third Branch of Government* (Toronto: McGraw-Hill Ryerson, 1987). For Russell's scholarly contributions in law and political science, see Joseph F. Fletcher, ed., *Ideas in Action: Essays on Politics and Law in Honour of Peter Russell* (Toronto: University of Toronto Press, 1999) [hereinafter *Ideas*].

⁴³ Peter H. Russell, *The Supreme Court of Canada as a Bilingual and Bicultural Institution* (Ottawa: Queen's Printer, 1969) at 216. Russell listed his research questions as follows: "What is the nature of the Court's work? How often is it concerned with provincial law or Civil Code cases? Are there significant differences in its disposition of appeals from different sources? Is there any evidence of cultural alliances of judges on different issues? To what extent have common-law judges participated in Quebec appeals dealing with civil law?" See page 114. Joseph Fletcher pointed out that Russell first used quantitative analysis in his preparation of the report. "In preparing his report for the B & B Commission, he virtually lived at the court for more than a year, making his first use of quantitative methods to describe the court's decision-making procedure." See *Ideas*, *supra* note 42 at 171.

⁴⁴ F. L. Morton, Peter H. Russell, and Michael J. Withey, "The Supreme Court's First One Hundred Charter of Rights Decisions: A Statistical Analysis" (1992) 30(2) *Osgoode Hall L.J.* 1. at 17.

⁴⁵ *Ibid.* at 48.

⁴⁶ *Ibid.* at 37. Russell and company also found that Charter claimants won a total of 35 of the 100 cases in 1984-1989, with the winning percentage of Charter claimants per year falling from 75% in 1984 (3 of 4) to 31% in 1989 (8 of 26). *Ibid.* at 9.

⁴⁷ *Ibid.* at 48.

division was more or less inevitable given the inescapably contentious character of modern judicial review.”⁴⁸

Russell’s quantitative approach is best summarized in a description of the strengths and weaknesses of descriptive statistics as an analytical tool in his joint 1992 paper with Morton and Withey. Descriptive statistics, they said, can be used to construct a narrative of the patterns of the Supreme Court of Canada’s work flow, nature of the work of the court, sources of its cases, distribution of cases among the justices and their relationships with each other.⁴⁹ Using Charter cases as examples, they said that “by identifying patterns not discernible through the study of leading *Charter* cases, quantitative analysis can generate empirically supported generalizations—that is, new understandings—of how the *Charter* is affecting the Supreme Court and how the Court is shaping the *Charter*.”⁵⁰ However, Russell and company cautioned that the use of descriptive statistics cannot replace the study of individual cases because descriptive statistics only captures the bottom-line outcomes of the cases but not their subtleties.⁵¹ They said: “A decision that upholds a *Charter* claim might do so through opinions that actually narrow the meaning of the *Charter* right involved.”⁵²

Ian Greene, who was a doctoral student of Russell, and Peter McCormick followed Russell’s quantitative approach and found more empirical support for Russell’s finding of a divided SCC.⁵³ In the 1998 book *Final Appeal: Decision-Making in Canadian Courts of Appeal*, Greene, McCormick and their collaborators found, among other things, differences in the patterns of dissents between Justices Iacobucci and Cory as a group and Justices L’Heureux-Dubé and McLachlin as another in non-unanimous cases.⁵⁴ For example, based on data on

⁴⁸ *Ibid.*

⁴⁹ *Ibid.* at 3.

⁵⁰ *Ibid.*

⁵¹ *Ibid.* at 3–4.

⁵² *Ibid.*

⁵³ Greene is a political scientist at York University. McCormick is a political scientist at University of Lethbridge and was a colleague of Greene while he was teaching there in the 1980s.

⁵⁴ Ian Greene, Carl Baar, Peter McCormick, George Szablowski, and Martin Thomas, *Final Appeal: Decision-Making in Canadian Courts of Appeal* (Toronto: James Lorimer & Co., 1998). The Supreme Court of Canada is only one of the appellate courts analyzed in the book. The total vote counts for the Supreme Court of Canada justices in reported cases from 1990 to 1997 were: Iacobucci (612), Cory (648), L’Heureux-Dubé (588) and McLachlin (640). Calculations are based on data in Table 10.1 at page 208. Another Greene-McCormick project is Peter McCormick and Ian Greene, *Judges and Judging: Inside the Canadian Judicial System* (Toronto: James Lormier & Co., 1990).

voting patterns of Supreme Court justices from 1990–1997, Greene, McCormick and others found that Iacobucci and Cory dissented 10% of the time in all cases they presided while L'Heureux-Dubé dissented 29% of the time and McLachlin dissented 24% of the time.

McCormick, one of the most prolific researchers who use descriptive statistics to examine judicial decision making in Canada, provided more examples of such institutional/strategic knowledge on dissents and voting coalitions in his work on the Supreme Court of Canada.⁵⁵ In further exploring the topic of dissents, McCormick found that the practice has grown in the past 25 years, rising from an average of about seven per year before 1970 to an average of over 40 per year since 1980.⁵⁶ Since the end of World War II the justice who cited minority opinions the most was Lamer, who recorded 137 citations of minority opinions, of which 36 were his own minority decisions or a self-citation rate of about 26%. L'Heureux-Dubé topped the list of those who cited one's own minority opinions, with 67 out of 103 times or a self-citation rate of about 65%.⁵⁷

In terms of voting blocs, McCormick found that Justices Iacobucci and Major were committed to the Lamer voting bloc, but Justice McLachlin was not, so the post-Lamer stability in the McLachlin Court partly hinges on the actions of newer justices.⁵⁸ On the Lamer Court, McCormick found that Justices Lamer, Sopinka and Major formed the trio who voted as a bloc and also appeared in many differently configured voting coalitions of four and five judges. Therefore, the three justices can be seen to have had more power than others because of

⁵⁵ Since the 1980s, McCormick has written dozens of articles and books on various aspects of courts in Canada. Selected publications of McCormick are cited in note 54-60 and note 87-88.

