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JUDGING JURIES: EVALUATING RENEWED PROPOSALS FOR SPECIALIZED JURIES FROM A PUBLIC CHOICE PERSPECTIVE

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ABSTRACT

This article evaluates whether specialized juries are better in dealing with complex cases than lay juries. Public choice theory provides a way to examine the group decisionmaking that occurs in juries.

Even the Supreme Court has recognized that juror comprehension levels might differ based on education or inherent ability. Public choice theory indicates collective decisionmaking might differ between lay juries and specialized juries. Informational cascading likely occurs within lay juries when a few jurors have a better ability to comprehend the technical issues in question. Finding a selection method for specialized juries might prove difficult to achieve in practice, but establishing such a selection method for specialized juries by requiring more uniform education or comprehension levels might help to reduce informational cascades.

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> We have circuitry that in a hydraulic sense probably makes some TV circuits look mild in comparison. There really is no way for most average juries, whether they be garage tinkerers or not, or judges that we normally draw, to really understand that with comprehension.[1]

> It's a leap of faith that goes considerably beyond what a religion requires to say that the best way to determine questions of technology, market-competition and computer science is to find people who have led a life that has not put them in contact with the issues involved.[2]

INTRODUCTION

[¶1] In complex litigation, even the most educated experts often debate the meaning of a single word.[3] Nonetheless, the current judicial system expects lay juries to decide the outcome of cases where the facts are more complex than the average person can comprehend.

[¶2] For example, a recent patent infringement case in the Eastern District of Virginia required jurors to decide, after a five-week trial, whether eBay infringed various claims in three patents that covered aspects of electronic sales on the Internet.[4] One patent covered the "Buy it now" electronic feature on eBay that allowed buyers to make fixed-price purchases instead of waiting for an auction to end.[5] In the first patent, Claim 8 was just one of twelve claims at issue.[6] Claim 8 contained 356 words, including obscure terms such as "a post/de-post

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[1] *Abolition of Jury Trials in Patent Cases*, Fourth Biennial Patent System Major Problems Conference, 34 IDEA 77, 88 (1994) [hereinafter *Abolition of Jury Trials*] (statement of Bill Thompson).
[2] Stephen J. Alder, *Can Juries Do Justice to Complex Suits?*, WALL ST. J., Dec. 21, 1989, at B1 (statement of antitrust attorney).
[3] *See, e.g.*, Startex Drilling Co. v. Sohio Petroleum Co., 680 F.2d 412, 415 (5th Cir. 1982) (noting "both sides offered plausible explanations to the jury of the meaning of the disputed terms"—"footage", "day," and "circulation"—in an oil drilling contract); Markman v. Westview Instruments, Inc., 772 F. Supp. 1535, 1537 (E.D. Penn. 1991) (noting conflicting expert testimony about the meaning of patent term "inventory").
[4] MercExchange, L.L.C. v. eBay, Inc., 275 F. Supp. 2d 695, 698 (E.D. Va. 2003).
[5] *See* MercExchange, L.L.C. v. eBay, Inc., 401 F.3d 1323, 1325 (Fed. Cir. 2005).
[6] *Id.* at 1326.

communications handler operably connected to said communications means."[7] The jury was given a special verdict form, which focused on infringement and validity of the patents using the judge's claim construction.[8] The jury initially found no indirect infringement of one patent, but despite this finding, awarded a total of $5 million in damage for infringement of that patent.[9] The jury was also asked to consider if eBay induced another company to infringe the second patent.[10] After considering the evidence and the claims, the jury found eBay liable for $10.5 million for willfully infringing the competitor's patent and $5.5 million for inducing the other company to infringe.[11] The final judgment on all of the patents required the defendants to pay over $35 million in damages.[12]

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[7] Claim 8 in the '265 patent read:

> A market apparatus for use with a posting terminal apparatus, said posting terminal apparatus having means for creating a digital image of a good for sale, means for creating a data record of said good for sale, a tracking number printer means, a tracking number scanner means and means for communicating to said market apparatus, said market apparatus comprising: a communications means for communicating with the posting terminal apparatus; a post/de-post communications handler operably connected to said communications means, said communications handler receiving a data record of a good for sale from the posting terminal apparatus, said communication handler detecting a predetermined posting terminal apparatus identification code from the posting terminal apparatus and verifying from said code that the posting terminal apparatus is an authorized user of said market apparatus; a storage device operably connected to said post/de-post handler, said storage device adapted to receive and store said data record of a good for sale, said data record containing an image of said good for sale and a textual description of said good for sale; a presentation mapping module operably connected to said storage device and a wide area communication network, said presentation mapping module providing via said wide area communication network an interface to said market apparatus for a participant, said presentation mapping module providing said participant with access to said data record textual description and said image of said good for sale; a transaction processor operably connected to said wide area communication network and said storage device, said transaction processor adapted to receive a purchase request and payment means from said participant, clear said purchase request and payment means and if said payment means clears then transfer the ownership of said good for sale by modifying said data record of said good for sale to reflect the new ownership of said good for sale by said participant; and a notification means operably connected to said transaction processor said notification means notifying the posting terminal apparatus in response to said transaction processor transferring ownership of said good for sale denoting with a finality of transaction said new ownership of said good.

U.S. Patent No. 5,845,265 (filed Nov. 7, 1995). Though long, this type of claim is not uncommon in patents.

[8] *See Jury to Ebay: You Infringed*, IP LAWYERS, Fall 2003 at 4, *available at* http://www.ip-lawyers.com/fall2003.pdf.

[9] *See MercExchange*, 275 F. Supp. 2d at 708.

[10] *Id.* at 710.

[11] *Id.* The Federal Circuit affirmed the jury's findings on infringement of the '265 patent. *See MercExchange*, 401 F.3d at 1362 ("Because substantial evidence supports the jury's verdict regarding infringement and validity of the

[¶3] Although recent research demonstrates that jury damage awards do not drastically exceed awards made by judges in bench trials,[13] many commentators have proposed changing the jury selection process in complex cases. Current proposals to reform the jury selection process in complex litigation include selecting juries based on (1) education,[14] (2) experience,[15] (3) some combination of (1) and (2);[16] or (4) letting the parties or the judge select the jurors.[17] Other proposals include educating the jury, bifurcating issues, or letting objective experts such as special masters operate as fact-finders.[18]

[¶4] In judging juries, the focus should not be on whether juries should be compared to an imaginary perfect fact-finder. Some jurors might be as capable of understanding factual issues as judges, especially because many district court judges are not specialists in the technology at issue, at least any more than a juror. The question this article seeks to address is therefore not who is best equipped to determine complex fact-finding. Instead, the focus of this article is whether specialized juries are better in dealing with complex cases than lay juries.

'265 patent, we affirm those aspects of the judgment."). However, the court reversed the jury's findings on inducement because the verdict was not supported by substantial evidence. *Id.*

[12] *Id.*

[13] *See Civil Justice Statistics*, U.S. Dep't of Justice, Bureau of Justice Statistics (2001), *available at* http://www.ojp.usdoj.gov/bjs/civil.htm (noting the median punitive damage award in state civil cases in 2001 was $50,000 jury trial cases and $46,000 from bench trials; only 8% of federal tort cases awarded over $10 million in damages).

[14] William V. Luneberg & Mark A. Nordenberg, *Specially Qualified Juries and Expert Nonjury Tribunals: Alternatives for Coping with the Complexities of Modern Civil Litigation*, 67 VA. L. REV. 887, 946-50 (1981) (proposing college-educated juries and further examining specialized juries where education relates to issue at trial).

[15] *See id.* at 948 (proposing selecting juries by finding jurors whose experience correlates to issues at trial); *see also* Kristy Lee Bertelsen, *From Specialized Courts to Specialized Juries: Calling for Professional Juries in Complex Civil Litigation*, 3 SUFFOLK J. TRIAL & APP. ADVOC. 1 (1998) (proposing professional, educated, and expert juries in complex civil cases).

[16] Franklin Strier, *The Educated Jury: A Proposal for Complex Litigation*, 47 DEPAUL L. REV. 49, 59 (1997) (requiring a minimum number of college educated jurors on each jury).

[17] *Id.* at 60.

