

What's in a Name: How U.S. Supreme Court Justices Shape Law and Policy in the Lower Courts

Online Appendix

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1. Descriptive Statistics for Main Models

Descriptive statistics are presented in Table A1. The distribution of several key variables is notable, with readability having an average score of .92 but ranging from roughly -17 to +15, and opinion length varying from a minimum of 12 words to a maximum of 20,317. Additionally, the hub score variable shows that about 27 percent of cases have a hub score that is higher than the mean, suggesting a mildly uneven distribution. However, this is not surprising to us. Also worthy of note is the large range of Supreme Court vitality scores in the data, as well as the wide range for ideological distance that is found in our data.

Table A1: Descriptive Statistics

Variable	Num.	Mean	SD	Minimum	Maximum
Readability	149,138	0.92	3.52	-16.97	14.91
Opinion Centrality	147,410	0.01	0.01	0	0.06
Opinion Length	149,138	41.56	22.21	12	203.17
Ideological Distance	143,126	0.39	0.29	0.00	1.43
Supreme Court Vitality	143,102	0.05	0.72	-5	11
Ten Part CoA Vitality	149,138	1.29	2.75	-1	10
Vote Margin	149,138	5.76	3.09	1	9
Salient Case	149,138	0.15	0.36	0	1
Circuit of Origin	149,138	0.06	0.24	0	1
Criminal Case	149,138	0.24	0.42	0	1
Economic Case	149,138	0.21	0.41	0	1
Age	149,138	12.39	7.17	0	26
Age ²	149,138	204.98	185.32	0	676
Clerk Ideology	144,687	-0.04	0.38	-0.532	0.559

2. Descriptive Statistics for Justice Attributes

Table A2 shows a second set of descriptive statistics focusing on how the opinions of the justices themselves vary in terms of several metrics, as shown in the table. In this table, we include the number of opinions each justice has in the dataset, their average number of total citations per opinion, the percent of each justice’s opinions with a hub score above the mean, and the average majority opinion length per justice. Additionally, we include the average vote margin that each justice’s opinions had. In this way, we are able to show

descriptively that what each justice’s opinion looks like varies dramatically (at least in some cases) from the other justices on the Court in our data (cases from 1990-1994). Both Justice Marshall and Justice Ginsburg have relatively few opinions in the dataset given that the data run from the 1990-1994 U.S. Supreme Court term. This relative lack of opinions for both justices is as expected given the time-frame of our study.

Table A2: Descriptive Statistics for Justice Attributes

Justice	Total Opinions	Average Citations Per Opinion-Year	Percent with Hub Score Above Mean	Average Length	Average Vote Margin
White	44	8.65	36.4	4,412	5.7
Marshall	12	5.8	8.3	3,548	6.8
Blackmun	39	8.68	28.2	4,354	6.0
Rehnquist	59	10.32	47.5	3,590	5.3
Stevens	60	5.9	21.7	4,632	6.1
O’Connor	62	17.56	17.8	3,960	6.3
Scalia	52	17.83	30.8	4,347	5.3
Kennedy	52	8.36	38.5	4,959	4.1
Souter	47	9.09	17	4,829	6.3
Thomas	34	7.59	11.8	3,431	6.9
Ginsburg	18	5.45	22.2	3,986	4.1

3. Robustness Check for Variation Among Justices

Table A3 presents the results of a zero-truncated negative binomial model examining systematic differences in the length of majority opinions authored by the justices, with several controls, as are noted in the research design section of the main paper. We include this model to account for the fact that majority opinion length, by definition, cannot be equal to 0. Thus, a count model is needed that starts with a minimum value of 1 to mitigate

Table A3: Zero-Truncated Negative Binomial Examining Total Majority Opinion Length

