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# Presence or Persuasion? The Effect of Persuasive Women in the Federal Judiciary

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## Abstract

The growing consensus in the judicial literature is that women judges pull men's votes in their direction in certain areas of law, namely sex discrimination cases. Many scholars have conjectured as to why this pulling phenomenon exists, however, no scholars have been able to empirically pin down (or rule out) their suspect. I attempt to overcome long standing limitations to this impasse by creating a new measure of judicial performance—persuasion. With this new measure, I show that it is not merely a woman's presence, but the persuasiveness of the woman that actually drives the observed panel effects. After controlling for persuasion, the mere presence of a woman has no statistical effect on a man's vote. In this paper I explain how this new measure is created, why it matters, and how it can be implemented to potentially uncloud a phenomena otherwise shrouded in mystery—judicial panel effects on gendered panels. Furthermore, piggybacking on previous research that alludes to the idea that women elites should outperform men due to social or institutional biases (Anzia and Berry, 2011), I test, and fail to reject, that this phenomena also applies to the judiciary—that is, women judges are, on average, far more persuasive than are men. The data I analyze comes from the Sunstein, Schkade and Ellman (2004) dataset. I create the persuasion measure using a theoretical framework and test its effectiveness using logistic regression models.

## INTRODUCTION

The growing consensus in the judicial literature is that women judges behave differently than men in certain areas of law, namely sex discrimination case types (Boyd, Epstein and Martin, 2010; Peresie, 2005; Davis, Haire and Songer, 1993), though there are some exceptions. Some scholars posit that there are no sex-based differences due to institutional factors that affect men and women equally (Steffensmeier and Hebert, 1999; Sisk, Heise and Morriss, 1998; Kritzer and Uhlman, 1977). Furthermore, at the intersection of sex discrimination cases and gendered panels, women judges pull case outcomes in their direction: “panel effects”—to be more specific, panels with a woman present are far more likely to produce pro-plaintiff verdicts than panels consisting of all men (Boyd, Epstein and Martin, 2010; Peresie, 2005).

What is missing from the judicial literature, however, is a causal mechanism for why this “pulling” phenomenon exists—that is, what is causing men to be more likely to vote pro-plaintiff when a woman is present on the panel? In this paper, I theorize that the causal mechanism is persuasion. To be clear, the causal mechanism isn’t the mere presence of a woman on an otherwise panel of all men that causes men to behave differently, but the persuasiveness of the woman on the panel. However, given that there are no current measures of individual performance of federal judges—the extent a member of the bench is effective at their job relative to their colleagues—based on persuasion, testing such a theory would be impossible. By creating this measure of persuasion based on a theoretical framework I establish a new measure of judicial performance that can be applied to specific areas of interest, for example, gendered panel effects on sex discrimination cases. In so doing, I answer three important questions: 1. Do women judges outperform men? That is, are women judges more persuasive than men? 2. What is the effect of persuasion on individual votes? And 3. Can panel effects be better predicted by an individual persuasion model better than a descriptive composition model which doesn’t account for the effects of persuasion?

I find that women judges are more persuasive than men. That is, women judges get their way more frequently than men, even when the odds are stacked against them. Furthermore, while the existence of gendered panel effects on sex discrimination cases are assumed, not all women judges affect men on a given panel equally. Strikingly, not only does the persuasiveness of a woman greatly increase the likelihood of observing a panel effect, it erases altogether the effect that description alone can cause panel effects. Thus, persuasion should be an important variable when analyzing judicial influence in the literature going forward.

These substantive findings are valuable, and should contribute nicely to the existing literature. However, the critical component of this research is the addition of this new measure of performance of federal judges. It can open doors to all new units of analysis in the judicial literature which were previously considered unapproachable. This should be of considerable interest to judicial scholars and should move forward the

collective understanding of judicial behavior. What’s more, this new way of measuring individual influence should benefit scholars in other sub-fields seeking to better understand small group deliberation and decision making processes when accounting for professional dexterity.

## **DESCRIPTIVE REPRESENTATION AND PERFORMANCE BASED EFFECTS**

The study of descriptive representation has generated a robust literature on the topic across several sub fields including legislative, executive, bureaucratic and judicial studies. While there is no shortage to the number of ways to analyze descriptive representation, measuring descriptive representation in terms of substantive representation, specifically through measurements of performance, are of great interest. Nowhere is this phenomena studied more extensively in the legislative literature, among legislative elites (Tate, 1999; Gay, 2002; Grose, 2005, 2011; Juenke and Preuhs, 2012), legislative elections (Campbell and Wolbrecht, 2006; Juenke, 2014), and candidate emergence (Fox and Lawless, 2004). Some scholars have examined the effects of the phenomena in executive (Hopkins and McCabe, 2012; ?) and bureaucracy (Rocha and Hawes, 2009) literature.

The representation literature suggests gender and race affect the performance of elites in their respective organizations, as well as how they respond to their constituents and/or subordinates (Kathlene, 1994; Mansbridge, 1999; Anzia and Berry, 2011; Pearson and Dancey, 2011; Butler and Broockman, 2011; Volden, Wiseman and Wittmer, 2013; Broockman, 2013; Mendelberg, Karpowitz and Geodert, 2013; White, Nathan and Faller, 2015). The chief takeaway from this literature is that not only do minorities and women represent their descriptive groups substantively, that they “outperform” their white and men counterparts, given the opportunity.

When dealing specifically with gender representation, the question: “In what way do women elites behave differently than men?” has been more than well treated. However, there seems to be a disconnect between the methods used to get at this important question between the judicial and other sub fields. Descriptive and substantive representation in the legislative, executive and bureaucratic sub-fields is often studied in terms of individual performance and behavior, while in the judicial literature the analysis is more fragmented. Behavior is often studied at the individual level of analysis (individual behavior), while performance is studied as a small group outcome (panel effects). This is no accident, as the constraints on the measurement of individual performance are largely due to the idea that we cannot directly observe federal judges in their most performance-revealing state—while in the deliberation process. Thus making it seemingly impossible to pin down the casual mechanism generating the observed panel effects.

That is not to say that the other sub fields are complete, and the judicial literature strictly lacking. The judicial literature benefits greatly from its analysis of small group interactions, specifically from its measurement of substantive representation in terms of panel effects. Small groups are found in just about every governmental setting, though outside of the judicial literature, small group decision making and outcomes are sparsely studied.