[18] *See, e.g.*, Keith Broyles, Note, *Taking The Courtroom Into The Classroom: A Proposal For Educating The Lay Juror In Complex Litigation Cases*, 64 GEO. WASH. L. REV. 714 (1996) (proposing educating lay juries); LeRoy L. Kondo, *Untangling the Tangled Web: Federal Court Reform Through Specialization for Internet Law and Other High Technology Cases*, 2002 UCLA J.L. & TECH. 1 ("Special masters are generally court-appointed attorneys or professors who are authorized . . . to assist judges in pretrial proceedings, discovery, settlement negotiations or arbitration between parties, formulating recommendations for findings of fact and conclusions of law, and devising remedies such as monetary damages or injunctive relief."); Luneberg & Nordenberg, *supra* note 14, at 889, 950-55 (analyzing role of expert non-jury tribunals in complex civil litigation).

[¶5] Most of the current proposals acknowledge the potential difficulties in selection and retention of specialized juries, as well as the constitutional issues associated with due process concerns and fairness to litigants and juries. This article does not propose a specific selection criterion for specialized juries. Instead, this article explores the renewed proposals for specialized juries, specifically analyzing the proposals from a public choice perspective.

[¶6] Public choice theory can help explore the collective decisionmaking of more educated juries compared to lay juries. Thus, public choice theory might shed light on proposals that conclude specialized juries would create more fair or accurate fact-finding than lay juries. Specifically, evaluating informational cascading effects on jury deliberation might explain one motivation behind renewed proposals for specialized juries in complex litigation.

[¶7] Part I of this article provides a summary of renewed proposals for specialized juries in complex litigation, a brief outline of the history of special juries, and a history of cases addressing a potential complexity exception to the Seventh Amendment. Although the use of specialized juries would not require a complexity exception to the Seventh Amendment, it is helpful to review motivations behind this suggested reform. Part II of this article uses public choice theory to evaluate whether specialized juries would enhance the accuracy or fairness of fact-finding in complex litigation.

[¶8] This article concludes that specialized juries might be more capable than lay juries, not necessarily due to increased expertise in the subject area or better ability to understand the issues, but instead due to a reduced cascading effect within the group deliberation process because of uniformity of information and comprehension.

I. BACKGROUND: A BRIEF HISTORY OF SPECIALIZED JURIES

A. Specialized Juries in England

[¶9] In the second half of the seventeenth century, it was not uncommon for a jury to include only property owners or experts in the subject matter of the litigation.[19] Courts also used the struck jury, formed by allowing parties to strike names from a large panel of prospective jurors,[20] which bears resemblance to the preemptory challenge system in place in the United States today.

1. Expert Juries

[¶10] Originally, juries in England were commonly chosen for their special knowledge of the facts in issue, but in time the system became impractical due in part to the lack of available jurors for each case.[21] Nonetheless, juries were often comprised of experts, including panels of "cooks and fishmongers" in cases related to cooking or fishing, or all-female juries that were assigned the task of determining if a female criminal defendant was pregnant.[22]

2. Mixed Juries

[¶11] It was not uncommon to find mixed juries composed of some jurors with special knowledge of the issues and some without. One example occurred in a 1663 libel trial, where a defendant requested a jury composed of "booksellers and printers, they being the men that only understand our business."[23] The Chief Justice replied: "There are those already that understand it as well as book-sellers or printers; besides, half the jury are such, and they are able to make the

[19] James C. Oldham, *The Origins of the Special Jury*, 50 U. CHI. L. REV. 137, 164 (1983).
[20] *Id.*
[21] *Id.*
[22] *Id.* at 139 (internal citations omitted); *see also* Luneberg & Nordenberg, *supra* note 14, at 903 (noting English Parliament in 1730 passed a statute declaring the right of any litigant to demand a special jury).
[23] Oldham, *supra* note 19, at 174 (internal citations omitted).

rest understand it."[24] Thus, the seemingly well-accepted method of using more educated or experienced jurors to aid other jurors in their comprehension of facts dates back to at least 1663.

B. Jury Trials in the United States

1. Seventh Amendment Right to a Jury Trial in Suits at Common Law

[¶12] The Seventh Amendment provides:

> In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.[25]

[¶13] In addition, Rule 38(a) of the Federal Rules of Civil Procedure guarantees a right to a jury trial "as declared by the Seventh Amendment . . . or as given by a statute of the United States . . . ."[26]

[¶14] In some complex cases, litigants have tried to avoid a jury trial in favor of a bench trial based on the argument that litigants deserve "a jury capable and willing to decide the case solely on the evidence before it."[27] The Seventh Amendment's right to jury trial in "suits at common law," however, presented a constitutional hurdle for these litigants.[28] Any attempt to avoid a jury trial would seem to require a constitutional interpretation permitting a complexity exception to the Seventh Amendment.[29] Some federal courts have interpreted the Constitution to permit this exception, relying on a footnote in the Supreme Court decision in *Ross v. Bernhard.*[30]

[¶15] In *Ross v. Bernhard*, the Court recognized three factors that courts can consider when examining whether a particular claim gives rise to a jury trial: (1) the customary manner of trying such a cause before the merger of law and equity in 1938; (2) the kind of remedy sought

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[24] *Id.*
[25] U.S. CONST. amend. VII.
[26] FED. R. CIV. P. 38(a).
[27] Strier, *supra* note 16, at 64 (citing Smith v. Phillips, 455 U.S. 209, 217 (1982)).
[28] *Id.*
[29] *Id.*
[30] *Id.*

by the plaintiff; and (3) the abilities and limitations of a jury in deciding the issue.[31] This language, presented in a footnote in *Ross*, eventually generated a circuit split on the issue of the Seventh Amendment right to a jury trial in complex cases.

[¶16] In several decisions after *Ross*, the Supreme Court considered the Seventh Amendment right to a jury trial "without once considering the practical abilities and limitations of juries."[32] But in 1980, the Third Circuit stated that jury capability might be a factor in determining whether there is a right to a jury trial at all—due process might instead require that the case be tried to the judge.[33] The court noted that a case is "too complex for a jury when circumstances render the jury unable to decide in a proper manner."[34] The proper manner, the court stated, presumes at a minimum that "a jury will find facts and reach a verdict by rational means."[35]

[¶17] The law does not require "scientific precision," but it does presume a "resolution of each issue on the basis of a fair and reasonable assessment of the evidence and a fair and reasonable application of the relevant legal rules."[36] The court went even further and examined the jury's role as a check on judicial power, concluding that a jury unable to understand the evidence is "hardly a reliable and effective check on judicial power."[37] In its analysis of the jury's role in the judicial system, the court went on to state: "Our liberties are more secure when judicial decisionmakers proceed rationally, consistently with the law, and on the basis of

[31] Ross v. Bernhard, 396 U.S. 531, 538 n.10 (1970).
[32] Phillips v. Kaplus, 764 F.2d 807, 814 n.6 (11th Cir. 1985).
[33] In re Japanese Elec. Prods. Antitrust Litig., 631 F.2d 1069, 1079 (3d Cir. 1980) (affirming denial of jury trial in suit for violations of the Sherman Act, the Antidumping Act, the Wilson Tarriff Act, and the Lanham Act).
[34] *Id.*
[35] *Id.*
[36] *Id.*
[37] *Id.* at 1085.

evidence produced at trial. If the jury is unable to function in this manner, it has the capacity of becoming itself a tool of arbitrary and erratic judicial power."[38]

[¶18] In a sharp criticism of the *Japanese Electric* decision, the Sixth Circuit stated that anyone who would claim that a jury cannot understand complex civil cases "improperly demean[s] the intelligence of the citizens of this nation . . . ."[39] The court further criticized proposals for more specialized juries as "elitist" and condemned the proposals as undermining a fundamental right.[40]

[¶19] Many arguments in opposition to specialized juries focus on the perceived elitism of specialized juries. Further clarifying this problem in dissent in the *Japanese Electric* decision, Judge Gibbons noted one valid concern of reducing lay jury participation—diminished respect for the judicial system:

> In the process of gaining public acceptance for the imposition of sanctions, the role of the jury is highly significant. The jury is a sort of ad hoc parliament convened from the citizenry at large to lend respectability and authority to the process. . . . Any erosion of citizen participation in the sanctioning system is in the long run likely . . . to result in a reduction in the moral authority that supports the process.[41]

[¶20] Thus, the most significant concern behind reduced lay jury participation in complex cases might not be perceived elitism, but instead reduced faith in the judicial system because of reduced participation by the "citizenry at large."