⁵⁶ Peter McCormick, "Second Thoughts: Supreme Court Citation of Dissents & Separate Concurrences, 1949–1999" (2002) 81 Can Bar. Rev. 369 at 393–394 [hereinafter *Second Thoughts*]. He did other work on citations including Peter McCormick and Tammy Praskach, "Judicial Citation, the Supreme Court of Canada, and the Lower Courts: A Statistical Overview and the Influence of Manitoba" (1996) 24 Man. L.J. 335; Peter McCormick, "Judicial Citation, the Supreme Court of Canada, and the Lower Courts: the Case of Alberta" (1996) 34 Alta. L. Rev. 870; and Peter McCormick, "The Supreme Court Cites the Supreme Court: Follow-Up Citation on the Supreme Court of Canada, 1989–1993" (1995) 33 Osgoode Hall L.J. 453.

⁵⁷ See *Second Thoughts*, *ibid.* at 388–389.

⁵⁸ Peter McCormick, "'With Respect ...'—Levels of Disagreement on the Lamer Court 1990–2000" (2003) 48 McGill Law Journal 89 at 115. See also Peter McCormick, "Birds of a Feather: Alliances and Influences on the Lamer Court 1990–1997" (1998) 36 Osgoode Hall L.J. 339. Four years after Lamer's retirement, Iacobucci retired from the Supreme Court of Canada at the end of June 2004.

their coalition building capability.⁵⁹ On the Laskin Court, McCormick found that Chief Justice Laskin didn't exert greater influences on the Supreme Court of Canada until his later years because he was first opposed by a coalition of Justices Martland, Judson, Ritchie, Pigeon and de Grandpre and then a coalition of Justices Martland, Pigeon and Ritchie.⁶⁰

In sum, the collective work of Russell, McCormick and Greene contributed to the empirical testing of the institutionalist/strategic models in Canada. In addition to gathering more evidence in support of the Peck group's general finding that judges voted differently on a consistent basis, they used the data to paint a detailed portrait of the workings of the Court as a policy-making institution. In highlighting the different voting patterns exhibited by Quebec and non-Quebec justices as well as the various patterns of dissents and different configurations of voting coalitions, they advanced the institutionalist/strategic knowledge of decision making in a divided Supreme Court of Canada in the post-World War II era.

V. USING MULTIPLE REGRESSIONS TO EXPLAIN JUDICIAL VOTING PATTERNS OF SUPREME COURT OF CANADA

Neal Tate, who had conducted his personal attributes studies at University of North Texas before moving to Vanderbilt University, and other U.S.-based political scientists used multiple regressions to explain rather than describe voting patterns of Supreme Court of Canada justices. The use of personal attributes variables in multiple regression analyses could solve one methodological problem—the lack of reliable external evidence of personal policy preferences of Supreme Court of Canada justices—with scalogram and descriptive statistics analyses. Personal attributes can be used as proxies for personal policy preferences of judges as all people are shaped by their social backgrounds to a certain degree. Personal attributes are the most accessible external evidence of personal policy preferences of judges on which researchers can rely, unless the judges publicly and openly declare their personal policy preferences.⁶¹ In the late 1980s and early 1990s, Tate and Panu Sittiwong, his graduate student, used multiple regressions to test the personal attributes model in three studies.

⁵⁹ Peter McCormick, "The Most Dangerous Justice: Measuring Judicial Power on the Lamer Court 1991–1997" (1999) 22 Dal. L.J. 93.

⁶⁰ Peter McCormick, "Follow the Leader: Judicial Power and Judicial Leadership on the Laskin Court, 1973–1984" (1998) 24 Queen's L.J. 237.

⁶¹ Spaeth and Segal used newspaper reporting of U.S. Supreme Court justices to construct an indicator of personal policy preferences of the justices in their attitudinal analyses. For details see the three books by Spaeth and Segal, *supra* note 10.

The first of the Tate-Sittiwong trilogy of studies was Sittiwong's 1985 master's thesis.⁶² Adopting Schubert's categorization of cases, Sittiwong classified justices' votes in three ways. First, those who voted for civil right claimants in civil liberties cases were counted as casting liberal votes. Second, those who voted for what he called "underdogs"—unions or governments in his study—instead of business monopolies in economics cases were counted as casting liberal votes. Third, those who voted for business instead of government in fiscal claims cases were counted as casting liberal votes.⁶³ Using a dataset of 737 non-unanimous cases from 1949 to 1980, Sittiwong regressed voting records of Supreme Court justices as the dependent variable against four social background independent variables—region (from Quebec or not), political party of appointing Prime Minister (Liberal Party or Conservative Party), previous judicial experience (number of years) and tenure on the SCC (number of years). Sittiwong found that justices who tended to cast liberal votes were those who were not from Quebec, who were judges before serving on the Court, who were on the Court for a relatively short period of time and who were appointed by Liberal Prime Ministers.⁶⁴

In 1989, Tate and Sittiwong extended Sittiwong's work in the first published article that used multiple regressions to test for linkages between voting records of SCC justices and their social backgrounds.⁶⁵ Like Schubert, Tate and Sittiwong divided cases into civil rights and liberties cases as one type and cases concerning economics issues as another type. Using a dataset of 606 non-unanimous decisions from 1949 to 1985, Tate and Sittiwong regressed the de-

⁶² Panu Sittiwong, "Canadian Supreme Court Decision-Making: The Personal Attribute Model in Explaining Justices' Patterns of Decision-Making, 1949–1980" (M.A. Thesis, North Texas State University, Department of Political Science, 1985). He used ordinary least squares in the study.

⁶³ *Ibid.* at 28–29. The fiscal claims cases Sittiwong referred to were about monetary conflicts between individuals and government. The classification of voting for business such as corporate taxpayers in fiscal claims cases as a "liberal" vote could be problematic, as the social background reasons for siding with civil rights claimants and corporate taxpayers might not be of the same type. For example, a working-class upbringing might have steered a justice to vote for civil rights claimants, while a private school education might have steered a justice to vote for corporate taxpayers. Constructing a dependent variable by such a classification of "liberal" votes could run the danger of distorting the regression results.

⁶⁴ *Ibid.* at 81–82. The regression model generated an adjusted R-square of 0.52, meaning that the model explained more than half of the variations of the voting patterns of the justices. The region variable was significant at a one-percent level, while the tenure variable was significant at a five-percent level. The remaining two variables were not statistically significant.

