Lawyers and other commentators often remark that American courts, and American juries in particular, are prejudiced against large corporate entities. Existing empirical research attempting to confirm this suspicion is contradictory and suffers from a number of shortcomings. In this Article, Judge Moore reexamines the issue by reporting the results of research on an original dataset of over four thousand patent cases and more than one million patents. The results indicate that individuals and corporations are treated differently in jury trials of patent property rights. In jury trials of patent cases between corporations and individuals, individuals won 74% of the time, with corporations winning in the remaining 26% of cases. Corporations and individuals won at nearly equal rates in judge trials. Marshaling a range of other evidence, Judge Moore explains that these results are likely to understate the degree of bias.

Moreover, analysis of patent cases permits the exploration of a related phenomenon—the heroic iconization of the American inventor. Just as the injured tort victim is viewed sympathetically, the American inventor is idealized for her ingenuity, productivity, and creativity. The individual inventor puts a face on the corporate entity, humanizing or personalizing it. Hence, even corporation-versus-corporation litigation has an individual component and therefore provides an opportunity for bias to impact decisionmaking.

INTRODUCTION ................................................. 70

I. THE EMPIRICAL PROJECT ................................. 77

II. ADJUDICATOR BIAS: INDIVIDUALS WIN MORE OFTEN, BUT ONLY IN JURY TRIALS ......................... 80

III. INDIVIDUAL VERSUS CORPORATE LITIGATION STRATEGY: A DIFFERENT POOL OF CASES ............. 82

A. SELECTION EFFECT THEORY: ECONOMIC MODELING OF THE PATENT CASE ........................................ 83

1. ASYMMETRICAL STAKES BETWEEN INDIVIDUALS AND CORPORATIONS INVOLVED IN PATENT LITIGATION ...... 85

2. INFORMATION ASYMMETRIES BETWEEN INDIVIDUALS AND CORPORATIONS IN PATENT LITIGATION ........... 87

3. INDIVIDUAL AND CORPORATE PATENTEES MAY ESTIMATE OUTCOMES DIFFERENTLY ......................... 88

* Copyright © 2007 by Kimberly A. Moore. U.S. Circuit Judge, United States Court of Appeals for the Federal Circuit. This research was done and this Article written while I was a Professor of Law at George Mason University School of Law. I am grateful to the George Mason University Law & Economics Center for its support of faculty research. I thank participants at workshops at the New York University School of Law, Boalt Hall School of Law, George Washington University Law School, Northwestern University School of Law, and George Mason University School of Law for feedback on this project.

69
INTRODUCTION

The perception that American juries are biased in favor of individuals and prejudiced against corporations is widespread. As one commentator noted, “A common belief is that jurors are so prone to favor individual plaintiffs over corporate defendants that they pick the ‘deep pockets’ of rich business corporations and deliver extremely high awards that are not merited by the company’s actions or the plaintiff’s injuries.” Anecdotal accounts often bear great weight in the formation of these impressions. Whether jury populism is perceived as anticorporate prejudice, a preference for the underdog, or a desire to redistribute wealth, there is no doubt that the prevailing

2 See Steven Lybrand & Jim Dobson, Jury Bias? Could Be True, Legal Times, Mar. 28, 2005, at 28 (“[H]ard-core anticorporate jurors will not listen to the evidence of a case. Jurors within this hard-core group also express the idea of conspiracy: that corporations ‘are all in cahoots with one another’ or that ‘they are in bed together.’ Such jurors see corporations as in opposition to ordinary folk.”); Sandra J. Anderson, Jury System Requires Public’s Participation, Columbus Bus. First, May 2, 1997, http://columbus.bizjournals.com/columbus/stories/1997/05/02/editorial1.html (“A perception clearly exists that corporations don’t get a fair shake when it comes to juries. It’s not just corporations feeling sorry for themselves; juries are generally anti-corporate.” (quoting Jeff Howard)); Decision Quest, Trial Tip: Overcoming Jurors’ Bias Against Corporate America, http://www.decisionquest.com/litigation_library.php?NewsID=82 (last visited Feb. 5, 2007) (“Corporate image has taken a beating in the last year. Never before have corporations, their leaders, and advisors been held in such low regard by the general public.”).
3 See Life Ins. Co. v. Johnson, 684 So. 2d 685, 703 (Ala. 1996) (“Allowing evidence of a defendant’s wealth into evidence brings the politics of resentment into the courtroom and encourages and legitimates the Robin Hood reaction.”); Sidle v. Majors, 341 N.E.2d 763, 771 (Ind. 1976) (“The tendency to take from the rich and give to the needy is as American as apple pie . . . .”); Saul M. Kassin & Lawrence S. Wrightsman, The American Jury on Trial 162 (1988) (“Like Robin Hood, civil juries are accused of using the courts as a
wisdom among commentators is that juries are prejudiced against the large corporate entity and biased in favor of the small, often injured, individual. This bias could impact jury decisionmaking in determinations of liability and assessments of damages.

These anecdotes and impressions have spurred social science literature on jury decisionmaking and inspired substantive and procedural legal reform efforts. All of this despite claims by some that no means of taking from the rich and giving to the poor.


5 See Meghan A. Crowley, *From Punishment to Annihilation*: Engle v. R.J. Reynolds Tobacco Co.—No More Butts—Punitive Damages Have Gone Too Far, 34 LOY. L.A. L. REV. 1513, 1533 (2001) (“Studies have shown that juries are often biased against large, wealthy corporate defendants and often believe that wealthy corporations should be held to a higher standard of responsibility than the average individual.”).

6 Concern over the tendency of juries to redistribute wealth has led to the implementation of substantial safeguards to minimize such prejudice. For example, in many circumstances evidence of the defendant’s wealth is not admissible because of concern that it will
credible evidence confirms the existence of such bias. The empirical literature that has addressed this problem and its impact on U.S. litigation has taken several forms: experimental studies, surveys and prejudice the jury. See, e.g., Reilly v. NatWest Mkts. Group Inc., 181 F.3d 253, 266 (2d Cir. 1999) ("Evidence of wealth . . . is generally inadmissible in trials not involving punitive damages."); DeRance, Inc. v. PaineWebber Inc., 872 F.2d 1312, 1330 (7th Cir. 1989) (noting that evidence of defendant's wealth is inadmissible); cf. Andrew L. Frey, Corporate Wealth: The 800-Pound Gorilla That Sabotages Fair Adjudication of Punitive Damages, 30 Litigation 8, 8 (2004) ("The most significant factor fueling the drive over the past couple of decades to ever larger punitive awards is evidence of corporate finances.") In fact, many patent cases bifurcate the trial of damages and willfulness from the trial of liability in order to remove this potentially prejudicial evidence from the liability trial. Cf. Kimberly A. Moore, Empirical Statistics on Willful Patent Infringement, 14 Fed. Cir. B.J. 227, 235 (2004) ("Concerns over the impact inflammatory evidence such as willfulness evidence would have on verdicts—concerns about how the factfinder may be swayed by bad guy evidence—would be greater in jury trials.").

7 John GuintHER, The Jury in America 93, 181 (1988) (stating that findings of jury bias were insignificant in large-scale mock jury studies and that there is no evidence of pro-plaintiff jury bias); Harry KalverN & Hans Zeisel, The American Jury 157-58 (1966) (observing congruent judge/jury agreement in both “clear” and “difficult” cases); Rita J. Simon, The Jury: Its Role in American Society 69 (1980) (concluding mock juries were attentive to rules of law); Kevin M. Clermont & Theodore Eisenberg, Trial by Jury or Judge: Transcending Empiricism, 77 Cornell L. Rev. 1124, 1152 (1992) ("[T]he evidence, such as it is, consistently supports a view of the jury as generally unbiased and competent . . . ."); Marc Galanter, The Regulatory Function of the Civil Jury, in Verdict: Assessing the Civil Jury System 61, 70 (Robert E. Litan ed., 1993) ("The literature, on the whole, converges on the judgment that juries are fine decisionmakers. They are conscientious, collectively they understand and recall the evidence as well as judges, and they decide on the basis of the evidence presented."); Valerie P. Hans & Stephanie Albertson, Civil Trial Reform, 78 Notre Dame L. Rev. 1497, 1506 (2003) ("[T]he common beliefs that jurors are highly sympathetic to individual plaintiffs and anti-business are not supported by empirical evidence to date."); Hans, supra note 1, at 327-28 ("Reflecting the citizenry from which they are drawn, civil jurors are largely supportive of the aims of American business and extremely concerned about the potential negative effects on business corporations of excessive litigation."); George L. Priest & Benjamin Klein, The Selection of Disputes for Litigation, 13 J. Legal Stud. 1, 34 (1984) (suggesting that jury decisions may be less prone to bias than judge decisions because “individual biases are suppressed where a twelve-person jury must agree on a verdict.”).


9 Scholars and psychologists have attempted to test for corporate prejudice by distributing surveys with fact patterns in which they vary the identity of the defendant (generally between individual and corporation) while controlling the other facts about the dispute. See, e.g., Valerie P. Hans & M. David Ermann, Responses to Corporate Versus Individual Wrongdoing, 13 Law & Hum. Behav. 151, 157-58 (1989) (finding sample of college students significantly more likely to find corporate defendant liable and to assess higher damage award in personal injury case); Robert J. MacCoun, Differential Treatment of Corporate Defendants by Juries: An Examination of the “Deep-Pockets” Hypothesis, 30 Law & Soc’y Rev. 121, 136-37 (1996) (finding that corporate defendants were more likely to be found liable than either rich or poor individuals).
The results of these studies differ, but most seem to conclude that juries exhibit some form of anticorporate prejudice when assessing liability and/or damages. The results of these studies differ, but most seem to conclude that juries exhibit some form of anticorporate prejudice when assessing liability and/or damages. Whether or not the anticorporate prejudice exists in fact, there is a perception that the prejudice exists in American courts and particularly in American juries. The psychology literature, empirical studies, and legal reform efforts all testify to this perception. This bias/prejudice has the potential to arise in any case that pits an individual against a corporation—in areas ranging from products liability litigation, with its injured individual against the irresponsible corporation,

10 Social scientists have attempted to identify and quantify anticorporate prejudice by surveying former jurors and by interviewing judges to determine whether they agreed with the jury verdict. See, e.g., Hans, supra note 1, at 341–42 (discussing Arizona jury reform study that interviewed judges about 132 civil cases to determine whether they disagreed with jury verdicts); id. at 349–50 (presenting results of survey of jurors asking whether decision was influenced by fact that defendant was corporation and finding that twenty-three percent said they would have changed their approach if case had involved individuals); The View from the Jury Box, NAT’L L.J., Feb. 22, 1993, at S15 (polling eight hundred people who sat on juries and finding that one-third of jurors considered financial situation of defendants when reaching verdict). Ex post interviewing of jurors or judges about case outcome or the decisionmaking process seems unlikely to produce accurate information given the impact of such hindsight analysis and the likely reluctance to admit that prejudice impacted a verdict.

11 Social scientists have sought to measure corporate prejudice in a group deliberative process by having a mock jury determine liability while varying the identity of the defendant and controlling other factors. See, e.g., Hans, supra note 1, at 344–45 (conducting mock jury study with community residents at courthouse deliberating as group over slip-and-fall case and finding that whether defendant was individual or corporation significantly influenced judgments); ROBERT MACCOUN, RAND INST. FOR CIV. JUST., IS THERE A “DEEP-POCKET” BIAS IN THE TORT SYSTEM? 3 (1993) (finding that jurors do treat corporations differently (corporate identity effect), but not because of wealth (rejecting deep pocket effect)). Mock jury studies have the added advantage of examining group dynamics and how bias could impact a group deliberative process differently than individual decisionmaking.