2. Federalist Papers

[¶21] The arguments against requiring specialized juries predict that general faith in the judicial process would weaken if lay jury participation were reduced. This argument bears

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[38] *Id.*
[39] Kian v. Mirro Aluminum Co., 88 F.R.D. 351, 355 (E.D. Mich 1980) (denying defendant's motion to strike plaintiff's jury demand and request for expert in patent licensing dispute).
[40] *Id.*
[41] *In re Japanese Elec.*, 631 F.2d at 1093 (Gibbons, J. dissenting).

resemblance to a similar critique of public choice theory: public choice can hurt the public interest by increasing public cynicism toward government and the democratic process (evidenced, for example, by decreasing voter turnout).[42] On the other hand, a proposed regime of sophisticated juries might lead citizens to think that the cases in which they are used are somehow important. Recognizing the need for expertise is unlikely to create public cynicism in the same manner as learning about interest group influence on legislation. Further, requiring lay juries to decide questions that are too complicated will itself undermine respect for jury decisions, a worry Alexander Hamilton recognized in the Federalist Papers.

[¶22] Hamilton's Federalist Paper Number 83 supports an interpretation of the Constitution that holds that when a case is too complex for jury resolution, there is no true remedy "at common law," and the case should instead be decided in equity:

> The circumstances that constitute cases proper for courts of equity are in many instances so . . . intricate that they are incompatible with the genius of trials by jury. They require often such long, deliberate, and critical investigation as would be impracticable to men called from their occupations, and obliged to decide before they were permitted to return to them. . . . The attempt to extend the jurisdiction of the courts of law to matters of equity will . . . tend gradually to change the nature of the courts of law and to undermine the trial by jury, by introducing questions too complicated for a decision in that mode.[43]

3. Current Practice and Jury Demographics

[¶23] Most commentators agree that without a constitutional amendment, which is itself highly unlikely,[44] juries cannot be entirely eliminated from complex litigation because of the Seventh Amendment.[45] Yet, it appears that specialized juries could be substituted for lay juries

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[42] Daniel A. Farber & Philip P. Frickey, *The Jurisprudence of Public Choice*, 65 TEX. L. REV. 873, 907 (1987).
[43] Strier, *supra* note 16, at n.79 (citing THE FEDERALIST NO. 83 (Alexander Hamilton) (1937)).
[44] *See Abolition of Jury Trials*, *supra* note 1, at 83 ("[I]t is not likely that we're going to be able to change the Constitution, and it is problematical as to whether or not we're going to succeed in getting a complexity exception engrafted onto the Seventh Amendment.") (statement of Donald Dunner).
[45] *See* Gregory D. Liebold, *In Juries We Do Not Trust: Appellate Review of Patent Litigation*, 67 U. COLO. L. REV. 623, 624 (1996). Further, the Supreme Court has adopted a two-prong test to determine whether a Seventh

without violating the Seventh Amendment right to trial by jury. Recently, some commentators have called for Congress to create special juries in complex litigation, or at least in patent cases.[46] These juries, suggest the commentators, would be in many ways preferable to a specialized Article I court because special juries would theoretically increase the sophistication of the fact-finder without changing the balance of power between trial and appellate courts.[47]

[¶24] These critiques are in many ways similar to old criticism of generalist courts. Almost a century ago, Judge Learned Hand observed that generalist courts were not always equipped to decide complex technological issues:

> I cannot stop without calling attention to the extraordinary condition of the law which makes it possible for a man without any knowledge of even the rudiments of [science and technology] to pass upon such questions as these. The inordinate expense of time is the least of the resulting evils, for only a trained [scientist] is really capable of passing upon such facts. . . . How long we shall continue to blunder along without the aid of unpartisan and authoritative scientific assistance in the administration of justice, no one knows; but all fair persons not conventionalized by provincial legal habits of mind ought, I should think, unite to effect some such advance.[48]

[¶25] More recently, Judge Michel of the Federal Circuit observed, "it seems likely that society at large, not to mention the business community, will be less tolerant of any inconsistent or possibly unsound adjudications by general adjudicators handling highly complicated matters of great economic importance with widespread practical consequences."[49] Judge Michel predicted that Congress might soon respond to pressures from the business community and other

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Amendment right to a jury trial attaches: "First, a court must examine the case to see if it would have arisen in law or in equity in 1791 when the Seventh Amendment was adopted. Second, . . . a court must look at the relief requested to see if it is legal or equitable." *Id.* at 628 (citing Chauffers, Teamsters, & Helpers, Local No. 391 v. Terry, 494 U.S. 558, 563-67 (1990)).

[46] *See id.* at 648.

[47] *Id.* at 653.

[48] *See* Kondo, *supra* note 18 (quoting Parke-Davis & Co. v. H.K. Mulford Co., 189 F. 95, 115 (C.C.S.D.N.Y. 1911)).

[49] *Id.* (quoting Paul R. Michel, *The Court of Appeals for the Federal Circuit Must Evolve to Meet the Challenges Ahead*, 48 AM. U. L. REV. 1177, 1184-85 (1999)).

countries to implement increased specialization within the Federal Circuit or other federal courts.[50] "Corporations with enormous stakes in high technology races impose pressures on the legal system to transform itself, posing special challenges that promise to shift the boundaries and contours of intellectual property law."[51]

[¶26] Seventeen states have used some form of a specialized jury, basing their authority primarily on state statutes; because the Seventh Amendment applies only to federal court litigation, state court practice cannot supply the authority that specialized juries are constitutional.[52] Few federal courts in the United States have used specialized juries,[53] while, in contrast, many other countries rely on specialized juries in complex cases.[54] Currently, in patent cases, a jury trial is available if demanded by either party at the start of litigation.[55] One party, however, does not have absolute control over the composition of the jury and cannot predict who will sit on their jury.

[¶27] The first stage of jury selection for civil trials is the venire, "which lists eligible jurors drawn from the population of the United States, age eighteen or older, who can communicate in English"—most commonly using voter registration lists.[56] Because only 60% of eligible voters register, a large part of the population—usually correlated with minorities—is not included on the list.[57] Summons are sent, and "intelligent potential jurors with a significant

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[50] *Id.*
[51] *Id.*
[52] *See* Luneberg & Nordenberg, *supra* note 14, at 903-06 (internal citations omitted).
[53] *See id.* at 903 n.85
[54] *See* Gretchen Dunbar, Comment, *"Real as Pro Wrestling":* Johns Hopkins University v. CellPro *and the Federal Court's Power of Review in Patent Infringement Actions*, 18 SANTA CLARA COMPUTER & HIGH TECH. L.J. 275, 296 (2002) (noting that in the United Kingdom and Canada, some cases are still considered "too complicated for a jury of laymen to rule upon," and there exist concerns "about whether juries should be allowed to decide relatively complex issues of Internet and intellectual property law.").
[55] Kimberly A. Moore, *Jury Demands: Who's Asking?*, 17 BERKELEY TECH. L.J. 847, 852 (2002) [hereinafter Moore, *Jury Demands*] (citing FED. R. CIV. P. 38(b)(1)).
[56] GORDON TULLOCK, THE CASE AGAINST THE COMMON LAW 31 (Amanda J. Owens ed., Carolina Academic Press 1997) [hereinafter COMMON LAW] (noting "communicate" is broadly interpreted).
[57] *Id.*

opportunity cost of time find excuses, including perceived bias, to be excused from duty."[58] As most people know, however, this claim is exaggerated. Strong social sanctions against stating biased attitudes certainly exist in most environments. Counsel on both sides may reject potential jurors either for cause or by peremptory strikes. Some scholars allege that attorneys use expert advice to understand psychological profiles of potential jurors and "strike to win, not to ensure justice."[59]

[¶28] There is little freely available statistical information for parties to predict the outcomes of cases based on the composition of civil juries by education or income level. Instead, most legal studies focus on the racial composition of juries. Some private companies sell statistics on jury demographics.[60] A few small-group researchers have studied demographic factors such as race, gender, education, and socioeconomic status because these factors are readily observable.[61] Yet, juror demographic characteristics "have been only weakly and inconsistently related to juror verdict preferences."[62]

4. Complex Cases Defined

[¶29] Additionally, very few commentators have attempted to define complex cases with particularity, and there is no uniform standard for what is meant by a "complex" case. One wide-ranging definition for when a case might be too complex for a jury trial would account for

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[58] *Id*

[59] *Id.* at 32. When lawyers on both sides "strike to win," however, the system as a whole promotes justice, because the result is to eliminate any jurors predisposed toward one side of a case. Tullock claims that lawyers, or jurors with above average information concerning complex matters, tend to be stricken from the panel, and that jurors tend to be "extremely non-random, unusual representatives of the population at large." *Id.* Few public studies, however, have analyzed the education or information level of jurors.