⁶⁵ C. Neal Tate and Panu Sittiwong, "Decision Making in the Canadian Supreme Court: Extending the Personal Attributes Model across Nations" (1989) 51(4) *The Journal of Politics* 900. At that time Sittiwong was a doctoral student of Tate.

pendent variable of justices' voting percentages for liberal case outcomes against five independent variables—indicators of region and religion affiliations of justices (using an index of non-Quebec/Catholic attributes), political party of Prime Ministers who appointed the justices (Liberal Party or not), the prime ministers who appointed the justices (Liberal Party Prime Minister Mackenzie King on one hand and others on another), political experience of justices (some political experience or none) and judicial experience of justices (number of years as a judge).⁶⁶ For civil rights and liberties cases as well as economics cases, Tate and Sittiwong found that the region-religion variable influenced justices' voting percentages positively, suggesting that justices who were not from Quebec and not Catholics tended to cast liberal votes.⁶⁷ In addition, Tate and Sittiwong found that the variable of whether the political party of prime ministers was the Liberal Party influenced the casting of liberal votes positively in both types of decisions, while the variable of whether the Prime Minister was Mackenzie King influenced the casting of such votes negatively.⁶⁸ Together the two findings suggested that justices who were appointed by Liberal Prime Ministers except Mackenzie King tended to cast liberal votes in both types of decisions. Tate and Sittiwong pointed out: "The conservatizing effect of the Quebec political and legal culture comes through clearly for Canadian justices."⁶⁹ Based on their findings, Tate and Sittiwong concluded that "decision making in the Canadian Supreme Court reflects the same influences that shape Canadian politics outside that court."⁷⁰

⁶⁶ The voting percentages of justices were based on the number of decisions they decided. Weighted least squares regression was used. A case outcome was regarded as "liberal" when (1) the claimants of a right or liberty won in civil rights and liberty cases or (2) the "less economically privileged" party won in conflicts of economic interests between non-government parties or (3) the government won in cases pitting the government against business on regulations of business. Almost half of the outcomes of the cases in the study were "liberal" (*ibid.* at 908–909). The dependent variable was logged because the distribution of individual justice's voting percentages was positively skewed (*ibid.* at 902–903).

⁶⁷ *Ibid.* at 911. Both models—one for civil liberties cases and another for economics cases—reported an adjusted R-square of over 60%. The region-religion variable and the political party variable were significant at the one-percent level, while the King appointee variable was significant at the five-percent level. The prior political experience variable was significant at the one-percent level for the civil rights and liberties cases only.

⁶⁸ *Ibid.* Tate and Sittiwong also found that political experience was a variable that had positive influence on the casting of liberal votes in civil and liberties cases, suggesting judges who were politicians tended to cast liberal votes in such decisions.

⁶⁹ *Ibid.* at 913.

⁷⁰ *Ibid.* at 914.

To continue his work on the personal attributes model, Sittiwong embarked on an ambitious data collection project for his doctoral dissertation.⁷¹ For his analysis of Supreme Court of Canada cases from 1875 to 1990, Sittiwong compiled a dataset using data from Peck, Russell, Tate, his 1985 M.A. thesis and his 1989 joint article with Tate.⁷² Compiling the longitudinal dataset from various datasets was not easy, as Sittiwong said that “the original data for 1875–1969 collected by Peck and Russell were still in the form of computer punch cards, and it turned out that numerous cards were missing.”⁷³ Using the data, Sittiwong built regression models for non-unanimous individual claims cases (individual v. government) and economic claims cases (such as individual v. corporations and labour v. management). To analyze the two types of cases, Sittiwong tried a new approach by dividing the study period from 1875 to 1990 into three segments— from 1875 to 1949, from 1949 to 1990 and from 1875 to 1990.⁷⁴ He used similar dependent and independent variables he had used in his M.A. thesis. The dependent variable was a liberal score.⁷⁵ The independent variables were religion and region (Quebec non-Catholic, Quebec Catholic, non-Quebec non-Catholic or non-Quebec Catholic), prior political experience (some political experience or none), party of appointing Prime Minister (Liberal or Conservative), prior judicial experience (number of years), prior private practice experience (number of years) and Prime Minister Mackenzie King appointee (yes or no).⁷⁶ Even though the regression models didn’t exhibit strong explanatory power, they did not provide strong statistical evidence to contradict the prior findings that judges who were Catholic but not from Quebec and judges who were Liberal appointees tended to cast liberal votes. Therefore, Sittiwong argued that region and religion as well as political party of appointing Prime Minister were “consistent predictors in explaining the justice’s voting behavior.”⁷⁷

⁷¹ Panu Sittiwong, “Canadian Supreme Court decision-making, 1875–1990: Institutional, group, and Individual level perspectives” (Ph.D Dissertation, University of North Texas, Department of Political Science, 1994).

⁷² *Ibid.* at 31–33.

⁷³ *Ibid.* at 32.

⁷⁴ For each type of cases, Sittiwong ran multiple regressions in ordinary least squares on the three time segments.

⁷⁵ *Supra* note 71 at 76. Sittiwong coded a government win in fiscal claims cases as a liberal vote. The coding is different from what he did in his M.A. thesis (*supra* note 63).

⁷⁶ *Ibid.* at 158, 160, 162 and 163.

⁷⁷ *Ibid.* at 168. For six of the regression models, only the models for individual claims cases and economic claims from 1949 to 1990 generated an adjusted R-square of about 50%, with most of the variables statistically significant at a five-percent level in a one-tailed test.

In recent years, some American political scientists have produced quantitative tests of findings of previous studies on judicial decision making in the Supreme Court of Canada. Testing the 1989 Tate-Sittiwong personal attributes model, Donald Songer and Susan Johnson divided Supreme Court of Canada non-unanimous decisions from 1949 to 2000 into three types of cases: civil rights and liberties cases; criminal cases (a subset of civil rights and liberties cases); and economic cases.⁷⁸ They classified a vote as liberal when the vote was cast for “the party asserting the denial of a civil right or liberty, the defendant in a criminal case, the government in a economic regulation case, unions or workers in a labor case, or the economic underdog in a private economic dispute.”⁷⁹ Songer and Johnson confirmed some of the findings by Tate and Sittiwong findings but cast doubts on others. Two groups of justices – those from Quebec and those who were Liberal appointees – tended to cast conservative votes in criminal cases but liberal votes in economic cases. This is partly in line with the Tate-and-Sittiwong finding that Quebec judges tended to cast conservative votes but raised questions on the finding that judges appointed by Liberal Party tended to cast liberal votes. In addition, Songer and Johnson found that Quebec justices who were Liberal appointees tended to cast liberal votes in criminal cases but conservative votes in economic cases. The voting behaviour of Quebec justices who were Liberal appointees was the opposite of the behaviour of judges who were from Quebec as an individual group and judges who were Liberal appointees as an individual group.⁸⁰ The combined group behaved differently than the two groups that made up the combination.