Variable	Model
Readability	-0.009 (0.007)
Hub Scores Above Average	0.173* (0.050)
Vote Margin	-0.039* (0.007)
Salient Case	0.239* (0.060)
Altered Precedent	-0.023 (0.106)
Decision Direction	0.002 (0.039)
Term	0.033* (0.015)
Justice White	0.084 (0.081)
Justice Marshall	0.048 (0.121)
Justice Blackmun	0.069 (0.082)
Justice Rehnquist	-0.250* (0.075)
Justice Stevens	-0.067 (0.081)
Justice O'Connor	0.002 (0.079)
Justice Kennedy	0.049 (0.082)
Justice Souter	0.217* (0.088)
Justice Thomas	-0.095 (0.081)
Justice Ginsburg	-0.102 (0.123)
Constant	-57.032* (28.872)
<i>N</i>	470

Note: The outcome variable is the majority opinion length (in total number of words). Justice Scalia is the baseline category. Robust standard errors are in parentheses. * $p < 0.05$

bias. We use the median justice for opinion length as the baseline, which is Justice Scalia (his opinions average at 4,347 words in length). We find that Justice Scalia actually writes fairly long opinions on average, and we find that 5 of the 11 other justices write shorter opinions than the average. Examining specific results, we find that the justices have the following average opinion lengths in words (in terms of the ones who systematically vary from Justice Scalia): Souter-5,069; Rehnquist-3,186. While this effect perhaps does not seem that large, it is in fact comparable to the effect of political salience. We find that cases that are not politically salient have an average majority opinion length of 4,086 words, versus cases that are politically salient having an average majority opinion length of 5,178 words. Similarly, systematic differences among the justices produce a difference in the average opinion length that is comparable to that of the effects of vote margin when going from a 5-4 decision to a unanimous 9-0 decision. For 5-4 decisions, we find that the average majority opinion length is 4,955 words. By contrast, the average opinion length of a unanimous 9-0 decision in our data is 3,502 words.

4. Robustness Check Using Causal Mediation Models

To better be able to examine the degree that the identity of the justice matters more compared with the individual attributes that a justice may have (in terms of writing style), we utilize an additional method (and a model for each of the justices) to be able to better analyze the influence that individual justices have on lower court citation and adoption of opinions. This method is designed to give explicit estimates as to the degree to which the justices' identity directly influences lower court adoption of precedents, compared with these differences in writing style. In fact, this method provides us both with explicit direct estimates and indirect estimates (through the manner in which justices write their opinions, which may be based *partially* on the opinion assignment process). To run this method, we use the basic operationalization of variables that we do in Table 2. Thus, the basic research

design in discussion of the second table fully applies here. For purposes of saving space, we focus primarily on the key variables of interest and simply note whether they are significant (which are the effect of identity and writing style for each of the justices in our models compared with Justice Blackmun as the baseline, as is the case for Table 2 in the main paper). Coefficients are not directly interpretable given the negative binomial model we use for the treatment model. We estimate natural direct and indirect effects using this model. Indirect effects of greater than 1 denote a positive effect whereas indirect effects of less than 1 denote a negative effect.

Results on the citation mediation model show direct effects for three justices when compared with Justice Blackmun, who we choose as the baseline because he had the median number of average citations among the justices in our dataset: Justice Scalia and Chief Justice Rehnquist who had positive direct effects and Kennedy who had slight negative direct effects (suggesting a slightly reduced number of citations in a given year that could be attributed to Justice Kennedy's identity). In the case of indirect effects for citation, about half of the justices have statistically significant effects compared with Justice Blackmun. These include the following: weakly positive indirect effects for Rehnquist and Kennedy, weakly negative indirect effects for Stevens and Souter, and moderately negative indirect effects for Justice Marshall, suggesting that attributes related to how Justice Marshall wrote opinions (in this case, opinions with relatively low centrality) caused a moderately reduced number of citations by lower courts in a given year, and therefore, a reduced impact of Justice Marshall's opinions compared with Justice Blackmun. Indirect effects for all justices other than Justice Marshall, when compared with the baseline of Justice Blackmun, are relatively small from a substantive perspective.