12 See, e.g., AUDREY CHIN & MARK A. PETERSON, DEEP POCKETS, EMPTY POCKETS: WHO WINS IN COOK COUNTY JURY TRIALS, at v (1985) (finding that corporate defendants lost more than individual defendants in jury verdicts in Cook County, Illinois from 1959–1979); Brian Ostrom et al., What are Tort Awards Really Like? The Untold Story from the State Courts, 14 LAW & POL’Y 77, 80, 95 (1992) (analyzing tort cases from 1989 in twenty-seven state courts and finding that corporate defendants won more often, but that when they lost they had to pay more than their individual counterparts). The existing empirical studies that examine the corporate identity effect in actual case outcomes are outdated, inconclusive, and limited to state court personal injury–type cases.

13 See Hans, supra note 1, at 338–49 (“[T]he experimental research that I and other scholars conducted shows that corporations are treated differently in at least some instances. Because of the limited range of cases studied, the generality of the phenomenon is not yet known.”).
to patent litigation, with its heroic inventor against the thieving corporate infringer. As one commentator noted:

In the United States, if you go into the courtroom with a patent of a small inventor against a large corporation, let me tell you, that large corporation is shaking in its boots because juries are pro-patent. Anyone who has ever done a jury study . . . will find that juries are just overwhelmingly pro-patent for the individual inventor.

In 1999, I conducted a survey of sixty-two Chief Patent Counsels of large corporations and found that they overwhelmingly believed that juries favor individuals over corporations in patent litigation. One Chief Patent Counsel with thirty-eight years of experience commented, “Human nature is to favor the underdog.” These sentiments were replicated in concerns that juries favor patentees over infringers. Another Chief Patent Counsel commented that juries favor patentees because there is a “misconception about inventing and [a] bias against large corporations.” An increased frequency of demands for jury trials in patent cases supports these fears about the

---

14 See Nicholas M. Cannella & Timothy J. Kelly, Jury Trials and Mock Jury Trials, in PATENT LITIGATION 1993, at 731, 738–39 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 375, 1993), available at 375 PLI/Pat 731 (Westlaw) (“Regardless of whether it is right or wrong, big corporations suing individual inventors or mom-and-pop local companies may not get off on the right foot with the jury.”); Jack L. Lahr, Bias and Prejudice Against Foreign Corporations in Patent and Other Technology Jury Trials, 2 FED. CIR. B.J. 405, 408 (1992) (“Warmly received is the opportunity . . . to represent David against Goliath—the small company or individual . . . against Goliath International, Inc. The bias in favor of the Little Guy against the Big Guy need not be stressed in the courtroom for the jury knows regardless.”); Edmund L. Andrews, A ‘White Knight’ Draws Cries of ‘Patent Blackmail’, N.Y. TIMES, Jan. 14, 1990, at A5 (“[Many juries] have proven eager to side with inventors against large companies.”).


16 This survey was administered at the annual conference of the Association of Chief Patent Counsels. In order to attend this conference, a lawyer must be the Chief Patent Counsel of an organization with at least five full-time intellectual property attorneys. The individuals in my sample had an average of twenty-five years of patent legal experience.

17 When asked, “Do you believe that jurors are biased in any of the following ways: Jurors favor the inventor over the big corporation? YES or NO,” 89.8% of the fifty-nine respondents answered affirmatively, indicating their belief that juries are biased against corporate entities.

18 Another Chief Patent Counsel commented that, “Big company versus small company—juries tend to sympathize with the little guys.”

19 When asked, “Do you believe jurors are more likely to find for the patentee?;” 87% believed juries favored patentees, 11% believed that juries were not more likely to find for either the patentee or the infringer, and 2% believed that juries were more likely to find for the infringer.

20 See Kimberly A. Moore, Jury Demands: Who’s Asking?, 17 BERKELEY TECH. L.J. 847, 855 (2002) [hereinafter Moore, Jury Demands] (finding that juries were demanded in 78% of all patent cases terminated from 1999–2000); Kimberly A. Moore, Judges, Juries,
biases and prejudices of American juries. Perceptions of juror favoritism manifest themselves in a significantly higher likelihood that individual plaintiffs seeking to enforce their patents will demand a jury trial when they sue corporate parties. Undoubtedly, these perceptions impact the litigation process and the selection of cases that are taken to trial.

This Article reports the results of an empirical study designed to test for anticorporate prejudice in patent litigation. Empirical research on deep pocket bias or anticorporate prejudice has previously been limited, in large part, to tort cases. The appeal of these cases for studying jury bias is obvious: There is usually an injured individual up against a corporate defendant. Analysis of tort cases, however, runs into a serious methodological problem: the inability to determine the population of potential cases. Such studies can measure the outcomes in suits involving individuals and corporations, and can even measure the number of cases brought by these parties, but they cannot determine the number of situations that could have led to litigation.

This difficulty does not exist in patent law. The number of patents applied for and obtained by individuals and corporations can be measured and compared with the number of U.S. patent cases. Though it is impossible to control for every factor that could impact outcome, the existence of a measurable universe of potential patent cases facilitates analysis of actual patent cases. For patent cases, we can study the impact of anticorporate prejudice from patent acquisition, to attempted patent enforcement, to trial.

Moreover, analysis of patent cases permits the exploration of a related phenomenon: the iconization or idealization of the American inventor. Just as the injured tort victim is viewed sympathetically,

\[\text{[Notes and Citations]}\]

21 Moore, Jury Demands, supra note 20, at 865 (finding that plaintiff is more likely to demand jury if plaintiff is individual and defendant is corporation).

22 Do not confuse an acknowledgement that bias impacts litigation with an endorsement of the same. While there may be some societal value in jury nullification, see, e.g., Paul Butler, In Defense of Jury Nullification, Litigation, Fall 2004, at 46 (2004) (explaining that jury nullification can reflect belief that “the law is unjust or the prosecution is unfair”), in patent cases, which are purely commercial disputes, generally between large corporate entities, there seems to be little desire for jury decisionmaking to be based on bias and prejudice.

23 See supra notes 8–13 and accompanying text.

24 See Michael E. Gorman, Transforming Nature: Ethics, Invention and Discovery 112 (1998) (“[W]e spoke of the discoverer as hero. Inventors, especially in
the American inventor is loved—for her ingenuity, productivity, and creativity. The inventor is usually the first witness to testify in a patent trial, to tell her story: how she recognized a problem in the existing technology and toiled endlessly to find a solution that had thus far eluded all others. Even in corporate-versus-corporate patent litigation, the inventor humanizes or individualizes one of the parties. Accordingly, every patent case has a very real individual component.

The empirical data analyzed and presented in this Article include all patents granted in the eleven-year period 1990–2000 (1,265,876 patents), all patent cases terminated by any means during the two-year period 1999–2000 (4247 cases involving 6861 patents), and all patent trials that occurred during the fourteen year period 1990–2003 (1997 patents tried). The data validate concerns that American juries decide cases involving individuals and corporations differently. The most significant finding is the substantial disparity between individual and corporate success rates in jury trials. Individual patent owners win 78% of cases tried to juries when the adversary is a corporation; corporate patent owners, in contrast, only win 50% of the cases in which the adversary is an individual. There is no similar disparity in win rates between individual and corporate parties in bench trials. In fact, corporate parties win a bit more often than their individual counterparts in bench trials. This latter finding not only helps to identify the source of bias in patent litigation, it also minimizes the possibility that the low corporate win rate is due to differential case quality. If corporations somehow systematically pursued weaker cases than individuals, the difference should be manifest in both judge and jury decisions.

To further explore the differences in case strength, this Article compares patterns of patent acquisition with patterns of patent enforcement, looks at summary judgment rates, and considers characteristics of the patents themselves. These empirical comparisons all suggest that the pool of individual patentee litigations is actually weaker on the merits than that of their corporate counterparts.

Given the highly publicized corporate financial scandals in recent years and the pervasive belief in a lack of corporate morality, it

\textsuperscript{25} See infra note 96 and accompanying text.
\textsuperscript{26} See infra note 86 and accompanying text.
\textsuperscript{27} See generally Lawrence E. Mitchell & Theresa A. Gabaldon, If I Only Had a Heart: Or, How Can We Identify a Corporate Morality, 76 Tul. L. Rev. 1645 (2002) (defining
may not be surprising that people generally harbor an antibusiness prejudice. It is also not surprising that people love inventors and creative genius. However, the extent of jury bias reported in this study is surprising. Practitioners know this bias exists, but they have underestimated its magnitude. The finding of jury bias in patent cases is especially meaningful because these are commercial disputes—no one is physically harmed. Juries would seem more likely to exhibit bias or prejudice in products liability cases where a sympathetic, injured individual stands up against a rich corporation that showed a disregard for human life. The fact that bias can be found even in purely commercial patent disputes is all the more compelling.

Part I describes this empirical project. Part II presents the empirical finding that individuals are significantly more likely to win jury trials than are corporations. Part III considers one possible explanation for this finding: whether there are systematic differences in individual and corporate litigation strategy and whether those differences explain the empirical finding that individuals win more with juries, but not with judges. This Part analyzes economic case selection models, behavioral patterns, and economies of scale and predicts that corporations will pursue stronger cases to trial. It also considers the impact that prelitigation and pretrial sorting ought to have on the pool of tried cases and finds that corporate patents should be stronger than their individual counterparts at all stages. Part IV considers two other possible explanations for the results: jury bias and judge bias. Part V discusses the related findings that juries prefer patentees and, more particularly, solo inventors, and also discusses the implications of these findings for corporation-versus-corporation litigation.

I

THE EMPIRICAL PROJECT

In order to measure perceived bias in the U.S. courts and its impact on the litigation process, I developed a database that included every patent trial in federal district court from 1990 to 2003, with a total of 1997 patents being litigated. This database included three types of information relevant to testing the hypothesis:

1. Party Data: detailed characteristic information on the parties to the litigation, such as whether the party was foreign or domestic, an individual or a corporation, and located in the
state where the litigation was brought or out-of-state; and whether the plaintiff or defendant was the patent holder;

(2) Case Data: temporal length of the litigation; name of the district court; age of the patent at the time suit was brought; whether a jury was demanded, and if so, by which party; win rate data (who won the lawsuit—plaintiff or defendant, patent holder or infringer); win rate data on individual issues such as patent infringement, validity, enforceability, and willfulness; and damages data; and,

(3) Patent Data: detailed characteristic information on the patents involved in the litigation, such as the number of claims; issuance date; priority date; filing date; prior art citations made on the patent, including other U.S. patents, foreign patents, and publications; citations received by the patent; field of technology; how long the patent was prosecuted; how many related applications were filed; number of inventors; whether the inventors were foreign or domestic; and whether the patent was assigned either before or after issuance, and if so, to what type of assignee (foreign or domestic, individual or corporation, small or large corporate entity).

The data in this study were largely acquired through independent research. I obtained the names of tried cases from the database of the Administrative Office of the Courts, but I then personally researched each variable for every case. I obtained most of the data by contacting the ninety-four district courts and obtaining the docket sheets and case documents (complaints, judgments, court orders, and special verdict forms) for each case.

In order to get a sense of the selection of patent cases that go to trial, I collected data on all patent cases terminated by any means during the two-year period 1999–2000 (4249 cases, 6861 patents). For this database, I collected the same party, case, and patent data. I augmented the case data by collecting detailed information on the litigation itself, such as at which stage in the litigation process the case terminated (i.e., before there was any significant court action, mid-litigation, or at trial) and how the case was terminated (i.e., settlement, judgment on a motion, court verdict, jury verdict, etc.).