[60] For example, "JuryView" software purports to provide reports "that identify the juror characteristics of a specific court or all courts as well as statistics on diversity of age, race, geographic location, education, income, and sex." *See* The JuryView™ Management solution, http://www.maximus.com/justice/pages/juryview.asp (last visited April 2, 2005).

[61] Tali Mendelberg, *The Deliberative Citizen: Theory and Evidence*, 6 POLITICAL DECISION MAKING, DELIBERATION AND PARTICIPATION 151, 160, 165 (2002), *available at* http://www.princeton.edu/%7Etalim/DeliberativeCitizen.pdf.

[62] Dennis J. Devine et al., *Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups*, 7 PSYCHOLOGY, PUBLIC POLICY, AND LAW, 622, 673 (2001).

three factors: (1) the nature of the trial; (2) the nature of the evidence; and (3) the difficulty of the substantive law.[63] Another commentator suggests that complexity should be defined in terms of both the length of the trial and the technical issues at stake. This definition would include statutory securities law, patent infringement, shareholder derivative actions, and medical malpractice trials as among the most complicated.[64] An alternative proposed system of jury selection would establish a rebuttable presumption of complexity whenever a litigant requested as a witness an expert in a technical subject.[65] This proposal would create a broad presumption that a case is complex, and might allow parties to manipulate the court system by requesting expert witnesses in almost any case.

[¶30] For purposes of this article, I define complex cases to mean only those cases where appreciation of the facts might require greater than average technical background or comprehension. For example, "an auto accident at an intersection is normally not factually complex while a patent infringement suit normally is."[66]

II. A PUBLIC CHOICE PERSPECTIVE ON SPECIALIZED JURY DECISIONMAKING

[¶31] Lay juries have at least some comprehension of the facts in complex cases, but might miss nuances that a more specialized jury might find important. Assuming complex cases to include only those cases where appreciation of the facts might require greater technical background or comprehension, the question remains—how do lay juries decide complex cases?

A. The Rational Juror's Rational Ignorance

[63] Joseph A. Miron, Jr., Note, *The Constitutionality of a Complexity Exception to the Seventh Amendment*, 73 CHI-KENT. L. REV. 865, 883-84 (1998).
[64] Strier, *supra* note 16, at 75.
[65] *Id.* Of course, this begs the question to some extent, because technical could be defined in many ways.
[66] Jeffrey W. Stempel, *A More Complete Look at Complexity*, 40 ARIZ. L. REV. 781, 794 (1998).

[¶32] The Third Circuit's critique of lay juries in complex cases was based in part on the assumption that a lay jury does not proceed rationally[67] because it cannot effectively comprehend the facts in technical cases. The dictionary definition for "rational" is "consistent with or based on reason; logical."[68] The term rational in public choice theory has a different meaning than the Third Circuit's use of the word. This section evaluates a jury's decisionmaking using the public choice definition of rational to examine how it is possible for a jury to appear "irrational" in the common sense of the word while remaining rational in the public choice sense.

[¶33] One basic assumption of the public choice actor is the person who is an "egoistic, rational, utility maximizer."[69] Self-interest can be defined to include not simply economic interests, but also any kind of objective, so long as people are rational in pursuit of that objective.[70]

[¶34] A rational agenda might be defined as a merely transitive agenda. When rational is defined to assume that people only engage in an activity where the activity's marginal benefit must equal or exceed the marginal cost, the definition would allow for the construction of a model with predictive value. Essentially, public choice theory assumes that people generally pursue objectives in this rational manner—in a way where the marginal cost does not exceed the marginal benefit.

[¶35] Some scholars argue that public choice can help explain ideological voting.[71] For example, in elections, to vote for her conception of the public interest and against her financial interest costs a voter nothing because her vote has such a small chance of even affecting the

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[67] In re Japanese Elec. Prods. Antitrust Litig., 631 F.2d 1069, 1079 (3d Cir. 1980).
[68] THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (Houghton Mifflin 4th ed. 2000).
[69] Farber & Frickey, *supra* note 42, at 878.
[70] Michael E. Debow and Dwight R. Lee, *Understanding (and Misunderstanding) Public Choice: A Response to Farber and Frickey*, 66 TEX. L. REV. 993, 996 (1988).
[71] *Id.* at 997.

outcome.[72] Thus, if public choice models increase skepticism about interest groups or special interest programs, a voter might oppose those programs, even when the voter could privately benefit from them.[73]

[¶36] Unlike voters, a juror knows that her vote will affect the outcome of a case. A juror is expected to vote based on the facts presented at trial, applied to the law as instructed by the judge, regardless of personal or subjective beliefs regarding the parties. This assumption applies whether the juror is a rocket scientist or an average person.

[¶37] Assuming that a voter or juror might behave rationally in the public choice definition of the word does not imply that such a person has all the facts, comprehends all the facts, or is even motivated to understand the facts. A voter, for example, has little incentive to gather information about relevant or ongoing political issues, because the probability that her vote will affect the outcome is so small.[74] Any person will spend only a certain amount of time or money to obtain a piece of information.[75] If obtaining that information costs more than the information is worth, an individual will (or should) rationally choose to remain ignorant of it.[76] This has been deemed "rational ignorance."[77]

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[72] *Id.* at 998.
[73] *Id.* at 1005.
[74] *See, e.g.*, GORDON TULLOCK, TOWARD A MATHEMATICS OF POLITICS 102-104 (1967) [hereinafter MATHEMATICS OF POLITICS]; Jonathan R. Macey, *Public Choice: The Theory of the Firm and the Theory of Market Exchange*, 74 CORNELL L. REV. 43, 47 n.17 (1988) (For example, "[w]here a piece of legislation will cost a taxpayer $50.00, and the net cost of obtaining information about the effects of the legislation (including the opportunity costs of the taxpayer's time, and the start-up costs of identifying the issue) are greater than $50.00, no rational taxpayer will obtain the information necessary to begin to affect legislative outcomes.") (citing ANTHONY DOWNS, AN ECONOMIC THEORY OF DEMOCRACY 238-76 (1957); MANCUR OLSON, THE RISE AND DECLINE OF NATIONS 25-35 (1982)).
[75] *See, e.g.*, COMMON LAW, *supra* note 56, at 32; MANCUR OLSON, RATIONAL IGNORANCE, PROFESSIONAL RESEARCH, AND POLITICIANS' DILEMMAS, IN KNOWLEDGE, POWER AND THE CONGRESS 130 (William H. Robinson & Clay H. Wellborn eds., 1991) (discussing rational ignorance in the context of citizens and their rational ignorance of public policies).
[76] *See, e.g.*, COMMON LAW, *supra* note 56, at 33; OLSON, *supra* note 75, at 130 (discussing rational ignorance in the context of citizens and their rational ignorance of public policies).
[77] *See* MATHEMATICS OF POLITICS, *supra* note 74, at 104; *see also* Lisa R. Anderson & Charles A. Holt, *Information Cascades in the Laboratory*, 87 AM. ECON. REV. 847-862 (1997) (applying theory of rational ignorance to experiment testing information cascades in laboratory); Macey, *supra* note 74, at 47 n.17 ("The term for the concept presented here is 'rational ignorance.'").

[¶38] Unlike voters, a juror has more incentive to inform herself and understand the relevant issues in the trial because her vote will affect the outcome of the trial, in a way that a vote in a national election will not. In addition, forced attendance at trial lowers the cost of gathering information. Yet, because jurors are captive audiences with no chance to do outside research, a juror could only better understand the information presented at trial by learning from other more sophisticated jurors during deliberation.

