IDEOLOGY AND RISK FOCUS: A PRELIMINARY EXPLORATION OF THE EFFECT OF JUDICIAL IDEOLOGY ON RISK FOCUS IN SUPREME COURT OPINION CONSTRUCTION

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ABSTRACT

Literature in political science and neurology suggests that conservative politicians are more likely to use rhetoric based in fear and that conservative persons have, on average, stronger disgust and fear responses to stimuli in laboratory settings. We propose to extend this research to the Justices of the Supreme Court. If this research, which suggests that the language of fear and risk should be more prevalent among conservatives than among other ideological positions, is valid, then one should observe this pattern extend to conservative judges. The most common place in which judges touch public rhetoric is through writing opinions for the outcomes of cases that come before them. Therefore, we propose to use the Linguistic Inquiry and Word Count (LIWC) software, a common language-analysis device, to determine the risk focus of a sample of Supreme Court opinions, we find that increasing conservatism in the majority coalition of a case is linked to greater risk focus in the content of the majority opinion.

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INTRODUCTION

A growing body of literature in a burgeoning field known as political neuroscience has explored the connections between brain construction, genetics, and political ideology.¹ This literature has generally found that differences in individuals’ political ideology trace to fundamental psychological responses to fear and uncertainty.² And further, basic personality characteristics trace to individuals’ brain construction and even genetic code.³ The broad takeaway from this body of literature is that ideology is, to some degree, hardwired in individuals’ brains and genetics, and is correlated with a broad array of basic psychological characteristics and responses to stimuli.

One of the key findings from this literature is that characteristics—such as a need to reduce uncertainty and to manage risk and perceptions of threat—are linked to conservative ideology.⁴ These psychological traits form a connection between political ideology and more fundamental characteristics, including the structure and compositions of individuals’ brains, and to the even-deeper level of genetic pattern.⁵ In this Article, we aim to connect this literature to the world of judicial politics, where the effect and role of ideology has been a primary concern of scholars for many years. The operative idea here is to test whether psychological and biological traits that inform the need to manage risk and threat are observable in highly complex political behavior—like a federal judge writing an opinion.

Existing literature has found that differences in responses to threatening or disgusting images are connected to self-reported political ideologies.⁶ But these differences in behavior are detected through basic, immediate responses to researchers presenting images of threatening or disgusting stimuli.⁷ These studies have not extended to a highly complex and necessarily political activity like an expert in the law writing an opinion.

A. Table 3: Difference-in-Means Tests of Risk Focus Scores in Conservative and Liberal Opinions

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2. Id. at 61.
3. Id.
5. Jost et al., Political Conservatism, supra note 4, at 339.
6. Jost & Amodio, supra note 1, at 60.
complex legal opinion about a phenomenon governed by detailed technical knowledge of principles and precedents, which might conceal the primal reactions to the threatening stimuli that a case’s basic facts might present. In other words, this Article will move out of the laboratory and, as such, will lose some internal validity, but will replace this with external validity and a different kind of test: whether the unmediated reactions to primal and evocative stimuli can still be detected when interwoven with a set of legal precedents and principles. This test also determines how judges perform the most complex task in their array of duties: Writing opinions that justify the votes and decisions they have made.

If these psychological and cognitive traits are visible in the sophisticated decisions that judges make, then we should observe conservative judges focusing their efforts on grappling with the perceptions of threat and risk that a case may present. That is, a case before a judge may present stimuli that produce reactions similar to the stimuli that have been tested in laboratories. Judges can be confronted with fact patterns that hint at dramatic social changes or that present stimuli that might be considered repulsive. It would not be unusual for judges to have visceral, moral reactions to the cases before them. These reactions are products, at least in part, of the basic psychological traits described in the literature above. Any case may present threatening or revolting stimuli, and judges may respond in their choices of opinion language to perceived threats in general social structure and relationships (like traditionally marginalized groups like African-Americans or homosexuals seeking legal vindication of equal rights) or changes in reliable and familiar legal rules and structures, such as precedent alterations, unconstitutionality rulings, etc.

Generally, we hypothesize in this Article that conservative judges will be more likely to employ the language of risk in their opinions than liberal judges, owing to the differences in psychological and physical structures described in the political neuroscience literature. To test this theory, we will look at the U.S. Supreme Court, and a sample of opinions of the Court. We will use a well-worn text analysis software called LIWC to measure opinions for their focus on risk and trace the connection between ideology and risk focus.

