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Is There a Bias Against Education in the Jury Selection Process?

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I. INTRODUCTION

Herbert Spencer famously said that a jury is "a group of twelve people of average ignorance."[1] That is not a particularly rosy picture of juror competence, but it presents a far better view than the one held by many—if not most—modern commentators. The more common contemporary sentiment was captured by Mark Twain when he wrote, in his inimitable style, "[w]e have a criminal jury system which is superior to any in the world; and its efficiency is only marred by the difficulty of finding twelve [people] every day who don't know anything and can't read."[2] Specifically,

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[1] *E.g.*, MORRIS J. BLOOMSTEIN, VERDICT: THE JURY SYSTEM 123 (1968); GLANVILLE WILLIAMS, THE PROOF OF GUILT: A STUDY OF THE ENGLISH CRIMINAL TRIAL 207 (1955); Gail L. Heriot, *A Study in the Choice of Form: Statutes of Limitation and the Doctrine of Laches*, 1992 BYU L. REV. 917, 947 n.88; William D. Stiehl, *Insights into the Deliberative Process*, 21 ST. LOUIS U. PUB. L. REV. 11, 12 (2002).

[2] Mark Twain, Text of Undelivered Speech (July 4, 1872), *reprinted in* MARK TWAIN AND THE

there is widespread belief that relatively educated members of jury pools[3] are weeded out during the selection process, resulting in relatively under-educated juries.[4] If Spencer were a contemporary legal commentator, he

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GOVERNMENT 55 (Svend Petersen ed., 1960).

[3] Obviously, opinions differ as to how much education is sufficient or how little is inadequate. Education is not binary, and the use of definitive categories to identify who is "educated" is fraught with difficulties. For this reason, we simply refer to the "relatively educated" and the "relatively undereducated" throughout this article. These terms refer to individuals as compared to the mean of the pool. That is, if the pool has a mean education of fifteen years, someone with seventeen years of education is relatively educated, and someone with thirteen is relatively undereducated.

[4] *See, e.g.*, STEPHEN J. ADLER, THE JURY: TRIAL AND ERROR IN THE AMERICAN COURTROOM 219 (1994) (arguing that state jury exemption laws exclude the most educated members of society); BLOOMSTEIN, *supra* note 1, at 123–24 (noting that state exemption practices exclude educated professionals); JEROME FRANK, COURTS ON TRIAL 121 (1949) (discussing the trial strategy of purposely selecting jurors who are ignorant of the case's subject matter); Albert W. Alschuler, Commentary, *Explaining the Public Wariness of Juries*, 48 DEPAUL L. REV. 407, 408 (1998) (noting that jurors are "less educated than the norm"); Daniel P. Collins, *Making Juries Better Factfinders*, 20 HARV. J.L. & PUB. POL'Y 489, 499–500 (1997) (advocating repeal of professional exemptions and reducing peremptory challenges in order to diversify the jury); Dan Drazan, *The Case for Special Juries in Toxic Tort Litigation*, 72 JUDICATURE 292, 295 (1989) (suggesting that typical jurors ignore statistical evidence due to their limited educations); Phoebe C. Ellsworth & Alan Reifman, *Juror Comprehension and Public Policy: Perceived Problems and Proposed Solutions*, 6 PSYCHOL. PUB. POL'Y & L. 788, 812 (2000) (stating that attorneys often eliminate well-educated jurors with peremptory challenges); Steven I. Friedland, *The Competency and Responsibility of Jurors in Deciding Cases*, 85 NW. U. L. REV. 190, 194, 196 (1990) (explaining that emphasis on juror objectivity leads to the selection of jurors who are "generally less informed"); Graham C. Lilly, *The Decline of the American Jury*, 72 U. COLO. L. REV. 53, 61–65 (2001) (arguing that higher-income and better-educated people have an incentive to avoid jury service); Douglas G. Smith, *The Historical and Constitutional Contexts of Jury Reform*, 25 HOFSTRA L. REV. 377, 458–61 (1996) [hereinafter Smith, *Historical*] (comparing modern juries to the more experienced early English and American juries); Douglas G. Smith, *Structural and Functional Aspects of the Jury: Comparative Analysis and Proposals for Reform*, 48 ALA. L. REV. 441, 500–01 (1997) [hereinafter Smith, *Structural*] (discussing how modern *voir dire* and peremptory challenges exclude the most qualified and best-educated individuals); Jeffrey W. Stempel, *A More Complete Look at Complexity*, 40 ARIZ. L. REV. 781, 839 (1998) (suggesting that an underinclusive jury pool, avoidance of jury duty by professionals, and peremptory challenges lead to a jury devoid of highly educated individuals); Franklin Strier, *Making Jury Trials More Truthful*, 30 U.C. DAVIS L. REV. 95, 135 (1996) (arguing that hardship exemptions and peremptory challenges lead to "suboptimal juries"); Richard K. Willard, *What Is Wrong with American Juries and How to Fix It*, 20 HARV. J.L. & PUB. POL'Y 483, 483–87 (1997) (positing that people who are well-educated are increasingly excluded from juries and implying that their exclusion can lead to juries not understanding legal instructions and making decisions contrary to the law); Kristy Lee Bertelsen, Note, *From Specialized Courts to Specialized Juries: Calling For Professional Juries in Complex Civil Litigation*, 3 SUFFOLK J. TRIAL & APP. ADVOC. 1, 15–16 (1998) (arguing that attorneys use peremptory challenges to exclude jurors with specialized knowledge and pack juries with less-educated citizens); Douglas W. Ell, Comment, *The Right to an Incompetent Jury: Protracted Commercial Litigation and the Seventh Amendment*, 10 CONN. L. REV. 775, 779–81 (1978) (concluding that individuals are likely to be excused if they are well-educated or if their occupation correlates to the substance of the case); Alan Feigenbaum, Note, *Special Juries: Deterring Spurious Medical Malpractice Litigation in State Courts*, 24 CARDOZO L. REV. 1361, 1389–91 (2003) (discussing how cross-section requirements and peremptory challenges lead to the removal of educated jurors); Edward L. Holloran, III, Comment, *Medical Malpractice Litigation in Florida: Discussion of Problems and Recommendations*, 26 NOVA L. REV. 331, 347–48 (2001) (suggesting that attorneys exclude educated jurors because of their influence and intelligence); Mary Kaluk Lanning, Comment, *The Unnecessary Alternate Juror*, 73 U. COLO. L. REV. 1047, 1062 (2002) (noting that prosecutors employ visual stereotypes to remove potential jurors who look highly educated); Joanna Sobol, Note, *Hardship Excuses and Occupational Exemptions: The Impairment of the "Fair Cross-Section of the Community,"* 69 S. CAL. L. REV. 155, 174–75 (1995) (discussing the impact of financial and business hardship excusals on the jury venire); Rita Sutton, Comment, *A More Rational Approach to Complex Civil Litigation in the Federal*

may have said that a jury is composed of people of *above* average ignorance,[5] or perhaps more accurately, below average education.

