THE COMPARATIVE OUTPUTS OF MAGISTRATE JUDGES

Christina L. Boyd*

Do federal magistrate judges make different decisions and produce distinct judicial outputs from district judges? To provide initial empirical evidence on this question, this study utilizes federal district court data covering issue areas including employment discrimination, broader civil rights, intellectual-property rights, and personal-injury torts. The data indicate that magistrate judges are actively involved in civil cases, with as many as sixty-seven percent of cases having one or more magistrate judges serving in some role. These magistrate judges commonly preside over settlement conferences, decide discovery motions, issue reports and recommendations on dispositive motions, preside over status, management, and scheduling conferences, and serve as the assigned judge in the case by the consent of the parties. While there are numerous areas where there is no statistical difference in the outputs of magistrate judges and district judges, notable differences include grant rates of discovery motions, the likelihood of cases settling, appeal rates, the number of days to case resolution, the number of docket entries before case resolution, and the likelihood of opinion publication. The results may be due to differences in behavior between district judges and magistrate judges or, instead, may be driven by non-random opinion assignment practices.

This project also provides empirical insight into two additional, closely related questions. For the first question of whether prior experience as a magistrate judge affects district judge behavior, the data reveal that differences in settlement probabilities again emerge. The data also show a lower rate of report and recommendation non-adoption, and a higher number of words and citations per opinion among district judges with magistrate judge experience than those without that same background. For the second question of whether magistrate judges who receive future Article III district court appointments behave differently from their magistrate colleagues who do not, the data indicate that future district judges have higher grant rates on discovery motions and lower rates of appeal than

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other magistrate judges. There are also no instances in the data of these future appointees having their reports and recommendations not adopted. The article ends with an encouragement of additional data collection efforts on magistrate judges' decisions and activities to further the systematic inquiry into this important subject.

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<div align="center">INTRODUCTION</div>

The Federal Magistrates Act of 1968, as amended and codified at 28 U.S.C. §§ 631–639, details the important role of magistrate judges (MJs) in the U.S. district courts today. For purposes of this article, 28 U.S.C. § 636 is particularly instructive, describing the jurisdiction and powers of these judges in civil cases.[1] Three areas of MJ civil jurisdiction and power are of note: (1) hearing and determining various pretrial matters,[2] (2) conducting hearings and submitting to the district judge findings of fact and recommendations for the

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[1] 28 U.S.C. § 636 (2012) also details MJ powers and jurisdiction in criminal cases, a subject that is beyond the scope of this Article's inquiry.

[2] *Id.* § 636(b)(1)(A). This subsection clarifies that a District Judge may not designate MJs to "hear and determine" the following matters:

    [A] motion for injunctive relief, for judgment on the pleadings, for summary judgment, to dismiss or quash an indictment or information made by the defendant, to suppress evidence in a criminal case, to dismiss or to permit maintenance of a class action, to dismiss for failure to state a claim upon which relief can be granted, and to involuntarily dismiss an action.

Id.

ultimate disposition,[3] and (3) upon the consent of the parties, conducting any or all proceedings in a case and ordering its entry of judgment.[4]

This article seeks to provide an initial empirical overview of the outputs and activities of MJs serving in these three important roles in civil federal district court cases. To do so, this project utilizes a wide range of data to investigate how often MJs participate in civil cases, what activities they engage in, what decisions they make, and how their presence in a case as the consent judge (via point (3) above) or as a pretrial participant (via points (1) and (2) above) affects the case's outcome and outputs, if at all. Throughout this piece, the behavior and outputs of MJs are compared to those of the Article III district judges (DJs) with whom they serve alongside. This comparison between the outputs of MJs and DJs permits the examination of the question at the heart of this article: Do MJs produce distinct judicial outputs from DJs?

While the other articles of this Symposium issue more fully weigh in on why we should or should not expect differences between MJ and DJ outputs, a few points are worthy of note here. When it comes to rationale for why we might expect a difference in the outputs of MJs and DJs, one potential explanation includes the varying status and job protection of the judges. DJs are Article III appointees, nominated by the President and confirmed by the Senate, and holders of life tenure.[5] MJs are not.[6] Instead, they are selected by their district court colleagues for renewable eight-year terms and may be fired, sanctioned, or not chosen for reappointment.[7] Without the same codified independence and job protection that DJs enjoy, MJs may behave differently. Additionally, the role of MJs, in theory, is not identical to DJs. As 28 U.S.C. § 636(b)(1)(A) indicates, a great deal of a MJ's focus is on pretrial matters.[8] With this, it is possible that MJs develop a distinct set of skills and strengths during the course of their service, and that translates to different behavior.

On the flip side, however, the lack of Article III protection may serve as encouragement for MJs to attempt to behave exactly like DJs or at least in ways that should please DJs. Additionally, scholars examining trial court judging often conclude that there is little room for judicial discretion to operate in most decisions that are made.[9] This means that the parties, the types of cases, the facts of the cases, and the settled law as applied to those facts, are generally much better predictors of decisions and outputs than the identity of the judge or

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[3] *Id.* § 636(b)(1)(B). This subsection indicates that MJ "proposed findings of fact and recommendations" may be designated the task of conducting hearings, proposing findings of fact, and recommending a disposition on matters for all motions listed in subsection (A). *Id.*

[4] *Id.* § 636(c)(1).

[5] *See* U.S. CONST. art. III, § 1.

[6] *See* 28 U.S.C. § 631(e) (2012).

[7] *See* ADMIN. OFFICE OF THE U.S. COURTS, THE SELECTION, APPOINTMENT, AND REAPPOINTMENT OF UNITED STATES MAGISTRATE JUDGES 2 (2010).

[8] *See supra* note 2 and accompanying text.

[9] *See, e.g.*, Pauline T. Kim, *Lower Court Discretion*, 82 N.Y.U. L. REV. 383 (2007).

external constraints.[10] While this research area is by no means settled, these conclusions would seem to indicate that we may have little reason to expect differences in outputs between DJs and MJs.

This article also provides the opportunity to empirically examine two additional questions that are closely related to the decision making of MJs. First, does experience as a former MJ affect DJ behavior? Ultimately, if MJs develop a unique set of skills and strengths while serving in that role, it is likely that these things will translate into a different type of DJ than one entering the district court with other background experiences. Much of the expectations for what effect, if any, we should expect from previous MJ experience on DJ behavior are likely to depend on what this paper reveals regarding the MJ versus DJ question noted above. Second, do MJs alter their outputs to seek promotion via nomination and confirmation to an Article III district court judgeship? Here, the expectation is that some, but not all, MJs use their MJ role to "audition" for a DJ position. If this is indeed the case, we should expect to observe decision-making and output differences among these two types of MJs.

This article proceeds in six parts. Part I provides background on the two data sets used for this empirical examination and details the data exploration technique used for this preliminary endeavor. Part II then gives an empirical description of the participation of MJs in the two data sets. Part III provides an in-depth examination of the comparative outputs of DJs and MJs throughout the cases in the EEOC and Boyd data sets. Part IV conducts a similar exercise for examining whether DJs with and without MJ experience behave differently, and Part V does the same, in an abbreviated fashion, for MJs who do and do not receive future DJ appointments. Finally, Part VI summarizes the results from the project and reminds the readers of the numerous limitations within the empirical analyses.

I. THE DATA AND ANALYSIS

To provide empirical insight into the comparative outputs of MJs, this project uses two recently collected federal district court, civil law data sources: the EEOC litigation data and the Boyd data.

A. *EEOC Litigation Data*

The first source of data used in this project is the EEOC litigation data (EEOC data).[11] Collected, managed, and maintained by Pauline Kim, Margo

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[10] *See generally, e.g.*, Orley Ashenfelter et al., *Politics and the Judiciary: The Influence of Judicial Background on Case Outcomes*, 24 J. LEGAL STUD. 257 (1995); Denise M. Keele et al., *An Analysis of Ideological Effects in Published Versus Unpublished Judicial Opinions*, 6 J. EMPIRICAL LEGAL STUD. 213 (2009); Thomas G. Walker, *A Note Concerning Partisan Influences on Trial-Judge Decision Making*, 6 LAW & SOC'Y REV. 645 (1972); Christopher Zorn & Jennifer Barnes Bowie, *Ideological Influences on Decision Making in the Federal Judicial Hierarchy: An Empirical Assessment*, 72 J. POL. 1212 (2010).

Schlanger, and Andrew Martin, the EEOC data provide a vast quantitative and qualitative data set of Equal Employment Opportunity Commission-brought employment discrimination lawsuits filed between 1997 and 2006 in federal trial courts.[12] The data include a sample of 2,227 cases filed over this ten-year period within ninety-two of the ninety-four federal district courts.[13] These data were first publicly released in 2012.[14]

The EEOC data provide a detailed picture of federal district court litigation. Rather than simply focusing on final case outcomes like most court-related data collection efforts, the EEOC data were designed to systematically capture the different stages, participants, and activities within litigation. As a result, in addition to traditional case outcome and timing variables, these data include a record of nearly every motion (by type), scheduling, status, management, and settlement conference, ADR referral, parties' consent to trial before a magistrate, assignment of a new judge, and scheduling and postponement of a trial date, among many other activities. The data also include extensive details on the case participants (defendants, complainants, and all attorneys), the allegations made in the complaint, and the relief received by the plaintiff, if any.[15] For purposes of this project, the fine-grained nature of these data is ideal, particularly because each of the above-noted events and motions is attached to the presiding judge—including when that judge is an MJ who has not been formally assigned the case.

The EEOC data are uniquely suited to the MJ activity analysis conducted below, but the nature of the data also present limitations that are important to acknowledge and consider. As noted above, all of the cases in the EEOC data are brought by the EEOC and are related to employment discrimination.[16] The EEOC is, of course, an atypical plaintiff, and its decision to file a lawsuit is far from random.

The EEOC has statutory authority through the 1972 Equal Employment Opportunity Act to sue private employers to enforce legislation banning em-

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[11] *See* EEOC LITIG. PROJECT, http://eeoclitigation.wustl.edu [https://perma.cc/V2HK-X9ZS] (last updated July 3, 2013) (follow "Data Codebook" and "Master" hyperlinks).