C. L. Ostberg, Matthew Wetstein and Craig Ducat tested two sets of components of prior modeling on judicial decision making in the Supreme Court of Canada and found that ideological variables reflecting the dichotomy of liberalism and conservatism can capture the attitudes of SCC justices in Charter cases but regional and political party variables had no impact on the justices’ voting patterns in search and seizure cases. Examining 58 non-unanimous Charter

The region-religion variable and the variable of the political party of appointing Prime Minister were at a five-percent level in a one-tailed test in three out of the six models.

⁷⁸ Donald R. Songer and Susan W. Johnson, “Attitudinal Decision Making in the Supreme Court of Canada” (University of South Carolina, U.S., 2002), in 2002 meeting of the Midwest Political Science Association of Chicago (available on the web at www.cla.sc.edu/poli/faculty/songer/Songer-Johnson.pdf). The authors didn’t disclose the exact size of their dataset. The unit of analysis for the dependent variable is Supreme Court justices, ranging from 23 to 33 in their models. They used ordinary least squares.

⁷⁹ *Ibid.* at 13.

⁸⁰ *Ibid.* at 22, Table 3. The models on the three types of cases reported an R-square of over 50%. But the region variable, political party variable and the interaction variable of region and party were only significant at the five-percent level in the criminal case model and economic case model.

cases in the first half of the Lamer years of the SCC from 1991 to 1995, they found that “traditional notions of liberalism and conservatism probably go a long way to explain attitudinal differences between Canadian justices in the post-Charter Lamer Court.”⁸¹ Analyzing a dataset of 279 observations generated from 41 search and seizure cases from 1984 to 1994, Ostberg and Wetstein found that personal attributes such as prior judicial experience (years), region (Quebec or not), gender, political party of appointing Prime Ministers (Liberal or Conservative) and personal ideology of the justices were not the main explanatory variables for case outcomes. Ostberg and Wetstein said: “In deciding search seizure cases in Canada in the post-Charter years, the dimensions of prime importance are judicial attitudes toward factual circumstances rather than the personal ideology and values of justices.”⁸²

In recent years, U.S.-based political scientists have also used multiple regressions to test the Canadian applicability of theories related to judicial decision making that were previously tested in the U.S. One of the theories tested was Marc Galanter’s theory that the haves will come out ahead.⁸³ Testing the applicability of Galanter’s theory to the SCC, Roy Flemming and Glen Krutz investigated whether lawyers who argued repeatedly before the Supreme Court of Canada tended to win more than other lawyers.⁸⁴ Analyzing data derived from a total of 1 265 applications from 1993 to 1995, they found that the repeat players didn’t necessarily come out ahead in the SCC. They offered two reasons to explain their findings based on the institutional environment at the SCC. The first one is about the procedure dealing with applications:

⁸¹ See C. L. Ostberg, Matthew E. Wetstein and Craig R. Ducat, “Attitudinal Dimensions of Supreme Court Decision Making in Canada: The Lamer Court, 1991–1995” (2002) 55(1) *Political Research Quarterly* 235. Factor analysis was used to slot factors considered to be influential in judicial decision making in groupings such as liberalism and conservatism. C. L. Ostberg is a political scientist at University of the Pacific, while Matthew E. Wetstein is a political scientist at San Joaquin Delta College. Craig R. Ducat is a political scientist at Northern Illinois University.

⁸² See C. L. Ostberg and Matthew Wetstein, “Dimensions of Attitudes Underlying Search and Seizure Decisions of the Supreme Court of Canada” (1998) 31(4) *Canadian Journal of Political Science* 767. They performed logistic regression analysis.

⁸³ Marc Galanter, “Why the “Haves” Come Out Ahead: Speculations on the Limits of Legal Change” (1974) 9 *Law & Soc. Rev.* 160. The theory states that the rich and the powerful will more likely win in courts than the poor and the weak.

⁸⁴ Roy B. Flemming and Glen S. Krutz, “Repeat Litigators and Agenda Setting on the Supreme Court of Canada” (2002) 35(4) *Can. J. of Pol. Sci.* 811. Flemming is a political scientist at Texas A&M University, while Krutz is a political scientist at University of Oklahoma. They performed multi-variate analysis in logistic regressions and bivariate analysis in cross-tabulations.

The amount of attention an application receives in Canada may well dilute the value of a well-known name as a shortcut to identifying a worthy application; alternatively, this attention increases the chances that a solid case made by a lesser-known name will be recognized.⁸⁵

The second reason is about law clerks:

Another reason why the experience or reputation of repeat players may be discounted in the Canadian Court is that the law clerks lack the knowledge about repeat players that their American counterparts have. Law clerks in Canada are recruited during their senior year in law school to serve the justices. Law clerks in the US Supreme Court typically have clerked for a year or two in the lower courts, where they are likely to see and learn more about lawyers through observation and through the grapevine that winds through the legal system.⁸⁶

The Flemming-and-Krutz findings seem to contradict the findings by McCormick on repeat players almost a decade ago. In a 1993 study of almost 4 000 SCC decisions from 1949 to 1992, McCormick found that the government won more often than businesses, which won more often than unions that won more often than individuals.⁸⁷ He said:

The reported decisions of the Supreme Court of Canada since 1949 show a persistent pattern of advantage between various categories of litigants, patterns so strong and so internally consistent that we can statistically 'predict' the probability of appellate success from a knowledge of the relative status of the two parties.⁸⁸

However, as Flemming and Krutz examined the propensity to win of repeat players who are lawyers rather than the parties represented by the lawyers as specified by McCormick, more studies are needed to clarify the applicability of Galanter's theory to explain judicial decision making in Supreme Court of Canada.