I examined how the population of patent cases and patent trials differed from the population of patents issued. This allowed consideration of how actual disputes differed from the universe of potential disputes. It also permitted analysis of the differences in patents acquired by corporations and individuals, as well as the differences in enforcement rates. To this end, I isolated patents issued during the eleven-year period 1990–2000 (1,265,876 patents). Some of the patent
characteristic data was from the extensive empirical work of Bronwyn Hall, Adam Jaffe, and Manuel Trajtenberg on the characteristics of all issued patents from 1975–1999 (NBER data). Because this database lacked data on patent families and prosecution lengths, both of which seemed relevant to differences between individual and corporate patenting strategies, I supplemented the NBER data with data acquired directly from the Patent and Trademark Office (PTO).

Two significant coding issues arose in identifying individuals and corporations for purposes of this analysis. First, should the status of the party that owns the patent be determined by the assignment recorded on the patent itself or by the nature of the party to the litigation? Every patent lists the individual inventors of the patented technology, and these individuals own an undivided interest in the patent absent assignments. For any patent assigned and recorded prior to issuance, the type of assignee who owns the patent is recorded on the face of the patent itself. No data is currently available on post-issuance assignments or on assignments that are not recorded at the PTO until after the patent issues. Therefore, to determine the number of patents from the pool of litigated patents that were transferred after issuance, I compared the name of the owner at the time of issuance to the name of the party involved in the suit as the patentee (only patent owners are entitled to bring suit). If these were different, the patent must have been transferred after issuance.

I analyzed the data in two ways for different purposes. To test for anticorporate prejudice, I focused on the parties to the litigation, as these were the entities seen by the judges and juries. To analyze the

---


30 Of the litigated patents, 2.1% were assigned to individuals, 25.6% were unassigned (they were still owned by the individual inventors listed on the patent), and 72.2% were assigned to corporations at the time of issuance.

31 There is a Patent and Trademark Office (PTO) website that allows members of the public to check on individual patents to determine whether they are assigned. U.S. PTO, Assignments on the Web, http://assignments.uspto.gov (last visited Feb. 5, 2007). It is important to record patent assignments with the PTO in much the same way it is important to record transfers of real property. If the assignment is not recorded with the PTO “within three months from its date or prior to the date of [a] subsequent purchase” or assignment, the assignment is void against a subsequent assignment. 35 U.S.C. § 261 (2000).

32 Only the owner of a patent, the patentee, may bring a lawsuit. There is one exception to this general rule. An exclusive licensee can bring a lawsuit to enforce a patent, but only if the patentee is joined. Fieldturf, Inc. v. Sw. Recreational Indus., Inc., 357 F.3d 1266, 1266 (Fed. Cir. 2004). In either case, if the name of the patentee (assignee or inventor) at issuance is not the same as the name of the party in the lawsuit who is the patentee, then we know that there was a post-issuance assignment.
strength of the patents obtained by individuals versus corporations generally, I identified how many of the litigated patents were originally acquired by individuals, small entities, and large corporations. I defined small entities in the same manner as the PTO: an individual, a small business as defined by the Small Business Administration,33 or a nonprofit organization.34

The second coding issue concerned how to code multiple defendants or multiple plaintiffs. If all parties on a given side were individuals, the party was coded as an individual, and if all parties were corporations, the party was coded as a corporation. However, when there was an individual and a corporation on the same side, I coded the party as a corporation. This happened very infrequently, but when it did it was in one of two circumstances. In the first situation there was both an individual and a corporation listed as the patentee. These suits involved an individual patentee and its exclusive licensee suing an infringer; an exclusive licensee, lacking “all substantial rights,” can only sue infringers if the patentee is joined.35 Under these circumstances, the exclusive licensee almost always was the true party to the litigation, the one with the financial interest in the outcome and the one controlling the litigation. In the second situation, a single patentee sued multiple defendants (where at least one was an individual and at least one was a corporation). Again I treated the party as a corporate entity unless the judge or jury was asked to make separate findings regarding the individual and the corporation. Hence, if the same act of infringement resulted in both the individual and the corporation being found liable, I treated the party as a corporation. If, however, the court treated the defendants as two discrete parties with different litigation positions, then I treated them separately (coding the individual defendant as an individual and coding the corporate defendant as a corporation).

II

ADJUDICATOR BIAS:
INDIVIDUALS WIN MORE OFTEN,
BUT ONLY IN JURY TRIALS

From 1990–2003, individual litigants prevailed over their corporate adversaries in 64% of patent trials. Case selection—that individuals pursue stronger cases to trial than corporations—would seem to

34 37 C.F.R. § 1.27 (2006) (defining small entity status for organizations including nonprofits).
35 See supra note 32.
be a logical explanation if individuals won more often in both bench and jury trials. The data, however, show that in jury trials from 1990–2003, individuals won 74% of patent lawsuits against corporations. There was no similar discrimination in bench trials. In fact, corporations were slightly more successful with judges when their adversaries were individuals. Individuals prevailed against corporations in only 46% of bench trials.

The party’s status as patent holder or plaintiff does not explain the difference. If more of the jury trials involved individual patentees and more of the bench trials involved corporate patentees, then the patentee/infringer distinction might have been the cause of the disparity in win rates. Alternatively, if the difference were attributable to which party was the plaintiff—namely, if the individual was more often the plaintiff in jury trials and the individual was more often the defendant in bench trials—then the plaintiff/defendant distinction might have been the cause of the disparity. However, the descriptive statistics show that the difference cannot be attributed to which party is the patentee or the plaintiff. Table 1 includes all infringement and declaratory judgment actions. It delineates between patentees and accused infringers. If the patentee/infringer distinction were the cause of the difference, then one would expect individual patentees to have won at the same rate in jury and bench trials against corporate infringers. However, Table 1 shows this was not the case: Individual patentees won 78% of jury trials against corporate infringers but only 47% of bench trials. Table 2 includes all infringement and declaratory judgment actions and delineates between plaintiff and defendant status. Likewise, if the difference were attributable to which party was the plaintiff, then one would expect the plaintiff-individuals to have won at the same rate in both jury and bench trials against defendant-corporations. However, Table 2 shows that plaintiff-individuals won 80% of the jury trials against defendant-corporations, but only 50% of the bench trials.
TABLE 1: Patentee Win Rate Depending on Party

<table>
<thead>
<tr>
<th>Patentee</th>
<th>Accused Infringer</th>
<th>Patentee Win Rate with Jury</th>
<th>Patentee Win Rate with Judge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Individual</td>
<td>60%</td>
<td>88%</td>
</tr>
<tr>
<td>Individual</td>
<td>Corporation</td>
<td>78%</td>
<td>47%</td>
</tr>
<tr>
<td>Corporation</td>
<td>Individual</td>
<td>50%</td>
<td>59%</td>
</tr>
<tr>
<td>Corporation</td>
<td>Corporation</td>
<td>64%</td>
<td>52%</td>
</tr>
</tbody>
</table>

TABLE 2: Plaintiff Win Rate Depending on Party

<table>
<thead>
<tr>
<th>Plaintiff</th>
<th>Defendant</th>
<th>Plaintiff Win Rate with Jury</th>
<th>Plaintiff Win Rate with Judge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Individual</td>
<td>60%</td>
<td>88%</td>
</tr>
<tr>
<td>Individual</td>
<td>Corporation</td>
<td>80%</td>
<td>50%</td>
</tr>
<tr>
<td>Corporation</td>
<td>Individual</td>
<td>48%</td>
<td>61%</td>
</tr>
<tr>
<td>Corporation</td>
<td>Corporation</td>
<td>67%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Individuals won more with juries, and corporations won more with judges. Both tables confirm that in jury trials, individuals were more successful than their corporate counterparts regardless of their position in the litigation. Conversely, in bench trials, corporations were more successful than their individual counterparts regardless of their positions in the litigation. There are three possible explanations for these empirical results:

1. The pool of cases in bench trials is systematically different from the pool in jury trials.
2. Juries are biased in favor of individuals; judges are not biased.
3. Judges are biased in favor of corporations; juries are not biased.

Part III explores considerations that could impact the pool of cases that go to trial. Part IV contains a discussion of the second and third explanations.

III

Individual Versus Corporate Litigation Strategy: A Different Pool of Cases

There are several reasons to believe that individuals and corporations may litigate different pools of cases and that these cases may systematically be of different strength. Asymmetries in resources, stakes, and information, differences in risk preferences, concern over
adjudicator bias, behavioral science, and repeat-player economies all suggest a difference in the pool of cases litigated by individuals as opposed to the pool litigated by corporations. This Part explores how case differences would likely impact the pool of tried cases—and ultimately, the case outcome—in two Sections. First, I explore whether the pool of tried cases differs for individuals versus corporations. For example, the case strength criteria may indicate that corporate patentees pursue stronger cases than individual patentees, yet empirically individuals win more. Moreover, the difference in case selection could explain why the pool of all tried cases is stronger for one side, but it does not explain why individuals win more only with juries. Second, I explore whether bench and jury trials are systematically different. None of these explanations, however, account for the difference in judge versus jury outcomes.

It is useful to understand the pool of tried cases and how it differs from the pool of underlying disputes with respect to corporations and individuals. In Section A, I explain selection effect theory and the likely impact of preconceptions about decisionmakers on the pool of settled and tried cases. In Section B, I discuss the advantage of repeat play for litigants and the impact this ought to have on the pool of cases selected for trial. In Section C, I examine how prelitigation and pretrial sorting, including differences in individual and corporate patenting and enforcement, likely affect the pool of tried cases. These three Sections suggest that the pools of cases litigated by individuals and corporations are different in tangible ways and that the pool of tried cases should be stronger for corporations. In short, corporations pursue stronger cases to trial against individuals and individuals pursue weaker cases to trial against corporations.

While these considerations provide important insight into the pool of tried cases, they do not explain why individuals win more often than their corporate counterparts or why this is only true in jury trials. Therefore, I explore whether there are systematic differences in jury versus judge trials in Section D. I conclude, based on available data, common perceptions, and economic theory, that jury trial cases should be stronger on the merits for corporations than are bench cases. The best explanation for the empirical findings presented, I conclude, is jury bias.

A. Selection Effect Theory: Economic Modeling of the Patent Case

For the rate of plaintiff verdicts to be an accurate measure of the influence of a legal standard, of judicial or jury attitudes, or of the
substantive fairness of any adjudicatory process, litigated disputes must be representative of the entire class of underlying disputes.

—George L. Priest & Benjamin Klein, The Selection of Disputes for Litigation

My data show that the district courts resolve 2800 patent cases each year, but only 3% of these reach trial. Most scholars agree that the 3% that reach trial are not a random or representative sample of all disputes. The Priest & Klein divergent expectations model predicts that the win rate for tried cases ought to be 50% as the fraction of tried cases approaches zero. This model predicts that the parties are more likely to disagree on their chances of success, and thus continue to trial, in close cases. In close cases, the wins ought to fall more or less evenly on both sides of the decisional standard, resulting in the 50% win rate. This 50% prediction is not based solely on the merits of a case, but takes all relevant outcome determinants into consideration.

However, the selection effect theory is based on a number of unlikely assumptions. At least five assumptions underlie the 50% prediction: (1) equal stakes; (2) equal information; (3) identical outcome determinants; (4) equal information; and (5) identical outcome determinants.