[12] *See id.* The most common statutory basis for these lawsuits is Title VII of the Civil Rights Act of 1964 as amended through the Civil Rights Act of 1991 and the Pregnancy Discrimination Act of 1978 (42 U.S.C. § 2000(e)). *Id.*

[13] For ease of analysis and discussion, this current project does not examine the seventy-eight consolidated case observations in the EEOC litigation data and the eleven additional complex litigation cases in which only the injunctive relief was coded. This exclusion brings the total data number of case-level observations down from 2316 to 2227. The two district courts with no cases represented in the EEOC data sample are the District of the Virgin Islands and the District of Maine. *See id.*

[14] *See id.*

[15] *See id.* This level of coding better permits an examination of district court cases. *See generally* Pauline T. Kim et al., *How Should We Study District Judge Decision-Making?*, 29 J.L. & POL'Y 83 (2009).

[16] The 2227 cases in the data include eight cases in which the EEOC intervened in a private plaintiff's employment lawsuit. *See* EEOC LITIG. PROJECT, *supra* note 11.

ployment discrimination on the basis of sex, race, religion, and national origin.[17] Prior to bringing federal lawsuits to enforce these statutes, the EEOC conducts extensive internal review of the employment discrimination complaints that it receives.[18] Based on this review, the EEOC decides to file a federal district court lawsuit in some cases and declines to do so in others, a filtering process that the agency says is driven by "the seriousness of the violation, the type of legal issues in the case, and the wider impact the lawsuit could have on EEOC efforts to combat workplace discrimination."[19] For most complaints, the EEOC chooses to not file a federal lawsuit.[20] For example, in the 2001 fiscal year, the EEOC reported that nearly 81,000 individual charges of employment discrimination were filed in its office.[21] Of these, just 428 enforcement lawsuits were filed by the agency in federal district courts.[22]

Compared to "typical" district court litigation,[23] the EEOC data cases have a great deal of consistency among them. The EEOC, as a federal government agency and frequent filer in federal district courts, is a repeat, advantaged player in federal litigation.[24] The complaints filed by the regional attorneys across the country are very similar to each other in formatting and content.[25] The de-

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[17] *See* 42 U.S.C. § 2000e-5 (2012). This includes, for example, Title VII of the Civil Rights Act of 1964 and subsequent legislation amending it, the Age Discrimination in Employment Act, and the Americans with Disabilities Act. *See Laws Enforced by EEOC*, U.S. EQUAL EMP. OPPORTUNITY COMMISSION, http://www.eeoc.gov/laws/statutes [https://perma.cc/WX7G-P6CZ] (last visited Mar. 20, 2016).

[18] *Filing a Lawsuit*, U.S. EQUAL EMP. OPPORTUNITY COMMISSION, www.eeoc.gov/employees/lawsuit.cfm [https://perma.cc/RU28-SKM4] (last visited Mar. 20, 2016). Statutory and administrative procedure require nearly all employment discrimination complaints that may eventually be brought into federal court to first be filed with the EEOC. The notable exception are those complaints based on age discrimination claims. *Id.*

[19] *Litigation Procedures*, U.S. EQUAL EMP. OPPORTUNITY COMMISSION, http://www.eeoc.gov/eeoc/litigation/procedures.cfm [https://perma.cc/D8Y7-BA35] (last visited Mar. 11, 2016).

[20] *Id.*

[21] *Charge Statistics FY 1997 Through FY 2015*, U.S. EQUAL EMP. OPPORTUNITY COMMISSION, http://www.eeoc.gov/eeoc/statistics/enforcement/charges.cfm [https://perma.cc/2SMZ-VDE8] (last visited Mar. 20, 2016).

[22] *EEOC Litigation Statistics, FY 1997 Through FY 2015*, U.S. EQUAL EMP. OPPORTUNITY COMMISSION, http://www.eeoc.gov/eeoc/statistics/enforcement/litigation.cfm [https://perma.cc/N6XA-EVVM] (last visited Mar. 20, 2016). *See generally* C. Elizabeth Hirsh, *Settling for Less? Organizational Determinants of Discrimination-Charge Outcomes*, 42 LAW & SOC'Y REV. 239 (2008).

[23] *See* LEE EPSTEIN ET AL., BEHAVIOR OF FEDERAL JUDGES: A THEORETICAL AND EMPIRICAL STUDY OF RATIONAL CHOICE 232 (2013) (noting that "many cases are filed by pro se or emotional litigants and by litigants represented by inept or inexperienced lawyers").

[24] *See generally* Marc Galanter, *Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change*, 9 LAW & SOC'Y REV. 95 (1974).

[25] *Compare* Complaint, EEOC v. Vasquez Bros., Inc., No. 5:05-cv-03867-PVT, 2005 WL 5473972 (N.D. Cal. Sept. 26, 2005), http://www.clearinghouse.net/chDocs/public/EE-CA-0050-0001.pdf [https://perma.cc/7U75-PKKA], *with* Complaint, EEOC v. Atlanta Gastroenterology Assocs., No. 1:05-cv-2504-TWT, 2006 U.S. Dist. LEXIS 101580 (N.D. Ga. Sept.

fendants are employers, typically medium- and large-sized businesses and cor-porations.[26] The majority of cases are resolved via a Consent Decree.[27] This level of consistency among the cases in the data is very helpful from a social science perspective—it is much easier and more reliable to compare "apples to apples"—but, at the same time, the atypical nature of the data means the cases are not wholly representative of federal district court litigation. The degree to which this limitation affects this project's ability to speak to the broader outputs of MJ activities like presiding over settlement conferences, making decisions on discovery motions, and serving as consent judges is less clear.

B.   *Boyd Data*

The second source of data for this analysis is referred to as the Boyd data. These data, originally collected by the author here for a Ph.D. dissertation pro-ject on the federal district courts,[28] include a sample of cases terminated in twenty-five federal district courts from 2000 to 2006.[29] The issue areas provid-ed for inclusion in the study were identified by their nature of suit code (NOS) and include civil rights,[30] other contract disputes,[31] intellectual-property rights,[32] and personal-injury torts.[33]

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[27] 2005), http://www.clearinghouse.net/chDocs/public/EE-GA-0003-0001.pdf [https://perma.cc/NF5T-9FQB].

[26] *See* Margo Schlanger & Pauline Kim, *The Equal Employment Opportunity Commission and Structural Reform of the American Workplace*, 91 WASH. U. L. REV. 1519, 1583 (2014).

[27] *See id.* In the EEOC data, 1,520 cases—or 68.25 percent—terminated via a consent judgment. *See* EEOC LITIG. PROJECT, *supra* note 11.

[28] *See generally* Christina L. Boyd, Placing Federal District Courts in the Judicial Hierarchy, (Aug. 2009) (unpublished Ph.D. dissertation, Washington University in St. Louis), http://openscholarship.wustl.edu/etd/43 [https://perma.cc/K8YB-YAEX].

[29] *Id.* at 21–22. The data include observations from the following district courts: C.D. Cali-fornia, D. Colorado, D. Delaware, D. Kansas, D. Maryland, D. Rhode Island, D. South Da-kota, E.D. Louisiana, E.D. Michigan, E.D. Missouri, E.D. New York, E.D. Virginia, M.D. Florida, M.D. Pennsylvania, N.D. Florida, N.D. Georgia, N.D. Iowa, N.D. Illinois, N.D. In-diana, N.D. Ohio, N.D. Oklahoma, N.D. Texas, S.D. New York, W.D. Tennessee, and W.D. Washington. *Id.* These districts were selected for inclusion in the study based on their distri-bution across circuits and the willingness of their chief judges to grant me PACER fee ex-emptions. Due to data collection hurdles and decisions, not all of these districts are repre-sented in every analysis of the Boyd data. The opinion content analysis below does not include N.D. Indiana, N.D. Ohio, or N.D. Oklahoma. The MJ report and recommendation analysis does not include D. Delaware, E.D. Missouri, N.D. Illinois, W.D. Tennessee, or W.D. Washington.

[30] Codes 440 (Other Civil Suits), 442 (Employment), 443 (Housing/Accommodations), and 444 (Welfare). *Nature of Suit Codes*, PUB. ACCESS TO CT. ELECTRONIC RECS., https://www.pacer.gov/documents/natsuit.pdf [https://perma.cc/KG2B-VQCJ] (last visited Mar. 21, 2016).

[31] Code 190 (Other Contract). *Id.*

[32] Codes 820 (Copyrights), 830 (Patent), and 840 (Trademark). *Id.*

[33] Codes 310 (Airplane), 320 (Assault, Libel, & Slander), 340 (Marine), 350 (Motor Vehi-cle), and 360 (Other Personal Injury). *Id.*

Originally collected to address district court decision making and the inter-action of these courts with the rest of the federal judicial hierarchy,[34] these data have been expanded to cover related questions on the opinion writing of judges in federal district courts[35] and the potential principal-agent relationship between DJs and MJs.[36] As a result, the data include coded details for each case that are quite relevant to this current project, such as the outcome of the case, including whether there is a settlement, and whether the plaintiff or defendant wins (via, e.g., a dispositive motion or trial); the presence of an appeal following the final district court resolution and, if present, the outcome on appeal; and the identity of the presiding judge, including MJs presiding over cases after the parties have consented to MJ jurisdiction (consent MJs) The data also include details on MJ reports and recommendations (R&Rs) in the cases from the identity of the re-porting MJ, the identity of the supervising DJ, whether the DJ adopts the R&R, and whether a party in the case opposes the recommendation. Finally, the data include original content details on district court opinions that extend to who au-thored each opinion, whether the opinion is published, the length (in words) of each opinion, and the number of outward citations within the opinions.

The Boyd data nicely complement the EEOC data. The broader set of issue areas and litigant types within them better represent the "typical" variation in civil cases in federal courts described above than the much less variable EEOC district court litigation. This breadth thus provides a way to check, at least in part, whether the EEOC data MJ results hold in other settings. The Boyd data are much less fine-grained—no detailed coding on, for example, non-case ter-minating motions, complaint contents, or the type and extent of the relief pro-vided upon resolution—but, at the same time, the data provide content on opin-ions and R&Rs that simply are not in the EEOC data.