In recent years, commentators have written dozens of articles offering both explanations for what causes this problem[6] as well as elaborate and wide-ranging policy proposals aimed at fixing it.[7] They are surely right to focus on this issue, because the problem is potentially serious, and the picture appears bleak. As trials continue to become more complex,[8] it would be perverse if relatively educated members of pools—who may be the very best kinds of jurors[9]—were systematically excluded from jury service.

However, there has been virtually no attempt to examine the extent and causes of the problem empirically.[10] The scholarly literature relies on a combination of theory[11] and anecdotal evidence.[12]

Courts: The Special Jury, 1990 U. CHI. LEGAL F. 575, 578 (discussing how excusal for cause leads to fewer educated jurors); Donna Walter, *Missouri Legislation Seeks to Reform State's Jury System*, ST. LOUIS DAILY REC./ST. LOUIS COUNTIAN, Feb. 19, 2004, *available at* LEXIS, News Library, ALLNWS File (discussing a bill pending in the Missouri legislature that would eliminate occupational exemptions); Vikram David Amar, *More on What's Wrong with the Modern Jury: How Juror Selection Can Be Improved*, FINDLAW'S LEGAL COMMENTARY, Feb. 20, 2004, http://writ.news.findlaw.com/amar/20040220.html (arguing that peremptory challenges and exemptions decrease the education level of juries).

[5] We have a vague recollection that this phrase originally belongs to someone else, possibly a former Supreme Court justice. However, we have been unable to track down any citation. We would be grateful for any insight a reader may offer.

[6] *See infra* notes 14–22 and accompanying text.

[7] *See infra* notes 23–32 and accompanying text.

[8] *See infra* note 20 and accompanying text.

[9] Several research studies that have tested mock juries' capacities to understand and apply complicated jury instructions and trial scenarios have found a positive correlation between education and performance. *See, e.g.*, AMIRAM ELWORK ET AL., MAKING JURY INSTRUCTIONS UNDERSTANDABLE 58–59 (1982) (observing that better-educated people performed better on a questionnaire measuring understanding); Robert P. Charrow & Veda R. Charrow, *Making Legal Language Understandable: A Psycholinguistic Study of Jury Instructions*, 79 COLUM. L. REV. 1306, 1320 (1979) (describing research indicating that education "consistently and significantly correlated with" jurors' ability to paraphrase jury instructions); Valerie P. Hans & Andrea J. Appel, *The Jury on Trial*, *in* A HANDBOOK OF JURY RESEARCH 3-1, 3-7 to -11 (Walter F. Abbott & John Batt eds., 1999) (asserting that typical jurors have difficulty understanding more complex statistical and expert evidence and judicial instructions); David U. Strawn & Raymond W. Buchanan, *Jury Confusion: A Threat to Justice*, 59 JUDICATURE 478, 483 (1976) (finding, after testing jurors' application of jury instructions, that "those jurors with some previous college experience tended to score higher after receiving instructions than those without college experience"); *see also* Smith, *Structural*, *supra* note 4, at 507 (citing "empirical evidence that educated jurors tend to participate in deliberations more frequently and remember more than other jurors").

[10] Although many scholars have discussed the issue as though it were proven and fully understood, *see supra* note 4 and accompanying text, at least one has candidly admitted that empirical data is lacking. *See* Lilly, *supra* note 4, at 61, 65 (noting that "empirical evidence of jury-duty avoidance is slim" and that the trend towards the relatively undereducated jury is worrisome "*if* documented by empirical evidence") (emphasis added); *see also* Mary R. Rose, *The Peremptory Challenge Accused of Race or Gender Discrimination? Some Data from One County*, 23 LAW & HUM. BEHAV. 695, 697 (1999) (explaining that "data on jury selection outcomes in recent trials are largely unavailable"); *cf.* Shari Seidman Diamond, *Truth, Justice, and the Jury*, 26 HARV. J.L. & PUB. POL'Y 143, 148–49 (2003) (noting that the data available from recent studies is "limited").

[11] *See infra* Part II (explaining the various theories put forward by scholars).

This Article presents the results of a study, conducted in the United States District Court for the District of Connecticut, that puts these theories to the test. The study was designed to examine whether there is a bias in the jury selection process that results in relatively undereducated juries, and, if so, how much and why.

The results are surprising: there is no evidence that juries are undereducated relative to the venires[13] from which they are selected. Indeed, juries seem to be *better* educated than the Connecticut population demographics reported by U.S. census data. Thus, our study suggests that the system is not broken in the way we typically imagine. We conclude that it would be a mistake to adopt the more radical policy proposals offered by scholars who argue that juries are relatively undereducated, at least until empirical evidence is produced that demonstrates that such a systemic problem actually exists. Further, our findings affirm our beliefs that empirical analysis (where it can be performed) is essential to policy discussion and that scholars ignore practical, non-academic literature at their peril.

Part II of this Article reviews current scholarship and traces the theories and proposals offered by commentators to explain and address the perceived problem of the relatively undereducated jury. Part III, the heart of our Article, presents the study's methodology and surprising results. Finally, Part IV discusses the implications of our findings and proposes a direction for further exploration of this important issue.

II. THE CONVENTIONAL WISDOM

Commentators who have addressed the issue of the relatively undereducated jury commonly blame all participants in the jury selection process: the relatively educated members of the jury pool, the judge, and the attorneys.

Theorists suggest that members of society with college and advanced degrees tend to disfavor jury service, and that judges and legislators tend to accommodate them by excusing them from service. Although people across the entire population probably try to avoid jury service (that is, few

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[12] *See, e.g.*, Bertelsen, *supra* note 4, at 23–24 (citing a complex antitrust case in which the foreperson of a hung jury was quoted as telling the judge: "[I]f you can find a jury that's both a computer technician, a lawyer, an economist; knows all about that stuff; yes, I think you could have a qualified jury, but we don't know anything about that.") (quoting ILC Peripherals Leasing Corp. v. IBM, 458 F. Supp. 423, 447 (N.D. Cal. 1978)); Ell, *supra* note 4, at 776 (discussing SCM v. Xerox Corp., 463 F. Supp. 983 (D. Conn. 1978), a complex commercial lawsuit in which the average juror had a tenth-grade education); *see also* Smith, *Historical*, *supra* note 4, at 460 (citing *SCM* as evidence of a larger trend); Stempel, *supra* note 4, at 839 & n.168 (stating categorically that "[a]lthough there are obvious exceptions, the average jury is devoid of professionals, the highly educated, and upper socio-economic status persons generally," but citing to two other articles that are generally devoid of any information regarding the "average" jury makeup).