36 Priest & Klein, supra note 7, at 4.
37 See, e.g., Theodore Eisenberg, Litigation Models and Trial Outcomes in Civil Rights and Prisoner Cases, 77 GEO. L.J. 1567, 1568 (1989) (describing “expectations theory,” which suggests that tried cases might not reflect pool of all disputes). In fact, the litigations brought in district court are not a random or representative sample of all potential disputes. Karl Llewellyn once noted that litigated cases bear the same relationship to the underlying pool of disputes “as does homicidal mania or sleeping sickness, to our normal life.” K.N. LLEWELLYN, THE BRAMBLE BUSH: ON OUR LAW AND ITS STUDY 58 (2d ed. 1951).
38 Priest & Klein, supra note 7, at 19–20. Professors Priest and Klein claim that the 50% tendency ought to hold true regardless of the shape of the underlying distribution of cases (even if the pool of disputes were more favorable to one side). Id. at 19.
39 Id. at 16.
40 Id. at 19. As one commentator noted:
Many factors other than the merits of the plaintiff’s case, such as jury bias, relative ability of the lawyers, and attractiveness or availability of key witnesses, may affect these variables. Additionally, the outcome of negotiations may be affected by factors such as risk aversion, strategic behavior (such as bluffing), and the parties’ relative ability to bear the costs of continued litigation.


41 The Priest & Klein model assumes equal stakes. See Priest & Klein, supra note 7, at 5 (“[T]he relative stakes to the parties will greatly influence the rate of success in litigation and are likely to be the principal reason why success rates differ from the 50 percent baseline.”).
come estimations; (4) absence of strategic behavior;\(^\text{43}\) and (5) risk neutrality.\(^\text{44}\) In any given case, these assumptions may not hold, causing a breakdown of the 50% prediction.\(^\text{45}\) The following Sections explore these assumptions and the likely ways in which patent cases, and in particular, patent cases involving individuals and corporations, may deviate from them.

I. Asymmetrical Stakes Between Individuals and Corporations Involved in Patent Litigation

In cases with asymmetric stakes, the parties with more at stake are likely to settle close cases, electing only to try stronger ones.\(^\text{46}\) Traditionally, a patentee-plaintiff receives an injunction when infringement is proven.\(^\text{47}\) Thus, the defendant not only risks paying a damage award but also her ability to compete in the future. One commentator likened injunctive relief in patent cases to a “nuclear winter” for defendants.\(^\text{48}\) In cases with nonpracticing patentees, or patentees who do not themselves commercialize the invention, the injunction hurts the defendant a lot more than it helps the patentee—the defen-

---

\(^{43}\) Litigants may behave strategically to attempt to capture the maximum amount of the settlement range. Such strategic behavior may be a barrier to settlement. Robert D. Cooter & Daniel L. Rubinfeld, *Economic Analysis of Legal Disputes and Their Resolution*, 27 J. Econ. Literature 1067, 1078 (1989).


\(^{45}\) See Daniel Kessler et al., *Explaining Deviations from the Fifty-Percent Rule: A Multimodal Approach to the Selection of Cases for Litigation*, 25 J. Legal Stud. 233, 256–57 (1996) (concluding that deviations from underlying assumptions explain previous empirical studies that failed to substantiate 50% hypothesis).

\(^{46}\) See Priest & Klein, * supra* note 7, at 25 (“[W]here the stakes are greater to defendants than to plaintiffs, relatively more defendant than plaintiff victories ought to be observed in disputes that are litigated.”).

\(^{47}\) Although the Supreme Court recently determined that patent cases, like other civil cases, require the patentee to satisfy the four-part test for injunctive relief, the patentee has traditionally received an injunction when infringement is proven. eBay, Inc. v. MercExchange, LLC, 126 S. Ct. 1837, 1840–41 (2006); see also Glynn S. Lunney, Jr., *Patent Law, the Federal Circuit, and the Supreme Court: A Quiet Revolution*, 11 Sup. Ct. Econ. Rev. 1, 12 (2004) (suggesting that injunctive relief may result in lower patentee win rate because injunction has different value for patentee and infringer). Professor Lunney explains the different values of an injunction to the parties as follows:

For the patent holder, the value of an injunction consists in the additional rents earned if the would-be competitor is successfully excluded from the market. In contrast, an alleged infringer values the possibility of injunctive relief based upon the rents that he expects to earn if successful in entering the market. Because the market will become more competitive after entry, successful entry will reduce the total rents available.

*Id.* at 12.

dant has more at stake. This asymmetric stake is likely to exist in the cases studied because individual patentees are more likely than corporate patentees to hold paper patents—patents for inventions that they do not commercialize. Since we expect the corporate defendant with an asymmetric stake to settle close cases, this suggests that tried cases may be stronger for the corporate party.

The asymmetric stakes analysis suggests that the patentee (individual or corporate) may have more at stake than the infringer given that a favorable precedent will permit the patentee to further enforce his patent rights. In a two-supplier market, where the only competition is between the patentee and the infringer, the stakes are equal. In a more competitive market, however, the patentee has more at stake because success against one defendant impacts suits against all other potential infringers. If the defendant successfully invalidates the patent or renders it unenforceable, the patent will be unenforceable against all potential infringers and existing licensing agreements will likely be void. If the court adopts a narrow claim construction, this may impact the patentee’s ability to argue that other products fall within the claim’s scope. Each of these considerations suggests that the patentee may have more at stake than the defendant, so one would expect the patentee to settle close cases and to try stronger cases. There is no reason to believe that individual patentees and corporate patentees would be different in this regard.

There may also be asymmetric stakes when individual patentees who have contingent-fee lawyers sue corporate infringers. Here, the stakes are asymmetric for the lawyers. If the patentee’s lawyer takes a case to trial and fails, she does not recoup the cost of litigation. The contingent-fee lawyer, therefore, is likely to settle all but the strongest cases to minimize her risk. The corporate defendant’s lawyers, who are paid hourly, may have an incentive to prolong litigation to increase the hours billed. This ought to result in a stronger pool of tried cases for individual patentees.

49 See Frank B. Cross, In Praise of Irrational Plaintiffs, 86 CORNELL L. REV. 1, 6–8 (2000) (suggesting that rational litigants who are repeat players have strong incentives to settle unfavorable cases and litigate those with favorable facts).

50 For example, Jerome Lemelson, perhaps the most well-known individual patentee of recent times, obtained more than three hundred patents and filed lawsuits against many large corporate defendants. Lemelson’s lawsuits were handled by attorney Gerald Hosier, who collected more than $150 million in contingent fees when he secured $500 million in settlements for Mr. Lemelson. Emily Barker, The One That Got Away?, AM. L. REV., Nov. 1995, at 16; see also David Rubenstein, Contingency Patent Lawyer Fills Unique Niche: To Some He’s a Hero, to Others He’s No Better Than an Extortionist, CORP. LEGAL TIMES, Mar. 1994, at 3 (describing patent lawyers whose specialty is handling patent infringement cases against large corporations on contingency basis for small companies and individuals).
The contingent-fee cases could also be explained in terms of risk aversion. The individual patentee and his lawyer may have opposite approaches to risk in contingent-fee patent cases. The patentee, since he is not paying millions of dollars in legal fees, may be more risk seeking, while his attorney, who only gets paid if he wins the case, may be more risk averse. While the lawyers’ asymmetric stakes may suggest that tried cases would be stronger for the individual on the merits, the parties’ asymmetric stakes may tend toward the opposite.

2. Information Asymmetries Between Individuals and Corporations in Patent Litigation

There are also information asymmetries in patent litigation that would suggest that defendant-infringers try stronger cases. Until the close of discovery, defendants alone possess most of the information regarding infringement, strength of the patent, and damages. This information asymmetry may be an obstacle to accurate outcome estimation by the plaintiff-patentee. The defendant-infringer has more information about the operation of his product. The defendant will likely acquire prior art through searches early in the dispute, giving the defendant information on the strength or validity of the patent. The defendant also has information about the number of potentially infringing sales and profit from those sales. These asymmetries are likely to be most acute in cases involving individual patentees and corporate infringers because the patentee who does not commercialize the invention has less information about the profitability of the market. The asymmetric information model suggests that when one party has private information, she is more likely to settle when her case is weak; the selection of cases that go to trial will be stronger for the party with the private information. Since corporate defendant-infringers have more information about product operation and damages, especially in cases where the patentee is an individual, the selection of tried cases, according to this model, ought to be stronger for the corporate defendant.

51 Evan Osborne, Who Should Be Worried About Asymmetric Information in Litigation?, 19 INT’L REV. L. & ECON. 399, 404–05 (1999) (finding that defendant generally has more information in cases that proceed to trial).

52 Keith N. Hylton, Asymmetric Information and the Selection of Disputes for Litigation, 22 J. LEGAL STUD. 187, 205 (1993) (concluding that in divergent expectations model of trial outcomes, where there is asymmetric information, “easy” cases go to trial because party with private information will be eager to settle cases in which he has weaker-than-average case); Leandra Lederman, Precedent Lost: Why Encourage Settlement, and Why Permit Non-Party Involvement in Settlements?, 75 NOTRE DAME L. REV. 221, 233 (1999) (stating that trial outcomes will favor party with informational advantage).
3. Individual and Corporate Patentees May Estimate Outcomes Differently

There are also psychological reasons to believe that individuals and businesses may estimate outcomes differently, which would impact the strength of the pool of tried cases. Individuals may not be rational wealth maximizers with regard to their patents. Most individuals likely view each patent affectionately as a legal acknowledgement of their accomplishments. An individual inventor’s emotional attachment to her patent is likely to skew her ability to estimate outcomes. Corporations may be better at detached, rational evaluation and outcome estimation. Due to emotional attachment to her patent, the individual may be more optimistic about the patent and the chances of success at trial. If individuals are more optimistic in their outcome estimations, they will take weaker cases to trial. If individuals pursue weaker cases, the pool of tried cases will be stronger for the corporation. If the pool of cases is stronger for the corporation, we ought to observe a higher corporate win rate.

4. Patent Cases Involve Different Approaches to Risk

Finally, scholars have observed that individuals and corporations have a difference in attitude toward risk of trial—in particular, indi-

53 See Michael A. Heller & Rebecca S. Eisenberg, Can Patents Deter Innovation? The Anticommons in Biomedical Research, 280 SCIENCE 698, 701 (1998) (arguing that inventors’ attachment to their own inventions can “interfere with clearheaded bargaining, leading owners to overvalue their own patents, undervalue others’ patents and reject reasonable offers”); Ivar M. Kaardal, The American Inventors Protection Act, the Independent Inventor’s Interest & Consumer Choice in the Market, 84 J. PAT. & TRADEMARK OFF. SOC’Y 503, 523 (2002) (“Transactions involving independent inventors typically include significant personal and emotional content.”); cf. Christine Jolls et al., A Behavioral Approach to Law and Economics, 50 STAN. L. REV. 1471, 1545 (1998) (asserting that people display bounded rationality limited by emotional biases); Ronald J. Mann, Explaining the Pattern of Secured Credit, 110 HARV. L. REV. 625, 647 n.79 (1997) (“Many factors could cause a borrower to value an asset more highly than the market. For example . . . the borrower may have an idiosyncratic or emotional investment in the asset . . . .”); Miranda Oshige McGowan, Property’s Portrait of a Lady, 85 MINN. L. REV. 1037, 1095 (2001) (“[C]ourts recognize the fact that people do form deep attachments to some kinds of property, and that the value of some sorts of property cannot properly be compensated by substitution of another like thing.”).

Individual litigants are more risk averse than risk-neutral corporate litigants. Individuals may be more risk averse than corporations largely because they have less ability to diversify their risk portfolios. Individuals own fewer patents than do corporations, so when one of their patents is at stake, they have more to lose. The party who is more averse to risk will settle more cases, so the pool of tried cases would be stronger for the risk-averse party. If individual patentees are more risk averse than corporations, and in particular more risk averse than corporate patentees, then we would expect the pool of tried cases to be stronger for individual patentees.