Lori Hausegger and Stacia Haynie tested a theory about the use of panel assignments by chief justices to further their personal policy preferences in a

⁸⁵ *Ibid.* at 832.

⁸⁶ *Ibid.*

⁸⁷ Peter McCormick, "Party Capability Theory and Appellate Success in the Supreme Court of Canada, 1949-1992" (1993) 26(3) *Can. Jl. of Pol. Sci.* 523. McCormick said his theory does not mean to downplay "the independence or the impartiality of judges by predicting in advance the general direction of their decisions." Instead, he said he merely pointed out the winning attributes of parties in cases. He said that such examination is like "suggesting that the taller basketball team will usually win" and the referees won't take that as an insult.

⁸⁸ *Ibid.* at 540. McCormick regressed the dependent variable of winning percentage of the parties against an independent variable of what he called "advantage differential," which represents the advantage of certain parties over others. He said he found a "perfect fit" in his regression based on an unlabelled number of 0.7971. On the assumptions that he ran an ordinary least squares regression and the number was either an R^2 or adjusted R^2 , the one-variable regression result produced the explanatory power he claimed.

comparative study of Canadian and South African courts.⁸⁹ The importance of panel assignments were tested on U.S. data before, but the study by Hausegger and Haynie is the first multiple regression analysis of panel assignments in the Supreme Court of Canada. Analyzing data from published SCC decisions from 1986 to 1997, Hausegger and Haynie found that “[w]hile ideologically distant judges may be assigned to more cases, those closer to the chief justice may be assigned disproportionately to the more salient cases.”⁹⁰ They explained the moves by Canadian Chief Justices Dickson and Lamer at least partly as a strategy to maintain a balance of perspectives on panels:

The Canadian chief justices have larger panel sizes and may appoint both extremely conservative and extremely liberal judges to the panels alongside members who are more closely aligned with the chief justice. The ideologues will then be marginalized, and the panel median will remain closer to the chief justice.⁹¹

In the same study on panel assignments, Hausegger and Haynie also found evidence for freshman effects in the Supreme Court of Canada. They found that “while both countries assign freshman judges less frequently to panels, Canadian chief justices do so significantly less than their South African counterparts” so “it appears that a judge’s first year on the bench in Canada is regarded very differently than are subsequent years.”⁹² The finding seems to contradict earlier finding by Ostberg, Wetstein and Ducat of the absence of freshman effect in the SCC.⁹³ Ostberg and her colleagues used data derived from SCC cases from 1973 to 1999 to examine the workload of the first 12 months of 15 new justices appointed to courts under Chief Justices Laskin, Dickson and Lamer. The three researchers found no discernible freshmen effects overall, but they said that Canadian chief justices helped ease the transition of newly appointed judges by assigning them fewer cases:

If a justice is eased on the Court in the way we suggest, freshman justices are necessarily afforded more time to establish their voting and opinion voice earlier in their ca-

⁸⁹ Lori Hausegger and Stacia Haynie, “Judicial Decisionmaking and the Use of Panels in the Canadian Supreme Court and the South African Appellate Division” (2003) 37(3) *Law & Soc. Rev.* 635. Both authors are political science professors at Louisiana State University. They conducted conditional logit regression analysis.

⁹⁰ *Ibid.* at 651.

⁹¹ *Ibid.* at 655.

⁹² *Ibid.* at 653.

⁹³ C. L. Ostberg, Matthew E. Wetstein and Craig R. Ducat, “Acclimation Effects on the Supreme Court of Canada: A Cross-Cultural Examination of Judicial Folklore” (2003) 84(3) *Social Science Quarterly* 704. Variance analysis was used in the study. Basically, the analysis of variance in this case focuses on whether the means of the variables representing the behaviour of freshman justices are different from those of other justices in a statistically significant way. The results are by and large negative.

reers than their U.S. counterparts As such, they exhibit fewer signs of uncertainty and unease, and establish consistent patterns of judicial behavior early on.⁹⁴

As Hausegger and Haynie and Ostberg, Wetstein and Ducat used different multi-variate techniques to analyze different datasets, more studies are needed to determine whether freshmen effects exist in the Supreme Court of Canada.⁹⁵

In sum, the collective work of Tate, Sittiwong, Songer, Johnson, Ostberg, Wetstein, Ducat, Flemming, Krutz, Hausegger and Haynie contributed to the empirical testing of the personal attributes and the institutionalist/strategic models. The use of multiple regressions enabled the researchers to test causal relationships between judicial votes and personal attributes of judges as well as the institutional process of judging. These multi-variate analyses showed that repeated tests are required to advance knowledge. For example, the Tate-and-Sittiwong findings about Quebec judges and judges appointed by Liberal prime ministers were tested by Songer and Johnson, while the explanatory power of personal attributes was tested by Ostberg, Wetstein and Ducat. Some of these findings are the same but some are different, so more quantitative tests are required to clarify the findings on the explanatory power of these two personal attributes.

VI. OUTLOOK FOR QUANTITATIVE ANALYSIS OF JUDICIAL DECISION MAKING IN CANADA

When Peck published his research in the late 1960s, many in the legal profession did not accept his view of the existence of a political dimension in judicial decision making and his mapping of judicial voting patterns in scalogram analysis. Ian Bushnell said that "the bar's reaction to Peck's work bordered on the hysterical."⁹⁶ Peck's focus on judges' ideologies, coupled with the use of a quantitative technique, were too unorthodox at the time. Donald Fouts, a contemporary of Peck and a fellow scalogram user, commented in a 1969 book that "Canadian scholars have made few systematic efforts to examine the Court's voting behavior in various policy areas or to suggest theories to explain what kinds of personal attitudes are operative in particular cases."⁹⁷ The main objec-

⁹⁴ *Ibid.* at 719. The reasoning fits what McCormick offered in 1994. See Peter McCormick, "Judicial Career Patterns and the Delivery of Reasons for Judgment in the Supreme Court of Canada, 1949-1993" (1994) 5 Sup. Ct. L. Rev. 499 at 520-521.