[13] Throughout the paper, we use the terms "pool" and "venire" interchangeably.

may actually want to serve on a jury, regardless of their level of education), commentators appear to believe that those with relatively higher levels of education are particularly averse to jury service[14] and are better able to convince judges that they are unable to serve.[15] Thus, according to conventional wisdom, relatively well-educated members of the population are disproportionately *excused* from jury service.

A second part of the process, the supposed *exclusion* of the relatively educated, has been the source of even greater concern. Scholars theorize that those with relatively higher levels of education who manage not to be excused by the judge are likely to be excluded from jury service by the attorneys through the exercise of peremptory challenges.[16] In civil cases, a single plaintiff suing a large entity might prefer a relatively undereducated jury because she expects it to sympathize with her plight even in the face of complex evidence rebutting her claim.[17] In criminal cases, the defendant supposedly prefers a relatively undereducated jury, perhaps because it is more likely to relate to the difficult choices and obstacles facing "regular people."[18] Thus, the theorists suggest that the party seeking the sympathy

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[14] *See, e.g.*, Lilly, *supra* note 4, at 61–62 (speculating that relatively educated people attempt to avoid jury duty, in part, because of poor pay); Willard, *supra* note 4, at 486–87 (discussing the economic losses suffered by some who serve on juries). Implicit is the argument that there are greater incentives for those with higher-paying salaries—correlating with those with relatively greater education—to avoid jury service than those with lower paying jobs.

[15] *See, e.g.*, Strier, *supra* note 4, at 135 (arguing that relatively undereducated juries are due to the routine granting of hardship exemptions to highly skilled and educated professionals); *see also* Friedland, *supra* note 4, at 195–96 (suggesting that the requirement that juries represent a fair cross-section of the community makes it more likely that well-educated and qualified jurors will be excused). Some scholars, like Strier, have criticized categorical exemptions issued by legislatures in some jurisdictions that exempt professionals such as doctors, nurses, lawyers, ministers, dentists, managers, and so forth from jury duty. These exemptions have the effect of stripping juries of entire categories of educated members of society. However, the trend appears to be away from such categorical exemptions. *See infra* note 32 and accompanying text. Perhaps as a result of this trend, commentators mostly focus on the problems associated with case-by-case judicially-dispensed excusals and peremptory challenges exercised by attorneys. The District of Connecticut, like all federal courts, does not issue broad categorical exemptions, *id*., and our study does not address this aspect of the perceived problem. However, we agree that such categorical exemptions are a poor idea, not only because they may well bias the selection, but also because part of the value of the jury is its role as a representative and democratic institution. Either we are all in it together, or we should leave the decision-making to experts rather than an unrepresentative subsection of all laypeople.

[16] *See, e.g.*, Collins, *supra* note 4, at 499–500 (suggesting that attorneys use peremptory challenges to weed out educated jurors); Ellsworth & Reifman, *supra* note 4, at 812 (similar); Lilly, *supra* note 4, at 64 (similar); Smith, *Structural*, *supra* note 4, at 500, 505 (blaming extensive *voir dire* and the use of peremptory challenges for the exclusion of well-informed jurors); Willard, *supra* note 4, at 485–86 (similar).

[17] *See* Holloran, *supra* note 4, at 347–48. *But see* Frederick P. Furth & Robert Emmett Burns, *The Anatomy of a Seventy Million Dollar Sherman Act Settlement—A Law Professor's Tape-Talk With Plaintiff's Trial Counsel*, 23 DEPAUL L. REV. 865, 880–81 (1974) (suggesting that antitrust defendants prefer relatively uneducated juries because of the propensity for educated juries to understand and exploit the defendants' financial vulnerabilities).

[18] *See* Willard, *supra* note 4, at 486. There is evidence that capital murder cases follow a slightly different pattern. In these cases, empirical studies show that it is the prosecution that seeks to strike

of the jury (rather than its scrutiny) uses its peremptory challenges to exclude those with relatively high levels of education.[19]

These forces are assumed to be particularly strong in lengthy and complex cases.[20] According to the theorists, the relatively educated members of the pool are particularly keen to avoid service—and have better excuses—when a trial is expected to be lengthy.[21] Further, the party seeking sympathy will likely focus its peremptory challenges on the relatively educated where the evidence in the trial is expected to be especially complex. This is disturbing because jurors with college degrees are thought to be better able to follow judges' instructions and remain focused on complex evidence than are their non-degreed peers.[22] In other words, precisely those cases that require relatively educated jurors are the most likely to lack them altogether.

Because this problem is believed to be so important, scholars have offered numerous proposals and counter-proposals for solving it. A few have

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educated members of the pool, whereas defense attorneys prefer educated jurors. *See* David C. Baldus et al., *The Use of Peremptory Challenges in Capital Murder Trials: A Legal and Empirical Analysis*, 3 U. PA. J. CONST. L. 3, 14–15 (2001).

[19] There is another element in the jury selection process that impacts jury demographics: juror rolls. Some have suggested that juror rolls underrepresent the relatively educated. *See* Willard, *supra* note 4, at 485 (arguing that infrequently updated juror rolls often fail to include college and graduate students). However, most evidence suggests that it is marginalized members of society—those who tend to be less educated—who are absent from jury venires. *See* ROBERT G. BOATRIGHT, IMPROVING CITIZEN RESPONSE TO JURY SUMMONSES 15 (1998) (stating that "minorities, women, and the young" are underrepresented on juror rolls because they are underrepresented on voting rolls); HIROSHI FUKURAI ET AL., RACE AND THE JURY 45 (1993) (explaining that minority involvement in secondary labor markets increases incidence of mobility and therefore decreases incidence of jury eligibility); Hiroshi Fukurai, *Race, Social Class, and Jury Participation: New Dimensions for Evaluating Discrimination in Jury Service and Jury Selection*, 24 J. CRIM. JUST. 71, 84–85 (1996) (concluding that racial and ethnic minorities, and those from lower social classes, are underrepresented in venires); *see also* DAVID POLLARD, A CONNECTICUT JURY ARRAY CHALLENGE 1, 3 (1999), http://www.stat.yale.edu/preprints/1999/99jun-2.pdf (finding that Hispanics are underrepresented on jury venires). Our own study supports this latter theory. We found that relatively educated members of society are overrepresented on jury venires. *See infra* Table 3. Of course, both theories could be correct. In any case, our study does not focus on this element of the selection process. Our study examined what happens after those summoned for jury service arrive in court and form the venire, and not the process by which they are summoned.