I aim to bridge this divide in two ways. First, by establishing a measure of performance at the individual unit of analysis within the judicial literature, and second, by providing a judicial example of small group analysis that can be replicated in legislative, executive and bureaucratic settings.

## Gender in the Courts

Within the judicial literature Epstein, Landes and Posner (2013) find that the anecdotal idea that judges are not “political” like their legislative counterparts is simply unfounded, and that many judicial decisions are influenced by political ideology. Furthermore, the party of the nominating president can be a strong predictor of federal judges voting behavior (Sunstein, Schkade and Ellman, 2004). And thanks to the contributions of Epstein et al. (2007), every federal judge has a Judicial Common Space (JCS) score, which is a strong predictor of ideological voting.

Gender, also, can be a strong predictor of voting behavior in specific subsets of law, namely, areas of law where women are affected at disproportionately larger numbers compared to men (Carroll, 1984),<sup>1</sup> especially as sex discrimination case types (Boyd, Epstein and Martin, 2010).

In the judicial literature, there is a traditional approach of studying descriptive and substantive representation in the federal courts, namely asking and answering two main questions: do women judges vote differently in certain areas of law (individual behavior), and do women judges affect the votes of men when sitting together on those areas of law (panel effects)? Many have taken either the logistic or probabilistic regression approach to get at these questions with much success—especially when the data has been pre-treated using matching techniques. Regardless of the methodological approach employed to answer these questions, the conventional wisdom is that, yes, we do observe that women judges vote differently than men, specifically on sex discrimination cases (Davis, Haire and Songer, 1993) where women judges are more likely to vote pro-plaintiff, but we also find that when a woman sits on an otherwise panel of all men the probability of a pro-plaintiff case outcome also increases (Boyd, Epstein and Martin, 2010; Peresie, 2005).

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<sup>1</sup>Though, there are some that posit that the phenomena exists not necessarily because women are representing women, but because women have a unique set of life experiences that inform their decision making (Gryski, Main and Dixon, 1986). These findings are consistent with research in other judicial small group settings, namely jury deliberations, where it is suggested that diverse groups provided greater levels of information exchange as compared to all-white groups (Sommers, 2006).

While I confirm the existence of these phenomena within the data utilizing a logistic regression approach, where I diverge from the existing literature is not by simply adding new variables, but by asking entirely new questions and employing new measures. First, do women judges *outperform* men?<sup>2</sup> In other words, are women judges better at their jobs than men? If women elites outperform men in other governmental settings, we should find a similar effect in judicial settings as well. Given that there is currently no conventional measure of performance in the judicial literature, this question has yet to be fully fleshed out. I attempt to rectify this problem by creating a new measurement of performance. Second, I question whether or not the presence of a woman on an otherwise panel of all men (on sex discrimination case types) is really a sufficient predictor of case outcomes. Might the “skill”<sup>3</sup> of a judge be an important factor? Is simply the addition of a woman to an otherwise panel of all men sufficient to cause men to vote abnormally.<sup>4</sup>

## MEASURING PERFORMANCE OF FEDERAL JUDGES

In order to create a measure of performance in the federal judiciary it is necessary to list the assumptions and questions that lay the foundation that measure. First one must assume that federal judges have motives to achieve certain goals. Thus, the first question is, what are the goals of federal judges? First, federal judges value precedent. That is, “a current decision-maker is told to follow the decision of a previous case involving assimilable, if somewhat different, fact” (Schauer, 1987). Judges have a goal of upholding ideas and decisions of previous rulings. Second, federal judges value collegiality and consensus; judges have a shared interest(goal) in getting the law right. And because of this shared interest each judge on the panel is willing to persuade and be persuaded (Edwards, 2003; Fischman, 2011). Third, judges are ideological, and therefore have an goal of creating case outcomes that fit within the context of their given values (Epstein, Landes and Posner, 2013). In this case these values are somewhat constrained to a left-right, or liberal-conservative, scale (Epstein et al., 2007).

Aside from the “goals” assumption, I also assume that a judge’s success at achieving some or all of these goals is a rudimentary way of measuring judicial competence. Competence is not a static characteristic, however; some are more competent than others. Furthermore, I make an assumption that competence is a measure of comparison. One can only be classified as competent when measured against one’s peers.

In order to get at judicial skill, the main objective, it is best to think of competence as a spectrum of those who are more or less skilled than their colleagues. Using this framework, I use the goals assumption

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<sup>2</sup>For a treatment on what is meant by the terms “performance” and/or “outperform” see the next section “measuring performance of federal judges.”

<sup>3</sup>I use the term “skill” here as a stand in for a judge’s ability to persuade their peers to vote to their own advantage.

<sup>4</sup>More terminology. “Abnormally” refers to a vote that is out of the norm. For example, in legislative studies, if a partisan votes against ones party and ideology. In the judicial setting, it’s more complex. See the treatment below of the persuadability measure for a more detailed analysis of an abnormal judicial vote.

that I previously assumed to create a scale of judicial skill. Before that, however, I had to make a few more assumptions. I assume that the goals of collegiality, consensus, precedent and ideology are somewhat consistent across the judges in the federal courts.<sup>5</sup> If this holds, then all judges desire to create outcomes that are ideologically consistent with their liberal-conservative preferences, and that each judge is willing to persuade other judges<sup>6</sup> to achieve this end. Furthermore, each judge is willing to be persuaded<sup>7</sup>, even at the cost of their ideological preferences given their goals of collegiality, consensus and precedent. Because all judges weigh their values of ideology, collegiality, consensus and precedent differently, which particular value weighs most heavily in a given moment is uncertain. However, when I observe a judge voting against one's ideological preferences, I assume that some other value is weighing more heavily in that judge's decision-making at the time they cast their votes.<sup>8</sup>

In this way, judicial skill is, in essence, measured by a judge's ability to persuade other judges to vote "abnormally"—that is to vote against their ideological preferences when they otherwise had a strong opportunity to achieve their goals of precedent and ideology. Indeed, the most skillful (or persuasive) judges, are those who most frequently get what they want at the expense of others getting what they want (especially when the others had the upper hand<sup>9</sup>). Further, the least skillful (or most persuadable) are those judges who get what they want less frequently than others (especially when they themselves had the stronger position to get what they want). This measure of judicial skill, will hereafter be named "persuasion."