I. SUPREME COURT JUSTICES: DIFFERENCES IN BEHAVIOR DRIVEN BY IDEOLOGY

It is well known among political scientists who study the federal courts that the Justices of the Supreme Court are powerfully driven in their
merits-voting behavior by their political ideologies. Numerous studies have advanced this theory, tested it, qualified it, and even taken it as settled. Much of the literature in political science surrounding the Supreme Court has to do with the extent to which ideological motives contend with the Justices’ awareness of the political environment, and their efforts to maximize their preference satisfaction in political decisions subject to institutional and environmental constraints.

Literature on the Supreme Court has also explored the interaction of ideological preferences and legal doctrine. Early on, the development of this ideology-centric explanation for Supreme Court behavior contended with the theory that legal doctrine governed the Court’s behavior to the exclusion of all else. Even accounts that sought to displace this theory accounted for the role of law in the Court’s behavior and confirmed its importance. Later studies examined the conditional, interactive nature of the Court’s ideological preferences with the legal regimes that the Court set up to govern judicial and institutional behavior in such areas of law as free speech and Fourth Amendment search and seizure cases.

The field has settled on the proposition that ideology matters—and matters a lot—in explaining why the Supreme Court Justices behave like they do. Numerous projects have shown that some political and legal factors may exacerbate or mitigate this powerful effect, but ideology remains a powerful explanatory factor.

If ideology is connected to such factors as a need to manage threat and risk, then the Justices’ ideology should correspond to the manifestation of such behavior in their opinion-writing behavior. Ideology matters a great deal on the Supreme Court. Ideology is a function of psychological and biological characteristics having to do with the powerful response to perceived threats and risks, and the psychological need to manage those factors as a way to cope with them. Therefore, the Court’s behavior should reflect the Justices’ need to manage perceptions of risk and threat, including in the construction of opinions where the Justices both attempt to justify their other judicial behaviors and to persuade courts to come to respond to similar stimuli in the way that seems best to those Justices. Conservative Justices are most likely to evince these

9. See, e.g., Segal & Spaeth, supra note 8, at 114.
13. Segal & Spaeth, supra note 8, at 48.
14. Id. at 145.
psychological patterns concerning risk and threat perceptions, so their opinions should be written in such a way as to reflect those patterns.

II. IDEOLOGY AS MOTIVATED SOCIAL COGNITION IN POLITICAL NEUROLOGY

Now we provide a synopsis of the work in political neurology pertaining to the different ways that liberal and conservative individuals respond to stimuli, as well as the psychological and biological sources of this difference.

The basic model here is that genetics and brain construction drive a person’s responses to risk, threat, disgust, and danger, and these responses are correlated with political ideology. Thus, biology produces psychological tendencies to respond to threatening stimuli, and those psychological tendencies cause some political ideologies to be more attractive than others. The core of the claim here is that:

Studies from neuroscience and genetics suggest that right- (vs. left-) wing orientation is associated with greater neural sensitivity to threat and larger amygdala volume, as well as less sensitivity to response conflict and smaller anterior cingulate [which may be involved in empathy, impulse control, emotion, and decision-making] volume.

Emotional responses are part of broader neural structures and pathways that are bound to extend beyond narrow responses to particular social issues, questions, and laboratory experiments.

A host of studies in psychology and neuroscience support these claims.

A. Psychology

For example, Dodd et al. find that “greater orientation to aversive stimuli tends to be associated with right-of-centre and greater orientation to appetitive (pleasing) stimuli with left-of-centre political inclinations.”

A variety of sources indicate that political orientations vary within a battery of constructs like:

a) personality traits;

b) moral foundations;

16. Michael D. Dodd et al., The Political Left Rolls with the Good and the Political Right Confronts the Bad: Connecting Physiology and Cognition to Preferences, 367 PHIL. TRANSACTIONS ROYAL SOC’Y B 640, 640 (2012); Jost & Amodio, supra note 1.
18. Dodd et al., supra note 16.
d) neural structures;¹⁹

e) neural activation to unexpected stimuli;²⁰

f) self-reported sensitivity to threats;

g) tendency to perceive threats in faces;²¹

h) physiological response to threats;²²

i) sensitivity to disgust.²³

Differences in individual responses to what Dodd et al. call “aversive stimuli” are likely to be correlated with political ideology.²⁴ This Article argues that “political decisions affect the kind of environment in which one exists,” and “individuals will take steps to shape their environment into one is that is as consistent as possible with their pre-existing physiological and cognitive tendencies.”²⁵ They do this by adopting certain values and advocating certain political positions, which shape the world around them. This is all the more expected from a judge rather than an individual because judges’ decisions will have a more powerful influence on the political and social environment than the behavior of an ordinary person whose power is limited to voting, protesting, donating, and other small-scale activities.