Scholars have suggested that in frivolous or low probability suits, the plaintiffs are more likely to be risk seeking. There is some suggestion among patent lawyers that individual patentees looking for nuisance settlements may be more likely to file frivolous lawsuits against corporations, partly because they are not afraid of being sued in retaliation. There are also contrary suggestions that large

57 James Bessen & Michael J. Meurer, Lessons for Patent Policy from Empirical Research on Patent Litigation, 9 LEWIS & CLARK L. REV. 1, 13 (2005) (“[T]here is concern that independent inventors and licensing shops are especially likely to abuse the patent system by seeking licenses for weak or invalid patents.”); Douglas L. Price, Assessing the Patentability of Financial Services and Products, 3 J. HIGH TECH. L. 141, 157 (2004) (“[T]here has been a substantial increase in nuisance cases by smaller companies who seek wealth by bringing patent infringement suits against larger companies.”); see Jay P. Kesan, Assistant Professor of Law, Univ. of Ill. Coll. of Law, Remarks Before the Federal Trade Commission Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy 146 (Apr. 10, 2002) (transcript available at http://www.ftc.gov/opp/intellect/020410trans.pdf) (“There is a typical problem of opportunistic licensing by a lot of individual inventors at times, who can easily create hold up . . . .”); Robert Barr, Vice President, Worldwide Patent Counsel, Cisco Sys., Inc., Remarks Before the Federal Trade Commission Hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy 680 (Feb. 28, 2002) (transcript available at http://www.ftc.gov/opp/intellect/020228ftc.pdf) (“Individual patentees benefit from the high cost of litigation by demanding . . . license fees that just happen to be less than the cost of litigation, hoping that people will pay even if they don’t infringe or if they do infringe it’ll be too costly to change the product.”).
58 A number of commentators have suggested that individual patentees are more likely to file frivolous lawsuits because they are not deterred by the possibility of being sued themselves. For example:

In many cases [individual inventors have] been able to exploit the fact that while, for instance, one competitor would be reluctant to threaten another one with a preliminary injunction, lest they also have that threat turned on themselves, here they can essentially . . . unilaterally engage in scorched earth kind of litigation tactics, simply because they don’t have much to lose themselves.
corporations may file nuisance suits against smaller defendants because smaller defendants cannot afford to litigate and thus are likely to settle quickly, regardless of the merits.59 While nuisance suits may affect the pool of litigated cases, it seems unlikely that nuisance suits would be continued to trial given the high costs of patent litigation. Therefore, it is doubtful that nuisance suits skew the win rate statistics in tried cases.

The complexity of this analysis for any given set of cases raises concerns about the underlying assumptions of the Priest & Klein model. On balance, the economic modeling suggests, at a minimum, that the pool of tried cases is different for individuals and businesses and explains why the win rates may not converge on the Priest & Klein 50% prediction. The problem, however, is that the stakes, resources, information, and risk preferences of individuals relative to corporations are difficult to quantify with precision. The asymmetric stakes analysis is indeterminate. Corporate infringers may have more at stake due to the nature of injunctive relief, but individual patentees or their attorneys may have more at stake in contingent-fee cases. The other asymmetries seem to balance out as well: Corporate defendants may have more information, but individuals may be more risk averse. From this economic modeling, there is reason to believe that the pool of tried cases may be different for individual and corporate litigants, but quantifying this difference proves more difficult.


59 See Thomas J. Stueber, Insurance Coverage for Patent Infringement, 17 Wm. Mitchell L. Rev. 1055, 1083 & n.202 (1991) (explaining that “dozens of small companies with marginal interest in the patent are named as defendants” because patentee can extract nuisance settlements from small companies who cannot afford to pay litigation costs); S. COMM. ON THE JUDICIARY, 84TH CONG., REVIEW OF THE AMERICAN PATENT SYSTEM, S. REP. NO. 84-1464, at 5 (1956) (“[Patents] have a high nuisance value in the hands of large corporate owners, since they can wreak financial havoc upon smaller competitors by infringements suits, even though the ultimate judgment is in favor of the infringer.”), quoted in Note, Improperly Procured Patents: FTC Jurisdiction and Remedial Power, 77 Harv. L. Rev. 1505, 1510 (1964).
B. Repeat-Player Advantage for Corporations

Patent acquisition and litigation are both expensive undertakings.\(^{60}\) Given the high transaction costs, corporations are likely to be more sophisticated consumers of patent litigation and should have a repeat-player advantage. While being a repeat player could result in better outcome estimations (one of the assumptions discussed above), the advantages extend beyond outcome estimation to an overall litigation advantage. Scholars have noted that repeat players have significant advantages in litigation, including increased credibility, specialized expertise, and lower costs.\(^{61}\) Corporations are likely to have greater exposure to, and familiarity with, patent law, patent prosecution, and patent litigation than do most individual patentees. It seems plausible that corporations would gain an advantage by being repeat players in patent litigation.

Corporations usually have established relationships with law firms that perform a wide range of legal work for them. Moreover, given that corporations generally have more money than individuals, corporations may be able to hire better lawyers. Given these resource asymmetries and repeat-player advantages, the pool of tried cases ought to be stronger for the corporation.

C. Pretrial Sorting

This Section analyzes the effect of pretrial sorting on the pool of tried cases. In particular, it focuses on what we can learn about the selection of cases that are tried and how those cases may differ from the underlying pool of disputes. Analysis of the pool of underlying disputes and the patents at issue in litigation helps to ascertain whether there are systematic differences between individual and corporate patent holders or their patents.

---

\(^{60}\) Patent litigation costs on average $4 million per side from complaint through trial for cases with more than $25 million at stake. AM. INTELLECTUAL PROP. LAW ASS’N, REPORT OF THE ECONOMIC SURVEY 21–22 (2003).

1. Patent Acquisition

Individuals acquire far fewer patents than do corporations. In 2003, for example, individuals acquired 11.6% of all patents granted.\textsuperscript{62} Most of the rest (87.8%) were granted with assignments to corporate entities.\textsuperscript{63} An individual patent is one that is granted to its inventor and is either unassigned or assigned to another individual at the time of issuance. Corporate patents have individual inventors but are assigned to a corporation prior to their issuance. Generally, corporate patents are based on inventions made by corporate employees in the scope of their employment.

As Figure 3 demonstrates,\textsuperscript{64} the percentage of patents granted to individuals has been declining,\textsuperscript{65} while the percentage granted to corporations has been rising.\textsuperscript{66} There are several explanations for this trend. First, patents have become big business. Patent acquisition is an expensive endeavor; patent attorney fees for the preparation and prosecution of a patent application cost anywhere from $5000 for simple inventions to hundreds of thousands of dollars for complex inventions.\textsuperscript{67} Although small relative to the attorney fees, the PTO also charges fees.\textsuperscript{68} These costs are often prohibitive for unsophisti-


\textsuperscript{63} Id. Governments were issued the remaining 0.6% of patents in 2003. Id.

\textsuperscript{64} It should be noted that Figure 3 and the discussion herein relates to the percentages of patents granted to particular types of entities. This is not meant to suggest that the amount of patenting by individuals is declining. It is simply not increasing at the same rate as corporate patenting. For example, although the percentage of patents issued to individuals decreased from 27.5\% to 10.2\% between 1963 and 2005, the total number of patents granted to individuals in this period actually increased from 12,523 to 14,729. Patent Tech. Monitoring Branch, supra note 62, at tbls.A1-1b & A1-2b. For corporate entities, on the other hand, not only did the number of patents increase between 1963 and 2005 (from 32,002 to 128,322), so too did the percentage of patents issued to corporations (from 80.1\% to 89.2\%). Id.

\textsuperscript{65} My research shows that unassigned patent grants, in particular, have been declining (from 21\% in 1975 to 14\% in 1999). Patents assigned to individuals have remained constant over the twenty-five years studied, with 0.6\% assigned to U.S. individuals and 0.4\% assigned to foreign individuals.

\textsuperscript{66} The increase in corporate patenting percentages is largely the result of increased patenting in the United States by foreign corporations, from 5369 patents in 1963 to 63,115 patents in 2005, Patent Tech. Monitoring Branch, supra note 62, at tbl.A1-1b, a testament to the increasing globalization of commerce.

\textsuperscript{67} See John R. Thomas, Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties, 2001 U. Ill. L. Rev. 305, 345 (stating that attorneys charge several thousand dollars for preparing simple patent applications and considerably more for complex applications or applications involved in appeals or interferences).

\textsuperscript{68} The PTO currently charges applicants $300 to file a nonprovisional patent application, $700 for a search and examination of an application, and $1400 to issue a patent. PTO Fees and Payment of Money, 37 C.F.R. §§ 1.16(a)(1), 1.16(k), 1.16(o), 1.18(a) (2006).
cated individual inventors who do not know whether they will be successful in obtaining a patent and are unable to estimate the commercial value of their invention.69

FIGURE 3: PATENT OWNERSHIP BY YEAR AND BY ENTITY70

Second, corporate patent strategy has changed over the years. Corporations are increasingly adopting a “shotgun” approach to patent acquisition. When a corporation files a patent application on an important invention, it seldom files just one application. Corporations file claims on every possible variant of the invention in order to foreclose competition as broadly as possible. They likewise keep a continuation on file at the PTO so that they can add additional claims to cover competitor products as these products become known.

These fees are cut in half for small entities—that is, most individuals, nonprofit corporations, or corporations which qualify as small businesses under the Small Business Act. Id. § 1.27(a)(1)–(3).

69 Preparing the patent application and paying the application fees do not guarantee the grant of a patent. There is some dispute regarding the percentage of applications that result in issued patents. Compare Cecil D. Quillen, Jr. et al., Continuing Patent Applications and Performance of the U.S. Patent and Trademark Office—Extended, 12 Fed. Cir. B.J. 35, 54–55 (2002) (suggesting that PTO issues patents for at least 85% of all filed applications), with Robert A. Clarke, U.S. Continuity Law and Its Impact on the Comparative Patenting Rates of the U.S., Japan and the European Patent Office, 85 J. PAT. & TRADEMARK OFF. SOC’Y 335, 338–40 (2003) (concluding that PTO grant rate was approximately 75%).

2. Patent Enforcement Rates

In a vacuum, patent acquisition rates shed little light on the evidence that juries are more likely to find for individuals. Comparing acquisition rates with enforcement rates, however, gives us a better sense of the pool of underlying disputes. Table 3 details the individual and corporate litigation patterns.

<table>
<thead>
<tr>
<th>Table 3: Suits By Entity Status (1999–2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaintiff-Patentee</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Individual</td>
</tr>
<tr>
<td>Individual</td>
</tr>
<tr>
<td>Corporation</td>
</tr>
<tr>
<td>Corporation</td>
</tr>
</tbody>
</table>

It appears that individuals litigate slightly less often than corporations—individuals receive 14.9% of patents and initiate only 11.9% of patent suits. Additionally, only 6.9% of the patent litigations that went to trial (1999–2000) involved individual patentees. Transaction costs likely make patent litigation prohibitive for many individual patentees. In order to file a patent infringement suit, an individual has to identify infringers and perform a sufficient pre-suit investigation. It is also likely that individuals and corporate patentees have asymmetric information. Individual patentees are more likely to own paper patents, meaning that they often do not compete in the industry to which their patents pertain. Accordingly, they are likely to be less informed regarding potential infringers, reasonable royalties, or the product’s profit margin.

In addition, individual patentees, even when they are able to identify potential infringers, may be deterred from filing suit due to projected litigation expenses. While filing a patent infringement complaint in a federal district court is relatively inexpensive, the average cost of taking a midsized infringement case to trial is $2 million per

71 Expanding the data to include all trials from 1990–2003 results in individual patentees being involved in 10% of all patent trials.