Persuasion is measured in two parts. First, persuasiveness—a judge's ability to persuade others, and persuadability—a judge's quality of being persuadable. Both persuasiveness and persuadability are measured quantitatively on a continuous scale, however, both measure opposite ends of the persuasion spectrum. The persuasiveness index (PI), is a measure of strength in terms of performance, while the persuadability index (pdi) is more of a nested measure of any or all of at least three items: 1. a judge's priority placement of collegiality over other goals, 2. a judge's desire to avoid conflict, and 3. a judge's lack of judicial skill. Larger values on the persuasiveness index (PI) convey higher evaluations of performance, conversely, larger values on the persuadability index (pdi) convey lower evaluations of performance.<sup>10</sup> A good way to think of

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<sup>5</sup>That is not to say that all judges are comparably consistent between themselves to the extent that they all hold each norm to the same standards, or even self-consistent where each norm is held to the same standard in all cases. By consistent I mean that all judges, to some unknown degree, take these considerations into account when making their decisions.

<sup>6</sup>When it suits them. That is, when the expected utility outweighs the expected time and energy they would expend to do so.

<sup>7</sup>Again, when it suits them (see previous footnote).

<sup>8</sup>It should also be pointed out that perhaps judges ideologies are not uni-dimensional. Perhaps when a conservative judge votes liberally on a given case type the judge may not be voting against one's ideology at all. This is a fair criticism of the uni-dimensional ideology spectrum, however, this paper assumes a uni-dimensional ideological space.

<sup>9</sup>In other words, the path to getting their way was far easier. Again, see the treatment of the creation of the persuasion measures below for a detailed analysis of this phenomena

<sup>10</sup>It should be clear, that "performance" and substantive representation are highly correlated phenomena. For this reason, I evaluate characteristics such as judicial ambition and ideological stubbornness above adherence to judicial norms such as collegiality and precedent when evaluating who "outperforms" their peers at their job. One could potentially conceive of a space where performance is measured on the opposite spectrum, where judges who are the best at adhering to the norms of the

persuadability is that it is diametrically opposed to being ideological stubborn.

## Causal Stories

Unfortunately, assigning values to federal judges on either index, is complicated by the notion that as a scholars we cannot go back in time and witness the judicial deliberation process that took place on each panel. If we could somehow peek behind closed doors and witness the judicial debates that took place first hand, it would certainly make the process much more simple. In a world devoid of perfect information, however, we must resort to secondary observations to create these measures. What further complicates the matter is that there are several different hypothesized causal stories scholars have posited for why one might see deviation from expected behavior. Specifically at the intersection of gender and deliberation, what causes one judge to be persuaded by another?

Under the assumption that individual voting behavior of federal judges on sex discrimination cases does differ by gender, and that these gender-differences have substantive panel effects, scholars have attempted to explain these phenomena with at least five leading causal stories, namely deliberation, deference, logrolling, votes, and presence.

### Deliberation

The idea that the addition of a woman on a three-judge panel brings to light new information that an otherwise panel of all men would not be privy to by themselves, causing them to think differently about the case. Information sharing is expected given the norm of collegiality and consensus forming on appellate courts (Howard Jr., 2014; Fischman, 2015), which leads judges to discuss their preferences before ruling on a case (Peresie, 2005; Kastlelec, 2013). This notion suggest that judges engage in a series of civil debates where all sides of the debate are fleshed out with each side given proper consideration (Carp and Stidham, 2010; Peresie, 2005) in an effort to achieve consensus which shields the judges from public dissent (Goldman, 1968).

Information sharing is compounded with the introduction of diversity into an otherwise homogeneous group (Sommers, 2006). The introduction of heterogeneity to a group can also increase complex thinking, positive affect, and bring to light new ways of assessing tasks (Antonio et al., 2004; Phillips and Loyd, 2006).<sup>11</sup>

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institution are evaluated as being better at their jobs compared to their peers.

<sup>11</sup>However, group diversity does not always improve all aspects of deliberation, it can, unfortunately decrease the performance of a group through negative affect (Mannix and Neale, 2005).



More specifically, adding a woman<sup>12</sup> to an otherwise panel of all men introduces new preferences, thus potentially changing the range and probability of given outcomes (Peresie, 2005)—this effect can be compounded even further on sex discrimination case types (Boyd, Epstein and Martin, 2010; Peresie, 2005).

### Deference

Deference refers to a situation where a man—either because a perceived lack of knowledge, or a perception that their woman colleague on the panel is more knowledgeable—in gender-based cases will “defer” to the judgment of their woman colleague and casts their votes in like manner (Dovidio et al., 1988; Peresie, 2005). It is generally accepted in both the judicial literature and social psychology literature that women experts, more so than expert men, on “gender issues” are considered more persuasive and more expert (Schuller, Terry and McKimmie, 2005; Memon and Shuman, 1998; Schuller and Cripps, 1998; Swenson, Nash and Roos, 1984).

The addition of a woman to an otherwise panel of all men, then transforms the deliberation process to more of a one-sided debate, where the “expert” woman is given a great deal of latitude to pull the other judges to her preference in the absence of strong preference on the part of a man (Dovidio et al., 1988; Lockheed, 1985; Schuller, Terry and McKimmie, 2001). Further, if the woman can articulate personal experience on the case at hand, then the effect on men can be even stronger (Peresie, 2005).

An interesting distinction must be drawn here, however. It is not necessarily the case that women judges *are* more knowledgeable on the subject matter, just that men perceive them as such. In the event that this phenomena exists, a man will be far less likely to vote against her, regardless of her preference. In essence, he takes a cue from his more knowledgeable peer (Chaiken, 1980; Kingdom, 1989; Matthews and Stimson, 1975; Peresie, 2005).

### Votes

How a person votes can itself be a potential source of causality for another person. The idea is that the mere act of voting one way can influence a peer to vote differently thorough institutional and/or social pressures. In this case, when a woman votes a certain way, regardless of the deliberative process, the men on the panel may be “peer-pressured” to vote the same way.

Imagine a situation where a panel has deliberated the case to a stand still—no consensus has been achieved—If the woman votes pro-plaintiff, in order to avoid publicizing their dissent, the men on the panel vote pro-plaintiff as well, despite their anti-plaintiff preference. Furthermore, the peer-pressure effect doesn’t

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<sup>12</sup>It has also been posited that the addition of more than one woman on a panel can have an even greater effect (Peresie, 2005), and while this phenomena may hold up in principle, it was not supported by her data. I also checked for this effect and found no substantive or statistical significance in the effect of adding a second woman to a panel on a man’s vote.

have to be strategic. Theoretically, a man could vote pro-plaintiff purely because they feel pressured to do for any number of non-strategic reasons. (Kastellec, 2013; Manski, 1993; Fischman, 2015; Powell, Tauras and Ross, 2005).