C. Notes on Analyzing the Data

This project utilizes data exploration to examine questions of interest. The project lacks traditional hypothesis testing—something that is better suited for future projects *after* we have enough information to craft theoretically informed expectations—and the project does not perform causal inference. Any interpre-tation of MJ-related output statistics, like that presented here, must proceed with caution. Case assignment methods to MJs vary significantly by district, but randomization should not be assumed. As a result, any observed differences

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[34] For the projects resulting from these initial question see Christina L. Boyd, *The Hierar-chical Influence of Courts of Appeals on District Courts*, 44 J. LEGAL STUD. 113 (2015); Christina L. Boyd, *Litigant Status and Trial Court Appeal Mobilization*, 37 LAW & POL'Y 294 (2015); Christina L. Boyd, *She'll Settle It?*, 1 J.L. & CTS. 193 (2013).

[35] *See* Christina L. Boyd, *Opinion Writing in the Federal District Courts*, 36 JUST. SYS. J. 254 (2015).

[36] *See* Christina L. Boyd & Jacqueline M. Sievert, *Unaccountable Justice? The Decision Making of Magistrate Judges in the Federal District Courts*, 34 JUST. SYS. J. 249 (2013).

between MJs and DJs in the data below may be because of actual behavioral differences but may also be the result of differences in the underlying cases.

Additionally, as the below analyses will reveal, while the initial sample sizes in both the EEOC data and Boyd data are relatively large, the sample sizes begin to quickly shrink as the data are sliced up to examine only a subset of cases at a time. Because the data were not originally collected for an MJ-focused study, the inclusion of data points focused on consent MJs, MJ-authored opinions, and MJ-authored R&Rs is not particularly high. This is most noticeable when the data are further divided, as is the case in the last data section of the paper searching for a district court auditioning effect among MJs.

II. DESCRIBING MAGISTRATE JUDGE PARTICIPATION IN THE DATA

The first part of this data examination looks to the frequency and degree of MJ participation in the EEOC data and Boyd data.

A. MJ Descriptives: EEOC Data

In the EEOC data, the incidence of MJs in the data can be examined in a number of interesting ways. To begin, Figure 1 (below) details the distribution of MJs in the data's cases by the number of MJs present per case. MJ presence here is broadly defined to include consent MJs, MJs hearing motions, and MJs presiding over a docketed event like a settlement or management conference. This number ranges from zero to four MJs per case, with the modal case having one MJ participating at some point.[37] Figure 1 displays the distribution of MJ numbers as a percentage of cases in the data (left-hand y-axis and gray bars) and the frequency of cases (right-hand y-axis and black diamonds). As it reveals, 56 percent of the data (1,242 cases) have one MJ participating in some form, and nearly 10 percent of the data (218 cases) have two MJs participating in some form. Thirty-three percent of the cases (738 observations) have no MJs present (which means, of course, that 67 percent of cases have one or more MJ). Just over 1 percent of the cases (26 cases) have three MJs present in them, and three additional cases have four coded MJs participating during the docketed life of the cases.

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[37] This count of MJ incidence errs on the side of undercounting MJ participation. Although the EEOC data coding scheme covers most judge activity in a case, there is potential that additional MJs participated in a case in a way that did not yield coding. For example, the coding for discovery motions captures substantive, contested discovery motions like motions to compel or motions for protective orders. The coding does not extend to discovery motions on things like timing or numerical limits. If an MJ's activity in a case only involves ruling on a discovery motion of the latter type, he or she is not counted in Figure 1.

FIGURE 1: NUMBER OF MAGISTRATE JUDGES PRESENT PER CASE
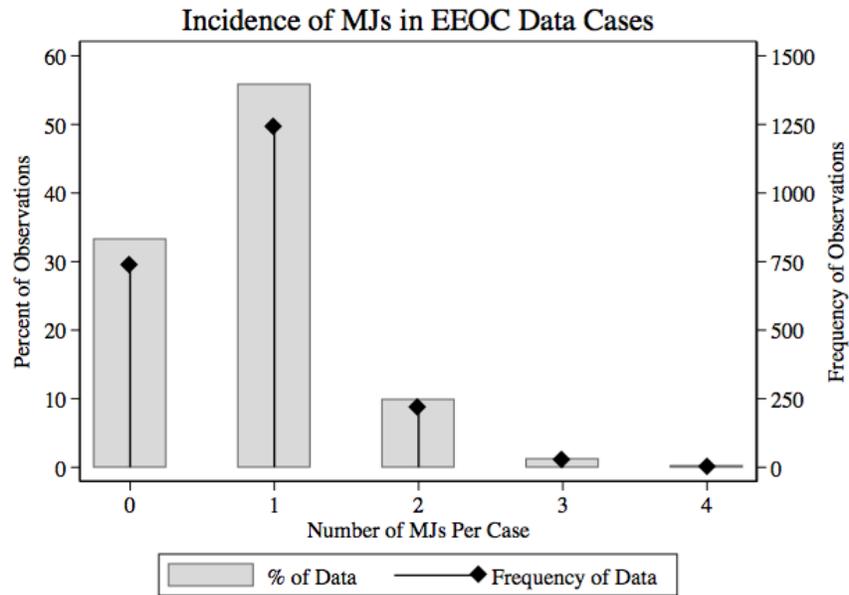
Let us look more deeply into MJ participation in the EEOC data cases. One important type of MJ participation in the EEOC data is consent MJs. Out of the 2227 cases considered in the EEOC data, 103 of them—under 5 percent—have consent MJs presiding. How is this number distributed across the district courts within the data? To illustrate this, Figure 2 depicts the percentage of the EEOC data cases hailing from each district court that have a consent MJ presiding over them.[38] To save space, the figure only depicts those districts with a consent MJ rate above 7 percent. While the very small district-by-district samples require interpretation caution, the figure does indicate that a number of districts have high rates of consent MJ participation and, likely, very low rates of non-consent to MJ jurisdiction. The District of Vermont, District of Montana, Middle District of Louisiana, and Middle District of Alabama all have consent MJ rates at or above 40 percent while the Northern District of Mississippi, Western District of North Carolina, and Central District of Illinois have consent MJ rates at or above 20 percent. Even a district like the Northern District of Illinois, which at 126 has the most cases in the EEOC data of any district, has fourteen consent MJ cases—i.e., 11 percent. On the low end of consent MJ participation (not depicted in Figure 2) are districts like Western Washington (one

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[38] Because the EEOC data utilizes sampling (not constructed based on MJ participation) and does not represent the universe of EEOC-brought cases during the years of the study, these percentages reflect only the sampled data. That means, for example, that while a district like Vermont has a 100 percent consent MJ rate in the sample, it may well have most of its cases assigned to a district court judge.

out of sixty cases), Central California (one out of sixty-five cases), Maryland (one out of seventy-eight cases), Eastern Michigan (one out of eighty-three cases), and fifty-two additional districts with no consent MJs at all within the data.

FIGURE 2: PERCENTAGE OF CASES IN THE EEOC DATA,
BY DISTRICT COURT, WITH A CONSENT MJ PRESIDING

Percentage of Cases With Consent MJ
By District - EEOC Data
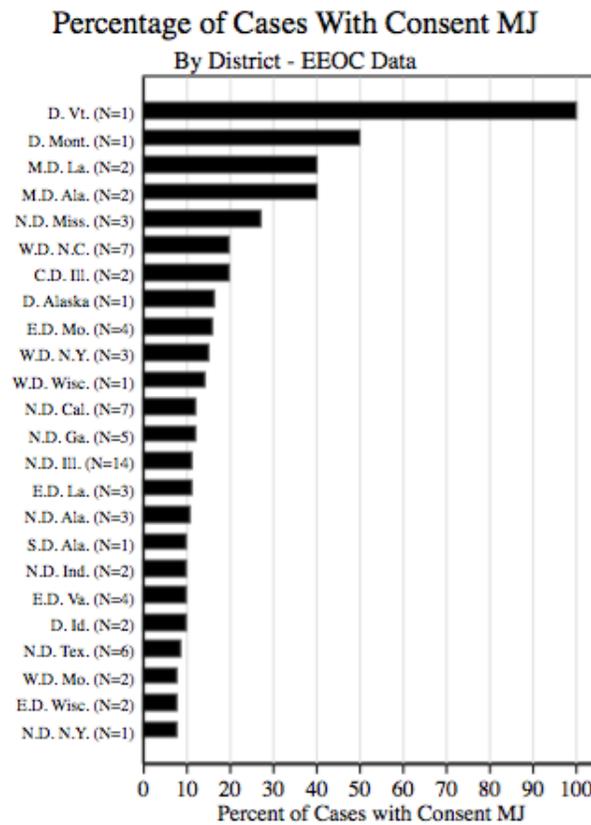
An important benefit of the EEOC data is its motion-level coding. In other words, nearly every motion is coded from the moment the plaintiff or defendant files the motion to the moment the motion is resolved by the judge (or the case terminates while the motion is still pending). This permits an examination of all of the motions, by type, that MJs resolve. Later, this article will dig into the direction of those motion rulings, but first, Figure 3 displays the breakdown of motion rulings of MJs and, for comparison, DJs, in the data. The gray bars in the figure indicate the percentage of MJ motion activity allocated to each type of motion while the black bars do the same for DJs. As the gray bars indicate, most MJ motion activity in the data involves discovery motions. Indeed, nearly 75 percent of MJ ruled-on motions (N=1138) were discovery motions. By comparison, as the black bar shows, only 27 percent of DJ motions (N=897)

were discovery motions. MJs also heard a significant number of motions by the plaintiff to intervene in the case (15 percent of their motions; N=225).[39] Of course, neither of these types of motions—interventions nor discovery—require the parties to consent to MJ jurisdiction.[40] By comparison, dispositive motions like summary judgment or involuntary dismissal for lack of jurisdiction or failure to state a claim, require consent MJs.[41]