“From this perspective, it makes sense that people who are more attentive and responsive to hedonic stimuli would support tax dollars being spent on the arts and national parks,”²⁶ just as people who are more attentive to aversive stimuli would advocate policies promoting moral purity and harsh treatment for norm violators. People who are more responsive to aversive stimuli, and thus more likely to advocate moral purity and harsh treatment for deviators, might also be more likely to use the language of risk to justify their decisions.

Several studies aim to connect ideology to fundamental psychological responses and, even more deeply, to biology and genetics. These studies have discovered connections between political conservatism and an array of aversive characteristics. For example, Hibbing et al. find

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¹⁹ Ryota Kanai et al., Political Orientations Are Correlated with Brain Structure in Young Adults, 21 CURRENT BIOLOGY 677, 678 (2011).

²⁰ David M. Amodio et al., Neurocognitive Correlates of Liberalism and Conservatism, 10 NATURE NEUROSCIENCE 1246, 1246 (2007).

²¹ Vigil, supra note 7.


²⁴ Dodd et al., supra note 16.

²⁵ Id. at 641.

²⁶ Id.
that when compared to liberal individuals, conservatives have greater negativity bias, which includes both disgusting and threatening conditions.27 They write, “Our finding that only disgusting pictures, especially in the animal-reminder category, differentiate conservatives from liberals might be indicative of a primacy for disgust in that, . . . compared to threat, disgust is much easier to evoke with visual images on a computer screen.”28 The preoccupation with disgust and its avoidance is connected to conservative ideology by a wide array of similar studies.29

Here again, we see the connection between conservatism and strong reactions to stimuli designed to evoke a threat response or a disgust response. This Article, and others in a similar vein, show that people who systematically differ in the neurological and psychological traits that govern these responses to stimuli tend to sort themselves into conservative political ideological groups. In general, Jost et al. argue that conservative ideology is appealing to individuals who are either temporarily or chronically in need of managing uncertainty and threat.30 By contrast, liberal ideology appeals to individuals who are low in such needs. We see that “preserving the status quo allows one to maintain what is familiar and known while rejecting the risky, uncertain prospect of social change,”31 which again speaks to the emphasis on risk and its avoidance, which correlates with political conservatism.

The roots of this tendency go deep into one’s psychological construction. According to Jost et al.:

[D]eath anxiety, system instability, fear of threat and loss, dogmatism, intolerance of ambiguity, and personal needs for order, structure, and closure were all positively associated with conservatism [(or negatively associated with liberalism)]. Conversely, openness to new experiences, cognitive complexity, tolerance of uncertainty, and . . . self-esteem were all positively associated with liberalism [(or negatively associated with conservatism)].32

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30. Jost et al., Are Needs, supra note 4, at 990; Jost et al., Political Conservatism, supra note 4.
31. Jost et al., Are Needs, supra note 4, at 990.
The fear of threat and loss, concern over system instability, and the need for order and structure all speak to the comparative emphasis on managing risk and threat, which are psychological hallmarks of personalities that are attracted to conservative ideology. 33 “Specifically, Jost et al. found that uncertainty and threat management contributed independently and significantly to self-reported conservatism, even after adjusting for effects of ideological extremity.” 34 Thus, an ever-expanding array of research programs confirm that heightened psychological needs to cope with uncertainty and threat are positively associated with conservative ideology and negatively associated with liberal ideology. 35

Evidence on this point has been discovered in longitudinal studies, which present the advantage of increased internal validity as the same individuals are tracked and measured over several years. Block and Block selected sample three-year-olds and followed their development for two decades. 36 The results showed a connection between the personality traits evinced in early development and the political ideology that the grown-up children adopted by the end of the study. 37 Specifically, the study found that the children who were rated by teachers as fearful, rigid, indecisive, vulnerable, and inhibited turned out to be more politically conservative as adults. 38 By contrast, the children who were described as more energetic, resilient, self-reliant, expressive, dominating, and prone to developing close relationships became more liberal in adulthood. 39 These findings provide further evidence that personality traits and political orientation are linked. 40 This evidence helps to demonstrate, again, the link between the need to manage risk, the preoccupation with risk, and political conservatism.

Experimental evidence on this point is interesting and may be compelling. To that end, see Hibbing, Smith, and Alford report:

People sitting in a messy, malodorous room tend to make harsher moral judgments than those who are in a neutral room and disgusting ambient odors decrease approval of gays. Sitting on a hard,
uncomfortable chair leads to less flexible attitudes than those offered when sitting on something soft and comfortable. People reminded of physical cleansing – for example, by the presence of hand sanitizer – render sterner judgments than those who are not given such a reminder. Focusing exclusively on political variables, when churches are employed as polling places people’s tendency to cast votes for right-of-center candidates and ballot propositions increases compared with when public schools serve as polling places. Mortality prompts – images of tombstones, hospitals, and the elderly – foster the adoption of conservative political positions.41