### **Logrolling**

Logrolling is the controversial idea that men are trading their votes with their women colleagues on gender-based cases for a future vote in other case contexts (Peresie, 2005). While vote-trading is prohibited, and predictably and vehemently denied, there does exist some evidence of the phenomena within the literature (Caminker, 1999; Maltzman, Spriggs and Wahlbeck, 2000).

The idea doesn't necessarily suggest that judges are having express conversations where one judge contractually votes one way in exchange for a future vote. It is not unreasonable to assume that one aspect of the the phenomena exists in a non-verbalized institutional norm. That is, if one assumes judges are strategic and that they understand that they are participating in a "repeated game," if they do not have strong preferences for or against the case outcome (and their colleague does), it may be strategic to not create unnecessary conflict in the hopes that their colleagues may behave similarly on future cases where their preference intensities are reversed (Peterson, 1981; Caminker, 1999).

### **Mere Presence/Moderation**

Unlike any of the previous stories, which require action, presence is the idea that the *mere* presence of a woman on a three-judge panel will cause men to behave differently. This is considered a contextual effect where behavior is altered merely due to the characteristics of another, in this case gender (Kastellec, 2013). It is possible that men simply act differently in the mere presence of women judges. In the case of sex discrimination case types, men may moderate—or altogether not verbalize—their anti-plaintiff preferences at the risk of coming across as prejudiced (Ramirez, 1998; Peresie, 2005).

If mere presence was the causal mechanism behind panel effect it would follow that the panel effect would exist despite the voting behavior of the woman (Fischman, 2015). That is, men should vote pro-plaintiff in sex discrimination cases regardless of how the woman adjudicates. And, indeed, there is some evidence to suggest the existence of a purely mere presence-centric causality (Sommers, 2006; Kastellec, 2013) in certain settings. Presence, however, is tangled up with deliberative and voting influences on judge panels in the federal court. Given that women judges are actively engaged—in the same way men are engaged—in the deliberative and voting processes, thus untangling presence from these other causal mechanisms in the federal judge panel setting could prove difficult. Fortunately, this is unnecessary.

## Persuasion

The most important take-away from this review of potential causal mechanisms is as follows: because of the intertwining and non-observability of each of the phenomena, and the fact that in order to see any of the causal effects discussed there must be a woman on the panel, thus I combine all of these causal stories into a single unified category that I call *presence*. Not to be confused with *mere* presence, presence is just the most descriptive way to express that there is a woman on the panel, and there may be any or all of the causal mechanisms discussed at play. This is actually somewhat intuitive as, to this point, when I measure panel effects, all one really knows is the descriptive makeup of the panel. That is, is there a woman *present* on the panel, or not? One cannot see the underlying causal story(ies) at work.

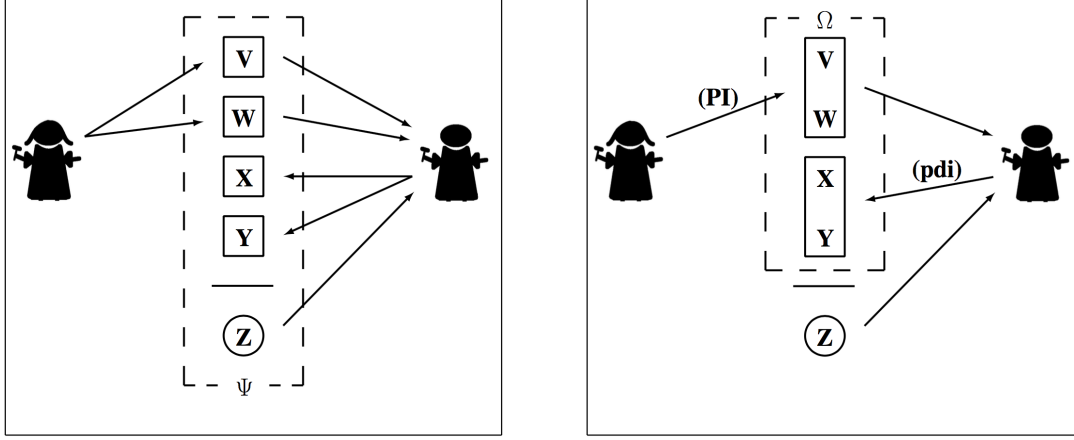
Having made this assumption, I lay out the base by which one can view the federal courts. That is, in sex discrimination cases, panel effects are caused by the *presence* of a woman. The purpose of this work is not to test this theory as many others have before, but to test a presence-only model against the newly created persuasion—that is the persuasiveness of women judges and persuadability of men—model predicts men’s votes on sex discrimination cases better than a presence-only model (see Figure 1 for a graphical depiction of “presence vs. persuasion.”)

One objection to this premise is that persuasion and deliberation are understood as identical concepts. However, I argue below that persuasion is not a verbal or non-verbal action a judge takes to achieve their preferences, it is not even a passive characteristic; persuasion is a *measure* of judicial skill. That is, it measures how well a judge is at achieving his or her goals. In this way, persuasion measures a judge’s aptitude within each of four of the five causal stories: to engage in deliberation and logrolling to achieve one’s goals; it measures how frequently a judge engages in deference, and is susceptible to peer-pressure such that their goals are sacrificed; and even captures non-measurables such as attractiveness and emotional intelligence—both characteristics that influence the social behavior of others.

Thus, when I ask “presence or persuasion?” I am asking which predicts men’s votes better: 1. A presence model which assumes no knowledge of the underlying causal mechanisms, or 2. A persuasion model that controls for mere presence and assigns a makeshift principal components analysis of the unknown causal stories?<sup>13</sup>

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<sup>13</sup>To be clear, persuasion is not a principal component. However, it achieves a similar—but not identical—purpose. Essentially a principal components analysis collapses several variables that one assumes are grouped together by a common underlying dimension into one (or more) variable/s. This is not quite what persuasion does. Persuasion *measures*—rather than taking the place of—the four variables (deliberation, deference, votes, and logrolling) with unknown values using two new variables which are conceived of from a theoretical—rather than methodological—framework.