72 The fee for filing a complaint is only $350. Deficit Reduction Act of 2005, Pub. L. No. 109-171, § 10001(a), 120 Stat. 4, 183 (2006) (to be codified as amended at 28 U.S.C. § 1914(a)). Of course, the party generally needs a lawyer to draft the complaint and serve as counsel should the case go forward. While drafting a complaint is not terribly expensive—in fact, most patent attorneys seem to file the same complaints over and over and just change the names of the parties—a pre-suit investigation does need to be performed to satisfy Rule 11, which allows judges to sanction attorneys for bringing frivolous suits, Fed. R. Civ. P. 11.
At first blush, the fact that individuals litigate fewer cases and take fewer cases to trial (i.e., they are more selective in their cases) could explain their higher win rate. Given the transaction costs barrier, individuals may only take stronger cases to trial.

There are several reasons why this explanation is insufficient. First, among the cases brought by individuals and corporations, individuals may actually bring weaker cases. Cases brought by individual patentees have a higher dispositive motion (summary judgment) grant rate. According to my data, while only 12% of all cases with corporate patentees are resolved on summary judgment, 20% of all cases with individual patentees are resolved on summary judgment—a much higher summary judgment grant rate. Moreover, 74% of the summary judgments involving corporate patentees favor the infringers, whereas 87% of those involving individual patentees favor the infringers. In short, the cases filed by individual patentees are more likely to be resolved on summary judgment against the patentees than are the cases filed by corporate patentees. Thus, it would seem that the pool of litigation brought by individual patentees is weaker than the pool of litigation brought by corporate patentees.

Second, patents acquired by individuals do not appear to be objectively stronger than patents acquired by corporations. There are several ways we can measure the strength of individual and corporate patents. First, we can look at the characteristics of their patents for indicia of strength. Economists and scholars agree that the number of patent claims and the number of prior art citations considered by the PTO during prosecution are indicative of the value of the patent. Comparing patents issued to individuals and corporations from 1990–2000, the characteristics suggest that corporate patents are, on the whole, stronger than individual patents. To the extent that these characteristics are indicia of patent strength, individuals are not filing fewer patent cases because they are more selective; they file fewer patent cases because their patents are not as strong.

73 AM. INTELLECTUAL PROP. LAW ASS’N, supra note 60, at 22.

Moreover, even if the patents issued to individuals were objectively stronger than those issued to corporations, this would explain the difference in win rate only if the party bringing suit were the party to whom the patent was issued. An important finding of this empirical project is that 39.7% of the litigated patents are not being litigated by the party to whom they were originally issued. A very high transfer rate exists, at least among litigated patents originally issued to individuals.

Corporations acquired 85% of all patents issued (in 1999) and brought 88% of litigations (in 1999–2000), but they often were not litigating their own patents. Among the 6077 patents litigated by corporate patentees, 57.1% were issued to the corporation and 42.3% were acquired after issuance. Of these later-acquired patents, almost

75 I omitted the litigations involving design patents and plant patents as they are substantially different from utility patents. For example, all design patents have only one claim. 37 C.F.R. § 1.153 (2006).

76 The number of cites received is unavailable for the patents involved in the trials from 1990–2003 because the cites-received data available from the NBER database only extends through 1999. Hall et al., supra note 29, at 3. Hence any cites received by any patents after that are not included. Since many of the patents in the trial study were actually issued later, the cites-received data is unavailable.
all (98.1%) were originally issued to individuals. In contrast, when individual patentees were involved in litigation, 80% of the patents were originally acquired by the litigating individual. Of all the patents litigated from 1999–2000, 31.9% were originally issued to individuals. Hence while individuals only acquired 14.9% of all patents, their patents were involved in 31.9% of the patent litigation. Individual patents seem to be different from corporate patents in ways that make them more likely to end up in litigation, a subject ripe for further research.77 This finding weighs against the notion that prelitigation sorting creates stronger cases for individual patentees.

Additionally, comparing the characteristics of the patents in litigations resolved in 1999 and 2000 suggests that, if anything, the corporate patents are stronger. Table 4 shows that the corporate patents at issue in litigation had more claims, received more citations from other patents, and were allowed by the PTO after comparison to more prior art.

Finally, comparing the characteristics of the patents that went to trial also suggests that corporate patents are stronger. This comparison is the most important because it bears a direct relationship to trial outcomes. Tried corporate patents have more claims, cite more prior art, are based on more related applications, and take longer to prosecute. Table 4 shows that in each pool—issued patents, litigated patents, and tried patents—the corporate patents are stronger. Analysis of the pool of underlying disputes and the patents at issue in litigation suggests that, if anything, corporations try stronger patents.

D. Jury Trials Are Systematically Different from Bench Trials Explanation

The most plausible alternative to the jury bias explanation is that the types of cases taken to trial in front of judges differ from those taken to jury trials. For case differences to explain the difference in judge/jury win rates, the cases tried to a jury would have to be

77 It may be argued that since individual patents are more likely to end up in litigation than corporate patents, they are therefore stronger, more valuable patents. Undoubtedly, however, the differences in patenting strategies are a partial explanation. Corporations patent for different reasons than individuals. Individuals, especially those with paper patents (not competing), patent exclusively for revenue generation through licensing and litigation. Corporations are more likely to patent defensively, as a signaling mechanism, and to create thickets or more significant barriers to entry for their competition. As such, it makes sense that corporate patents are litigated less often.
stronger for the individual, and the cases tried to a judge would have to be stronger for the corporation.\textsuperscript{78}

Three reasons, however, suggest that differences in selection do not explain the results. First, given that juries are widely perceived as anticorporation and pro-individual,\textsuperscript{79} litigants in a case where an individual is pitted against a corporation would factor this bias into their outcome estimation. Factoring in these perceptions of jury bias is likely to result in a selection of jury trial cases that are stronger on the merits for corporations than individuals. As Marc Galanter observed, settlement negotiations take place “in the shadow of the jury”\textsuperscript{80} because litigants are estimating their outcome by attempting to anticipate how a jury will decide their case. A corporation will not proceed to trial in front of a jury on a marginal case where its opponent is a sympathetic individual. Regardless of the ultimate win rate that one would estimate considering the Priest & Klein model and deviations from the underlying assumptions,\textsuperscript{81} the selection of cases for trial is affected by the parties’ outcome estimations; these estimations would include consideration of known or perceived adjudicator biases. Hence, if litigants believe juries favor individuals, they would take this into account in outcome estimations such that we would not expect to see a statistical difference in win rate between judges and juries.

Furthermore, the deviations from the underlying assumptions of the Priest & Klein model are unlikely to explain the empirical results because they would exist in both judge and jury trials, yet the significantly higher win rate for individuals only exists in jury trials. While these deviations from the assumptions may explain why the overall win rate is not 50\%, they do not explain why individuals are only more successful with juries. The empirical data, which shows a 78\% win rate for individuals with juries, indicates that despite a widespread perception of jury bias, parties may underestimate the magnitude of this bias.

Second, not only do individual patent owners prevail more often than corporate patent owners, but individual defendants also prevail more often than corporate defendants. As Table 1 indicates, in jury trials when individual patentees sue corporate defendants, the patentees win 78\% of the cases, but when individual patentees sue indi-


\textsuperscript{79} See supra notes 1–22 and accompanying text.


\textsuperscript{81} See supra notes 41–44 and accompanying text.
individual defendants, the patentees only win 60% of the time. If individual patentees simply bring stronger cases, then we would expect the individual win rate to be high against other individuals as well. However, it may be that individual patentees try stronger cases against corporate infringers than they do against individual infringers. Given the high costs associated with patent litigation and the likelihood that those costs would be driven up in cases involving a corporate defendant, individuals may only be willing to litigate against a corporate infringer when they have stronger cases.

This argument assumes that the parties have asymmetric resources—namely that the individual is poorer than the corporation and therefore the litigation costs would act as a greater deterrent to continued litigation. Due to the high cost of litigation, individual patentees may hire lawyers on a contingency basis when they litigate against corporations. When the law firm is risking its entire fee (on average $2 million) on the outcome of the trial, it is unlikely to try marginal cases. Hence, cases that go to trial with individual patentees against corporate infringers may be stronger than the cases that go to trial with individual patentees against individual infringers. In fact, the patent characteristic data support this explanation—injury trials, individual patentees sue based on stronger patents when their adversary is a corporation.82

Moreover, the difference between individual and corporate infringer success also exists in jury trials involving corporate patentees. As Table 1 indicates, when corporate patentees sue individuals in jury trials, the corporate patentees win 50% of the cases, but when corporate patentees sue other corporations, the corporate patentees win 64% of the time. Again, the same explanation might make sense: corporate patentees might bring stronger cases against other corporations than they do against individuals because of their respective abilities to mount defenses. Intuition suggests that corporate patentees may only try strong cases against individuals so as to counteract the jury bias. However, the patent characteristic data do not support this explanation.83 The patents being asserted in jury trials by corporate patentees against individuals do not appear to be stronger than those being asserted against other corporations.

Third, measurable differences in the quality of the patents at issue in the trials suggest that corporate party patents are stronger than those tried by individuals. Table 5 analyzes the patent characteristics, taking into account both the entity status of the patentee and

---

82 See infra tbl.5.
83 See infra tbl.5.
the entity status of the infringer. According to this analysis, individuals do bring suit with stronger patents against corporate infringers than against individual infringers. When individuals sue corporations, they select their patents that have more claims, spent more time in prosecution (and thus have more related applications), cite more prior art, and are younger at the time of the suit. This is true in both bench and jury trials. However, individual patentees do not select significantly different patents for suit in bench trials versus jury trials. In fact, the individual patents that are the subject of suit in bench trials are, if anything, stronger than the ones individuals litigate in jury trials.

When corporate patentees sue other corporations, they litigate stronger patents in bench trials, but not in jury trials. Furthermore, the data show that in jury trials, corporate patentees sue individual infringers with stronger patents than individuals who sue corporations. To the extent that patent characteristics are indicia of the strength of the suit, corporations bring stronger suits in jury trials, not bench trials, and individuals bring weaker suits in jury trials. Both findings suggest that the underlying pool of disputes cannot explain the differences in the win rate. These findings are, however, consistent with perceptions of bias and case selection predictions. Corporations, anticipating jury bias, would pursue stronger cases in jury trials than bench trials. Similarly, individuals, perceiving favoritism by juries, would be willing to take weaker cases to a jury trial than to a bench trial.

---

84 Obviously, the number of claims in a patent and the number of prior art references cited are not the only way to measure the relative strength of the parties' patents, nor do I suggest that these indicia dispositively measure the strength of a case.
T A B LE 5: C H A R A C T E R I S T I C S O F T H E T R I E D P A T E N T S \textsuperscript{85}

<table>
<thead>
<tr>
<th></th>
<th># Claims</th>
<th>Total Cites</th>
<th>U.S. Pats.</th>
<th>For. Pats.</th>
<th>Publ'ns</th>
<th>Pros. Time (yrs)</th>
<th># Related Apps</th>
<th>Patent Age at Suit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jury Trials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiv. Patentee v. Indiv. Infringer</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>1.77</td>
<td>0</td>
<td>4.94</td>
</tr>
<tr>
<td>Indiv. Patentee v. Corp. Infringer</td>
<td>16</td>
<td>15</td>
<td>13</td>
<td>1</td>
<td>1</td>
<td>4.47</td>
<td>1</td>
<td>5.60</td>
</tr>
<tr>
<td>Corp. Patentee v. Indiv. Infringer</td>
<td>19</td>
<td>21</td>
<td>4</td>
<td>1</td>
<td>16</td>
<td>5.55</td>
<td>2</td>
<td>5.91</td>
</tr>
<tr>
<td>Corp. Patentee v. Corp. Infringer</td>
<td>21</td>
<td>19</td>
<td>13</td>
<td>2</td>
<td>4</td>
<td>4.02</td>
<td>1</td>
<td>5.31</td>
</tr>
<tr>
<td><strong>Bench Trials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiv. Patentee v. Indiv. Infringer</td>
<td>12</td>
<td>12</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>2.85</td>
<td>1</td>
<td>4.20</td>
</tr>
<tr>
<td>Indiv. Patentee v. Corp. Infringer</td>
<td>17</td>
<td>16</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>4.00</td>
<td>1</td>
<td>5.13</td>
</tr>
<tr>
<td>Corp. Patentee v. Indiv. Infringer</td>
<td>12</td>
<td>15</td>
<td>8</td>
<td>1</td>
<td>6</td>
<td>3.43</td>
<td>1</td>
<td>6.77</td>
</tr>
<tr>
<td>Corp. Patentee v. Corp. Infringer</td>
<td>20</td>
<td>22</td>
<td>12</td>
<td>2</td>
<td>8</td>
<td>4.48</td>
<td>1</td>
<td>5.06</td>
</tr>
</tbody>
</table>

When the patent characteristics are included in a multivariate regression, the same party characteristics continue to be significant: whether the patentee is an individual, whether the infringer is foreign, and whether the patentee filed the lawsuit. The only patent characteristic data that significantly impacts patentee win rate with juries is the age of the patent at the time the lawsuit is filed. This suggests that juries may prefer patentees that sue to enforce their patent rights quickly after the patent issues. The following patent characteristics were not significant: number of claims, total cites, U.S. patent cites, foreign patent cites, publication cites, number of related applications, prosecution time, whether the patent was reissued, whether the patent was a design patent, or whether the patent was a utility patent. The year that the case was resolved is also not significant. Thus, the recent rise of corporate scandals has not caused an antibusiness bias to surface only in recent cases.\textsuperscript{86}

\textsuperscript{85} Design patents are excluded from this data.