FIGURE 3: DISTRIBUTION OF MOTIONS AMONG MJS AND DJS IN THE EEOC DATA

Distribution of Motion Type Rulings By Judge Type (EEOC Data)
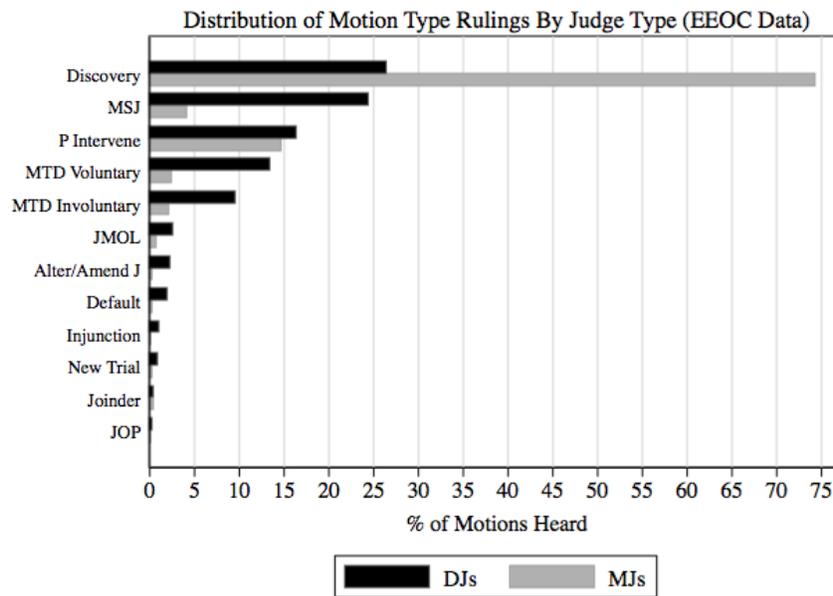
Moving beyond motions, Table 1 provides descriptive details on other areas in the EEOC data where MJs participated in cases. These areas include MJs presiding over scheduling, management, and status conferences, making ADR referrals, and presiding over settlement conferences. As Table 1 indicates, these are each areas where MJs are prolific and participate in numbers that rival or even exceed those of their district judge colleagues. The EEOC data reveal 1,020 instances of MJs presiding over scheduling, management, and status conferences in cases. This accounts for nearly 41 percent of all instances of these types of important organizational conferences in the data. There were also eighty-four times that an MJ referred a case to ADR (28 percent of all such re-

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[39] In the EEOC data, that usually involves the complainant seeking to intervene as a private plaintiff in the EEOC's lawsuit.

[40] *See* 28 U.S.C. § 636(b)(1)(A) (2012).

[41] *See id.* §§ 636(b)(1)(A), (c)(1). The EEOC motion data does not capture R&Rs on a motion. Rather, the DJ's decision to adopt, modify, or not adopt the R&R is coded as the final motion outcome.

ferrals). Finally, 82 percent of the settlement conferences in the data (N=562) were presided over by MJs.

TABLE 1: DISTRICT AND MAGISTRATE JUDGE CASE ACTIVITY RATES[42]

	District Judges	Magistrate Judges	Combined Total
Presiding Over Scheduling, Management, or Status Conferences	1476 (58.97%)	1020 (40.75%)	2496 (99.72%)
Making ADR Referral	212 (71.62%)	84 (28.38%)	296 (100%)
Presiding Over Settlement Conferences	120 (17.57%)	562 (82.28%)	682 (99.85%)
Consent to Trial by Magistrate Judge	N/A	103 (4.6% of cases in EEOC data)	103

Viewed together in this descriptive sense, the EEOC data confirm that the parties in these cases are often working with MJs and doing so in a variety of contexts. These party-MJ interactions include MJs presiding over cases as the assigned judge, MJs hearing and deciding motions, and MJs working closely with the parties in scheduling or settlement conferences.
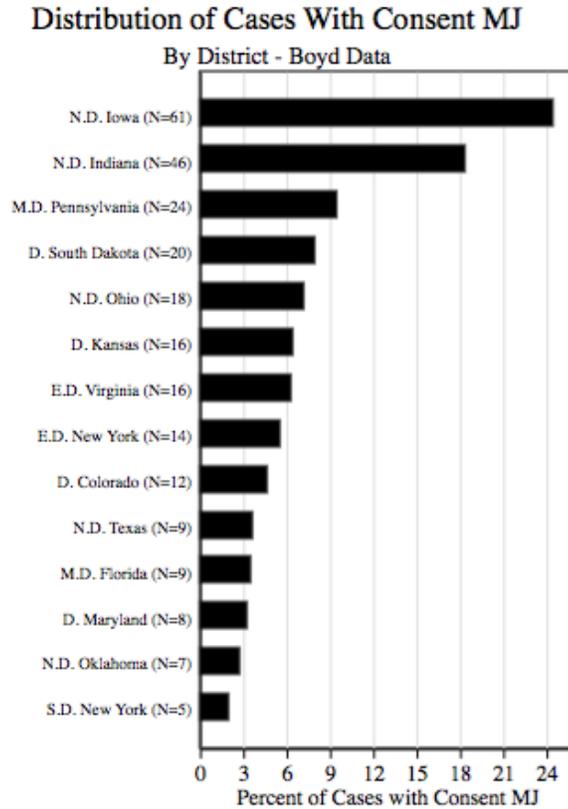
B.   MJ Descriptives: Boyd Data

In the Boyd data, 274 of 5,047 cases have an MJ presiding over the case by the consent of the parties. This is 5.43 percent of the total Boyd data. The distribution of these cases, provided as a percentage of each district court's total cases within the data, is provided in Figure 4. With a higher total number of observations than the EEOC data, Figure 4 provides additional useful information on how often district courts are successfully (via parties' consent) assigning cases to MJs. As the figure indicates, over 24 percent of the N.D. of Iowa cases and over 18 percent of the N.D. of Indiana cases in the data have an assigned MJ. Other high percentage districts include M.D. Pennsylvania (9.5 percent), D. South Dakota (8 percent), N.D. Ohio (7 percent), D. Kansas (6.4 percent), and E.D. Virginia (6 percent). The figure excludes districts with MJ consent participation below 1.5 percent—in this case, that is C.D. California, D. Rhode Island, E.D. Louisiana, E.D. Michigan, and N.D. Florida.[43]

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[42] These statistics were computed using the EEOC data. The data do not preclude multiple observations or incidents of the above events per case. Percentages were computed by event (i.e., by row). Some rows do not add up to 100 percent because of excluded non-MJs and non-MJs from the calculation. These excluded judges are circuit judges hearing cases in district courts by designation. All EEOC data computations exclude consolidated cases.

[43] Comparing these numbers to EEOC data described in Figure 2 and the surrounding text is tempting but does not likely provide much insight. Top performers in the Boyd data, includ-

FIGURE 4: PERCENTAGE OF CASES IN THE BOYD DATA,
BY DISTRICT COURT, WITH A CONSENT MJ PRESIDING

The Boyd data code MJ R&Rs and thus provide interesting insight into this

Distribution of Cases With Consent MJ
By District - Boyd Data

important MJ activity. Within the Boyd data, 364 of 5,047 cases, or 7.2 percent of the data, have R&Rs. Table 2 provides descriptive details on the distribution of these R&Rs across the different types of case motions and judge rules. Interestingly, the modal case area where MJs issue R&Rs is involuntary motions to dismiss. Forty-eight percent of the MJ R&Rs in the data involved these motions. This provides an interesting statistic when combined with Figure 3's details on types of motions for MJs in the EEOC data. In Figure 3, there were very few instances of MJs hearing involuntary motions to dismiss as consent judges, a result driven by the relatively small number of consent MJs. With Table 2's result regarding MJs and R&Rs, we find confirmation that it is not that

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ing N.D. Iowa, M.D. Pennsylvania, D. South Dakota, and N.D. Ohio, had no observations of consent MJs in the EEOC data, a result that is much more likely due to the different sampling schemes within these two data sets than MJ assignment practices in these districts. The Boyd data drew a random sample of 250 cases per district within the issue areas of focus. By contrast, the EEOC data's sampling scheme combined districts.

MJs are not making decisions on motions to dismiss but, rather, that they are doing so in a non-binding R&R setting rather than as the consent judge. MJs also issue a number of R&Rs on motions for summary judgment (22 percent). Other types of motions and activities show up less often in the R&R context for MJs—from discovery motions to motions to proceed *in forma pauperis*. The reasons for this likely vary, from the low frequency of the motions to the lack of need for a R&R given the non-dispositive nature of the motion.

TABLE 2: DISTRIBUTION OF REPORTS AND RECOMMENDATIONS
IN DATA, BY STAGE OF CASE[44]

	Reports and Recommendations in Data
Motion to Dismiss (involuntary)	48.26% (N=166)
Motion for Summary Judgment	22.09% (N=76)
Motion for Entry of Default Judgment	6.98% (N=24)
Issues related to fees, damages, sanctions, and/or counsel	6.98% (N=24)
Motion to proceed IFP	4.94% (N=17)
Settlement Entry or Enforcement	2.62% (N=9)
Discovery Motion	2.03% (N=7)
Motion for Injunction	2.03% (N=7)

Within the Boyd data, seventy-five of the 693 opinions were authored by MJs. Of these, the distribution of type of opinion is provided in Table 3. As the table reveals, these opinions are almost evenly divided between R&Rs (31 percent), non-R&R discovery motions (32 percent), and opinions in which the MJ serves as the consent judge (29 percent). More details on the contents of these MJ opinions are provided below.

TABLE 3: DISTRIBUTION OF MAGISTRATE JUDGE OPINION TYPES[45]

Opinion Activity	Activity Rate
Magistrate Judge as Consent Judge	29% (N=22)
Report and Recommendation	31% (N=23)
Discovery Motion	32% (N=24)
Issues related to fees, damages, sanctions, and/or counsel	8% (N=6)

III. ANALYZING DECISION MAKING AND OUTPUTS: MAGISTRATE JUDGES V.

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[44] Data source is Boyd data. Low values of R&Rs are excluded from the table but included in percentage calculations. These include stays, motions to amend complaints, and motions to transfer.
[45] Data source is Boyd Opinion Data.