**Figure 1:** Let deliberation be represented as ( $V$ ), votes as ( $W$ ), deference as ( $X$ ), logrolling as ( $Y$ ), and *mere* and mere presence as ( $Z$ ). The common approach to panel effects as seen on the left, is the question: is a panel of all men different from a panel with a woman? While previous research have found that there is, and can conjecture as to why, without a measure for  $V$ - $Y$ , we cannot determine whether the effect is  $Z$  or any (or all) of  $V$ - $Y$ . All we know is that some effect  $\Psi$  is causing panel effects. However, if we conceive of  $V$  &  $W$  as skills a judge uses to get their way,  $X$  &  $Y$  as utility choices a judge uses to achieve some other goal, and  $Z$  as the *mere* presence of a woman on an otherwise panel of all men, and we can measure  $V$ - $Y$ —even if we can’t observe them—then we can differentiate between the effects of  $Z$  and  $V$ - $Y$ . We measure  $V$ - $Y$  by giving each judge a score on each of the indexes persuasiveness (PI) and persuadability (pdi), which, taken together, constitute the new measure  $\Omega$ . Doing so allows us to ask a whole new question: Do some women judges affect men differently? That is, does  $\Omega$  produce different effects from what one observes when looking only at  $\Psi$ ?

### Persuasiveness

Persuasiveness is the ability of a judge to influence other judge’s votes through the deliberative process. Each judge is assigned a specific persuasiveness index (PI) according to the mean number of situations a judge was in the ideological minority and was successfully able to create a situation where the majority judges voted to overturn a lower-court’s decision in favor of minority judge’s ideology as measured by the judge’s JCS score in a three-judge panel situation.<sup>14</sup> For example, when a panel of federal judges made up of one conservative judge and two liberal judges hears a case where the lower-court decided the case liberally. This is a persuasive opportunity for for the conservative judge. That is, the conservative judge has the *opportunity* to persuade her liberal colleagues to overturn a case that they have the majority advantage to both uphold the lower-court decision, and get their ideological way. If the conservative judge can persuade the liberal judges to overturn the case and vote conservatively, thus overriding their ideological preferences and desire to uphold a lower-court decision in exchange for some other utility, this is a successful persuasive situation for the conservative judge.

<sup>14</sup>Persuasiveness is created by excluding the case types that the index will be used in. For example, the persuasiveness of a judge on a sex discrimination case is the persuasiveness of the judge on all other case types.

### The persuasiveness index (PI)

$$\frac{\sum \text{of successful persuasive situations}}{\sum \text{of persuasive opportunities}} =$$

$$\frac{\sum(x_{i_k}) \text{ if lower court decision} \neq k, \text{ minority status} = 1, \text{ case outcome \& vote} = k}{\sum(x_{i_k}) \text{ if lower court decision} \neq k, \text{ minority status} = 1}$$

Where  $k = 1$  if conservative, 0 if liberal.<sup>15</sup> Judges without at least one persuasive opportunity are coded as missing.<sup>16</sup>

### Persuadability

Persuadability is measured by the mean number of abnormal votes judge's cast, given the number of opportunities a judge had to uphold a lower-court decision that was favorably in the direction of the judge's ideology.<sup>17</sup> Abnormal votes, in turn, are defined as votes cast to overturn a lower-court's decision that was in-line with the judge's ideology and in the majority position while on a three-judge panel. Each judge was assigned a persuadability index (pdi) accordingly. Using the example given in the treatment of the persuasiveness index (PI), the liberal judges have the *opportunity* to be persuaded. They could uphold and ideologically stand fast if they were so inclined due to their ideological majority, however if they vote with the conservative judge to overturn the lower-court decision and vote against their ideological preference, this is considered a situation persuaded.<sup>18</sup>

### The persuadability index (pdi)

$$\frac{\sum \text{of situations persuaded}}{\sum \text{opportunities to be persuaded}} =$$

$$\frac{\sum(x_{i_k}) \text{ if lower court decision} = k, \text{ majority status} = 1, \text{ case outcome \& vote} \neq k}{\sum(x_{i_k}) \text{ if lower court decision} = k, \text{ majority status} = 1}$$

Where  $k = 1$  if conservative, 0 if liberal. Judges without at least one opportunity to be persuaded are coded as missing.<sup>19</sup>

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<sup>15</sup>Conservative and liberal are determined by the Judicial Common Space scores(Epstein et al., 2007). JCS scores greater than 0 are considered conservative, while JCS scores less than 0 are considered liberal. Note, also, that just as effectively I could have used party of the appointing president to establish ideology. Out of the 317 judges, only 8 judges deviated from a JCS score matching the party of the president who appointed him or her.

<sup>16</sup>If those who never had an opportunity to be in a persuasive situation were coded as 0 rather than as missing, this would bias the effect of persuasiveness, as those judges would be considered not persuasive, when in reality, there is no evidence to suggest that this is the case.

<sup>17</sup>see footnote 14.

<sup>18</sup>Only in the rare cases where an ideological heterogeneous panel overturns a lower-court decision, *and* the minority judge is ideologically opposed to the lower-court decision, will one see either persuasive opportunities and opportunities to be persuaded.

<sup>19</sup>see footnote 16.

## ASSUMPTIONS AND TESTABLE HYPOTHESES

I utilize individual vote as the dependent variable when analyzing panel effects rather than case outcomes for at least two reasons. The first is that case outcomes do not require unanimous decision rules; therefore panel effects could affect judges within the panel differently. The second reason is that panel effects by themselves do not take into considerations such as the individual relationship between each judge and the lower-court's decision, or the party composition of the panel from the individual judge's perspective.

These are critical components to understanding an individual's decision to vote one way or another on a three-judge panel. In other words, it is not merely the case outcome that is of interest; it is the individual vote that matters most.

Given the individual behavior and panel effects literature, I expect to be able to replicate the individual differences in voting behavior between men and women judges on sex discrimination cases, as well as panel effects on sex discrimination cases.

**A<sub>1</sub>** and **A<sub>2</sub>**: Two assumptions predict that I should find that on sex discrimination cases, women judges are more likely to vote liberally (pro-plaintiff) than are men, and that men will be significantly more likely to vote liberally when on a panel with a woman (presence).

**H<sub>1</sub>**: Women judges should outperform men. That is, on average, they should have higher scores on the persuasiveness index (PI).

**H<sub>2</sub>**: Women judges with higher persuasiveness (PI) scores should reveal stronger panel effects than women judges with lower persuasiveness (PI) scores on sex discrimination cases.

**H<sub>3</sub>**: Men with higher persuadability index (pdi) scores should be more susceptible to persuasive women judges than are men with lower persuadability index (pdi) scores on sex discrimination cases.