There may be a racial element here as well. Scholars have suggested (and empirical evidence has shown) that prosecutors are more likely to strike black members of the venire, whereas defense attorneys are more likely to strike white individuals. Rose, *supra* note 10, at 697, 700. There may well be a correlation between race and education. Thus, it is possible that what might appear to be a bias against education in the selection process might actually be a general bias in favor of black people. For an explanation of how our study addresses this issue, see *infra* note 50.

[20] The length of a trial is routinely used as an indicator of complexity. Neil Vidmar, *The Performance of the American Civil Jury: An Empirical Perspective*, 40 ARIZ. L. REV. 849, 856 (1998) ("[T]he length of the trial has often been used as a proxy for complexity.").

[21] *See, e.g.*, Lilly, *supra* note 4, at 66–68 (suggesting "an inverse relationship between trial length and jury competence" because "longer trials appear to contribute to the reluctance of many potential jurors to serve").

[22] *See, e.g.*, Ellsworth & Reifman, *supra* note 4, at 792, 796; Lilly, *supra* note 4, at 64–66; *cf.* Willard, *supra* note 4, at 484 (citing evidence that jurors in the O.J. Simpson murder trial believed that his status as a former football player made him unlikely to commit murder).

suggested that jury duty be made more attractive by shortening terms of service or raising pay.[23] Others have taken aim at the attorneys who allegedly target the relatively educated members of the pool, advocating the elimination or reduction of the number of peremptory and for-cause challenges, as well as limiting or eliminating attorney-conducted *voir dire*.[24] Still others have favored much more radical solutions, including leaving adjudication entirely to judges, having judges and jurors decide cases together, or using "blue ribbon" panels of jurors.[25] There is an entire cottage industry devoted to theorizing precisely how such juries would be chosen, by whom, and for what types of cases.[26]

These theories and proposals both invite and demand empirical analysis. They invite such analysis because they are well-developed enough to guide empiricists on what to look for and how, as well as what to expect. They demand empirical study because in the absence of quantifiable data, it is impossible to assess the extent of the problem or the merits of the proposals designed to address it. Because of the surprising and disappointing lack of statistical and observational analysis of these issues, we designed a study to examine the jury selection process for biases against education.

III. OUR STUDY

Commentators have outlined precisely how, why, and when we expect relatively educated jurors to be excluded in the selection process. In our study, therefore, we have done more than merely ask whether the jury is

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[23] *E.g.*, Collins, *supra* note 4, at 499; Strier, *supra* note 4, at 167; Willard, *supra* note 4, at 487–88; *see also* Smith, *Structural*, *supra* note 4, at 508 (suggesting relaxing the rules of evidence for experienced jurors as a means for shortening the length of trials).

[24] *E.g.* Collins, *supra* note 4, at 499–500; Smith, *Structural*, *supra* note 4, at 508; Strier, *supra* note 4, at 167; Willard, *supra* note 4, at 487–88; Amar, *supra* note 4.

[25] *See, e.g.*, Drazan, *supra* note 4, at 297 (advocating special "blue ribbon" juries in toxic tort cases); Friedland, *supra* note 4, at 195–96; Lilly, *supra* note 4, at 79–80 (advocating the use of bench trials in complex cases and offering two different models for composing a "blue ribbon" or special jury: either the court appoints jurors who meet basic education criteria, or the jurors meet some test of expertise in the particular area); Smith, *Structural*, *supra* note 4, at 508 (recommending special juries for complex cases); Stempel, *supra* note 4, at 839 (similar); Strier, *supra* note 4, at 166–71 (suggesting a number of potential reforms, including special juries, the establishment of a "science court," special masters, and "mixed court[s]" of laypersons and judges); Bertelsen, *supra* note 4, at 15 (advocating the use of professional juries); Sutton, *supra* note 4, at 576–77 (suggesting that choosing jurors based on their special experience or educational competence would be helpful in complex civil litigation).

[26] *See, e.g.*, Drazan, *supra* note 4, at 297 (arguing that special juries "would better understand the complex and technical concepts" in toxic tort cases); Lilly, *supra* note 4, at 79–80 (suggesting that judges or magistrates screen cases and assign them to appropriate factfinders, choosing blue ribbon juries for "all cases that do not clearly fall within the competence of the traditional, randomly selected jury"); Smith, *Structural*, *supra* note 4, at 508 (advocating the use of special juries for "more demanding cases"); Stempel, *supra* note 4, at 839 (suggesting that blue ribbon juries be impaneled for "factually or legally complex case[s]"); Strier, *supra* note 4, at 168 (suggesting that the parties or the judge only "select those from the venire with the most relevant experience or education").

undereducated relative to the venire; rather, we track the various stages of jury selection in which commentators suggest the bias against education is present. We found, however, no statistically significant, systematic bias.

A. *The Jury Selection Process*

In order to explain our methodology, it is necessary to outline how juries are chosen in the District of Connecticut. In the federal system (followed by the federal courts in Connecticut), jury selection begins with the compilation of juror rolls. Federal law requires that names of potential jurors be selected from voter registration lists or actual voting lists supplemented by "some other source or sources of names . . . where necessary to foster the policy and protect the rights secured by" jury nondiscrimination and universal participation statutes.[27] These names are placed on a "master jury wheel," and people drawn from the wheel are sent juror qualification forms.[28] Any citizen over the age of eighteen is qualified for jury service, except in narrow circumstances.[29] After recipients complete the juror qualification forms, the forms are screened and the names of qualified citizens are placed on a "qualified jury wheel."[30] The qualified wheel includes (in theory) all people in the jurisdiction who are qualified to sit on a jury.[31] On a regular basis, names from this wheel are drawn at random and summoned for jury duty on a designated day.[32]

Those who appear in court on the appointed day compose the venire, and are then subjected to the next stage of the selection process, *voir dire*, conducted by the judge.[33] There is some lack of uniformity in this portion of the selection process, but the patterns are similar enough that they should not make a difference for the purposes of our study. The courtroom deputy pulls a number of names from the venire at random; this group of people, referred to as the panel, is called to the jury box.[34] The judge begins by explaining the logistics of the trial to the panel: the start

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[27] 28 U.S.C. § 1863(b)(2) (2000); *see also* §§ 1861–62.