\textsuperscript{86} Corporate financial scandals have become big news since Enron collapsed in December 2001. See, e.g., Dylan Loeb McClain, Corporate Scandals: A User’s Guide, N.Y. TIMES, May 11, 2003, at N1 (highlighting recent corporate scandals and commenting that “dark details emerged of a tale of corporate greed and malfeasance almost unparalleled in financial history”); Editorial, Taking Care of Business Cheats, CHI. SUN TIMES,
These data do not support the explanation that a difference in the selection of tried cases causes individuals to win with juries more often than do corporations. Objective measurable evidence does not suggest that individuals have stronger cases on stronger patents in jury trials. If anything, the patent characteristic data indicate that of all the litigations, the suits with the strongest or most valuable patents are brought by corporate patentees against individual defendants in jury trials—yet the corporate patentee loses more often. In jury cases, individual patentees bring suit against corporate infringers with weaker patents—yet they win more often. In bench trials, individual patentees seem to sue corporate infringers on stronger patents—yet they win less often. Therefore, differential case selection does not explain the results of this study.

IV
THE JURY BIAS AND JUDGE BIAS EXPLANATIONS

A. The Jury Bias Explanation

Perhaps the most startling finding of this empirical study is that it substantiates the perception of jury bias in favor of individuals and prejudice against corporate litigants. The fact that juries may be biased in this way is not startling, but it is startling that the data substantiate the bias. For jury bias to explain the results, the selection of tried cases would have to be slightly stronger for the corporation on the whole. The slightly stronger cases would explain the bench trial results that slightly favor corporations. Underestimated jury bias would then explain the jury results that eviscerate the strength of the corporate case. This hypothesis is consistent with the case analysis of Part III, which found that due to asymmetries, patent strength, behav-

June 21, 2005, at 39 (discussing how juries are holding accountable corporate heads who defraud shareholders); Shawn Young & Peter Grant, Executives on Trial: More Pinstripes to Get Prison Stripes, WALL ST. J., June 20, 2005, at C1 (detailing recent wave of corporate-fraud cases).

87 In fact, perceptions of jury bias are well-documented. E.g., Honda Motor Co. v. Oberg, 512 U.S. 415, 431 (1994) (“[T]he rise of large, interstate and multinational corporations has aggravated the problem of arbitrary awards and potentially biased juries.”); TXO Prod. Corp. v. Alliance Res. Corp., 509 U.S. 443, 491 (1993) (O’Connor, J., dissenting) (“[J]uries may feel privileged to correct perceived social ills stemming from unequal wealth distribution by transferring money from ‘wealthy’ corporations to comparatively needier plaintiffs.”); id. at 468 (Kennedy, J., concurring) (“[T]he size of the punitive award is explained by the jury’s raw, redistributionist impulses stemming from antipathy to a wealthy, out-of-state, corporate defendant.”); see also supra notes 2–4 and accompanying text (discussing widespread belief that juries favor individuals over corporations and act on wealth redistribution impulses).
ioral characteristics, and repeat-player advantages, corporate cases are likely stronger.

Because winning a patent case can be a function of many factors other than whether the parties are individuals or corporations, I used a multivariate regression model to isolate the effects of several independent variables on the win rate data. According to these results, the patentee is significantly more likely to win a jury trial if: (1) the patentee is the plaintiff; (2) the infringer is foreign; and (3) the patentee is an individual. From the magnitude of the coefficients, whether the patentee filed the suit (as opposed to a declaratory judgment action) is the most powerful predictor of patentee win rate. Whether the patentee is an individual or a corporation is also a significant predictor of win rate, and from the magnitude of the coefficient, we can determine just how much of an impact corporate status has on win rate. The sign of the coefficient indicates the direction of the impact. For example, a corporate patentee has a coefficient of \(-0.655\), which we know is significant \((p = 0.008)\). The negative coefficient means that the corporation is less likely to win, or alternatively that the individual is more likely to win. The magnitude of the coefficient \((0.655)\) tells us the strength or impact this variable has on outcome. Compared to a case where the patentee is a corporation and in which the patentee has a 50% chance of success, where the patentee is an individual the chance of winning increases to 66%.

B. The Judge Bias Explanation

Another possible explanation for the descriptive statistics is that judges are biased in favor of corporations and juries are not biased in their decisionmaking. In short, maybe the judge, not the jury, is reaching the wrong result. For judge bias to explain the data, the selection of tried cases would have to be stronger for the individual so that the jury results are an accurate reflection of the merits of the cases. Since judge results differ from jury results, the judicial prejudice against the individual could explain the lower win rate. To test this theory, I ran a multivariate regression to analyze only bench trials. The regression mirrors the earlier one for jury trials. Unlike the jury trial regression, which confirmed the descriptive statistics, the

\[^{88}\text{ Magnitude is calculated by taking the anti-log of the coefficient. For example, the coefficient for corporate patentee is } -0.655 \ (e^{-0.655} = 1.925). \text{ With all the other variables constant, jury resolution changes the odds of the corporation winning from 1:1 to 1.925:1. This corresponds to a probability of winning of 66% (1.925 / (1.925 + 1)). }\]
TABLE 6: IMPACT OF PARTY CHARACTERISTIC DATA ON PATENTEE WIN RATE WITH JURY

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Significance (p statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patentee Is Defendant (Plaintiff/Defendant)</td>
<td>−1.341</td>
<td>.211</td>
<td>.000</td>
</tr>
<tr>
<td>Foreign Patentee</td>
<td>−0.185</td>
<td>.265</td>
<td>.486</td>
</tr>
<tr>
<td>Foreign Infringer</td>
<td>0.934</td>
<td>.215</td>
<td>.000</td>
</tr>
<tr>
<td>Corporate Patentee</td>
<td>−0.655</td>
<td>.246</td>
<td>.008</td>
</tr>
<tr>
<td>Corporate Infringer</td>
<td>0.572</td>
<td>.442</td>
<td>.195</td>
</tr>
<tr>
<td>Constant</td>
<td>0.725</td>
<td>.476</td>
<td>.128</td>
</tr>
</tbody>
</table>

Number of Observations = 969

The bench trial regression indicates that there is no significant difference in the judge’s treatment of individuals and corporations.

The results shown in Table 7 are reassuring, since they show that outcomes do not merely reflect the characteristics of the parties. While I have not proven that judges rely on the strength of the case, any reliance on the characteristics of the parties seems less likely—at least with respect to entity status and alienage. Whether the patentee or infringer is foreign or domestic, an individual or a corporation, or plaintiff or defendant has no significant impact on the outcome of bench trials.

TABLE 7: IMPACT OF CHARACTERISTIC DATA ON PATENTEE WIN RATE WITH JUDGE

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Significance (p statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patentee Is Defendant (Plaintiff/Defendant)</td>
<td>−0.127</td>
<td>.206</td>
<td>.535</td>
</tr>
<tr>
<td>Foreign Patentee</td>
<td>−0.259</td>
<td>.223</td>
<td>.245</td>
</tr>
<tr>
<td>Foreign Infringer</td>
<td>0.349</td>
<td>.221</td>
<td>.114</td>
</tr>
<tr>
<td>Corporate Patentee</td>
<td>0.082</td>
<td>.266</td>
<td>.758</td>
</tr>
<tr>
<td>Corporate Infringer</td>
<td>−0.629</td>
<td>.444</td>
<td>.156</td>
</tr>
<tr>
<td>Constant</td>
<td>0.643</td>
<td>.469</td>
<td>.171</td>
</tr>
</tbody>
</table>

Number of Observations = 729

The data in Table 7 do not support the explanation of judicial bias. Although tried cases are not a representative sample of all cases, case selection does not seem likely to support the notion that judge
bias in favor of corporations explains the difference in win rate. First, the Priest & Klein model predicts that both judge and jury trials would only occur in close cases. Second, to the extent that patent cases involving individuals and corporations deviate from the underlying assumptions, and they likely do, they would do so consistently in both judge and jury trials. Third, the likely optimism of individual patentees and repeat player status of corporations both suggest that the pool of tried cases would be stronger for corporations.

For judge bias to explain the empirical results, the selection of cases for trial must generally favor individuals; juries must be deciding the cases correctly. Given that anecdotes and scholarship are flush with observations of perceived jury bias in favor of individuals, and that there is no widespread belief in probusiness judicial bias, it is unlikely that the selection of tried cases consistently produces stronger cases for the individual. Thus, the data support a conclusion of impartiality by judges (at least with regard to who filed suit, alienage, and entity status of the parties).

In summary, the analysis in Parts III.A–C indicates that corporations try stronger patents. Part III.D concludes that corporations pursue stronger cases against individuals in jury trials than in bench trials. The regression analysis in Part IV suggests that being an individual has a significant impact on the likelihood of winning a jury trial but not a bench trial. Jury bias is the most plausible explanation for the data presented in Parts III and IV. These data support the widely held perception of jury bias but indicate that the community has underestimated the extent of the bias. The direction of the bias is accurate, but the magnitude is wrong.

One factor present in nearly every patent case, which could affect the win rate and provide insight into jury populism, is the inventor. I discuss the iconization of the inventor in Part V.