**H<sub>4</sub>**: The persuasion model will be a better predictor of men's votes on sex discrimination cases than the presence-only model.

## DATA AND ANALYSIS

I utilize the Sunstein, Schkade and Ellman (2004) data which has 13,928 observations, which each represent a single judge-vote. 12,477 of the observation are judge-votes on three-judge panels. There are 4,430 three-judge panels, and 317 individual judges. The observations span the course of fourteen years (1995-2008). The primary dependent variable is the conservative vote. Of the 317 judges, 54 are women, and cast 2,196 of the 12,477 votes cast. Breaking up panels by gender, of the 4,430 three-judge panels, 1,894 had a woman on the panel, consisting of 5,411 total votes on panels with a woman present.

Looking at judges ideology, the data set includes 186 conservative judges, and 131 liberal judges.<sup>20</sup> This difference is pronounced even further when one observes that the 131 liberal judges account for 4,966 (39.8%) votes, to the 7,511 (60.2%) votes cast by judges considered conservative. On sex discrimination cases there were 858 (61.6%) votes cast by conservative judges, and 535 (38.4%) votes cast by judges considered liberal.

## Laying the Bedrock: Individual Behavior and Panel Effects

### Individual Behavior

In the aggregate data judges tend to vote more conservatively with a mean conservative vote of 55.8%. When broken down by gender, men tend to be more conservative than women, with men voting conservatively 57.2% of the time, and women only 49.6% of the time.

Partisanship is also an important factor in predicting vote behavior in all case types. Conservative and liberal judges take the conservative position 61.3% and 47.3% of the time respectively. When I intersect gender and partisanship I find that while there is very little difference between men and women judges appointed by Democratic presidents (47.5 to 46.7 respectively) there is a large gap between judges appointed by Republican presidents (61.9% for men, and 55.3% for women).

This difference is further exacerbated on sex discrimination cases with men voting conservatively 63.9% of the time, while women judges vote conservatively 53.4% of the time—more than a 10 percentage point gap. Note, that for both men and women judges, sex discrimination cases mark an increase in conservative voting from their aggregate totals.

Looking specifically at men on sex discrimination cases, conservatives vote predictably more conservatively than their liberal counterparts, 68.7% to 54.2% of the time compared to 61.2% and 46.7% respectively, when not on a sex discrimination case.

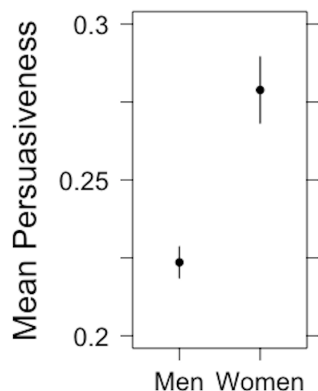
In terms of partisan voting, judges in the aggregate vote along partisan lines 58% of the time. Men, more so than women, tend to be more strictly partisan, but not by much: 58.8% for men and 54% for women judges.

The difference between voting along ones ideological preferences can also be effected by the majority or minority status on a panel, that is a judge in the ideological minority, i.e. a Republican appointee on a panel with two Democratic appointees, will only vote ones ideological preference 48.1% of the time, compared to 58.3% of the time when in the majority. Furthermore, those numbers increase even farther when on panels with no ideological opposition; judges vote ideologically 65% of the time with on homogeneously partisan panels.

The strongest predictor of vote, however, is the lower-court decision. In the aggregate, judges will vote to uphold the lower courts decision 68.1% of the time. When coupled with partisanship, however, the numbers increase significantly. Judges will vote according to their ideological preferences 74.2% of the time if the lower-court decision is in the same direction as the party of the president who nominated them. When on homogeneously partisan panels, the same phenomenon is increased to 77.9%: 79.6% for men, and 65.2% for women judges.

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<sup>20</sup>based on their score on the Judicial Common Space index—using 0 as the cut point.



**Figure 2:** Persuasiveness by gender

Looking at persuasiveness (PI) in the aggregate data, there does appear to be a performance gap between men and women judges, with women judges on average being 5.5 percentage points more persuasive than men (see Figure 2).

### Understanding Panel Effects Through Individual Effects

Looking directly at the interaction of men and women judges on sex discrimination cases, I begin by looking at case outcomes as the dependent variable. The probability of a plaintiff getting a pro-plaintiff verdict with a panel of all men is only 32.8%, compared to 46.5% with a panel that has a woman on it—nearly a 14 point increase. However, when I change the dependent variable from case outcome to judge votes, there is an almost identical result as the two variable have a correlation of .94.

While this may seem like semantics, moving forward, using case outcome as the dependent variable is problematic both theoretically and substantively. Because panel effect do not necessarily have the same effect across panel members—that is, they do not have to vote unanimously—there would be missing information if one only considered case outcomes, as 3.3% (3.4% of sex discrimination cases) of the panels are non-unanimous. Furthermore, as I get into the discussion on persuasion, case outcomes become irrelevant due to the fact that in order to win a majority on a panel, a single judge only needs to influence one other. Thus the dichotomous interpersonal effect is the stronger dependent variable.

## Re-estimating Presence Effects with Persuasion

Up to this point, I have only discussed the descriptive statistics of the data. I run a logistic regression model with the man’s vote as the dependent variable (in both models) on sex discrimination cases. In the presence-only model the primary independent variable is “woman on the panel.” In the persuasion model the primary independent variables are “most persuasive woman on the panel”—coded 0 if the panel has no woman present, 1 if the woman on the panel is unpersuasive, that is she scores low on the persuasiveness index (PI), and 2 if the woman on the panel is persuasive—she has a high value on the persuasiveness index (PI)—persuasiveness, and persuadability. Both models use the same control variables: the JCS score and age of the judge, lower-court decision and year the case was decided.<sup>21</sup> Using this approach I find some interesting results.<sup>22</sup>

In the presence-only model what I find is that when one moves from a panel of all men to a gendered panel, there is a 14.3 percentage point decrease in the predicted probability that a man will vote in favor of the plaintiff. That effect is very large, even when I control for ideology and lower-court decision, which also have large statistical and substantive coefficients. Thus, using this model I reject the null hypothesis that there is no difference between the way a man votes on a panel of all men compared to a gendered panel. However, what I will show in the analysis of the persuasion model, it may be presumptuous to arrive at such conclusions prematurely.

<sup>21</sup>Note: JCS, (PI), (pdi), year, and age are all centered and divided by  $2\sigma$  for ease of interpretation.