⁹⁵ Hausegger and Haynie conducted conditional logit regression analysis, while Ostberg and company conducted variance analysis, which is described in note 93.

⁹⁶ Ian Bushnell, *The Captive Court: A Study of the Supreme Court of Canada* (Montreal and Kingston: McGill-Queen's University Press, 1992) at 373.

⁹⁷ See *supra* note 30 at 264.

tion to Peck's research that linked law and politics was that such work undermined the public confidence on the integrity of the judiciary.⁹⁸ Now few would argue that the law and judicial decision making have nothing to do with the politics of judges, but more work still needs to be done to test the power of the five models in explaining judicial decision making in the SCC. To be sure, no one model can explain judicial decision making completely. More realistically, a combination of the five models can provide a more nuanced explanation of judicial decision making, and the configuration of such a combination will be a matter of weighting of different components of the five models. More empirical studies are needed to determine what variables of which model can explain more of what kind of cases under what circumstances.

The quantitative studies of decision making in the SCC contributed to the understanding of the models and paved the way for future studies. The three groups of quantitative studies can be seen as different parts of one big empirical research project. The Peck group of studies formulated the research question of whether SCC justices decided cases based on extra-legal factors and set up the hypothesis that judges voted according to their personal policy preferences. The Russell group of studies offered a description of the nature of data that can be gathered on three things: the operations of the SCC, the cases decided by the Court and the justices who decided the cases. The Tate group of studies undertook multiple regression analyses of the data to test (1) the hypotheses of the personal attributes model that were similar to the hypotheses of the Peck group; and (2) hypotheses formulated under other theories that explain judicial behaviour. Each group of researchers used more sophisticated quantitative techniques than the preceding group. For example, Fouts, Russell, Tate and Sittiwong all examined some aspects of the difference in voting patterns between Quebec judges and non-Quebec judges, but Fouts used scalogram analysis, Russell used descriptive statistics, while Tate and Sittiwong used multiple regressions. Taken together, the three groups of studies form a lineage of evolution, revealing possible areas for improvement along the way.

Even though more advanced quantitative techniques have been used over time, four things could still be done to further enhance the quality of quantitative research on judicial decision making. First, the unit of analysis in the studies has been judicial votes rather than rulings in the cases. That begs the question of how accurately judicial votes can reflect complex judicial behaviour.

⁹⁸ See Philip Slayton, "A Critical Comment on Scalogram Analysis of Supreme Court of Canada Cases" (1971) 21 U.T.L.J. 393. Slayton toned down his attacks on scalogram analysis after he had talked to Peck. In a subsequent article, Slayton said he agreed with Peck that in his previous article he didn't distinguish between the use of scalogram as a descriptive device and the use of scalogram analysis as an explanatory device of judicial attitudes. See Philip Slayton, "Quantitative Methods and Supreme Court Cases" (1972) 10 Osgoode Hall L.J. 429 at 434, footnote 27.

The strategic model that is in a state of resurgence in recent years can account for some behavioural patterns that are more likely to be found in close readings of the text of judicial opinions than in other quantitative models, but more methodological innovations are still needed to take fuller account of judicial behaviour.⁹⁹ Second, the studies were mainly static in nature because they rested on the implicit assumption that cases were similar and judicial behaviour remained more or less unchanged over time. The modeling needs to take into consideration the differences in the jurisprudential importance of cases and temporal changes in judicial behaviour.¹⁰⁰ Third, the studies were mainly retrospective rather than prospective in nature as they were designed mainly to explain judicial behaviour in the past rather than to predict judicial behaviour in the future.¹⁰¹ Although quantitative legal researchers are not like stock analysts who forecast earnings and share prices of publicly listed corporations, quantitative legal researches may test the rigor and robustness of judicial decision making models by using the models to make predictions of judicial behaviour and then compare the predictions with actual judicial behaviour. Fourth, the studies focused exclusively on judges and paid little attention to other public policy actors in the judicial decision making process including interest groups, politicians and the news media. The lack of such quantitative studies on judicial decision making in the Supreme Court of Canada leaves a gap in the literature.

To facilitate more quantitative studies to be performed on decision making in the Supreme Court of Canada, two obstacles must be overcome. First, the lack of datasets in the public domain poses a big challenge for anyone who wants to conduct quantitative legal research on judicial decision making in Canada. In the U.S., the Inter-university Consortium for Political and Social Research and the S. Sidney Ulmer Project for Research in Law and Judicial

⁹⁹ For a recent discussion on the focus on the outcomes rather than the laws in cases in quantitative research on judicial decision making in the U.S., see Lee Epstein, Nancy Staudt, and Peter Wiedenbeck, "Judging Statutes: Thoughts on Statutory Interpretation and Notes for a Project on the Internal Revenue Code" (2003) 13 *Wash. U.J.L. & Pol'y* 305 at 322–323.

¹⁰⁰ For a recent discussion on problems with the implicit assumption that all cases are of similar importance in the development of law in quantitative research on judicial decision making in the U.S., see Gregory C. Sisk, Michael Heise, and Andrew P. Morriss, "Charting the Influences on the Judicial Mind: An Empirical Study of Judicial Reasoning" (1998) 73 *N.Y.U.L. Rev.* 1377 at 1392–1394.

¹⁰¹ For a recent discussion on the retrospective nature of quantitative studies on judicial decision making in the U.S., see Theodore W. Ruger, Pauline T. Kim, Andrew D. Martin, and Kevin M. Quinn, "Essay: The Supreme Court Forecasting Project: Legal and Political Science Approaches to Predicting Supreme Court Decisionmaking" (2004) 104 *Colum. L. Rev.* 1150 at 1153–1154.

Politics provide invaluable services in developing and preserving datasets.¹⁰² There is no equivalent standard database about case outcomes, judges and their voting patterns in Canada.¹⁰³ Second, the lack of specialized statistical training for legal researchers poses another challenge. In Canada, legal researchers would have difficulties in finding statistical training courses specifically designed for them. In the U.S., three types of quantitative analysis courses in law are available. The first type is called statistics for lawyers. Its narrow focus stresses the interpretation of statistical outputs in the practice of law rather than the production of statistical outputs in empirical research.¹⁰⁴ The second type of

¹⁰² For the Inter-university Consortium for Political and Social Research see: <http://www.icpsr.umich.edu/org/index.html>.