[¶39] For all intents and purposes, the Third Circuit's critique of jury ignorance is compatible with the concept of rational ignorance. The Third Circuit's critique of lay juries not behaving "rationally" is compatible with the public choice analysis of jury rationality, if the Third Circuit actually means lay juries do not appear reasonable (because they are unreasonably applying the relevant legal rules and in failing to understand the evidence), or that juries do not deliberate with a comprehension of the facts necessary to make a fair determination for the parties involved.

B. Decisions Required Despite Limited Comprehension: Why Does A Larger Jury Result in a More Predictable Outcome?

1. The Condorcet Jury Theorem

[¶40] Some scholars predict that the larger the sample of individuals from a community on a jury, the lower the margin of error in the jury's verdict.[78] The Condorcet Jury Theorem supports this prediction. The Jury Theorem predicts that majority rule increases the chances that

[78] *See, e.g.,* Valerie P. Hans, *The Power of Twelve: The Impact of Jury Size and Unanimity on Civil Jury Decision Making*, 4 DEL. L. REV. 1, 8 (2001); Dennis J. Devine, *Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups*, 7 PSYCHOL. PUB. POL'Y & L. 622, 708(2001); Robert H. Miller, *Six of One is not a Dozen of the Other: A Reexamination of* Williams v. Florida *and the Size of State Criminal Juries*, 146 U. PA. L. REV. 621, 664 (1998) ("Thus, where memory is important, a larger group is more likely to recall crucial facts vital to the proper solution of the problem.").

a group will select the correct outcome.[79] Thus, assuming there is a "correct" outcome, and each decisionmaker has a greater than ½ chance of selecting the correct answer and none of the decisionmakers are experts, a larger jury would have fewer erroneous verdicts.[80] The Jury Theorem postulates that as the size of the jury increases, the possibility that jurors will choose a single incorrect answer or fail to sort over all answers decreases.[81] As the number of participants increases, so does the ability of those who actually know the correct answer to distinguish the correct answer from the choices that remain; in a larger group, there is a smaller chance that those who do not know the correct answer (and just choose randomly) will all choose a single incorrect result.[82] In other words, with more participants in the jury it is more likely that the responses of those who do not know the answer will be randomly distributed.[83] Yet, the Jury Theorem "promises nothing" if the choice is between options giving rise to preferences that are neither right nor wrong.[84]

[¶41] Determining the margin of error or method of measuring accuracy of jury verdicts is indeed difficult, because there is "no easy benchmark of correctness."[85] Some authors have proposed that an accurate jury decision be defined as one that "best reflects the views of the informed public while taking the evidence and law into account."[86] Based on this theory, twelve-person juries should produce "more reliable reflections of community sentiment about civil cases," while six-person juries are smaller samples of the community, and should therefore

[79] Maxwell L. Stearns, *The Condorcet Jury Theorem and Judicial Decisionmaking: A Reply to Saul Levmore*, 3 Theoretical INQ. L. 125, 130 (2002).
[80] *Id.*
[81] *Id.* at 132131.
[82] *Id.* at 132.
[83] *See id.*
[84] *Id.*
[85] Hans, *supra* note 78, at 8.
[86] *Id.* at 9.

produce less reliable, more variable outcomes in civil cases.[87] Indeed, empirical studies show that between six- and twelve-person juries selected from the same population pool, jurors on larger panels more accurately represented the community from which they were drawn, and had "more closely represented the average attitudinal characteristics of the pool."[88] Further, consistent with the predictions of the Jury Theorem and other empirical studies show that jury size does influence jury awards, with higher levels of variability associated with the outcomes of six-person juries compared with twelve-person juries.[89] Thus, larger juries produce more consistent verdicts across similar cases, and more consistently reflect the views of the community from which they are drawn.

[¶42] However, the larger juries needed to ensure lower levels of variability impose other costs. Larger juries create higher decisionmaking costs than smaller juries. Decisionmaking costs are the cost of securing agreement on a course of action.[90] Indeed, some empirical research shows that larger juries promote more thorough discussion of evidence and attention to minority views;[91] these thorough discussions and attention to minority views increase decisionmaking costs. Thus, twelve-person juries would reflect lower levels of variability but higher decisionmaking costs than six-person juries.

[¶43] Reducing the number of jurors would reduce the number of decisionmakers, and thus reduce decisionmaking costs. One drawback to a smaller jury, though, would be an increase in "agency costs"—costs engendered by a divergence of the agent's goals and those of the

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[87] *Id.; see also* Edward P. Schwartz & Warren F. Schwartz, *Decisionmaking by Juries Under Unanimity and Supermajority Voting Rules*, 80 GEO. L. J. 775, 807 (1992) ("[I]f we are concerned with jury verdicts reflecting the preferences of the average member of society as closely as possible, larger juries are certain to achieve this result better than smaller juries.").
[88] *See* Miller, *supra* note 78, at 666 (citing Richard O. Lempert, *Uncovering "Nondiscernible" Differences: Empirical Research and the Jury-Size Cases*, 73 MICH. L. REV. 643, 668 (1975)).
[89] *See* Devine, *supra* note 79, at 706; see also Hans, *supra* note 78, at 5.
[90] Peter H. Aranson et al., *A Theory Of Legislative Delegation*, 68 CORNELL L. REV. 1, 6 (1982).
[91] *See* Hans, *supra* note 78, at 5.

principal.[92] In the smaller jury, higher agency costs result in more erroneous verdicts and higher variability in jury awards.

[¶44] Thus, with larger juries, agency costs would decrease, while decisionmaking costs would increase. Studies have shown that jurors rely on each other for fact recollection or correction of one another's factual errors; with more jurors, the ability to recall information presented at the trial increases,[93] therefore reducing errors and agency costs. The costs of coming to a unanimous conclusion, however, would increase with larger juries.

[¶45] The Supreme Court has noted that twelve-person juries are a "historical accident."[94] If agency costs are reduced with larger juries, perhaps a twelve-person jury is too small. A 100-person jury would reduce agency costs and resulting errors. Still, at some point, decisionmaking costs would become too high for the jury to come to any conclusion, let alone a unanimous conclusion in a reasonable time frame. Perhaps because of an expected increase in deliberation time or cost with even larger juries,[95] very few commentators have argued for juries larger than twelve people.

2. The Role of the Jury

[¶46] Regardless of the size of the jury, many people assume the purpose of a jury is to reflect what the informed community would decide. [96] This mischaracterizes the role of the jury.

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[92] *See* Aranson, *Supra* note 90, at 6.
[93] *See* Joe S. Cecil et al., *Citizen Comprehension of Difficult Issues: Lessons from Civil Jury Trials*, 40 AM. U. L. REV. 727, 749 (noting mock jurors tended to correct one another's factual errors and pool memories, consistent with other research finding 90% recall of facts and 80% recall of instructions when collective memories were pooled, compared to lower recall for individual jurors); Miller, *supra* note 78, at 664.
[94] Williams v. Florida, 399 U.S. 78, 89 (1970).
[95] *C.f.* Miller, *supra* note 78, at 680 (citing studies finding savings of almost 50% in cost of using six-person juries instead of twelve-person juries, but finding "no savings in time" with smaller jury).
[96] *See* Roger W. Kirst, *The Jury's Historic Domain in Complex Cases*, 58 WASH. L. REV. 1, 29 (1982) (noting that a "jury verdict provides the courts and lawmakers with the most valuable information about the community view of a particular law…").

The jury is composed of fact-finders deliberating in isolation, instructed to determine the rights of individual parties and not the representative views of the public.

[¶47] Therefore, accuracy could instead be measured by affirmance rate of jury trials when compared to bench trials.[97] Indeed, one study found the affirmance rate of district court judges and juries was virtually identical for issues of patent validity,[98] signaling that juror resolution of complex facts is closely aligned with judicial resolution, at least in certain areas of patent law. At first glance, these findings seem to weigh against predictions that increasing the number of decisionmakers would increase the accuracy of fact-finding (if accuracy is measured by affirmance rate.) Yet, the conclusion is not necessarily inconsistent because judges have experience—they are not lay jurors who are get just one glimpse at the court system. Juries are "one-time players in the litigation game and have no opportunity to learn from or build on past juror experiences or reasoning,"[99] in contrast to judges who, especially in certain federal districts, might repeatedly hear cases in certain specialties such as patent or securities law.