We see here a wide array of experimental and observational studies that bespeak the malleability of political attitudes and further evidence that concern with risk (in this case, images that prompt thought about mortality) prompts decisions consistent with conservative ideology, as does the presence of environmental conditions that prompt reactions of disgust (like a smelly room or hand sanitizer).42 Further, the activation of psychological traits by stimuli that are unconnected to political thought or motivations nonetheless have a connection to political ideology in experimental settings.43 Dodd et al. asked participants to “freeview” collages of images that had been designed as positive (e.g., sunsets, happy children, cute and nonthreatening animals) or negative (e.g., vomit, fiery homes, dangerous-looking or threatening animals).44 This study found that conservatives spent significantly more time looking at negative images and fixated quickly on those images, fixing their attention on them for longer periods of time.45 Hibbing, Smith, and Alford summarize: across methods, samples, countries, etc., conservatives are quicker to focus on the negative; are inclined to look longer at the negative; and are more inclined to have their attention distracted by the negative.46 A meta-analysis reports relationships between political conservatism and a desire for cognitive closure (or related concepts such as intolerance of ambiguity and preference for order) in twenty different samples, in an array of countries.47

Other studies have shown that this tendency extends to word usage and language. Hibbing, Smith, and Alford write:

Research also reports liberal-conservative differences in word usage, implicit association tests (IATs), object categorization, and exploratory behavior. Linguist George Lakoff observes that people on

41. Hibbing et al., supra note 27, at 299 (internal citations omitted).
42. Id. at 298–99.
43. Dodd et al., supra note 16, at 645.
44. Hibbing et al., supra note 27, at 301. (“[T]hreatening stimuli are consistently more distracting for conservatives. Negative stimuli such as angry faces appear to grab the attention of conservatives more than they do liberals.” (internal citations omitted)).
45. Id. at 306–07.
46. Jost et al., Political Conservatism, supra note 4, at 339, 354.
the left use the language of the nurturing parent and those on the right the language of the strict parent. Compared with liberals, conservatives tend to have stronger implicit attachments to tradition, stability, long-held values, conformity, and order. Young (2009) finds conservatives are more likely to be ‘hard categorizers’ and liberals ‘soft categorizers,’ suggesting that conservatives have a lower tolerance for ambiguity and are more likely to view the world in strongly defined categories.48

These people, sources tend to agree, sort themselves into the right side of the political spectrum. If this is so, then we could easily expect that conservative judges will reflect their preoccupation with threat and risk in their choices of language in their opinions.

B. Biology and Genetics

But the scientific literature on ideology and its roots goes further by claiming that there are biological sources for ideology. Political ideology is fundamentally and deeply connected to basic biological mechanics that serve to defend against environmental challenges like contamination and physical threat.49

Hibbing, Smith, and Alford again put the point nicely when they summarize:

As we have seen, those individuals with politically conservative orientations display elevated physiological response to negative stimuli, devote more attention to negative stimuli, possess distinct self-reported psychological patterns when asked to imagine negative stimuli (i.e., give evidence of high disgust and high threat sensitivity), and perhaps harbor recognizable structural features consistent with elevated responsiveness to negative situations (distinctive substructures of the amygdala and perhaps even genetic differences such as a “short” allele of the dopamine receptor gene DRD4). Consistent with this line of thinking, Schaller and Neuberg observe that “some people seem to go through life more cognizant of threats” before going on to suggest that these variations in general threat awareness likely correlate with political orientations.50

Some people go through life more cognizant of threats, the literature claims.51 And the sources of this tendency go into the brain’s construction and the individual’s genetic code.52

So above, Hibbing, Smith, and Alford have given us a preview of the literature’s broad claims. The psychological tendencies described above,

48. Hibbing et al., supra note 27, at 301 (internal citations omitted).
49. Yoel Inbar & David Pizarro, Disgust, Politics, and Responses to Threat, 37 BEHAV. & BRAIN SCI. 297, 315 (2014).
50. Hibbing et al., supra note 27, at 303.
51. See MONDAK, supra note 40, at 12; Carney et al., supra note 40, at 814; Gerber et al., supra note 40, at 116; Jost et al., supra note 35, at 385.
52. See, e.g., Ahn et al., supra note 28, at 2695; Dodd et al., supra note 16, at 641.
on which this study depends, have deeper roots than socialization: the sources of ideology go as deep as the brain’s architecture and the individual’s genetic code.

Schreiber et al. report that during a risk-taking task, functional magnetic resonance imaging (fMRI), conducted on fifty-four participants, revealed that those who tend to vote Republican show greater amygdala activation whereas individuals who tend to vote Democratic show greater insula activation.53 As the amygdala is the part of the brain responsible for regulating fear and responses to risks and threats, this research is consistent with the psychological literature reviewed above.