<sup>22</sup>Note, statistical significance is found at the .05 level in a two-tailed test.

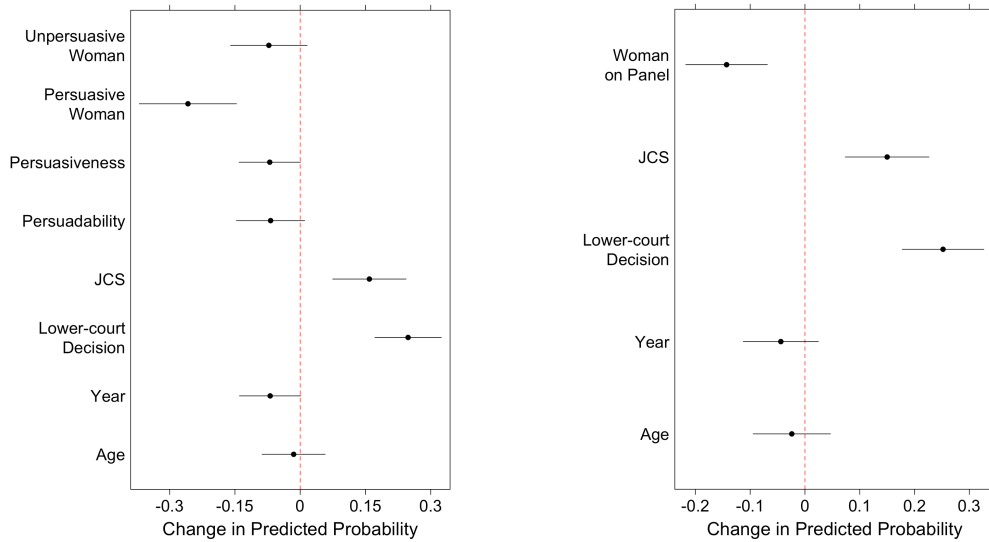


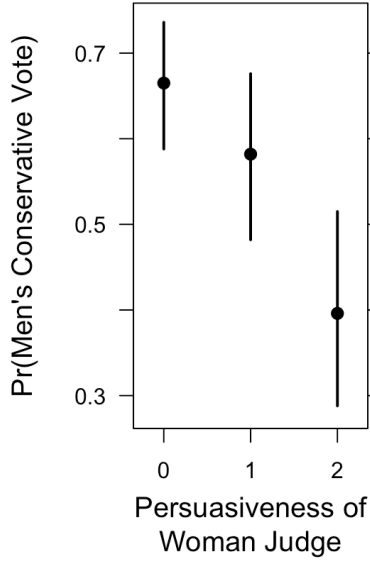
**Table 1:** Estimated Effects of Persuasion on Men's Votes on Sex Discrimination Cases

	Y = Conservative Vote			
	<i>Persuasion Model:</i>		<i>Presence Model:</i>	
	Coef (SE)	$\Delta \text{Pr}(Y=1)(\text{SE})$	Coef (SE)	$\Delta \text{Pr}(Y=1)(\text{SE})$
<b>Women Persuasiveness</b>				
(0) Panel of Only Men	—	—		
(1) Unpersuasive Woman	-.304 (.181)			
(2) Persuasive Woman	<b>-1.058*</b> (.231)	<b>-.258</b> (.057)		
(2 $\sigma$ )Persuasiveness (PI)	-.294* (.145)	-.070 (.036)		
(2 $\sigma$ )Persuadability (pdi)	-.285 (.162)			
Woman on Panel	—	—	<b>-.592*</b> (.151)	<b>-.143</b> (.038)
(2 $\sigma$ )JCS	.813* (.173)	.159 (.043)	.774* (.156)	.150 (.039)
Lower-court Decision	1.054* (.155)	.248 (.039)	1.078* (.153)	.252 (.038)
(2 $\sigma$ )Year	-.291* (.144)	-.069 (.036)	-0.191 (.140)	
(2 $\sigma$ )Age	-.069 (.149)		-0.109 (.146)	
Constant	-.123 (.137)		-.105 (.136)	
Observations	990		990	
Log Likelihood	-601.986		-610.756	
LR $\chi^2(8)$	108.7*		91.16*	
Percent Correctly Predicted	68.9%		67.8%	
Akaike Inf. Crit.	1221.973		1233.513	

Notes:

\*p &lt; 0.05 (Two-tailed)

**Figure 3:** Presence vs. Persuasion First Differences: Values depict  $\Delta \text{Pr}(Y=1)$  as seen in Table 1.



**Figure 4:** Effects on men’s votes on sex discrimination cases by the persuasiveness of women judges. 0 = panel of all men, 1 = unpersuasive (2 = persuasive) woman on the panel.

statistically and substantively significant. However, when we look at the persuasion model’s analog—after we control for the persuasiveness of the woman on the panel—to the variable “woman on panel”—“unpersuasive woman” the effect is no longer statistically or substantively effective (see Figure 4). When one moves from a panel of all men to an unpersuasive woman, there is no statistical or substantive difference on how a man votes—that is I fail to reject the null hypothesis that there is a difference in predicted probability of how a man votes moving from a panel of all men to a gendered panel with an unpersuasive woman.

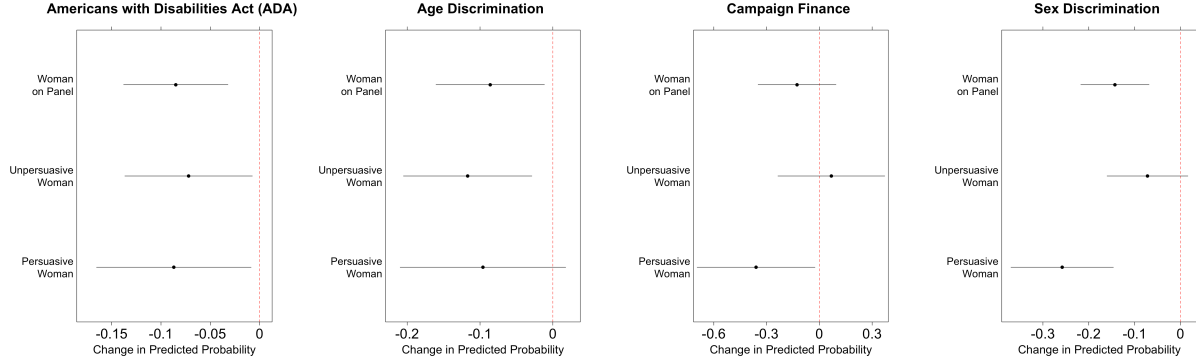
However, there is a large substantive effect on a man’s vote when one moves from a panel of all men to a panel with a persuasive woman. The change in predicted probability that a man will vote pro-plaintiff is an increase of over 25.8 percentage points (see Figure 5(d)). We can safely reject the null hypothesis that there is no statistical difference between the difference in predicted probability of a man on a panel of all men compared to a man on a panel with a persuasive woman.