V

ICONIZATION OF THE AMERICAN INVENTOR

When you say the word inventor to most Americans, a lot of pictures jump suddenly into their minds. They see Samuel Morse with his great white beard and his chest covered with medals standing by a telegraph key, ticking off the message “What Hath God

---

89 See supra notes 38–40 and accompanying text.
90 See supra notes 2–4 and accompanying text.
Wrought.” . . . They see Eli Whitney grinding away at his cotton gin and they see Edison standing stiffly by a large incandescent bulb, considerably bored by the crowd of admirers round him. . . . These are all pictures of popular American heroes. There is a regular parade of them before your mind’s eye whenever anyone says the word inventor.92

There is ample evidence to suggest that society holds inventors in high regard.93 “In the popular imagination, the hero of the patent world is the solo inventor—an eccentric individual who has a brilliant insight, obtains a patent and proceeds to fame and fortune by making and selling the patented invention.”94 Analysis of patent cases permits the exploration of a related phenomenon—the heroic iconization of the American inventor. A preference for inventors may also explain some of the empirical results.95 Due to high transaction costs, most patent litigation is corporation versus corporation (85%). However, the inventor puts a face on one of the corporate entities, humanizing or personalizing the party.96

92 Roger Burlingame, Inventors Behind the Inventor 3 (1947) (emphasis omitted).
94 Robert Patrick Merges & John Fitzgerald Duffy, Patent Law and Policy: Cases and Materials 1255 (3d ed. 2002); see also Russell Bourne, Invention in America 4 (1996) (“[T]he inventor has been hailed as hero or even god, even when his genius causes major social disruptions. This belief of ours goes way back.”); Thomas P. Hughes, American Genesis: A Century of Invention and Technological Enthusiasm 1870–1970, at 4 (1989) (“This history, then, argues that inventors, industrial scientists, engineers, and system builders have been the makers of modern America.”). Edison is particularly prominent in this vision:

[Edison] embodies the powerful myth of the solitary inventor, a figure as strong in the American imagination as the yeoman farmer and the brave frontiersman. . . . “Where does innovation come from?” asks Steven M. Shore, president of the Alliance for American Innovation. Even today, “the majority of technological breakthroughs comes from individual inventors,” Shore adds. The VCR, the heart pacemaker, intermittent windshield wipers and even kitty litter, all are the products of solitary inventors. “Their protection from the unjust infringement and bullying by large corporations has to continue,” Shore warns.

95 Bob Violino, Novell’s Nemesis, InformationWeek, Dec. 14, 1992, at 12 (quoting patent lawyer Robert Barr as saying that “a small inventor against a big company usually does well by a jury”).
96 Litigants realize the importance of humanizing the corporation in jury trials. See, e.g., W. Edward Bailey, Presenting the Witnesses Special to a Patent Trial, in Patent Litig.
Therefore, even in corporation-versus-corporation litigation, there is an individual component to every patent case and an opportunity for bias to impact decisionmaking. In nearly all patent litigation, the inventor will be the first person to testify. The inventor will explain the invention, how important it is, and how she came up with the idea that eluded others. Even though there may be a corporate patent owner, and the inventor who testifies will not actually get any of the damage awards, the inventor individualizes the corporate party. If the jury finds for the patentee, it is validating the efforts of the inventor.97

There is generally no individual closely or personally linked with a corporate infringer. The corporate infringer may have a representative sitting at the counsel table, but it is not the same.

Further analysis of the data shows that not only do juries prefer individuals over corporations and domestic parties over foreign ones, they prefer patentees. In bench trials, the patentee wins 52.1% of cases. In jury trials, the patentee wins 64.8% of cases. Juries are significantly more likely than judges to find for patentees.98

A regression analysis, including the characteristics of the inventors as well as those of the parties and the patents, finds that juries prefer individual inventors to groups of inventors. The lower the number of inventors, the more likely the patentee is to win with a jury. Juries like the image of the solitary inventor toiling away at a problem. The idea of teams of people working together on a solution is not as appealing. Even when a corporation owns the patent, the patentee is more likely to win if a solo inventor rather than a team invented the

---

97 ADAM J AFFE & J OSH L ERNER, I NNOVATION AND  I TS D ISCONTENTS 124 (2004), reprinted in Mark Voorhees, Hang the Jury, INTELL. PROP. LAW & BUS., Oct. 2004, at 42 ("[M]any patent attorneys regard juries as excessively sympathetic to patent-holders, being too easily swayed by a beribboned patent document. As a result, the general attitude of the legal community—including judges—was that the request of a jury trial was a signal of a weak case.")

98 \( \beta = -0.130; t = -5.405; p = 0.000. \)
technology at issue.\textsuperscript{99} In this regression, whether the infringer is foreign continues to be significant, as does whether the patentee is the plaintiff. Whether the patentee is an individual ceases to be significant ($p = 0.085$), but this is because it is so closely correlated to the variable for the number of inventors.

Few of the characteristics of the patents proved to significantly affect the patentee win rate with juries. The number of claims, prior art references, and related applications are not significant predictors of the win rate, which raises doubts as to whether these characteristics are predictors of the strength of the patent. Whether the patent was a utility patent or a design patent, or even whether the patent had been reissued, is not significant. This last finding is surprising given that reissue is a second chance for the PTO to evaluate the patentability of the claims, and a patent that was reviewed twice ought to be stronger than a patent that was reviewed only once. The only patent characteristics that significantly affect the win rate with the jury are the length of prosecution time and the grant year of the patent. The length of prosecution time is correlated with the number of ancestor applications that had been filed on the same invention by the same applicant. Hence, the length of prosecution time is a measure of the value of the invention to its patentee. The grant year of the patent is an important control because patent characteristics have changed significantly over time.\textsuperscript{100} The older the patent, the more likely the patentee is to win with the jury. This may indicate that more recently issued patents are less valuable or possibly not as strong. The age of the patent at the time of the litigation is also significant. Juries prefer patentees who file promptly to enforce their patent rights.

As I observed, the fewer the number of inventors, the more likely the patentee is to win. This is true whether the patent is assigned to a corporation or an individual at issuance and regardless of whether the patent was transferred after issuance. In fact, assignment and transfers do not significantly impact the win rate. This latter finding is surprising given the hypothesis that juries favor inventors. Apparently juries favor inventors regardless of whether the inventor stands to gain in the lawsuit—i.e., regardless of whether the inventor is the

\textsuperscript{99} Interestingly, the number of inventors seems to matter regardless of whether the suit is brought by the inventors, the patentee at the time the patent issued, or a subsequent purchaser. The patentee, as we learned from the high transfer rate of patents prior to litigation, is not always the inventor. Transference of the patent, however, does not significantly impact the patentee’s likelihood of success in a jury trial. This may be because even in cases where the patent is transferred, the inventor is still often brought to testify.

\textsuperscript{100} See Hall et al., supra note 29, at 9–21 (noting that claim and citation practice has changed dramatically over time).
April 2007]  

**POPULISM AND PATENTS**

### Table 8: Impact of Inventor Characteristic Data on Patentee Win Rate with Jury

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Significance (p statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patentee Is Defendant (Plaintiff/Defendant)</td>
<td>−1.470</td>
<td>.227</td>
<td>.000</td>
</tr>
<tr>
<td>Foreign Patentee</td>
<td>−.244</td>
<td>.282</td>
<td>.387</td>
</tr>
<tr>
<td>Foreign Infringer</td>
<td>.998</td>
<td>.229</td>
<td>.000</td>
</tr>
<tr>
<td>Corporate Patentee</td>
<td>−.274</td>
<td>.309</td>
<td>.375</td>
</tr>
<tr>
<td>Corporate Infringer</td>
<td>.545</td>
<td>.449</td>
<td>.225</td>
</tr>
<tr>
<td>Year Suit Terminated</td>
<td>.114</td>
<td>.042</td>
<td>.008</td>
</tr>
<tr>
<td>Reissue Patent</td>
<td>.060</td>
<td>.423</td>
<td>.888</td>
</tr>
<tr>
<td>Design Patent</td>
<td>−.203</td>
<td>.414</td>
<td>.623</td>
</tr>
<tr>
<td># of Claims</td>
<td>.003</td>
<td>.003</td>
<td>.386</td>
</tr>
<tr>
<td># Prior Art Cites Considered</td>
<td>.005</td>
<td>.003</td>
<td>.111</td>
</tr>
<tr>
<td># Related Applications</td>
<td>.090</td>
<td>.070</td>
<td>.199</td>
</tr>
<tr>
<td>Length of Prosecution Time</td>
<td>−.069</td>
<td>.034</td>
<td>.046</td>
</tr>
<tr>
<td>% of Foreign Inventors</td>
<td>.007</td>
<td>.011</td>
<td>.562</td>
</tr>
<tr>
<td># of Inventors</td>
<td>−.200</td>
<td>.070</td>
<td>.004</td>
</tr>
<tr>
<td>Grant Year of Patent</td>
<td>−.144</td>
<td>.039</td>
<td>.000</td>
</tr>
<tr>
<td>Age of Patent when Suit Was Filed</td>
<td>−.090</td>
<td>.044</td>
<td>.039</td>
</tr>
<tr>
<td>Corporate Assignee at Issuance</td>
<td>−.131</td>
<td>.213</td>
<td>.539</td>
</tr>
<tr>
<td>Transferred After Issuance</td>
<td>−.244</td>
<td>.175</td>
<td>.162</td>
</tr>
<tr>
<td>Constant</td>
<td>62.055</td>
<td>41.598</td>
<td>.136</td>
</tr>
</tbody>
</table>

Number of Observations = 943

patent owner. Whether the inventor is foreign does not significantly impact the win rate in the regression, but this variable is correlated with the patentee’s domicile.

Many of the same characteristics of the lawsuit continue to be significant: whether the infringer is foreign, whether the patentee initiated suit, and the year the suit is terminated. The termination year variable suggests that juries have become more favorably inclined
toward patentees in recent years—the more recent the case, the more likely the patentee is to win. Juries like proactive patentees—those who initiate suits and who do so quickly after the patent has issued. Although entity status of the patentee is not significant in the reported regression results, it is correlated with two related variables: whether the patent was assigned to a corporation or individual at the time of issuance and the number of inventors. The more inventors listed on a patent, the more likely it is a corporate patent. The fewer the number of inventors, the more likely it is a patent acquired by an individual and which is not assigned. If these variables are removed from the regression, then individual patentees are significantly more likely to win with juries.

These empirical results affirm the popular notion that juries love inventors and support the conclusion that juries prefer individuals.

**CONCLUSION**

The data indicate that juries are more likely to find for individuals in patent cases. Since bench trials do not demonstrate a similar win rate differential and evidence does not support a differential selection of cases, jury bias seems to be the most plausible explanation.

The process of human invention is changing. Major technological breakthroughs are less frequently the result of individuals toiling away in their basements and garages; more frequently, they are the work of inventive teams in large corporations or research labs. While the average person may envision Thomas Edison or Alexander Graham Bell when thinking of independent inventors, corporations view many modern day individual inventors as parasites. Corporate infringers have termed them “trolls,” “predators,” and “extortionists.”

---

101 See, e.g., David G. Barker, *Troll or No Troll? Policing Patent Usage with an Open Post-Grant Review*, 2005 DUKE L. & TECH. REV. 0009, ¶ 7–19, http://www.law.duke.edu/journals/dltr/articles/2005dltr0009.html (discussing “pernicious” effects of patent trolls on innovation); *Edited & Excerpted Transcript of Symposium on Ideas into Action: Implementing Patent Reform of the Patent System*, 19 BERKELEY TECH. L.J. 1053, 1101 (2004) (statement of Mark Janis) (“Patent trolls are patent system bottom feeders who buy improvidently granted patents from distressed companies for the sole purpose of suing legitimate businesses.”). “Patent ‘Trolls’ and Patent Property Rights” was the title of a conference held recently by the Intellectual Property Owners Association on March 14, 2005 in Washington, D.C. Individuals are not the only “patent trolls.” Licensing shops are frequently referred to as patent trolls. More and more patent licensing shops are in the business of buying and selling patents that they determine might be enforceable against large companies, but whose owners often lack the resources to do the enforcing themselves. Legislation has even been introduced in Congress for the purpose of minimizing the negative impact that patent trolls have on the patent system. See 151 CONG. REC. E1160 (daily ed. June 8, 2005) (statement of Rep. Berman) (stating that section 7 of the
because these individuals do not practice the invention themselves; in fact, they generally do not manufacture any commercial products. This image of the greedy inventor is relatively new, and it will be interesting to see whether it changes the longstanding love of the heroic inventor. In time, a changing perception of inventors in our society may diminish the jury bias manifested in patent litigation data. For now, the jury favors the individual inventor.


103 Sandburg, supra note 48 (quoting Intel executive discussing patent infringement suits against company).