For the S. Sidney Ulmer Project for Research in Law and Judicial Politics, see: <http://www.as.uky.edu/polisci/ulmerproject/UlmerProject/>.

¹⁰³ The Canadian Centre for Justice of Statistics Canada compiles data reports on some aspects of the Canadian judicial system, but the data in general might not be comprehensive enough for detailed quantitative research on legal issues beyond criminology and criminal law. See www.statcan.ca. Greene and McCormick do compile comprehensive datasets on Canadian judges and their decisions.

¹⁰⁴ In the U.S., Columbia Law School, for example, offers a seminar called Statistics for Lawyers taught by Michael Finkelstein, who has co-authored a book of the same title. See Michael Finkelstein and Bruce Levin, *Statistics for Lawyers*, 2nd ed. (New York: Springer, 2001). Based on the information at the Columbia Law School web site, the course was offered as a four-credit seminar to upper-year students in the J.D. program in 2002–03 and 2003–04. It is scheduled to be offered in 2005. The course is described in the Columbia Law School curriculum guide at www.law.columbia.edu as follows:

In recent years, proof based on statistical evidence has come to play a key role in diverse types of litigation. Some prominent examples are epidemiological studies in mass tort cases, multiple regression models in employment discrimination class actions, and Bayesian probabilities in paternity contests. To comprehend statistical methods, to use them correctly, and to expose errors by others are challenges for most lawyers and judges.

The purpose of this seminar is to prepare students for this brave new world by introducing them to the basic ideas of probability and statistics as they have appeared in the legal arena. The emphasis is not on calculation but on what might be called the legal logic of statistical inference. The goal is to equip students to recognize issues raised by quantitative methods and to work more knowledgeably with experts. The seminar ends with a mock trial of a statistical question in which students examine and cross-examine expert statisticians. A college-level course in statistics is recommended but not required.

Georgetown Law Center lists a similar course called Quantitative Methods: Statistics for Lawyers, but the course might not be offered currently. According to www.law.georgetown.edu, the course is described as follows:

This mini-course addresses selected uses by attorneys of statistical methods and related quantitative techniques. It is not a course in statistics; it is a law course, taught with cases and other legal materials. The focus will be on quantitative methods in discrimination law, mass tort litigation, and other substantive areas. Some straight instructional material in sta-

courses covers statistics for empirical research in fields related to law. Its broad focus stresses the application of statistical tools to solve a variety of empirical research questions, including questions about law and public policy.¹⁰⁵ The third type of courses covers applied statistical analysis in law and public policy. Its specific focus stresses both the interpretation of statistical outputs and production of them in legal and related public policy matters.¹⁰⁶ At present, only the second type of courses is taught in Canadian universities.¹⁰⁷

The development of the public database and statistical training programs will go a long way in creating an environment more conducive for quantitative analysis of judicial decision making in Canada. Coupled with the availability of increasingly powerful personal computing hardware and user-friendlier versions of statistical software including SPSS, SAS and Stata, the time may be ripe for the development of a critical mass of Canadian legal researchers who have computationally intensive quantitative techniques in their toolkit along with other analytical methods. However, the mere availability of the necessary tools

istics will be presented, but the course will emphasize the relevance of quantitative methods to practical legal situations and will assume no prior knowledge about statistics.

¹⁰⁵ Both American and Canadian universities offer courses on statistical methods in graduate programs related to law. New York University and University of Windsor are two examples. New York University offers a Ph.D in law and society, and students could take a sociology course called Introduction to Methods of Sociological Research. The course description at <http://www.law.nyu.edu/ils/index.html> is as follows:

This is the first course in a sequence of three that is required of all Ph.D. students in Sociology. The sequence serves as an introduction to quantitative research in sociology, integrating the study of research methods and statistics. This course introduces basic methodological issues and basic statistics.

The University of Windsor offers a doctoral program in social justice as part of the department of sociology, and among the courses for the social justice program is a sociology course called Methodology: Quantitative Analysis. The course description at www.uwindsor.ca is as follows:

This course will focus on advanced multi-variate statistical analysis as applied to theory testing.

¹⁰⁶ In the U.S., Washington University in St. Louis, for example, offers a course called Social-Scientific Research for Lawyers. The course description is as follows:

The purpose of this course is to provide law students with the ability to conduct and evaluate empirical social science research.

The course is taught by Lee Epstein, who is a professor in both the department of political science and school of law at the university. Topics include research design, research questions formulation, hypothesis setting and testing, data collection, statistical tools ranging from descriptive statistics to multiple regressions including logistic regressions. See <http://artsci.wustl.edu/~polisci/epstein/courses/index.html>.

¹⁰⁷ That is the Windsor program, see *supra* note 105.

alone is not sufficient for the production of more quantitative studies on judicial decision making.¹⁰⁸ Back in 1983, Tate said:

The development of powerful, flexible computerized data manipulation and statistical analysis techniques has meant that it has become easy for scholars of judicial behavior to apply even the most mathematically complex methods to their data. Under these circumstances, it would be surprising if 'statistical overkill' were not characteristic of at least some research. ... More common than statistical overkill, however, has been 'statistical underkill,' the failure to use appropriate multi-variate methods when analytical purposes would have been much advanced by their use.¹⁰⁹

Tate's 1983 statement still applies to quantitative analysis of decision making in the Supreme Court of Canada, even with the availability of computing power on a single desktop that was used to be provided by walls of floor-to-ceiling fridge-like machines in rooms with strict temperature controls in 1983.

As more researchers become interested in conducting quantitative analysis of judicial behaviour in Canada, more questions may arise on how these studies should be performed, and debates in the legal and political science research communities will help steer the course of quantitative analysis of judicial decision making in Canada. In 2002, Lee Epstein and Gary King asserted that most of the current empirical legal scholarship in the U.S. did not meet the requirements of the scientific method and offered their framework for conducting sound empirical legal research.¹¹⁰ Debates on the proper way of conducting em-

¹⁰⁸ No optimistic prediction of the outlook for quantitative analysis of judicial decision making will be made here. In the opening of a 1967 article, Peck predicted that by 1975 research on the Supreme Court of Canada "will be made the object of behavioral studies which will add a new dimension to the lawyer's understanding of the court's role in the nation's political life." The surging interest in behavioural studies Peck envisioned didn't materialize. See Supreme Court of Canada, *supra* note 21 at 666.