[28] 28 U.S.C. §§ 1863(b)(3), 1864(a); *see also* § 1869(h) (discussing the composition of juror qualification forms).

[29] 28 U.S.C. § 1865(b)(1) (2000). Examples of disqualifications are the inability to speak, read, or write sufficiently to fill out juror forms, mental or physical infirmity, and felony status. 28 U.S.C. § 1865(b)(2–5) (2000). Although some states automatically exempt practitioners of certain professions from jury service, the modern trend is away from such exemptions. *See* V. HALE STARR & MARK MCCORMICK, JURY SELECTION § 2.07 (3d ed. 2005). The federal system reflects the modern trend. *See* 28 U.S.C. § 1863(b)(6) (2000) (exempting from service only active-duty members of the armed forces, police and fire personnel, and public officials).

[30] 28 U.S.C. § 1866(a) (2000).

[31] JODY GEORGE, ET AL., HANDBOOK ON JURY USE IN THE FEDERAL DISTRICT COURTS 19 (Federal Judicial Center, 1989).

[32] 28 U.S.C. § 1866(a); GEORGE, *supra* note 31, at 19.

[33] GORDON BERMANT, JURY SELECTION PROCEDURES IN UNITED STATES DISTRICT COURTS 1, 3 (Federal Judicial Center, 1982); GEORGE, *supra* note 31, at 43.

[34] BERMANT, *supra* note 33, at 5–6.

date, the expected length, the parties involved, the nature of the case, and the names of the attorneys.[35] A panel member having a conflict (for instance, if she is scheduled to travel during the dates of the trial, or if he knows one of the attorneys or parties) is excused, and is replaced on the panel by someone randomly called from the venire.[36] The exercise is repeated until the judge is satisfied that there are no such conflicts among the panelists.[37]

The judge also asks a set of detailed questions (prepared in consultation with the attorneys) designed to detect potential biases among panel members.[38] For instance, if a civil plaintiff alleges police brutality as the basis for a civil rights complaint, the judge will explore whether any members of the panel have had experiences with police that may lead them to automatically distrust testimony by police officers, or to trust such testimony too much and automatically discount the claims of the plaintiff. Those with possible biases are excused and replaced by others randomly chosen from the venire.[39] Once the judge is satisfied that none of the panelists have logistical conflicts or display biases, the remaining members of the venire are dismissed as unnecessary. At this point, the panel is referred to as the qualified panel.[40]

Finally, the parties (through their attorneys) are permitted to exercise peremptory challenges against members of the qualified panel.[41] In civil cases, each party is permitted to challenge three qualified panel members.[42] In non-capital felony criminal cases, the government has six peremptory challenges and the defendant (or group of defendants) is permitted ten.[43] When the government is pursuing the death penalty, each party is permitted twenty challenges.[44] These challenges are conducted pri-

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[35] STARR & MCCORMICK, *supra* note 29, § 9.04.

[36] BERMANT, *supra* note 33, at 2–3.

[37] *Id.* at 3, 14–15.

[38] *See* GORDON BERMANT, CONDUCT OF THE VOIR DIRE EXAMINATION 9 (1977). Federal judges are permitted to allow attorneys to ask questions during the *voir dire* process, but as a practical matter, they tend to exclude oral participation by counsel. *Id.* at 19. Local rules in the District of Connecticut provide that the judge conduct the initial questioning, supplemented by either questions directly from counsel or further questions submitted for the judge to ask. D. CONN. R. CIV. P. 47 (West, Westlaw through Mar. 2005 amendments). Based on our observations and discussions with court personnel, we do not believe that any of the judges in our study permitted extensive attorney-conducted *voir dire*.

[39] *See* 28 U.S.C. § 1866(c) (2000) (stating that the court may exclude a juror "on the ground that such person may be unable to render impartial jury service"); BERMANT, *supra* note 33, at 2–3.

[40] *See generally* BERMANT, *supra* note 33, at 2–3 (outlining the steps to obtaining a qualified panel).

[41] FED. R. CIV. P. 47(b); FED. R. CRIM. P. 24(b).

[42] 28 U.S.C. § 1870 (2000).

[43] FED. R. CRIM. P. 24(b).

[44] *Id*. We did not observe any capital cases because none took place during the period of time we collected data.

vately by the parties, and the challenged qualified panelists are dismissed without explanation.[45] In the event that there remain more qualified panelists than are necessary to form the jury (with alternates), the courtroom deputy randomly dismisses unnecessary panelists.[46] The remaining individuals form the jury, including alternates.[47]

B. *The Questionnaire*

At this point, it should be clear that the theories offered by scholars fit well with the selection process. At each stage, it is possible for potential jurors to be excused or excluded from the process for a variety of reasons (stated or unstated), and commentators have posited that each stage of the in-court selection process leads to a systematic winnowing out of relatively educated venire members.[48] In order to evaluate this hypothesis, we tracked the demographic composition of jury venires throughout the selection process.[49]

On the day of jury selection, each member of the venire was asked to complete a short questionnaire. The questionnaire, included in the appendix, requested demographic information from each venire member, including gender, age, employment status, and the total number of years of education.[50] As explained in the questionnaire, we considered a high school

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[45] BERMANT, *supra* note 33, at 16.

[46] Multiple interviews with court clerks and courtroom deputies in the three seats of the United States District Court for the District of Connecticut (2003).

[47] BERMANT, *supra* note 33, at 3.

[48] *See generally supra* Part II (discussing the prevailing conventional wisdom on the impact of education level on juror-initiated exemptions and peremptory challenges).

[49] We restate that our study focuses on the selection process that begins when potential jurors enter the courthouse on the appointed day. We do not account for the compilation of juror rolls or compare the rolls to the people who actually appear in court. *See supra* note 19.

[50] Our questionnaire does not seek information about race. The judges of the district court specifically requested that we keep the questionnaire as short, non-intrusive, and non-controversial as possible. Race is a notoriously difficult demographic factor to include in a survey, and any manner of accounting for race is inherently controversial and problematic. *See, e.g.*, Tanya Katerí Hernández, *"Multiracial" Discourse: Racial Classifications in an Era of Color-Blind Jurisprudence*, 57 MD. L. REV. 97, 98 n.2, 99 n.7, 102–03 (1998) (criticizing efforts to add a multiracial classification to the 2000 census); Reginald Leamon Robinson, *The Shifting Race-Consciousness Matrix and the Multiracial Category Movement: A Critical Reply to Professor Hernandez*, 20 B.C. THIRD WORLD L.J. 231, 269 (2000) (rejecting Hernandez's perceived focus on a "race-conscious approach" and urging instead a focus on the "unimagined social reality" in which race has significant "currency"). Because our study focuses on the education levels of the jury rather than on its racial composition, and because the issue of race in the selection process has been addressed elsewhere, *see, e.g.*, Rose, *supra* note 10, at 699–700, we felt it prudent to exclude it from our survey.