DISTRICT JUDGES

With a descriptive sense of MJ presence and activity in cases now in hand, it is time to move to an examination of the decision-making and outputs of MJs and how these compare to DJs. To begin this inquiry, Table 4 examines the rulings of DJs and MJs on important motions in the EEOC data. The Table captures the probability of each type of motion being granted by whether the deciding judge is a DJ or MJ.[46]

Here, and in many of the results tables below, the right-hand column "Difference" details whether the reported statistics for DJs and MJs within a particular category are different from one another in a statistically significant way. If the two numbers (whether they are probabilities, percentages, or raw numbers) are not statistically different from one another, this column will indicate [NS]—i.e., not statistically significant. This means that even though the numbers reported for the DJs and the MJs may appear to be different from one another, statistically speaking, the two numbers' differences cannot be distinguished from zero. As an example, take the "Motion for Summary Judgment" row in Table 4. The Table reports that the probability of DJs granting these motions is 0.46, and the probability of MJs granting these motions is 0.526—a difference of 0.066. However, this difference is not statistically meaningful, something that is likely driven by the small total number of MJ observations (N=38) and the large variation in MJ activity in deciding summary judgment motions.

Just as MJs and DJs have no difference in their outputs for motions for summary judgment, there is no statistical difference in the outputs of MJs and DJs in rulings on involuntary motions to dismiss (where the average probability of granting for both is around 0.32). The same is true for motions for judgment as a matter of law (probabilities of granting between 0.19 and 0.25, not statistically different) and for motions by plaintiffs to intervene (probabilities of granting around 0.97 for both types of judges). In other words, at least within EEOC litigation cases, there is no systematic difference in motion outcome based on whether the deciding judge is a DJ or MJ.

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[46] This table considers granted motions to be those granted in whole or in part. It excludes all motions that are never decided and those filed by the parties as consent motions.

TABLE 4: PROBABILITY OF GRANTING MOTION, BY JUDGE AND MOTION TYPE[47]

Motion Type	District Judges	Magistrate Judges	Difference
Motion to Dismiss (Involuntary)	0.317 (N=265)	0.333 (N=18)	[NS]
Motion for Summary Judgment	0.460 (N=661)	0.526 (N=38)	[NS]
Motion for Judgment as a Matter of Law	0.192 (N=78)	0.250 (N=12)	[NS]
Plaintiff Motion to Intervene	0.964 (N=499)	0.970 (N=200)	[NS]
Discovery Motion	0.650 (N=491)	0.704 (N=830)	+0.05*

The one exception to the lack of statistical difference in motion outcomes is found at the bottom of Table 4 with discovery motions. Recall that the EEOC data's "discovery motions" only capture substantive discovery motions like motions to compel, strike, or enter a protective order. They do not extend to more procedural or administrative motions like limits on the number of pages or the timing of discovery. As we learned in Figure 3 above, discovery motions are an important, high-propensity part of MJs' jobs in civil cases. Table 4 reaffirms this with the 830 MJ discovery motion observations. Additionally, the Table indicates that MJs are more likely to grant discovery motions than their DJ counterparts—with the average probability of MJs granting being a statistically significant 0.05 higher than DJs. In other words, MJs are 5 percent more likely to grant discovery motions than DJs.

To further examine this difference between MJs and DJs resolving EEOC discovery motions, Table 5 breaks down discovery motion outcomes by type and disaggregates the grant in full motions from the partial grant motions. Upon doing so, Table 5's results indicate that the real differences between DJ and MJ discovery motion outcomes are in the partial grant and denial subcategories. MJ and DJ discovery motion outputs are nearly identical in the grant in full category—both do so about 41 percent of the time. MJs, however, are more likely to grant discovery motions in part (30 vs. 23 percent), and, by contrast, DJs seem to prefer to deny these discovery motions in full (35 vs. 30 percent).

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[47] The source for the data is the EEOC data. "*" designates that the difference is statistically significant at the $p < 0.05$ level. [NS] indicates that the difference between reported probabilities is not statistically significant.

TABLE 5: DISCOVERY MOTION OUTCOMES, BY JUDGE TYPE[48]

Motion Outcome	District Judges	Magistrate Judges
Grant in Full	0.422 (N=207)	0.405 (N=336)
Partial Grant or Partial Denial	0.228 (N=112)	0.299 (N=248)
Denial in Full	0.350 (N=172)	0.296 (N=246)

It is entirely possible that this difference in discovery motion results between MJs and DJs is driven less by differences in behavior and more by differences in the types and complexity of discovery motions heard. Since most of the discovery motions heard by MJs in the EEOC data are heard by referral MJs rather than by consent MJs, it may be that the discovery motions that DJs hear and decide themselves are less complex and time-consuming than those referred to MJs to manage and resolve. If that is the case, the resulting differences observed in Tables 4 and 5 are much more likely to be driven by the underlying motion pools.

We can move now from an examination of DJ and MJ outputs at the motion stage to the case-outcome stage. To start this, Table 6 provides a breakdown of case outcome types by judge type (DJs vs. consent MJs) for the EEOC data. As it reveals, for most types of case outcomes, their likelihood is indistinguishable based on whether the presiding judge for the case is a DJ or MJ. However, for two types of outcomes—settlements (broadly defined here to include private settlements and consent judgments) and jury verdicts in favor of the defendant—there is an appreciable difference between MJ- and DJ-assigned cases. MJ-presided EEOC cases are 7 percent less likely to settle than DJ-presided EEOC cases. By comparison, MJ-presided cases are 7 percent more likely to resolve by a defendant jury verdict than DJ-assigned cases. Both differences are statistically significant.[49]

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[48] The source for the data is the EEOC data.

[49] On a related note, in EEOC cases where one or more settlement conferences were held (see Table 1), the likelihood of those cases settling was very high—well above 80 percent. However, the position of the judge(s) presiding over those settlement conferences (MJ or DJ) has no noticeable effect on whether the case ultimately settles. DJ-presided settlement conferences lead to case settlement 81 percent of the time, whereas MJ-presided settlement conferences ultimately lead to settlement 83 percent of the time. The small difference between these two numbers is not statistically significant. This analysis does not double count cases, meaning that cases with more than one settlement conference are merged into one observation. If we treat each settlement conference as a single observation, the probability of case settlement rises (87 percent and 90 percent, respectively), but the differences between the types of presiding judges remain statistically insignificant.

TABLE 6: CASE OUTCOME TYPES BY JUDGE TYPE[50]

Case Outcome Type	District Judges	Magistrate Judges	Difference
Consent Judgments & Settlements	84.7% [N=1733]	77.8% [N=70]	-0.07*
Other Voluntary Dismissals (Non-Settlements)	3.2% [N=65]	2.2% [N=2]	[NS]
Involuntary Dismissals	0.5% [N=11]	1.1% [N=1]	[NS]
Default Judgment	2.1% [N=42]	1.1% [N=1]	[NS]
Plaintiff Summary Judgment	0.29% [N=6]	0% [N=0]	[NS]
Defendant Summary Judgment	5.4% [N=110]	3.3% [N=3]	[NS]
Plaintiff Jury Verdict	1.9% [N=39]	3.3% [N=3]	[NS]
Defendant Jury Verdict	1.8% [N=36]	8.9% [N=8]	+0.07*
Plaintiff Bench Verdict	0.2% [N=4]	2.2% [N=2]	[NS]

In the Boyd data, the case outcome is coded as a three-category variable based on whether the final resolution of the case is a settlement, a plaintiff victory, or a defendant victory.[51] The results of the comparison of DJ- and MJ-assigned cases for outcome type in the Boyd data are provided in Table 7. As the table indicates, MJ-assigned cases are 9 percent less likely to produce a defendant victory (via, for example, a bench or jury trial or a dispositive motion) than DJ cases and 9 percent more likely to produce a settlement than DJ cases. Once again, it seems that who the assigned judge is, MJ or DJ, may affect the case outcome.

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[50] The source for the data is the EEOC data. "*" designates that the difference is statistically significant at the $p < 0.05$ level. [NS] indicates that the difference between reported percentages is not statistically significant. Percentages are calculated by judge type for case outcome type and do not include excluded case outcome types. All included MJ observations were party consents to trial by MJ.

[51] Party victories are determined based on the final case resolution. If the plaintiff wins on one or more claims at trial or via a dispositive motion, she is generally classified as the winner for purposes of this coding scheme.

TABLE 7: CASE WINNERS AND OUTCOME BY JUDGE TYPE[52]

Case Outcome	District Judges	Magistrate Judges	Difference[53]
Plaintiff Wins	0.06 (N=266)	0.06 (N=66)	[NS]
Defendant Wins	0.33 (N=1459)	0.24 (N=17)	-0.09*
Case Settled	0.60 (N=2609)	0.69 (N=187)	+0.09*

As Tables 6 and 7 make clear, the baseline settlement probability between the EEOC data cases and the Boyd data cases is quite different, with the former being much more likely to settle than the more variable litigation found in the Boyd data. This should come as no surprise given the EEOC's litigation filtering process and goals.[54] These underlying differences are likely to hold at least some of the blame for the two tables' opposite direction results for case settlement between DJs and MJs. The fact that the Boyd data—i.e., cases with a much lower predisposition for settlement than the EEOC data—indicate a positive MJ effect on settlement is one that could be meaningful.

What about other case outcome products beyond who wins or the type of resolution? Does whether the assigned judge is an MJ or DJ matter there? Table 8 weighs in on this with some case-outcome product-descriptive statistics for MJs and DJs in the EEOC data. Interestingly, MJ-assigned cases have a 5 percent higher rate of appeal than DJ-assigned cases (7 percent appeal rate vs. 12 percent appeal rate). This may be driven, at least in part, by the outcome-type differences observed in Table 6. There are no statistically meaningful differences between MJ and DJ cases for the question of whether any relief is obtained (injunctive or monetary) by the plaintiff, the average amount the defendant pays (if any), or the number of pages in the injunctive-relief document (when present).

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[52] The source for the data is the Boyd data.

[53] "*" designates that the difference is statistically significant at the $p < 0.05$ level. [NS] indicates that the difference between reported probabilities is not statistically significant.

[54] *See supra* note 19.