[¶48] Regardless of the method used to predict accuracy, the function of the jury cannot be characterized as an essentially representative function. Juries are not representatives of their communities[100] and are not charged with determining public views. Instead, the jury is charged

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[97] Of course, this is an imperfect measure, because not all reversals are based upon issues relevant to juror competence. For example, a jury trial could also be reversed for a careful adherence to an ultimately erroneous jury instruction, which would not signal the quality of a jury deliberation.

[98] *See* Kimberly A. Moore, *Judges, Juries, and Patent Cases—An Empirical Peek Inside The Black Box*, 99 MICH. L. REV. 365, 368, 397 (2000) [hereinafter Moore, *The Black Box*]. This study found:

> Judges and juries find patents enforceable with similar frequency. Additionally, juries seem as "accurate" in their decisionmaking as judges are, as measured by appellate affirmance rate. .. . . The Federal Circuit affirms judge factfindings in 78% of all judge issues appealed and affirms jury factfindings in 78% of all jury issues appealed. These data indicate that the Federal Circuit upholds the findings of both types of adjudicators at the same rate, suggesting that jury factfindings are no less "accurate" than judge factfindings, as measured by appellate affirmance rate.

[99] *Id.* at 369.

[100] *Cf.* Liebold, *supra* note 45, at 623 ("When you go into court you are putting your fate in the hands of twelve people who weren't smart enough to get out of jury duty.") (quoting THE SPEAKER'S BOOK OF QUOTATIONS 60 (Henry O. Dorman ed., 1987)); *see also* TULLOCK, COMMON LAW, *supra* note 56, at 32 (noting juries typically

with resolving each fact issue before it on the basis of a fair and reasonable assessment of the evidence and a fair and reasonable application of the relevant legal rules as presented by the judge.[101]

consist of individuals of "below average intelligence," and are made up of disproportionately older and unemployed citizens).

[101] *In re Japanese Elec.*, 631 F.2d at 1079.

C. Informational Cascades in Juror Decisionmaking

[¶49] Juries are expected to make decisions when there is disagreement among members. In some ways, jury decisionmaking presents similar issues of social choice as legislatures who arrive at outcomes despite disagreement, because each juror, like each legislator, tries to achieve an outcome as close as possible to the juror's preference, constrained by the need to reach a consensus and the preferences of other jurors who have a vote.[102] The limited number of options available to juries, however, makes the analogy imperfect. Still, juries might be influenced by cascade effects, similar to legislatures.

[¶50] Many people are familiar with cascade effects even if they are not familiar with the term. Cascades occur "in various fads and fashions, in riots and mobs, and in the herd behavior of stock market investors."[103] Cascades occur because of (1) informational and (2) reputational causes.[104] Essentially, an informational cascade occurs whenever group members who lack information rely on the opinions of others with more information to make a decision.[105] For example, if a group member lacks information and is given facts, figures, or explanations, the group member will accept the information as true.[106] Similarly, a reputational cascade can occur when group members either publicly take a stand or remain silent to maintain or establish a reputation with other group members.[107]

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[102] *See* Schwartz & Schwartz, *supra* note 87, at 776.
[103] John R. Allison & Emerson H. Tiller, *The Business Method Patent Myth*, 18 BERKELEY TECH. L.J. 987, 1005 (2003).
[104] Marleen A. O'Connor, *The Enron Board: The Perils of Groupthink*, 71 U. CIN. L. REV. 1233, 1256-57 (2003) ("As a result of cascades, groups end up with a shared perception—which may not be true—because other people seem to hold a particular view.").
[105] *Id.*
[106] *See id.*
[107] *See, e.g.*, Suhil Bikhchandani et al., *Learning from the Behavior of Others: Conformity, Fads, and Informational Cascades*, 12 JOURNAL OF ECON. PERSPECTIVES 151, 168 (1998); O'Connor, *supra* note 106, at 1257.

[¶51] In one recent experiment, economists tested information cascades in the laboratory by asking groups of volunteers to receive a private signal in a random order.[108] The volunteers received private signals and made public decisions based on both (1) the signal and (2) public decisions of other volunteers who had gone before.[109] The study found that information cascades formed from volunteers' rational inferences that others' decisions were based on information that dominated their own signal.[110] Interestingly, "reverse cascades" also occurred when initial decisionmakers observed private signals that indicated the incorrect answer, and a large number of volunteers joined in the pattern of mistakes, despite receiving private signals indicating the correct result.[111]

[¶52] In the experiment, volunteers were given private signals that revealed information about two equally likely events: A or B.[112] To illustrate the experiment, imagine containers A and B. The signal, either ball *a* or *b*, tells a volunteer that the probability is 2/3 that the signal will match the event (the container label).[113] So, for example, if a first volunteer sees the private signal (ball) *a*, the probability of event (container) A is 2/3; the probability of event B given signal *a* is 1/3.[114] The decisions (A or B) are publicly announced, but signals (*a* or *b*) are kept private.[115]

[¶53] The volunteers are approached in a random order, receive a signal, and make a decision based on the information available: their private signal and the public choices of any volunteers who have already chosen. The model assumes each subsequent volunteer uses Bayes'

[108] *See* Anderson & Holt, *supra* note 77, at 849-53.
[109] *Id.*
[110] *Id.*
[111] *Id.* at 856.
[112] *Id.* at 849.
[113] *Id.*
[114] *See id.*
[115] *Id.*

rule[116] to make predictions. The first volunteer will predict event A if the signal is *a*; thus the prediction by the first volunteer will reveal that person's private signal.[117] If the first person predicts A, but the second person gets the *b* signal, the second person should infer that the first signal was *a*, and predict ½ A and ½ B posterior probabilities because the priors are ½ and the sample is balanced.[118] Thus, if the first two volunteers receive different signals, the second decision-maker almost always makes a prediction consistent with the private signal, even when this prediction differs from the first round decision.[119] In this situation, the first volunteer will predict A and the second will predict B; their decisions effectively cancel each other out,[120] and a cascade will not immediately form.

[¶54] If the first two decisions are A, even if the third person observes private signal *b*, the third person can use Bayes' theorem to predict that the posterior probability of A is greater than ½.[121] In this situation, the third person should predict event A, *despite* the private *b* signal.[122] Indeed, despite two *b* signals (the second and third volunteers received private *b*'s), the third person chooses A. Therefore, the first two decisions can start a cascade where the third and subsequent volunteers rationally ignore their own private information.[123] Indeed, cascade behavior was observed in 41 out of 56 samples where previous inferred signals caused an

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[116] Bayes' rule is a mathematical rule explaining how you should change your existing beliefs in the light of new evidence. *See In Praise of Bayes*, THE ECONOMIST (Sept. 28, 2000), *available at* http://www.cs.ubc.ca/~murphyk/Bayes/economist.html. Treating probability as logic, Thomas Bayes defined the following: Pr(A|B)=Pr(B|A)Pr(A)/Pr(B). *Id.* Specifically, our *posterior* belief Pr(*A*|*B*) is calculated by multiplying our *prior* belief Pr(*A*) by the *likelihood* Pr(*B*|*A*) that *B* will occur if *A* is true. For example, probability that the weather was bad given that our friends played tennis can be calculated as: Pr(play tennis in the rain)Pr(rain)/Pr(play tennis). *See also* Game Theory Dictionary, *at* http://www.gametheory.net/Dictionary/BayesRule.html.
[117] Anderson & Holt, *supra* note 77, at 849-50.
[118] *Id.*
[119] *Id.* at 855.
[120] *Id.* at 849-50
[121] *Id*. at 849-50 n.11 (noting that even assuming the second person behaved randomly, after observing two A decisions, and receiving a *b* signal, the posterior probability of container A is 5/9, thus, the third person should predict container A).
[122] *Id.* at 852. (emphasis added).
[123] *Id.*

imbalance between a volunteer's observation of the public decisions, and the private signal.[124] Further, the study's analysis showed how a cascade can result from rational behavior, even if based on a decision error by an earlier participant.[125] In this way, reverse cascades form.