In the case of positive treatments, the story is somewhat different compared with citations. In fact, we find no evidence of any Supreme Court justice with a statistically significant direct effect in this mediation model. Rather, it seems that patterns of positive treatment are driven primarily by writing style of justices, and the types of precedents that

Table A4: Causal Mediation Model for Citations by U.S. Courts of Appeals of Supreme Court Opinions

Justice	Nat. Direct Effect Sig.	Nat. Ind. Effect-Centrality
Justice White	1.05 (2.68)	1.01 (0.00)
Justice Marshall	5.33 (153.36)	0.74* (0.04)
Justice Rehnquist	1.08* (0.04)	1.03* (0.01)
Justice Stevens	0.68 (0.54)	0.99* (0.00)
Justice O'Connor	1.11 (0.20)	1.00 (0.00)
Justice Scalia	1.31* (0.03)	1.00 (0.00)
Justice Kennedy	0.90* (0.04)	1.00* (0.00)
Justice Souter	0.88 (0.98)	0.98* (0.00)
Justice Thomas	1.11 (0.17)	1.00 (0.00)
Justice Ginsburg	0.67 (0.28)	1.02 (0.01)

Note: The outcome variable is the number of citations by a lower court in a given year per precedent. Justice Blackmun is the baseline category. All control variables are not included in the table for purposes of parsimony, as our substantive focus is on the justices at this point. Direct effects are statistically significant if they are statistically distinguishable from 1. Estimates lower than 1 indicate a decrease when that justice wrote an opinion, estimates higher than 1 indicate an increase. *p < 0.05

they cite in their opinions. Specifically, we find an indirect effect based on hub scores of opinions for fewer positive treatments for two justices only (Justice Marshall and Justice Stevens) and an indirect effect for more positive treatments based on hub scores for three justices (Chief Justice Rehnquist, Justice Kennedy, and Justice Ginsburg, with Justice Ginsburg having the largest relative effect). In fact, the mediation model suggests that any differences among the justices when it comes to positive treatment by the lower courts would likely be driven by differences in opinion centrality in the opinions that each justice wrote as opposed to the specific identity of the justice or the ideology of the justice.

Table A5: Causal Mediation Model for Positive Treatments by U.S. Courts of Appeals of Supreme Court Opinions

Justice	Nat. Direct Effect Sig.	Nat. Ind. Effect-Centrality
Justice White	1.04 (0.49)	1.00 (0.00)
Justice Marshall	12.31 (241.31)	.68* (0.06)
Justice Rehnquist	0.96 (0.42)	1.06* (0.01)
Justice Stevens	0.73 (0.67)	0.99* (0.00)
Justice O'Connor	1.16 (0.52)	1.00 (0.00)
Justice Scalia	1.22 (0.32)	1.00 (0.00)
Justice Kennedy	0.80 (1.02)	1.01* (0.00)
Justice Souter	1.05 (0.44)	1.00 (0.01)
Justice Thomas	0.96 (0.18)	1.00 (0.00)
Justice Ginsburg	0.68 (14.77)	1.11* (0.04)

Note: The outcome variable is the number of adoptions by a lower court in a given year per precedent. Justice Blackmun is the baseline category, as he has the median number of citations among all of the justices (we want to remain consistent with our baseline term between the citations and positive treatments models). All control variables are not included in the table for purposes of parsimony, as our substantive focus is on the justices at this point. Direct effects are statistically significant if they are statistically distinguishable from 1. Estimates lower than 1 indicate a decrease when that justice wrote an opinion, estimates higher than 1 indicate an increase. * $p < 0.05$

In other words, while the identity of the justice seems to matter in terms of how lower court judges cite specific U.S. Supreme Court precedents, we find no such direct evidence for how frequently lower courts positively treat U.S. Supreme Court precedents. In other words, reputational effects from the identity of the justices appear to be confined to citations rather than substantive treatments of precedent. This finding is interesting in that it suggests a potential difference in terms of theories as to how justice influence may vary depending on what type of Supreme Court impact a researcher is looking to examine in their theory and empirical modelling.