¹⁰⁹ See Methodology, *supra* note 5 at 70.

¹¹⁰ Lee Epstein and Gary King, "The Rules of Inferences" (2002) 69(1) U. Chicago L. Rev. 1. The Epstein and King article was published with three rebuttals from law professors and the authors' reply to the rebuttals. In one rebuttal, Frank Cross, Michael Heise and Gregory Sisk said that the rules of inference are all true and good, but they pointed out that Epstein and King didn't follow their own rules in the sense that their use of data was poorly documented and thus the study was not easily replicated. See Frank Cross, Michael Heise and Gregory C. Sisk, "Above the Rules: A Response to Epstein and King" (2002) 69(1) U. Chicago L. Rev. 135. In another rebuttal, Richard Revesz said that Epstein and King may have been right in some of their criticisms against the existing body of empirical legal research, but he said Epstein and King should also ask social scientists to learn from the methodological innovations of legal researchers instead of only asking legal researchers to learn from the methodologies of social scientists. See Richard L. Revesz, "A Defense of Empirical Legal Scholarship" (2002) 69(1) U. Chicago L. Rev. 169. In yet another rebuttal, Jack Goldsmith and Adrian Vermeule said that Epstein and King simply tried to impose the political science approach on legal research and such a push for the legal academy to adopt the rules of inference was imperialistic. See Jack Goldsmith and Adrian Vermeule, "Empirical Methodology and Legal Scholarship" (2002) 69(1) U. Chicago L. Rev. 153. In response to the three

pirical legal research followed, and less than a year later, Richard Neumann and Stefan Krieger offered their own list of attributes essential for all sound empirical legal research in their overview of the virtues and flaws of empirical legal research.¹¹¹ Other debates in the U.S. also heightened attention to the explanatory power of extra-legal judicial decision making models and the applicability of quantitative techniques in judicial decision making analysis.¹¹² As exchanges

rebuttals, Epstein and King defended their criticisms against the methodological failures of empirical legal research staunchly, emphasized again the importance of the rules of inference in empirical research and urged the legal academy to develop its own methodological subfield like econometrics in economics and biostatistics in medical sciences. See Lee Epstein and Gary King, "A Reply" (2002) 69(1) *U. Chicago L. Rev.* 191.

¹¹¹ Richard K. Neumann, Jr. and Stefan H. Krieger, "Empirical Inquiry Twenty-Five Years after the Lawyering Process" (2003) 10 *Clin. L. Rev.* 349.

¹¹² Judge Edwards debated Richard Revesz, New York University School of Law professor, on whether personal ideologies and party affiliations of judges affected judicial decision making. For the article that started the debates, see Richard L. Revesz, "Environmental Regulation, Ideology, and the D.C. Circuit" (1997) *Va. L. Rev.* 1717; for Edwards' comment on the article, see Harry T. Edwards, "Collegiality and Decision Making on the D.C. Circuit" (1998) 84 *Va. L. Rev.* 1335; and for the reply by Revesz to Edwards, see Richard L. Revesz, "Ideology, Collegiality, and the D.C. Circuit: A Reply to Chief Judge Harry T. Edwards" (1999) 85 *Va. L. Rev.* 805. Another recent exchange debating the existence of influences of personal policy preferences of judges on judicial decision making was between Emerson Tiller and Frank Cross, two business professors at University of Texas at Austin on one side and Judge Wald at the United States Court of Appeals for the District of Columbia Circuit on another. She was the Chief Judge of the circuit in 1986–1991. For the professors' article arguing that judges voted at least partly based on their personal ideologies, see Emerson H. Tiller, and Frank B. Cross, "A Modest Proposal for Improving American Justice" (1999) 99 *Colum. L. Rev.* 215; for Judge Wald's reply, see Patricia M. Wald, "A Response to Tiller and Cross" (1999) 99 *Colum. L. Rev.* 235; for the professors' reply to Judge Wald, see Emerson H. Tiller and Frank B. Cross, "A Modest Reply to Judge Wald" (1999) 99 *Colum. L. Rev.* 262; and for Judge Wald's reply to the professors' reply, see Patricia M. Wald, "Last Thoughts" (1999) 99 *Colum. L. Rev.* 270. Separately, there were debates in the U.S. for the use of quantitative techniques in analyzing judicial decision making. Paul Edelman, a mathematics professor at University of Minnesota, and Jim Chen, a law professor at the university, used their mathematical model to analyze decision making in the U.S. Supreme Court, rating Justice Ginsburg the most dangerous justice under their scheme of measurement of judicial power that is partly based on swing votes. They were criticized for using mathematics that is too complex. For the Edelman and Chen article on the propensity of U.S. Supreme Court Justices to vote at the margins of winning coalitions, see Paul H. Edelman and Jim Chen, "The Most Dangerous Justice: The Supreme Court at the Bar of Mathematics" (1996) 70 *S. Cal. L. Rev.* 63; for criticism by University of Arizona law professor Lynn Baker, see Lynn A. Baker, "Interdisciplinary Due Diligence: The Case for Common Sense in the Search for the Swing Justice" (1996) 70 *S. Cal. L. Rev.* 187; for the reply by Edelman and Chen, see Paul H. Edelman and Jim Chen, "'Duel' Diligence: Second Thoughts About the Supremes as the Sultans of Swing" (1996) 70 *S. Cal. L. Rev.* 219; and for the recent Edelman and Chen article arguing that Ginsberg has become less dangerous because of changed dynamics in the U.S. Supreme Court, see Paul H. Edelman and Jim Chen, "The Most Dangerous Justice Rides Again: Revisiting the Power Pageant of the

of ideas are crucial in advancing knowledge, this kind of debates will hopefully fuel the engine driving quantitative research of judicial decision making in Canada forward.

Justices" (2001) 86 Minn. L. Rev. 131. Another mathematics-oriented article by Edelman is Paul H. Edelman and Suzanna Sherry, "All or Nothing: Explaining the Size of Supreme Court Majorities" (2000) 78 N.C.L. Rev. 1225.