1. One Potential Cascade: The Ability to Discern Complex Facts in Novel Subjects

[¶55] The novelty of the phenomenon about which information is being transmitted has been deemed one of the most important contributing factors in cascades.[126] Many tort and simple contract cases are understandable to lay juries, who can relate to car accidents or agreements to paint houses by drawing from their own experiences or general understanding. In contrast, a juror who is asked to comprehend complex gastrointestinal medical diagnoses, or chemical compounds in pharmaceuticals, would probably have a hard time coming up with a more difficult and novel topic to deliberate about. Further, even assuming attorneys are able to teach complicated technology to lay juries, the practical limits of trials today might not allow juries enough time and resources to fully comprehend the issues.

[¶56] At least one study has shown that better educated jurors are more persuasive in changing other jurors' opinions during deliberation.[127] A small study of twenty criminal trial juries found that male jurors and jurors with a college education participated the most in the group discussion.[128] The study also found that jurors with high participation were perceived by fellow jurors as "helpful" during the deliberation.[129] Additionally, college-educated jurors spent more time on procedural issues, rather than drawing upon insights from personal experiences or

[124] *Id.*
[125] *Id.*
[126] *See* Allison & Tiller, *supra* note 103, at 1080.
[127] *See* Rita James, *Status and Competence of Jurors*, 64 AM. J. OF SOC. 563 (1959) (noting that educated jurors received higher ratings from other jurors for their contributions to deliberations, and were more persuasive in changing other jurors' opinions).
[128] *Id.*
[129] *Id.* at 565.

upon discussion of specific testimony.[130] The accuracy in remembering court instructions by jurors with only grade-school education was "significantly less" than high-school or college-educated jurors, although recall of facts was similar across all education levels.[131]

[¶57] Grade-school jurors' contributions were also reported as "significantly less" active[132] than jurors with more education.[133] Jurors with grade-school education, while able to recall facts at the same level as other jurors, were significantly less accurate in their interpretations of the court's instructions.[134]

[¶58] The study also measured the effects of influence on other members when a jury was divided on a conclusion, finding that the greater number of jurors in opposition, the less the likelihood of a minority of jurors winning them over.[135] However, when the jury was divided almost evenly in terms of agreement on an issue, college-educated jurors appeared to be more effective at persuading other jurors.[136]

[¶59] Similar results might occur within jury deliberations in complex cases, when a jury contains at least one individual who: (1) understands the technical issues better than other jurors because of advanced education, experience, and/or ability; (2) takes aggressive positions within jury deliberation because of this education, experience, ability*; or* (3) some combination of the above.

[¶60] Several commentators have speculated that more educated jurors are better able to understand complex issues, in part because more educated jurors are "more likely to be adept at

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[130] *Id.* at 566.
[131] *Id.* at 566-67.
[132] An active contribution was defined as idea or opinion, and not mere agreement with a previous speaker. *Id.* at 566.
[133] *Id.* at 567.
[134] *Id.*
[135] *Id.*
[136] *Id.*

learning and applying new principles to complicated subjects."[137] Therefore, especially in areas of complex technology, which are novel to most jurors, more educated jurors might have better comprehension of the facts and thus more "information" by the conclusion of the trial. Although all jurors would have equal access to information during the trial, some jurors would better comprehend the technology, specific facts, judge's instructions and law, and might better distinguish between competing expert testimony.

[¶61] With better comprehension, these jurors would have more influence over other jurors' opinions during deliberation. This influence could create an informational cascade. As several studies have shown, jurors with more education have higher participation in jury deliberation and are perceived by others as "helpful."[138] Of course, some older studies report that other factors, such as gender, affect jury participation levels.[139] Still, it is likely that jurors who better understand the issues in complex cases will speak up early in deliberations. By presenting their views early (and often), these jurors could create information cascades or reverse cascades. Proponents of specialized juries might be motivated, at least in part, by a desire to avoid reverse cascades.

[¶62] For example, if there only two jurors with a better technical comprehension of issues in chemical patent case, Jurors 1-2 might influence the votes of Jurors 3-12, if 3-12 rely on 1-2 for their understanding of the issues. It is not the case that Jurors No. 3-12 have no information—after all, they saw the same evidence as 1-2. Because Jurors 1-2 are like the first randomly selected volunteers in the cascade experiment, however, they can start a cascade

[137] Liebold, *supra* note 45, at 649.
[138] *See* James, *supra* note 127, at 566; Cecil, *supra* note 93, at 764 (noting "more knowledgeable jurors guide others in deliberations").
[139] *See* Charlan Nemeth et al., *From the '50s to the '70s: Women in Jury Deliberations*, 39 SOCIOMETRY, 293, 297 (1976)(noting men in the study tended to communicate more frequently than the women, and were the target of more communications from others; men were rated higher than women by fellow jurors on the following adjectives: intelligent, influential, independent, confident, rational, strong, courageous, aggressive, active, and persistent; men were also seen as more of a leader, while the women were better liked). The results may not be as strong today.

because other jurors will rely on them for their information. Imagine that both Jurors 1 and 2 agree on an outcome.

Table 1: First Two Jurors Agree on Outcome

Juror	Public Decision
1	A
2	A

[¶63] Juror 3 could reason that there is at least 50% chance that Juror 1 is correct.[140] If Juror 2 then agrees with Juror 1's outcome, Juror 3 should infer that the posterior probability that the outcome is correct is now greater than 50%. Even if Juror 3 is unsure, it is rational for Juror 3 to rely on 1-2 and agree with their conclusions, because there is a greater posterior probability that 1-2 are correct than there is that they are incorrect. Therefore, if at least two jurors have better technical comprehension and both agree on a result, it is likely that these two jurors would start information cascades or reverse cascades most of the time.

Table 2: A Cascade Begins

Juror	Public Decision
1	A
2	A
3	A

[140] As Anderson and Holt note, the counting heuristic used in their experiment can be generalized to cover cases in which the prior probabilities are not 50%. *See* Anderson & Holt, *supra* note 77, at 849 n.9.

[¶64] A reverse cascade would occur if Jurors 1-2 agreed on an outcome but it was actually incorrect. In all cases, it only takes an imbalance of two decisions in one direction to overpower the informational content of subsequent individual "signals."[141]

[¶65] Further, even if one juror subsequently disagrees with the pattern of decisions (for example, if the decisions went: A, A, A, B, . . .) cascade analysis shows that if individuals recognize that decisions made after the beginning of a cascade are "not informative," they will ignore these "irrelevant" decisions in their probability assessments.[142] Thus, assume Juror 4 has less comprehension of the technical facts in a complex case, but chooses event B without regard to the pattern of A decisions. Other jurors would recognize that Juror 4 has less information, and ignore her in their probability assessments. Indeed, Anderson & Holt's experiment reflected this result.[143] Thus, the cascade would continue for jurors 5-12. It is likely that Juror 4 would eventually be persuaded to change positions during jury deliberation.

[¶66] Next, consider a case with two jurors who have better technical comprehension of the issues, and these jurors disagree. They would cancel out the effects of their signals on the other juror members.[144] In this situation, the third and fourth jurors to speak could begin a cascade by creating an imbalance.

[¶67] There is scant empirical research available regarding informational cascades in jury deliberation. Especially in juries composed of individuals with mixed backgrounds—some educated, some not, some with different levels of education—it is unclear how cascades affect juries in complex cases. What is clear, however, is that cascade effects likely occur in complex cases when there are at least two jurors with better comprehension, and these jurors agree on an

[141] *Id.* at 849.
[142] *See id.* at 850.
[143] *See id.* at 852, tbl. 2.
[144] *See* Anderson & Holt, *supra* note 77, at 852.

outcome. This means that the potential exists for a minority of jurors to have a disproportionate effect upon, and possibly even to control, deliberations in complex cases.