TABLE 8: CASE OUTCOME PRODUCTS BY JUDGE TYPE[55]

Case Outcome Products	District Judges	Magistrate Judges	Difference
Rate of Appeal	0.07 (N=2131)	0.12 (N=96)	+0.05**
Relief Obtained[56]	0.89 (N=2067)	0.86 (N=91)	[NS]
Amount Defendant Pays	$281,015 (N=1350)	$145,878 (N=50)	[NS]
Number of pages in injunctive relief document	9.64 (N=1194)	9.52 (N=44)	[NS]

For the Boyd data, Table 9 indicates that there is no difference between MJ and DJ cases when it comes to the rate of appeals from the district court outcome (both around 11 percent) or, for cases that are appealed, the likelihood that those district court outcomes are reversed or remanded, in whole or in part (around 12 percent for both).

TABLE 9: APPEAL RATES AND OUTCOMES BY JUDGE TYPE[57]

	District Judges	Magistrate Judges	Difference[58]
Rate of Appeal	0.12 (N=4773)	0.11 (N=274)	[NS]
Rate of Reversal (in whole or in part) on Appeal	0.12 (N=565)	0.13 (N=31)	[NS]

Figure 5 depicts the distribution of case resolution times (in days)[59] for the EEOC data (top subfigure, (a)) and the Boyd data (bottom subfigure, (b)) by whether the presiding judge was a DJ or MJ. It does this through box plots. The box itself in each plot represents the interquartile range of the data for each judge—from the twenty-fifth to seventy-fifth percentile of data. The white line running vertically through the box represents the median. The horizontal whiskers extending out of the box cover the data within 1.5 interquartile ranges

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[55] The source for the data is the EEOC data. "**" designates that the difference is statistically significant at the $p < 0.10$ level. [NS] indicates that the difference between reported probabilities or numbers is not statistically significant. Percentages are calculated by judge type for case outcome type and do not include excluded case outcome types. All included MJ observations were party consents to trial by MJ.

[56] This indicates whether the plaintiff received any relief (monetary or injunctive) in the case, whether by court disposition or settlement.

[57] The source for the data is the Boyd data.

[58] [NS] indicates that the difference between reported probabilities is not statistically significant.

[59] The number of days to resolution is computed in both data sets as a simple subtraction of the filing date from the resolution date (pre-appeal).

on the upper and lower extensions of the data, respectively.[60] The small black dots beyond the whiskers represent severe outliers.

Figure 5 (a)'s depiction of the days to resolution for MJ and DJ cases in the EEOC data reveals a similar shape and distribution between the two sets of cases. However, the MJ case resolution times are noticeably shifted upward. Indeed, the mean number of days to resolution for consent MJ cases is seventy-six days longer than DJ cases (514 days for MJ cases vs. 438 days for DJ cases). This difference is statistically significant at the $p < 0.05$ level.

Figure 5 (b)'s depiction of the same for the Boyd data provides very similar conclusions. Visually, the MJ figure is very noticeably shifted to the right in its distribution. The mean number of days to resolution for consent MJ cases in the Boyd data is 139 days longer than for DJ cases (487 days vs. 346 days for DJ cases). This difference is also statistically significant at the $p < 0.05$ level. The consistency of this result across the two data sets, particularly given their very different types of cases and the findings noted above regarding the differences in the likelihood of case settlements between the two data sets, makes it all the more notable and powerful.[61]

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[60] *See* Nicholas J. Cox, *Speaking Stata: Creating and Varying Box Plots*, 9 STATA J. 478, 480 (2009).

[61] However, as with all statistical results discussed within this Article, it is important to remember that the observed differences between MJ and DJ case processing times could just as likely be due to differences in the underlying cases resolved by these two types of judges (due to non-random assignment to the former group) than behavioral differences. Nancy J. King, Fred L. Cheesman, and Brian J. Ostrom also made this point in their study of federal district court habeas corpus cases. In finding that cases with an MJ R&R had a significantly longer case processing time than those without one, the authors cogently note that

> the analysis only tells us that among all cases, controlling for other factors, those with dispositive orders by magistrate judges are longer than those without. It does not indicate whether the use of magistrate judges in a given district helps the district judges to dispose of these cases more quickly than they would be able to without delegating the initial decisions to magistrate judges. It is also possible that the causal relationship is reversed for this variable, that is, that district judges in the districts that were already taking the longest time to process these cases are most likely to refer non-capital habeas cases to magistrate judges.

NANCY J. KING ET AL., FINAL TECHNICAL REPORT: HABEAS LITIGATION IN U.S. DISTRICT COURTS 73 (2007), https://www.ncjrs.gov/pdffiles1/nij/grants/219559.pdf [https://perma.cc/2R3E-D8CE].

FIGURE 5(a): DISTRIBUTION OF CASE RESOLUTION TIMES

FIGURE 5(b): DISTRIBUTION OF CASE RESOLUTION TIMES
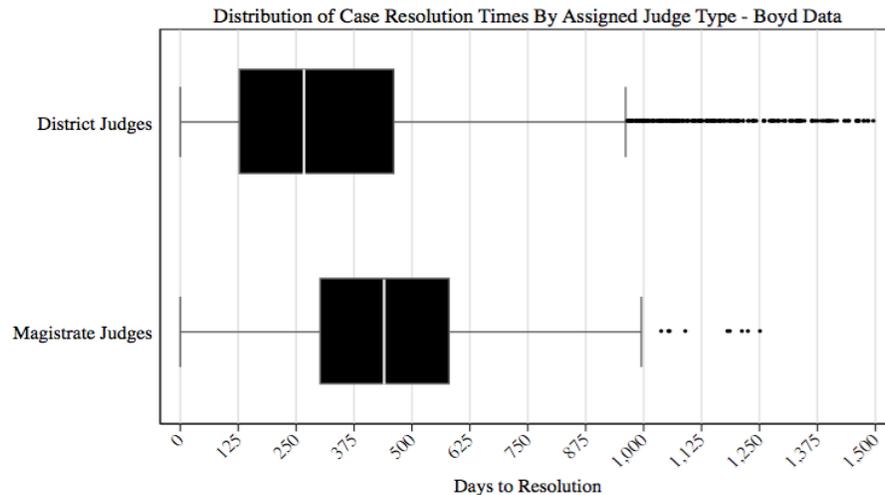
Figure 6 depicts a similar box plot distribution of data, only this time for the EEOC data's number of docket entries per case.[62] While this measure shares many similarities with the days to resolution measure described above, it may pick up something slightly different. Rather than pure passage of time, it is focused more on the amount of activity in a case—from motions to conferences

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[62] The number of docket entries within the data is coded in the EEOC data as the number of numbered entries appearing on a docket sheet for a case. Unnumbered entries on a docket sheet do not get counted.

to postponed trial dates—much of which requires judicial management. For this measure, the differences between the MJ and DJ case distributions are noteworthy. While the median values of docket entries are nearly identical, MJ cases have a much larger interquartile range (in other words, a wider range values for the middle 50 percent of values). This leads to statistically distinct mean values of docket entries for MJs and DJs. MJs have an average of 60.2 docket entries while DJs have a mean of 45.6 docket entries. This difference of 14.4 docket entries is statistically significant at the $p < 0.05$ level.[63] This provides some initial evidence that consent MJ cases may involve more activity and management than traditional EEOC cases.

FIGURE 6: DISTRIBUTION OF NUMBER OF DOCKET ENTRIES

Distribution of Case Docket Entries By Assigned Judge Type - EEOC Data
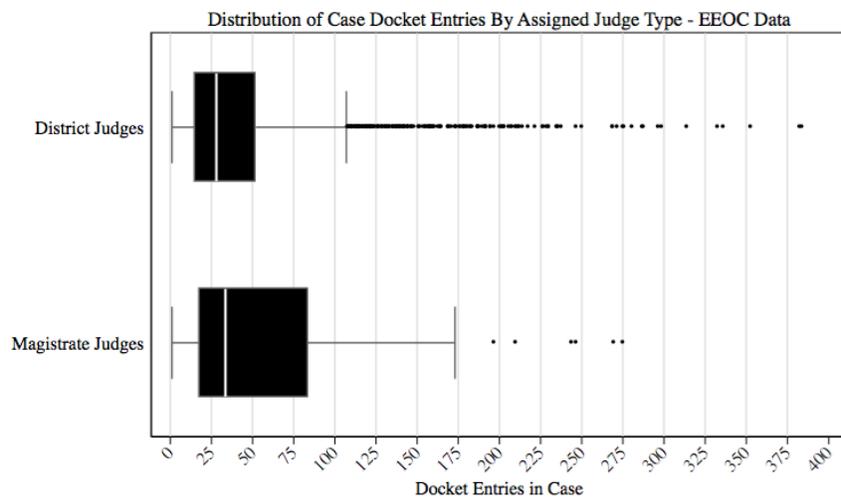
For a final area of inquiry into the activity of MJs compared to DJs, Table 10 provides details on the opinions written by DJs and MJs in the Boyd data.[64] This includes whether the opinions are published, their length in words, and the

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[63] One, two, or three of the added docket entries for MJs per case are likely to involve consent to MJ jurisdiction. Docket sheets usually have at least one numbered docket entry that reflects the consent and reassignment. *See, e.g.*, Civil Docket at no. 127, EEOC v. Everydry Waterproof, 556 F. Supp. 2d 213 (W.D.N.Y 2008) (No. 6:01-cv-06329-MWP) ("CONSENT to Jurisdiction by US Magistrate Judge. Case reassigned to Magistrate Judge Marian W. Payson."). Some case dockets include additional entries capturing the reminder to the parties that they need to return their consent forms. *See, e.g.*, Civil Docket at no. 3, EEOC v. Sun Pac. Shippers, Inc., No. 3:04-cv-02950-JCS (N.D. Cal. Aug. 3, 2004) ("CLERK'S NOTICE TO PLAINTIFF RE: Consent to Proceed before a U.S. Magistrate Judge. Form due by AUG. 17, 2004.").

[64] For this data set, "opinions written" includes "every opinion made available on Lexis (which includes published *Federal Supplement* and *Federal Rules Decisions* opinions as well as written and unpublished opinions for the cases in the dataset)." Boyd, *supra* note 5, at 261.

number of outward citations in the opinions. For the first of these, opinion pub-lication, this reflects whether the resulting written opinion was published in ei-ther the Federal Supplement or Federal Rules Decisions.[65] As Table 10 indi-cates, MJ opinions are much less likely to be published than DJ opinions. Even after excluding MJ discovery opinions, MJ opinions are still 18 percent less likely to be published than DJ opinions. The difference continues to be large (15 percent) when MJ R&Rs are instead excluded from the data.