What’s more, the substantive effect of persuasive women judges on men’s votes, is even larger than both a judges’ ideology and the direction of the lower-court decision. This makes sense, since persuasive judges have a proven track record of overcoming ideological differences and judicial norms. Finally, I do not find a statistically significant effect in a how a man’s persuadability (pdi) effects their vote choice.

<sup>23</sup>I have transformed the “most persuasive woman on the panel” variable into a categorical variable from a continuous variable for a specific reason. In order to keep the two models directly comparable, I needed to include panels of all men as a base line in the persuasion model, as it is in the presence model. If the panel has a woman, rather than a 1 as in the presence model, there are now two categories. While some might argue that a two category cut point is arbitrary, and 3, 5 or 7 categories may be a better fit, I erred on the side of parsimony and felt that two categories fit the data best.

The persuasion model adds the new persuasion variable in three forms. First, I change the primary independent variable from the naive understanding of presence. In the naive model the only concern was about whether or not there was a woman on the panel. The persuasion model assumes that not all women judges are equal, however. The new independent variable behaves similarly, but creates a new category: women’s persuasiveness.<sup>23</sup> In the event that there are two women judges on the panel, only the *most* persuasive woman on the panel is considered (8.5% of the cases). We also are interested in the effect men’s persuadability (pdi) has on the outcome of his vote. Furthermore, I control for his persuasiveness as well, to see if there is any “push back” effect.

What I find in the persuasion model is striking. When persuasion is added to the model (replacing the variable “woman on panel” in the presence model), the statistical and substantive effect of the naive—presence only— model, *completely disappears* (see Table 1, and Figure 3). That is, in the presence only model there is a 14.3 percentage point increase in the probability that a man will vote pro-plaintiff when there is a woman present on the panel. This is both



**Figure 5:** Change in Predicted probability of a man’s vote by case type with 95% confidence intervals. (a) Americans with Disabilities Act (ADA), (b) age-discrimination, (c) campaign finance and (d) sex discrimination.

Furthermore, we see no evidence that there is a “push back” effect, that a man’s persuasiveness (PI) increases or decreases their likelihood to vote one way or another—while the coefficient is statistically significant, the substantive interpretation is cloudy, at best. The coefficient is not large enough to warrant much attention—it shares an almost identical magnitude of effect as the year the case was decided. Additionally, the effect is negative—opposite the expected direction if one theorized a “push back” effect.

### Testing The Model on Other Case Types

I conduct this same analysis on other case types as well. Instead of sub-setting on sex discrimination case types, I subset on each of the other 13 case types in the dataset. This allows us to see if the effect of persuasive women judges are observed on other case types as well. What I find is that only on sex discrimination cases does the effect of having a woman on the panel get erased by controlling for the persuasiveness of the woman (see Figure 5(d)). However, on one case type, Campaign finance, there are no observed gender effects in a presence only model at all, but when we move the persuasion model, there are strong, statistically significant effects of having a persuasive woman on the panel (see Figure 5(c)). On Americans with Disabilities Act (ADA) cases, the gender effect does carry over from the presence only model for both persuasive and unpersuasive women judges (see Figure 5(a)). Finally, on age discrimination case types, the gender effect carries over from the presence only model to the persuasion model, only for unpersuasive women, while the effect of persuasive women is not statistically significant<sup>24</sup> (see Figure 5(b)).

## DISCUSSION

Analyzing the data reveals support for three of the four hypotheses. Women judges are, in the aggregate, on average, more persuasive than men. On gendered panels on sex discrimination cases, the persuasiveness of the woman proved to be a critical factor in the effect observed on the man’s probability to vote pro-plaintiff. However, the man’s persuadability did not prove to be an important factor statistically. Finally, comparing the persuasion model to the

<sup>24</sup>This more than likely due to measurement error than any substantive causal story.

naive presence-only model I find major statistical and substantive differences. In the naive model, there is a strong effect between a panel of all men and a gendered panel. That is, a man is significantly less likely to vote pro-plaintiff on a panel of all men. However, when I change to the persuasion model, that effect almost completely explained by addition of a *persuasive* woman, as there is no statistical difference in the vote probability of a man on a panel of all men and a panel with an unpersuasive woman.

These finding makes sense if one regards the Jackie (and Jill) Robinson effect as described by Anzia and Berry (2011). That is, if one believes that women assume that there are gender barriers in the institution, and that women generally perceive themselves as under-qualified (compared to me who usually, and often erroneously, perceive themselves as qualified), then only the most qualified women judges would make it to the highest levels of their profession. However, even among highly qualified women judges, there are those who better and more seasoned at their profession, and it is those women judges where I find the strongest effects on men. Furthermore, given the unique personal experience of women judges, I do find a differences in individual voting behavior among men and women judges, particularly on sex discrimination cases. It may be the case that unpersuasive women judges given opportunities to represent other women attempted just that, but weren't able to achieve their goals the same way that persuasive women judges were able to consistently do.

There is at least one potential limitation to this study which is that I did not pre-treat the data with a matching technique. Given that matching severely decreases the sample size, and its effects are marginal, I did not feel the need to pre-treat the data.

One idea for future research could include an analysis of the individual judges that are deemed persuasive, analyze their arguments in order to compare them to unpersuasive judges to see if their are rhetorical gaps between the two groups. This qualitative approach could give a more grounded feeling to this study.

Additionally, studying the effect of persuasion in other areas of law using race, rather than gender, as the primary intersection could prove valuable as well. Persuasion could also be used to study the effects of gender and race in other small-group setting as well, such as the legislative committee or an executive cabinet, to give a few examples.

The results highlight the idea that studying the effects of gender without a measure of performance may lead to unnecessary erroneous conclusions about both the women and the men being studied. One of the key contributions of this work is to show that not all women judges do not affect men equally. Consider the persuasion story; that it is not just the descriptive characteristics of gender, nor shared experience with the plaintiffs that cause men to "defer" to their women counterparts, it is the judicial skill of a judge, that when she exerts her will to achieve her goal, that is what creates panel effects.

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