There are some studies which focus on the physiological level, concentrating on the body’s physical responses to stimuli designed to evoke threat and fear responses. Oxley et al. argued that heightened physiological sensitivity to threats would be positively associated with conservative or right-wing orientation.54

Researchers administered two tasks commonly used to gauge threat sensitivity to adults in Nebraska. In one, participants viewed threatening images (e.g., of spiders, bloody faces, rotten food) in comparison with neutral and positive images while the experimenters measured their skin conductance responses.55

Oxley et al. report that heightened skin conductance responses reflect increased sweat gland activity associated with a sympathetic nervous system response that is characteristic of fear.56 Participants who held right-wing views exhibited significantly stronger skin conductance responses to these threatening images, whereas, responses to neutral and positive images were uncorrelated with self-reported political ideology.57 This Article provides evidence that the effects described above extend deeper than previously thought, penetrating all the way to physiology.

And this tendency penetrates into the structure of the brain as well. Jost and Amodio’s review of relevant literature claims that:

[L]arger ACC volume was associated with greater liberalism (or lesser conservatism). Furthermore, larger right amygdala volume was associated with greater conservatism (or lesser liberalism). . . . This pattern of results held after adjusting for participant age and gender and was replicated in a second sample of 28 participants. Given that the ACC is associated with conflict monitoring and the amygdala is

54. See Oxley et al., supra note 22, at 1667–69. Political orientation was measured in terms of attitudes toward military spending, capital punishment, school prayer, gay marriage, gun control, patriotism, and abortion rights.
55. Id. at 1667–68.
56. Id. at 1668.
57. Id.
centrally involved in physiological and behavioral responses to threat, this neuroanatomical evidence appears to lend further support to the notion that political ideology is linked to basic neurocognitive orientations toward uncertainty and threat. . . .

The conclusion from past research is that political orientations are shaped by a combination of unspecified genetics; the explanatory power of these factors is only slightly improved upon by specific environmental features.

The baseline expectation is that conservatives are more likely to experience strong fear and disgust responses than liberals. As a result, they are inclined to use the rhetoric of fear and risk more than liberals. Thus, there is every reason to suspect that this difference in behavior tracks the ideological differences in judges, too.

We already know from the political science literature that ideology drives differences in behavior among judges (in such behaviors as merits voting, certiorari, and opinion writing in some settings). In this Article, we examine whether those ideological differences also track the rhetoric of risk, as would be expected by a review of the literature in the fairly new field of political neurology.

III. LIWC AND RISK FOCUS

The LIWC software employs a word count strategy: searches whatever text under review for key words or word stems. The software uses the judgment of researchers in the subfields of social, clinical, health, and cognitive psychology to determine which words correspond with various emotions, thinking methods, social concerns, and parts of speech. The software searches target text to determine whether words or word stems in the dictionary appear in the text. LIWC assigns each word in a text to predetermined dimensions that have been categorized by independent examiners to measure the thinking styles of individuals. The LIWC dictionaries were developed with the idea that language provides important clues as to how people process and interpret information in light of their environments. The program then tallies up the words used in each

58. Jost & Amodio, supra note 1, at 61 (internal citations omitted).
59. Hibbing et al., supra note 27, at 298.
62. Id. at 2.
dimension, then provides a descriptive tally of the text as a whole: the percentage of words in the text that belong to each dimension.65

The version of LIWC employed in this analysis is from 2015 and categorizes text based on word use along many dimensions. For this Article, we will employ the dimension of Risk Focus. The LIWC Operator Manual locates this dimension in a broader category, “Drives,” which captures needs or motives expressed by the writer.66 Risk Focus is constructed from a text based on its “references to dangers, concerns, things to avoid.”67 Thus, we expect that it can pick up not only references to things to be avoided but also words that tend to indicate such an emotional state. Examining language, as LIWC does, helps to provide important clues on how people process information and interpret it to make sense of the world around them. The LIWC software examines how individuals express themselves, instead of what they are saying, because choices of words inform readers about deeper cognitive patterns, things that the writer is not discussing overtly.68 Thus, the LIWC can shed some light on whether the Justices’ word choices reflect an increased focus on risk.

IV. EMPIRICAL TESTS

However, there remain problems of measurement and influence on the majority opinion. First, how do we determine whether a Justice is liberal or conservative? For this, we employ a common measure in political science: the Common Space,69 or in this case, the Judicial Common Space,70 which locates each Justice of the Court in a common ideological space because of his or her voting behavior with respect to one another. The Judicial Common Space is an algorithm that scales the Justices of the Court on a hypothetical ideological space that is bounded at 1 and -1, placing each one in this space by his or her likelihood of voting together.71 For example, Justices Sotomayor and Kagan will be placed close to one another by the algorithm because they often are on the same side of a case. The same is true of Justices Alito and Thomas. However, Justices Thomas and Sotomayor, who vote together more rarely, will be located on different sides of the continuum because of their decreased rate of agreement in their voting behavior.