We were cognizant, however, that race and education bear some correlation. *See supra* note 19. Accordingly, we requested that participants include their ZIP codes on their surveys. For geographic areas that are relatively racially homogenous, ZIP codes can be crude predictors of race. Had we observed some kind of education bias, we could have used ZIP codes to determine whether the results might have been related to racial factors. Such an analysis proved unnecessary because we found no evidence of bias against education.

diploma or G.E.D. to be the equivalent of twelve years of education. For those completing more than twelve years of education, the questionnaire asks for the number of additional years of education. Thus, a high school graduate who also obtained a two-year technical degree would be considered to have completed fourteen years of education; a graduate of a four-year college program would be considered to have completed sixteen total years of education.

During the jury selection process, the courtroom deputies tracked the status of each venire member by juror number. During the first stage of jury selection—the formation of the qualified panel—the courtroom deputy recorded the juror number of each panel member excused for cause. Once a panel was fully qualified and attorneys began to exercise peremptory challenges, the courtroom deputy noted which qualified panel members were challenged by the attorneys, providing separate notations for plaintiff and defendant challenges in civil cases and prosecution and defense challenges in criminal cases. Finally, after all challenges were exercised and the jury randomly chosen from the remaining members of the qualified panel, the courtroom deputy noted who was actually chosen to sit on the jury.[51] Over the span of a year, our study produced usable survey results for thirty venires (ten for criminal trials and twenty for civil trials) for nine judges in the three seats of the United States District Court for the District of Connecticut.[52]

C. *Methodology and Results*

Our study of bias in the jury selection process includes exploratory data analysis and classical significance tests; we are primarily interested in identifying surprising shifts in the level of education through the various stages of the jury selection process. If, for example, judges tend to excuse

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It remains possible that race and education together play a complex role in the selection process, but they do not appear to change the overall educational composition of the jury. We recommend further empirical study of the role race may play in the selection process, including any way in which it may interact with education.

[51] Throughout our analysis, any member of a qualified panel not excluded by a peremptory challenge is considered to be a juror. Thus, our "juror" category includes actual jurors, alternates, and individuals who were qualified by judges and unchallenged by attorneys, even if they were excused by the court as unnecessary at the end of the selection process. Any differences in educational attainment among these groups (jurors, alternates, and those excused as unnecessary after qualifying at each stage of the process) must be the result of random selection, and therefore has no bearing on any flaws in the system.

[52] Several batches of surveys were unusable, for a variety of reasons. One batch involved the selection of a grand jury, which follows a different selection process. Two other batches were unusable because we were unable to obtain court documents identifying which members of the venire were excused (by either the judge or through peremptory challenges) and which were selected for the jury.

relatively educated members of the jury pool, we would expect to see systematic declines in the level of education between panels and qualified panels, beyond what might occur simply by chance. That is, if the commentators were correct as to the scope and magnitude of the problem, our study would reveal the biases.

We begin by exploring the survey results as a whole, aggregating across all the juries. This is little more than first-stage exploratory data analysis, but consistent biases, if strong, would likely appear.

In fact, we see no statistically significant evidence that the jury is undereducated relative to the venire. As shown in Table 1, roughly 50% of the venire has sixteen years of education or greater (which we treat as equivalent to a college degree), as does roughly 50% of the jury.[53] To be sure, there are slight shifts within the distributions, but these shifts are expected in a study of this size.

EDUCATIONAL ATTAINMENT **Number of Participants** (25 years and older)	**Venire** **1801 of 1895**	**Jury** **426 of 1895**
Less than 12th grade, no diploma	3.89%	3.76%
High school graduate (includes equivalency)	20.71	23.48
Some college, less than 4 years	28.37	26.76
4 years of college or more	47.03	46.00
Percent high school graduate or higher	96.11	96.15
Percent bachelor's degree or higher	47.03	46.00

Table 1. A comparison of the percentage of the venire and jury with high school and college degrees.

Similarly, as we compare the overall distribution of education of the venire to the jury in Figure 1 below, we see that the educational attainment of jurors reflects the venires from which they are chosen. In other words, we do not see the sharp drop in education from the venire to the jury that theorists have led us to expect. The slight differences that we see between the distributions are consistent with what we would expect if selection were completely random.

[53] This basic finding was recently corroborated in a study conducted in Texas showing that the *voir dire* stage does not impact the education levels of the jury. Mary R. Rose & Shari Seidman Diamond, ABA Standard 10 and the Representativeness of Juries: Findings on Jury Service Prevalence in Texas (2005) (paper presented at the Annual Meeting of the Law & Society Association, Las Vegas, Nevada, June 4, 2005).

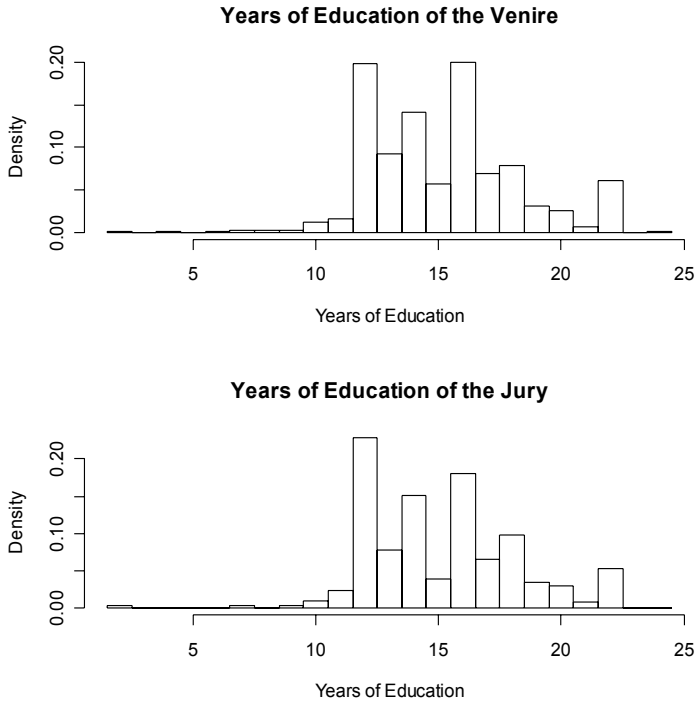

Figure 1.
The distribution of years of education (ranging from 2 to 24 years) of the venire (n = 1895) and the jury (n = 442).