Despite the differences in publication status between MJ and DJ opinions, there are not statistically meaningful differences in the content, as measured by length[66] and outward citations,[67] for these writings.[68] For opinion length, DJ opinions average 4,228 words each, and MJ opinions average 4,496 words each. For total outward citations (to federal appellate opinions, other district court opinions, or state court opinions), DJs cite an average of 12.58 outside opinions, and MJs cite an average of 13.43 outside opinions. These numbers shrink to just below ten when only federal appellate court citations are counted.

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[65] For a scholarly treatment of opinion publication in federal district courts, see generally Stephen J. Choi et al., *What Do Federal District Judges Want? An Analysis of Publications, Citations, and Reversals*, 28 J.L. ECON. & ORG. 518 (2012).

[66] Opinion length captures the number of words in the body of the opinion following the name of the opinion authoring judge.

[67] Outward opinion citations per opinion captures the number of total citations and federal appellate citations only in each opinion. The coding scheme only counts unique citations and only counts string citations as one citation.

[68] Table 10's length and outward citation calculations exclude MJ discovery opinions. These opinions tend to be short (average of 1,738 words each) and low on outward citations (4.88 per case total; 2.46 per case federal). Their inclusion in the Table 10 calculations does lower the MJ means, but the resulting numbers continue to not be statistically distinguishable from the DJ means.

TABLE 10: OPINION DETAILS BY JUDGE TYPE[69]

	District Judges	Magistrate Judges	Difference
Opinion Publication—All Opinions	0.32 (N=618)	0.12 (N=75)	-0.20*
Opinion Publication—Excluding MJ Discovery Opinions	0.32 (N=618)	0.14 (N=51)	-0.18**
Opinion Publication—Excluding MJ R&R Opinions	0.32 (N=618)	0.17 (N=52)	-0.15*
Opinion Length (in Words)	4228 words (N=616)	4496 words (N=51)	[NS]
Opinion Outward Citations (all Citations)	12.58 citations (N=616)	13.43 citations (N=51)	[NS]
Opinion Outward Citations (Federal Courts Only)	9.52 citations (N=616)	9.82 citations (N=51)	[NS]

IV. ANALYZING DECISION MAKING AND OUTPUTS: A PREVIOUS MAGISTRATE JUDGE EXPERIENCE EFFECT?

Let us turn now to an examination of whether prior experience as an MJ affects the behavior of DJs. To do this, I will once again utilize the EEOC and Boyd data set and ask many of the same underlying questions regarding judge behavior throughout district court cases. Here, however, only DJs will be examined, divided into those with and without background experience serving as MJs prior to their nomination and successful confirmation to the district court.

Table 11 begins this exercise by detailing the motion decision-making behavior of DJs with and without MJ experience. As Table 11 indicates, there is no statistically meaningful difference between these two types of DJs for any of the examined motions.

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[69] The source for the data is the Boyd data. Reported opinion lengths and citation counts exclude MJ discovery opinions. See the text for details on the content of those MJ discovery opinions. "*" designates that the difference is statistically significant at the $p < 0.05$ level; "**" designates that the difference is statistically significant at the $p < 0.10$ level.

TABLE 11: PROBABILITY OF GRANTING MOTION BY JUDGE AND MOTION TYPE: DISTRICT JUDGES WITH AND WITHOUT MAGISTRATE JUDGE EXPERIENCE[70]

Motion Type	District Judges: No Magistrate Experience	District Judges: Magistrate Experience	Difference
Motion to Dismiss (Involuntary)	0.32 [N=242]	0.26 [N=23]	[NS]
Motion for Summary Judgment	0.46 [N=632]	0.45 [N=29]	[NS]
Motion for Judgment as a Matter of Law	0.20 [N=75]	0 [N=3]	[NS]
Motion to Intervene	0.96 [N=472]	1 [N=27]	[NS]
Discovery Motion	0.65 [N=449]	0.69 [N=42]	[NS]

While there is no difference between DJs on their probability of granting EEOC data motions, is there a difference in the type of outcomes stemming from their assignment to cases? Table 12 provides insight on this very question, revealing that while there is little difference for most outcome types, DJs with MJ experience see their assigned cases settle 9 percent more often than DJs without that same background experience. This is a strong and statistically significant effect, and is one of the strongest signs of evidence in this article that there may be positive MJ effect on the likelihood of case settlement. As discussed above, EEOC-brought litigation has a very high baseline probability of settlement. Table 12 indicates that this settlement likelihood rises to nearly 93 percent with an MJ-experienced DJ presiding over the case.

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[70] The source for the data is the EEOC data. "*" designates that the difference is statistically significant at the $p < 0.05$ level. [NS] indicates that the difference between reported probabilities is not statistically significant.

TABLE 12: CASE OUTCOME TYPES BY JUDGE TYPE: DISTRICT JUDGES WITH AND
WITHOUT MAGISTRATE JUDGE EXPERIENCE[71]

Case Outcome Type	District Judges: No Magistrate Experience	District Judges: Magistrate Experience	Difference
Consent Judgments & Settlements	84.12% [N=1605]	92.75% [N=128]	+0.09*
Other Voluntary Dismissals (Non-Settlements)	3.25% [N=62]	2.17% [N=3]	[NS]
Involuntary Dismissals	0.58% [N=11]	0% [N=0]	[NS]
Default Judgment	2.10% [N=40]	1.15% [N=2]	[NS]
Plaintiff Summary Judgment	0.31% [N=6]	0% [N=0]	[NS]
Defendant Summary Judgment	5.61% [N=107]	2.17% [N=3]	[NS]
Plaintiff Jury Verdict	2.04% [N=39]	0% [N=0]	[NS]
Defendant Jury Verdict	1.78% [N=34]	1.45% [N=2]	[NS]
Plaintiff Bench Verdict	0.21% [N=4]	0% [N=0]	[NS]

Unlike with the MJ-focused inquiries above, this DJ-focused analysis has the benefit of random, or at least semi-random, case assignment to the DJs. This, plus a sizable number of observations (1,605 for no MJ experience; 128 for MJ experience), helps provide confidence that the settlement effect observed here is a real one. Even with that confidence, more examination is needed to unpack the effect. Is it driven by the MJ-experienced DJs themselves managing the cases toward settlement? Are these judges more likely to utilize settlement conferences and refer cases to Alternative Dispute Resolution? We cannot even discount the possibility that the parties are more incentivized to settle these cases out of fear of the outcome that is likely by taking an MJ-experienced DJ case to trial or awaiting the ruling on a dispositive motion.

Table 13 advances the analysis between these two types of DJs into other types of case-outcome products. It reveals that there are some notable differences in some products. In particular, the rate of appeal for MJ-experienced DJ cases is lower than that for other DJs (0.02 vs. 0.07) and the rate of relief being

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[71] The source for the data is the EEOC data. "*" designates that the difference is statistically significant at the *p* < 0.05 level. [NS] indicates that the difference between reported percentages is not statistically significant. Percentages are calculated by judge type for case outcome type and do not include excluded case outcome types. All included MJ observations were party consents to trial by MJ.

obtained by the plaintiff is higher than that for other DJs (0.94 vs. 0.88). However, these results are driven largely by what was observed in Table 12 with the higher rate of settlement in MJ-experienced DJ cases. With the higher rate of settlement, the cases are less likely to be appealed and more likely to produce relief for the plaintiff. There are no statistically meaningful differences between these two types of judges for the other types of case-outcome products like the amount the defendant pays or the number of pages in the injunctive relief document.

TABLE 13: CASE OUTCOME PRODUCTS BY JUDGE TYPE: DISTRICT JUDGES WITH AND WITHOUT MAGISTRATE JUDGE EXPERIENCE[72]

Case Outcome Products	District Judges: No Magistrate Experience	District Judges: Magistrate Experience	Difference
Rate of Appeal	0.07 (N=1989)	0.02 (N=142)	-0.05*
Relief Obtained	0.88 (N=1928)	0.94 (N=139)	+0.06*
Amount Defendant Pays	$287,834 (N=1240)	$206,023 (N=108)	[NS]
Number of pages in injunctive relief document	9.6 pages (N=1098)	10.1 pages (N=96)	[NS]

What about the number of days to resolution? Recall that this was an area that produced some meaningful differences between DJs and MJs (see Figure 5). In the EEOC data, the differences in average days to case resolution are not statistically different between DJs with and without MJ experience (438 days and 425 days, respectively). However, in the Boyd data, the differences re-emerge, albeit in a moderate fashion. There, DJs with MJ experience take, on average, thirty-one days longer to resolve their cases than other DJs (375 (N=539) vs. 344 (N=4234); $p < 0.05$).

Table 14 returns to an examination of the Boyd data's R&R coding. First, do DJs with and without MJ experience rely on MJs at different rates to issue R&Rs? Table 14 indicates that there is no appreciable difference between the two types of DJs in this regard. However, for the question of whether these DJs adopt the R&Rs at different rates, Table 14 provides preliminary evidence (caveated by a small number of MJ-experienced DJ observations) that there is a difference here. While MJ R&Rs are almost always adopted, DJs without MJ experience are less likely to do so than DJs with MJ experience. In concrete

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[72] The source for the data is the EEOC data. "*" designates that the difference is statistically significant at the $p < 0.05$ level. [NS] indicates that the difference between reported probabilities or numbers is not statistically significant.

terms, DJs with MJ experience are 6 percent less likely to not adopt MJs' R&Rs than their other DJ colleagues.

TABLE 14: REPORTS AND RECOMMENDATIONS: DISTRICT JUDGES WITH AND WITHOUT MAGISTRATE JUDGE EXPERIENCE[73]

	District Judges: No Magistrate Experience	District Judges: Magistrate Experience	Difference
Rate of using Reports & Recommendations	0.07 (N=4234)	0.06 (N=539)	[NS]
Rate of NOT adopting Reports and Recommendations	0.06 (N=305)	0 (N=33)	-0.06**

Finally, Table 15 permits an examination of opinions written by these two types of DJs. As it indicates, there is no difference in the rate of opinion publication. However, there is a difference in opinion length and outward citations. Opinions written by DJs with MJ experience are, on average, 1,738 words longer than those of their DJ counterparts' opinions. Similarly, the citation counts are distinct, with MJ-experienced DJs having an average of 4.5 more total outward citations and 3.9 federal appellate court outward citations in their opinions than other DJs' opinions. Of course, all things being equal, longer opinions should also yield more outward citations. Here, the rate of words per total citations for non-MJ-experienced judges is 332 words per citation. The equivalent rate for MJ-experienced judges is 347 words per citation.