The Judicial Common Space algorithm gives each Justice a number, a point estimate of their location in the ideological space. Negative scores,
because they are on the left side of the number line, correspond to liberal Justices. Positive scores, because they are on the right side, correspond to conservative Justices. Among the great advantages of the Judicial Common Space method is that it locates political actors in a voting body based purely on their behavior expressed in votes. It does not rely on subjective, personal assessments of ideological moderation or extremity. However, its results generally correspond with intuition: as of 2013 (the term up to which the scores have been calculated), the Court’s median Justice has been Anthony Kennedy, who is slightly to the right of zero. The Court’s two most conservative members have been Justices Clarence Thomas and Samuel Alito; the Court’s two most liberal members have been Justices Sonia Sotomayor and Ruth Bader Ginsburg, in that order. The Judicial Common Space thus has the advantages of objectivity and face validity, making it a highly desirable metric for empirical analysis.

The solution to the problem of measurement is to use the Judicial Common Space. The problem of influence on the majority opinion remains. Political scientists have wrestled with the questions of who influences the content of the majority opinion and to what extent for some years. There are three credible answers to these questions: the majority opinion’s author, the Court’s median Justice, and the median Justice of the majority coalition. Some studies suggest that the median of the majority coalition, more than the median of the Court, is the pivotal actor for opinion construction. However, other studies provide evidence that the Court’s ideological median exerts a powerful effect on opinion ideology as well. Therefore, we propose to measure the ideology of the Court’s opinions in three ways, each of which will be tested separately. We will use the Judicial Common Space score of: first, the majority opinion’s author; second, the Court’s median Justice for term in which the case was resolved; and third, the median of the majority coalition. That is, if the Court is split 5–4, then the majority-median score is the median of the five Justices in the majority coalition, not the median of the whole Court. It should be mentioned, however, that when the Court’s majority is even-numbered, we employ the median of the entire Court. Thus, the problem of influence on the Court’s opinions is addressed by testing all three possible key actors. This Article will have the added advantage of helping to shed light on the question of who controls the content of majority opinions as well as whether the rhetoric of risk is a function of judicial ideology.

Therefore, the data will be divided into two groups along three dimensions. We will perform a t-test for each of these three measurements. The first t-test will divide the Court’s opinions into two groups: one group

72. Cliff Carrubba et al., Who Controls the Content of Supreme Court Opinions?, 56 AM. J. POL. SCI. 400, 407 (2012); Tom S. Clark & Benjamin Lauderdale, Locating Supreme Court Opinions in Doctrine Space, 54 AM. J. POL. SCI. 871, 884 (2010).
73. Chris W. Bonneau et al., Agenda Control, the Median Justice, and the Majority Opinion on the US Supreme Court, 51 AM. J. POL. SCI. 890, 900 (2007); Carrubba et al., supra note 72.
for cases in which the majority opinion’s author has a Judicial Common Space score above zero, and one group for scores below zero. The test will then determine whether the Risk Focus scores are statistically distinguishable from one another between these two groups. The second test will do the same but will divide the opinions into two groups based on whether the Court median for that case is conservative (Judicial Common Space score above zero) or liberal (Judicial Common Space score below zero). The third test will be for opinions grouped based on the Judicial Common Space score of the median of each case’s majority coalition.

A. Data and Methods

The data for this project were taken in part from the Spaeth Supreme Court Database, case-centered, from the 2017 version. The data for the Risk Focus score were created by taking a random sample of 2,137 cases from the Supreme Court Database from the terms 1955 to 2008. These opinions are only from cases in which an Opinion of the Court was issued; we employed no decrees, per curiam opinions, or opinions one paragraph or shorter in the sample. If we included such cases in the first sample, they were excluded and replaced by another sample of cases from the same pool of data.

Then, we copied the text of each majority opinion, footnotes excluded, and used LIWC (2015 version) to analyze the majority opinions. The LIWC software generates scores for each opinion along dozens of dimensions, though the Risk Focus score for each opinion constitutes the variable of interest for this study.