However, because theorists suggest that biases correlated with education tend to work in different directions,[54] trial strategies unique to the type of case, personal preferences among lawyers, or differing procedural practices between judges may play a central role in jury selection for the particular case and yet essentially vanish in the aggregate analysis. For instance, if jury selection for civil trials tends to yield relatively undereducated juries, and selection for criminal trials tend to yield relatively overeducated juries, then these biases might not be visible in the aggregate analyses shown in Table 1 and Figure 1. Similarly, if (as commentators suggest) prosecutors seek relatively overeducated juries and defense attorneys seek relatively undereducated juries, then no swing in education may be visible in the aggregate analysis, even though both parties execute per-

[54] *See supra* text accompanying notes 16–19 (noting that in civil cases, plaintiffs tend to prefer undereducated juries, whereas in criminal cases, defendants tend to prefer undereducated juries).

emptory challenges based on individuals' educational attainment.

Thus, the core of our analysis considers each stage of the selection process separately. We begin by examining the selection of the qualified panel from the venire, first in the aggregate (for completeness), then by type of trial (civil or criminal), and then, in Appendix C, for each case separately. We then proceed by examining the peremptory challenges of the attorneys in similar levels of detail. None of the analyses exhibit any evidence of biases correlated with education. Finally, by extrapolating from data collected in the United States census, we compare the educational attainment of the juries and that of the general Connecticut population, with surprising results.

Table 2 summarizes the educational attainment of the aggregated jury venires compared to the panels qualified by the judges, demonstrating that (contrary to accepted theory) judges do not tend to over-excuse relatively well-educated members of the venire.

EDUCATIONAL ATTAINMENT **Number of Participants** (25 years and older)	**Venire** **1801 of 1895**	**Qualified Panel** **989 of 1895**
Less than 12th grade, no diploma	3.89%	3.13%
High school graduate (includes equivalency)	20.71	20.63
Some college, less than 4 years	28.37	30.03
4 years of college or more	47.03	46.21
Percent high school graduate or higher	96.11	96.88
Percent bachelor's degree or higher	47.03	46.21

Table 2. A comparison of the percentage of venire and qualified panel with high school and college degrees.

Similarly, Figure 2 and Figure 3 demonstrate that judges do not over-excuse relatively well-educated members of the venire in either criminal or civil trials. Once again, any slight differences between the distribution curves are consistent with what we would expect if selection were completely random, and are nothing like we would expect if the conventional wisdom were correct.

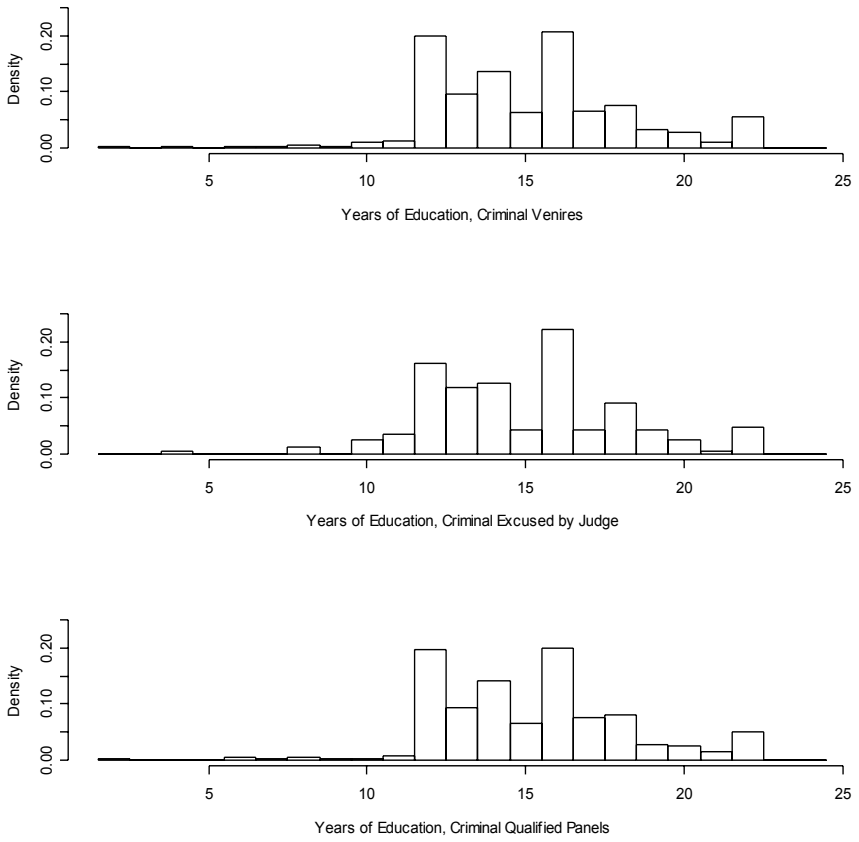

Figure 2.
The distribution of years of education in criminal cases of venires (n = 755), those excused by judges (n = 167), and those accepted by judges as qualified panelists (n = 458).