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[73] The source for the data is the Boyd data. "**" designates that the difference is statistically significant at the $p < 0.10$ level, one-tailed.

TABLE 15: OPINION DETAILS: DISTRICT JUDGES WITH AND WITHOUT MAGISTRATE JUDGE EXPERIENCE[74]

	District Judges: No Magistrate Experience	District Judges: Magistrate Experience	Difference
Opinion Publication	0.32 (N=485)	0.34 (N=133)	[NS]
Opinion Length (in Words)	3853 words (N=483)	5591 words (N=133)	+1738 words*
Opinion Outward Citations (All Citations)	11.6 citations (N=483)	16.1 citations (N=133)	+4.5 citations*
Opinion Outward Citations (Federal Courts Only)	8.7 citations (N=483)	12.6 citations (N=133)	+3.9 citations*

V. ANALYZING DECISION MAKING AND OUTPUTS: DISTRICT JUDGE AUDITIONS?

For a final MJ-related empirical examination, I turn briefly to whether there is evidence of an auditioning effect in the outputs of certain MJs. To do this, the data examination here compares the outputs of MJs in the data sets based on those who receive future district court appointments with those who do not. To be sure, this measure of which MJs we should and should not be most likely to expect a district court auditioning effect from is very elementary.[75] In addition to measurement concerns, there are also pressing data constraints that affect this inquiry. As the above analyses of MJ versus DJ activities indicated, the number of MJs making coded decisions in the EEOC and Boyd data sets is, at times, quite small. A great deal of pressure is placed on this small MJ number when it is further divided into those judges who do and do not eventually receive Article III appointments, particularly because the former number accounts for around 5 percent of the MJ consent judge observations in both the EEOC data and Boyd data.

In the EEOC data, the one area with a number of coded MJ decisions is discovery motions. Focusing there, there are some meaningful differences. Non-elevated MJs have a probability of granting discovery motions of 0.70

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[74] The source for the data is the Boyd data. Reported opinion lengths and citation counts exclude MJ discovery opinions. See the text for details on the content of those MJ opinions. "*" designates that the difference is statistically significant at the $p < 0.05$ level.

[75] Recent scholarship has adopted more sophisticated measures for attempting to examine auditioning and promotion effects for other courts. *See, e.g.*, Ryan C. Black & Ryan J. Owens, *Courting the President: How Circuit Court Judges Alter Their Behavior for Promotion to the Supreme Court*, 60 AM. J. POL. SCI. 30 (2016); Stephen J. Choi et al., *The Role of Competence in Promotions from the Lower Federal Courts*, 44 J. LEGAL STUD. S107 (2015). The measure here is much less inclusive and, as a result, surely undercounts those MJs attempting to audition for a district court appointment (if such an effect exists). This has the effect of dampening any MJ auditioning results that may exist.

(N=777) while future-elevated MJs have a probability of granting these motions of 0.81 (N=53). This difference of 0.11 is significant at the $p < 0.10$ level. The difference is consistent across the identity of the movant, with defendant-brought motions having a 0.13 higher probability of being granted by future DJs and plaintiff-brought motions having a 0.10 higher probability of being granted by future DJs.

TABLE 16: CASE OUTCOMES AND ACTIVITY: MAGISTRATE JUDGES WHO DO AND DO NOT RECEIVE FUTURE ARTICLE III APPOINTMENTS[76]

	Non-elevated Magistrate Judges	Future Elevated Magistrate Judges	Difference
Case Settles (Outcome)	0.71 (N=147)	0.63 (N=40)	[NS]
Plaintiff Wins (Outcome)	0.06 (N=13)	0.06 (N=4)	[NS]
Defendant Wins (Outcome)	0.23 (N=47)	0.30 (N=19)	[NS]
Time to Case Resolution	478 days (N=211)	517 days (N=63)	[NS]
Rate of Appeal	0.13 (N=211)	0.06 (N=63)	-0.06**
Rate of Reversal (in whole or part) on Appeal	0.11 (N=27)	0.25 (N=4)	[NS]

In the Boyd data, the larger number of observations allows a bit more analysis, although few differences emerge. These details are provided in Table 16. As we can see, for the case outcome—settled, plaintiff wins, or defendant wins—there are no statistically significant differences between the two types of MJs. The same is true for the number of days to case resolution.

Indeed, the only area of statistically meaningful difference between MJs who do and do not receive future district court appointments in the Boyd data is the rate of appeal. And this variable behaves exactly how we would expect from an auditioning effect. The cases assigned to MJs who do receive future district court appointments are 6 percent less likely to be appealed than those assigned to other MJs. This result holds even though the rate of case settlement is slightly lower (although not statistically lower) for these future DJs.

Finally, the Boyd data provide some (albeit limited) insight into R&Rs and the possible MJ-auditioning effect.[77] Within the Boyd data, there are only eight of 344 R&Rs written by future DJs. These eight MJs who will eventually re-

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[76] "**" designates that the difference is statistically significant at the $p < 0.10$ level, one-tailed.

[77] While opinion content is very relevant here, of the seventy-five opinions written by MJs in the Boyd data, only two were written by a future-elevated MJ. Both of these opinions happen to be opinions authored by Judge Jarvey from the Northern District of Iowa.

ceive DJ appointments never have their R&Rs not adopted while other MJs have a non-adoption rate of nineteen out of 335, or 6 percent. The number of future-elevated MJs is too low here to tell us if this difference is statistically meaningful, but as very early evidence, it is certainly informative, and points toward an auditioning effect.

VI. DISCUSSION AND CONCLUSION: WITH ALL NECESSARY CAUTION

Recall the three empirical questions of interest to this project:

- Do MJs produce distinct outputs from DJs?
- Do DJs with and without MJ experience behave differently from one another?
- Do MJs who receive future DJ appointments produce distinct outputs from other MJs?

Let us briefly summarize the findings for each. For each question, there are numerous areas where there is no statistical difference between the two types of judges examined. However, for each, there are some notable areas of distinction. For question one (differences between MJs and DJs), this includes grant rates of discovery motions, the likelihood of cases settling, the appeal rate, the number of days to case resolution, the number of docket entries before case resolution, and the likelihood of opinion publication. For question two, differences in settlement probabilities again emerge (along with closely entangled rates of appeals and relief obtained). The data also show a lower rate of R&R non-adoption and a higher number of words and citations per opinion among MJ-experienced DJs than those DJs without that same experience. Finally, for question three, the data reveal that MJs who receive future DJ appointments have a higher grant rate on discovery motions and a lower rate of appeal than their MJ colleagues. There are also no instances in the data of future-DJ MJs who do not have their R&Rs adopted by their supervising DJ.

Of course, as outlined in Part I of the paper and restated at various points throughout the empirical sections, these results must be interpreted with caution. This includes that the small sample sizes of MJs throughout much of this project provide a number of limitations. When the sample sizes are as low as they are in some places here, it is just as likely that any effect or lack of effect that is observed is due to the behavior of one judge or the norms of a district court rather than some systematic pattern due to the judge's categorization as a DJ, MJ, future DJ, or previous MJ. As an analogy, scholars studying the behavior of female justices on the U.S. Supreme Court have long faced this complication; prior to 1993, that study was simply a study of Justice O'Connor.[78] Interesting, but hard to generalize. And even since then, the presence of only four female justices over time is very limiting, particularly when one considers additional confounding factors.

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[78] *See, e.g.*, Suzanna Sherry, *Civic Virtue and the Feminine Voice in Constitutional Adjudication*, 72 VA. L. REV. 543 (1986).

Because of the preliminary nature of scholarship examining MJs, empirical and otherwise, exploratory or mining data exercises like this can serve an important role in advancing our understanding of the topic. But the statistics and inferences are not causal. I have estimated no multivariate regression models and controlled for no extraneous variables. Because of a lack of consistent random assignment of cases and matters to MJs, this project cannot distinguish between behavioral differences and underlying case differences when it comes to interpreting the descriptive statistics comparing MJ and DJ outputs. The issue areas studied in the EEOC and Boyd data also do not represent all types of civil cases that MJs work in, and, of course, the data do not cover criminal matters at all. Generalizability concerns stemming from the data are likely to be particularly possible with the EEOC data given the very unique filtering process used by the EEOC in bringing litigation, the high probability of settlement, and the consistencies present in the cases and the types of parties litigating them.

MJs are a vital part of district court litigation. In the EEOC data alone, approximately 67 percent of the cases have at least one MJ participating. Nearly half of the status, management, and scheduling conferences are held by MJs, meaning that for the parties involved in the cases, the MJ can play an important role in shaping the litigation and the interactions that take place. While MJs and DJs share some case activities (especially when MJs are the consent judge), the data indicate a very complementary relationship. MJs preside over the vast majority of settlement conferences (562 vs. 120; 82 percent) and hear more substantive discovery motions than DJs (1138 vs. 897; 56 percent). Both of these activity statistics connect to settlement likelihoods and timing during litigation. The theme of settlement strengths is, of course, repeated for DJs who have MJ experience.[79]

Moving forward with the MJ momentum and insights generated at this Symposium, we (collectively, as scholars) will hopefully be in a position to collect more data and move toward future empirical analyses that can provide systematic, inferential tests of some of the questions pondered here. Only at that stage can we truly make informed assessments of whether MJs behave differently from DJs and whether those differences, if present, extend to other areas.

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[79] These data seem to reflect bits and pieces of the three organizational models for MJs described by Seron: (1) "[m]agistrate as additional judge," (2) "[m]agistrate as specialist," and (3) "[m]agistrate as team player." Carroll Seron, *Magistrates and the Work of Federal Courts: A New Division of Labor*, 69 JUDICATURE 353, 356–57 (1986).