2. Another Potential Cascade: The Ability to Distinguish Expert Opinions and Emotional Factors in Complex Litigation

[¶68] Some commentators have argued that the current federal rules give "equal dignity to the opinions of charlatans and Nobel Prize winners, with only a lay jury to distinguish between the two."[145] Thus, the argument goes, lawyers are motivated to choose "experts from the extremes on the assumption that the jury will guess that the truth lies somewhere between the two."[146]

[¶69] Yet even assuming this argument is true, there are no obvious reasons to assume that more educated juries are presumptively better able to ascertain which is more accurate among competing expert opinions. Frequently, especially in certain areas of the law such as medical malpractice, the right answers are unclear —for example, there may be no clear answer to the question of whether a doctor's course of action in treating a patient caused a birth defect or other harm. Frequently, highly educated and seemingly non-biased[147] experts themselves disagree. This is not limited to experts who are retained to testify in litigation.[148]

[¶70] It is possible that lay jurors would be better able to pick a credible expert over a fraud, based on general perceptions of presentation, word choice, demeanor, etc. Still, some scholars have suggested the opposite—that more educated juries would be better able to

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[145] E. Donald Elliott, *Toward Incentive-Based Procedure: Three Approaches for Regulating Scientific Evidence*, 69 B.U. L. REV. 489, 492-93 (1989).
[146] *Id.* at 493.
[147] These experts are non-biased in the sense that experts would not be inclined to favor one litigant over another.
[148] *See* Neil Vidmar, *Are Juries Competent to Decide Liability in Tort Cases Involving Scientific/Medical Issues? Some Data from Medical Malpractice*, 43 EMORY L. J. 885, 900 (1994) (analyzing internal non-discoverable study conducted by large hospital of malpractice complaints, where results showed one-third of cases examined by medical experts within the relevant specialty were classified as good care, one-third bad care, and almost one-third as ambiguous, either because the experts disagreed about the quality of care or the reviewing doctors did not agree with the expert assessments).

objectively evaluate the credibility of expert testimony.[149] Some critics have argued it is "extremely difficult to detect" whether witnesses are credible.[150] Accordingly, it is not clear that any juror has an advantage based on education (or lack thereof), especially considering the disparity that may exist in the type of education among college graduates.

[¶71] There also exists the perception that jurors are often improperly persuaded by "tangential factors"[151] such as emotional testimony or attorney "manipulation," such as distortion of the facts, or dramatic arguments designed to appeal to jurors' emotions.[152] These tangential factors might have greater influence on juries in complex cases because "the more simple and straightforward the factual and legal issues of the case, the less likely that lawyering skills will prevail over the merits of the case."[153]

[¶72] One study, comparing bench trials to jury trials in patent cases, might lend credibility to this argument. The study found juries were more likely to decide whole suits rather than to delineate individual issues, suggesting "that judges are subtler at managing the complex nature of patent cases and the technical distinctions between patents and products."[154] The conclusions might also indicate that those with more education are also better at separating emotional and tangential issues from complex fact-finding.[155] Again, with better comprehension of the issues and better ability to separate tangential factors from the main issues at trial, more

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[149] *See* Strier, *supra* note 16, at 68 (noting college educated jurors in a broad-scale survey of Los Angeles jurors perceived more attorney attempts at evidence distortion, yet were more confident that "mismatched attorney skills" did not have a significant effect on jury decision-making and the jury deliberation process).
[150] *See* COMMON LAW, *supra* note 56, at 33.
[151] *See* Moore, *The Black Box*, *supra* note 98, at 368.
[152] Strier, *supra* note 16, at 56 ("The attorney may distort or dissemble the facts. He or she may use highly charged argumentation, even histrionics, to appeal to the jurors' emotions."). *See also* COMMON LAW, *supra* note 56, at 24 ("Some attorneys specialize in manipulating the ordinary people who comprise the jury. . . . For example, skillful attorneys use procedure objections to interrupt the judge's and jury's train of thought in order to diminish the effectiveness of witness testimony.").
[153] Strier, *supra* note 16, at 56 ("Increasing complexity, on the other hand, allows the crafty tactician greater room to ply his or her skills decisively.").
[154] Moore, *The Black Box*, *supra* note 98, at 368.
[155] *Id.*

educated jurors, or jurors with more expertise in the subject matter, would have more "information," would speak up early and often in deliberations, and would have disproportionate influence over other jurors' opinions, creating informational cascades in jury deliberation.

D. Potential Methods to Reduce Informational Cascades in Jury Deliberations

1. Uniformity

[¶73] First, informational cascading theory itself suggests that uniformity among jury information would lead to less informational cascading effects in jury deliberation, because no one juror could start a cascade if every juror had uniform information. For example, studies have shown that when one or two jury members have college degrees, these jurors can influence the other members of the group,[156] perhaps because of better comprehension of complex issues and ability to present this information to their less-educated colleagues on the jury. If courts require uniformity in the educational composition or expertise level of a jury, jurors would come to deliberation with more equal information, and informational cascades would be less likely.

[¶74] Although uniformity in lay jury education might achieve the result of reduced informational cascades, requirements for increased education or expertise in the technology would achieve the same result, with the additional advantage of a jury that has better comprehension of complex facts.

2. Inform Juries of Potential Cascading Effects

[¶75] Psychology theory on interactive behavior often concludes that informing participants of variables that can affect them unconsciously can reduce the negative influence of such effects.[157] One proposal for reforming the jury system includes briefly educating jurors

[156] *See* Strier, *supra* note 16, at 68.
[157] *See* Michael W. Decaire, *The Faltering Common Law Jury System: A Psychological Perspective, available at* http://www.uplink.com.au/lawlibrary/Documents/Docs/Doc24.html (last visited April 2, 2005).

about potential biases prior to the trial.[158] A similar process might be utilized to educate juries about potential informational cascading effects. First, however, it is difficult to imagine such a system of instruction. Second, it is difficult to imagine that jurors could refrain from relying on those with better understanding of the issues to help guide the decisionmaking process. Therefore, requiring a minimum uniform education or experience level to enhance in juror comprehension appears the better solution to reducing informational cascading within juries. However, instructing jurors may prove the more practicable solution, at least in the short term.

E. *A Prediction About Settlement Rates with a Specialized Jury System*

[¶76] Once at trial, attorneys will likely present the evidence differently to a specialized jury than to a lay jury. With more specialized juries, attorneys might be more likely to present complex issues in greater detail, rather than gloss over certain areas for fear of losing the attention of a lay juror. In a recent trial concerning software technology, for instance, an attorney gave jurors a crash course on mirroring technology by using "cartoon-like graphics that showed two computers talking to each other via thought bubbles."[159] He persuaded the jury, won the trial, and summarized the lesson for other attorneys in complex cases: keep the case "short, sweet, and easy to understand."[160]

[¶77] Yet, even with a specialized jury system, there exists the possibility that parties would incorporate their perceptions about a specialized jury's bias or expertise into their strategic decision regarding whether to litigate the case or settle. In other words, even if a new specialized jury existed, parties would adapt to the system by factoring the specialized jury into their decision whether to go to trial or which claims to pursue.

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[158] *Id.*
[159] Susan Hansen, *Trial Tips: Keeping it Simple*, IP WORLDWIDE (Aug. 2004), *available at* http://www.ipww.com/texts/0804/trialtips0804.html.
[160] *Id.*

[¶78] Settlement rates might differ under each system. The economic theory of litigation concludes that parties are least likely to settle when a case is close.[161] This general theory should apply regardless of the identity of the fact-finder. The role of a specialized jury, however, should weigh differently into the calculation of when to settle, or which claims to pursue in a case. Thus, settlement rates would likely change under a system where specialized juries are possible. Until there is more empirical evidence on specialized juries, the calculation whether to risk a specialized jury determination or settle would remain unpredictable.

CONCLUSION

[¶79] This article attempted to evaluate whether specialized juries are better in dealing with complex cases than lay juries. Public choice theory provides a way to examine the group decisionmaking that occurs in juries and the possible motivations behind renewed proposals for specialized juries.

[¶80] Even the Supreme Court has recognized that juror comprehension levels might differ based on education or inherent ability.[162] Public choice theory indicates collective decisionmaking might differ between lay juries and specialized juries. Informational cascading likely occurs within lay juries when a few jurors have a better ability to comprehend the technical issues in question. Finding a selection method for specialized juries might prove difficult to achieve in practice, but establishing such a selection method for specialized juries by requiring more uniform education or comprehension levels might help to reduce informational cascades.

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[161] *See* George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984) (noting tried cases are not a random sample of all disputes and only result when the parties make inconsistent and self-serving outcome estimations).

[162] *Ross*, 396 U.S. at 538 n.10.

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