As stated above, the sorting procedure for each of the three t-tests below is based on the three measures of judicial ideology we discuss above. Opinion Author is coded as 1 if the author of the majority opinion has a Judicial Common Space above 0 for the term in which the opinion was issued; and this variable is coded 0 if the opinion author has a score below 0. Court Median is coded as 1 if the case’s opinion was issued in a term in which the median Justice on the whole Court had a Judicial Common Space score of above 0; and Majority-Coalition Median is coded 0 if the median has a score below 0. Finally, Majority-Coalition Median is coded as 1 if the case’s opinion was issued by a majority coalition whose median Justice had a Judicial Common Space score of above 0; and Majority-Coalition Median is coded 0 if the majority median has a score below 0.

Let us look briefly at the data in their unanalyzed form. Below we present each of our four variables of interest in summary form. First, we start with the key variable of interest, Risk Focus.
B. Table 1: Summary Statistics for Risk Focus

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Obs.</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum Value</th>
<th>Maximum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Focus</td>
<td>2,137</td>
<td>0.678</td>
<td>0.447</td>
<td>0</td>
<td>3.47</td>
</tr>
</tbody>
</table>

Recall that the LIWC variables are measured on a scale from 0 to 100—and that the Risk Focus scores analyzed here vary between 0 and 3.47, with an average score of less than 1. This reminds the readers and researchers that the variable with which we deal is difficult to detect in Supreme Court opinions. This may make drawing conclusions through our populations difficult, which the readers and researchers must keep in mind through the results presented below.

C. Table 2: Summary Statistics for Ideological Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Obs.</th>
<th>Liberal Cases</th>
<th>Conservative Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinion Author</td>
<td>2,137</td>
<td>1,016</td>
<td>1,121</td>
</tr>
<tr>
<td>Court Median</td>
<td>2,137</td>
<td>544</td>
<td>1,593</td>
</tr>
<tr>
<td>Majority-Coalition Median</td>
<td>2,137</td>
<td>410</td>
<td>1,727</td>
</tr>
</tbody>
</table>

Take note of how each of these three measures distributes cases into the liberal or conservative categories. First, we see that the Opinion Author measure provides the distribution closest to equality. In other words, the number of liberal and conservative opinions is close to equal. However, the other two measures skew the distribution substantially in favor of conservative opinions. This is surely because for the last several decades, the Court’s median Justice (often either Justice Anthony Kennedy or Justice Sandra Day O’Connor) was on the positive side of 0 on the Judicial Common Space, so all of those cases will be coded as conservative. This means that this measure will be somewhat blunt, although one should note that this does not mean that we assert that opinions with a liberal
outcome—for example Lawrence v. Texas or Brandenburg v. Ohio, cases whose outcome favored the protection of civil liberties against government intrusion—are actually conservative. This measure does not speak to the ideological content of the case. It speaks only to the member(s) of the Court that we may expect to control the content of the opinion and, thus, its tendency to focus on risk and threat.

However, this is still a blunt measure that treats many cases as conservative, because the Court median is conservative, even if the opinion is liberal, or vice versa. Hence, the third measure, the Majority-Coalition Median, has an advantage. Though it still distributes a great many cases to the conservative side of the ledger, it will only do so if most of the Justices who vote in the majority are conservative. Thus, we avoid the difficulty mentioned above: the problems of treating all cases from a given term as conservative even if the opinion in each is written and controlled mostly by a liberal coalition. The higher number of cases in the conservative bin can be attributed to the general tendency of the Court, especially lately, to skew conservative in the bulk of its rulings and in the ideology of most of its Justices.

But there remains a problem worth considering. The relatively small number of liberal opinions makes it more difficult to describe the average Risk Focus scores for the liberal and conservative case categories. That is, the tests below attempt to identify the mean Risk Focus score for each category of case, but the degree of precision with which the test may do so is a function of the number of observations from which it may draw. Larger populations tend to offer more precise estimates. Imprecise estimates make drawing inferences difficult, especially when the variable of interest (Risk Focus) is already composed of small values and little variance. All of these are factors to keep in mind as we attempt to detect patterns in the Risk Focus of Supreme Court cases on ideological lines.

Below, we present the results of these three difference-in-means tests. In each of these three tests, we expect to find that the average Risk Focus score is statistically higher in the group of conservative opinions than in the group of liberal opinions.

V. RESULTS

Table 3 presents the average Risk Focus score for each category of cases as defined by the three measures described above. We see an average Risk Focus score for the conservative and liberal case categories as defined by the three measures described above. Below each value is the uncertainty interval (standard deviation) of each set of values. Then, in the fourth column, we see the difference between the two mean values: this is

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75. 539 U.S. 558 (2003) (holding that a Texas statute criminalizing homosexual conduct was unconstitutional).
76. 395 U.S. 444 (1969) (holding that an Ohio statute punishing oral advocacy violated the First and Fourteenth Amendments).
the key column. We are attempting to determine whether the Risk Focus scores differ statistically between liberal and conservative cases, which may lend support to the theory described above—that conservative individuals are more susceptible to the influence, perception of risk, and threat than liberal individuals. If that is so, we should see a detectable difference in the scores from columns two and three.

A. Table 3: Difference-in-Means Tests of Risk Focus Scores in Conservative and Liberal Opinions

<table>
<thead>
<tr>
<th></th>
<th>Mean (Liberal)</th>
<th>Mean (Conservative)</th>
<th>Difference</th>
<th>Number of Cases (Lib./Cons.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinion Author</td>
<td>0.677 (0.01)</td>
<td>0.679 (0.01)</td>
<td>-0.002 (0.02)</td>
<td>(1,016 / 1,121)</td>
</tr>
<tr>
<td>Court Median</td>
<td>0.656 (0.02)</td>
<td>0.686 (0.01)</td>
<td>-0.030 (0.02)</td>
<td>(544 / 1,593)</td>
</tr>
<tr>
<td>Majority-Coalition Median</td>
<td>0.629 (0.02)</td>
<td>0.690 (0.01)</td>
<td>*-0.061 (0.02)</td>
<td>(410 / 1,727)</td>
</tr>
</tbody>
</table>

* Indicates that the difference between the two means is statistically significant at the standard 0.05 level.

Negative numbers in the difference column indicate that the Risk Focus score for that measure is indeed higher for conservative opinions than for liberal opinions. This might tend to support our hypotheses, but the difference must be statistically significant to count as compelling evidence that the hypothesis is supported. The reader will notice that the differences in Risk Focus are insignificant and, thus, do not support the hypothesis, except in the final majority-median test. In the first two tests, the uncertainty estimate is too large, and the difference is too small to draw any reliable inferences from those results. We fail to reject the null hypothesis that the value of the difference between the categories is zero and, therefore, we cannot reliably assert our alternative hypothesis. This might cast doubts on the validity of the theory. However, it should be noted that the majority-median model of opinion construction is currently the predominant model in the political science field. Therefore, we should
commit to giving this test the greatest weight of all of them, and its significance gives confidence that this theory is capturing something real.

However, the failure of the first two tests to give detectable results is reason to maintain doubt about the theory’s validity and should give researchers pause when trying to infer conclusions from this study. But this is a young field, and this study is simple and preliminary. No matter the results from this study, doubt was bound to remain and further study would be imperative. In order for any strong conclusions to be drawn, the data must be subjected to a more sophisticated battery of empirical tests than those reported here.

One should also note how small are the differences in our reported means; even though the difference is detectable in one test, the risk focus scores for any Supreme Court opinion are rather low. This is unsurprising, because legal opinions in general are full of doctrinal analysis, recitation of complex sets of facts, and quotations from other opinions or learned treatises—sources that hardly lend themselves to lengthy predictions of some future horror. We can report from our own experience using LIWC to analyze Court opinions that such study of the Court can be challenging because, on some dimensions, like Risk Focus, the variation among opinions is rather low, which makes detecting patterns and influences on changes in those scores difficult.

For example, there is a dimension called Analytic which measures cognitive complexity in a body of text. Court opinions vary little on this dimension; virtually all opinions are above 90 on a scale of 0 to 100. Risk Focus is measured on the same scale, and the reader may notice that the average Risk Focus score for these groupings of opinions was less than 1.

On this dimension, a liberal opinion looks very much like a conservative opinion. Inferring the causes of difference is challenging when it is hard to see any difference without the aid of sophisticated computer software. This reflection may both lend confidence and discouragement: we may be confident knowing that in an area in which detecting patterns and drawing conclusions about differences is so difficult, we managed to do so anyway in at least one test. However, we may also be discouraged that these statistical problems will persist and remain vexing for further research into this area.

CONCLUSION

Further study should probe this theory and the Court’s opinions more carefully by doing the following things: employing a larger sample of cases; using a full empirical regression model with appropriate controls to isolate the effect of political ideology on writing behavior; and exploring nonmajority opinions, especially concurrences and dissents. In majority opinions, Justices must write to appease a large group of opinionated, strong-willed, and well-informed individuals. It may be difficult for any
authorial voice to penetrate the dense web of requirements that each Justice is sure to have over opinions of the Court. But in concurrences and dissents, the Justices write only for themselves. Others join the opinion only as far as it suits them, but their addition is not required. So one Justice’s voice, with all of its individuality, idiosyncrasy, and emotional volume, is relatively unclouded in concurrences and dissents rather than majority opinions.

These early results are encouraging; they suggest a connection between the literature on ideology, neuroscience, psychology, and judicial decision-making, but they far from conclusive. Hopefully, in the near future, judicial politics will continue this exploration, shedding light on ideological cognition, the choices that Justices make, and everything in between.