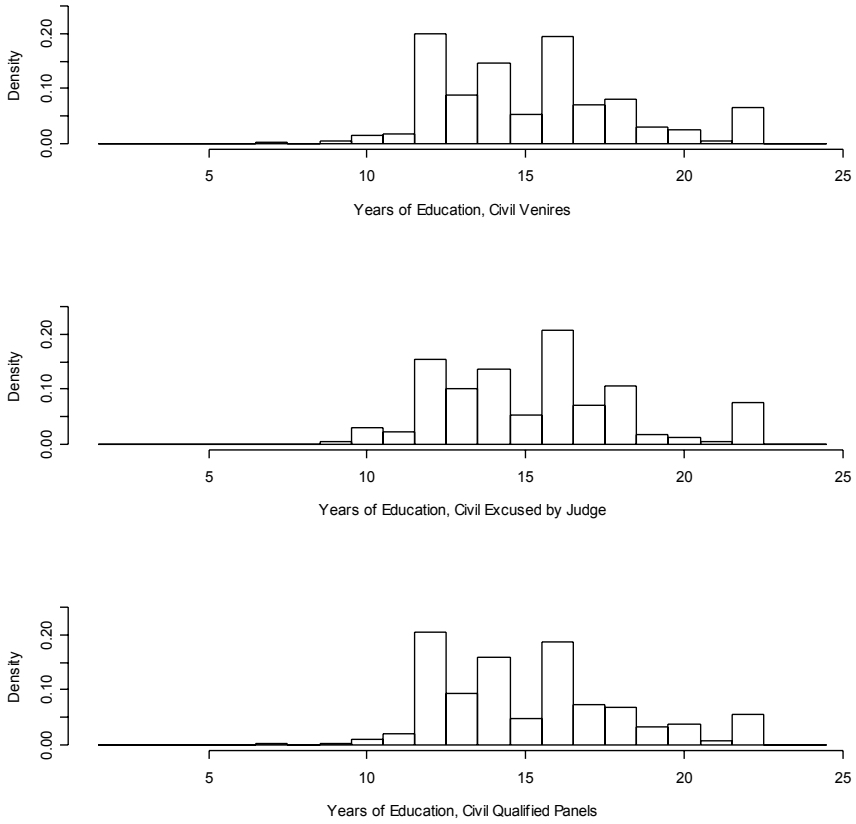

Figure 3.
The distribution of years of education in civil cases of venires (n = 1140), those excused by judges (n = 226), and those accepted by judges as qualified panelists (n = 569).

Applying the same methodology and breakdown to peremptory challenges exercised by attorneys in Figure 4 and Figure 5, we once again find no evidence to support the hypothesis of systematic biases against (or for) educated jurors at any stage in the selection process. The one possibly surprising element of Figure 4 is the relatively high proportion of defense challenges in criminal trials of jurors having sixteen years of education. Upon examination, however, this spike is of no real significance, particularly as it occurs near the center of a distribution of a relatively small number of individuals.

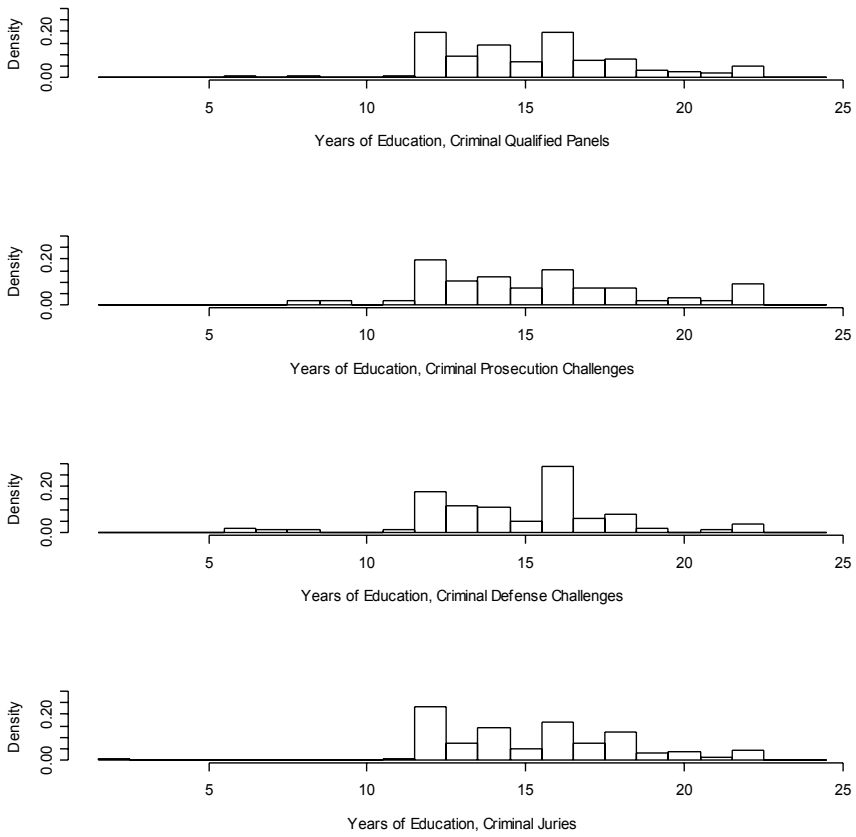

Figure 4.
The distribution of years of education in criminal cases of qualified panelists (n = 458), those peremptorily challenged by the prosecution (n = 66), those peremptorily challenged by the defense (n = 101), and jurors (n = 158).

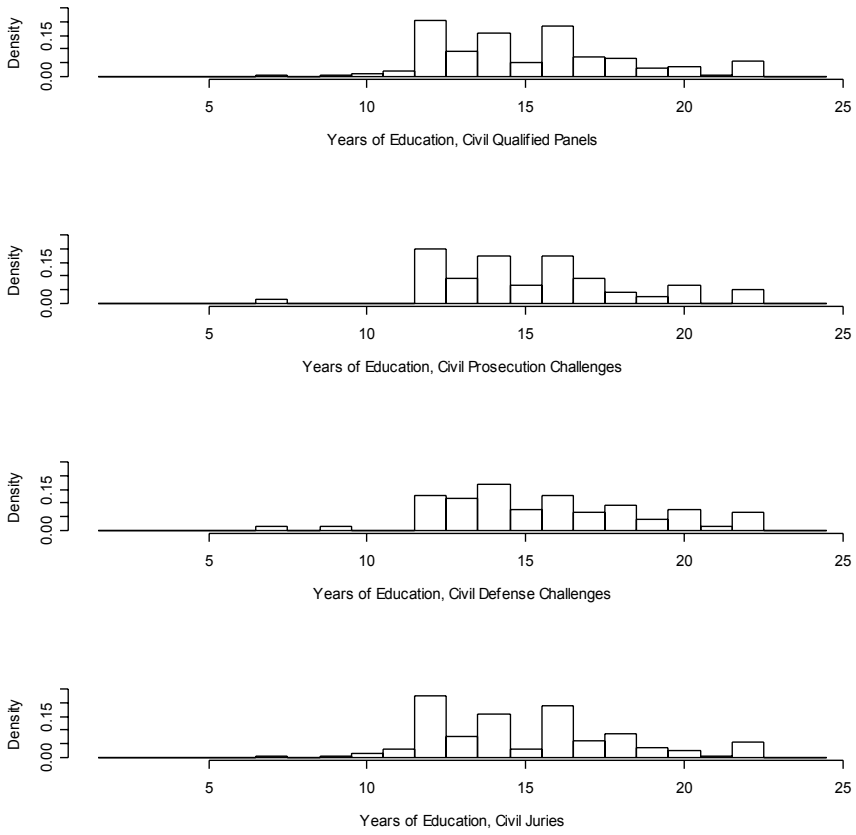

Figure 5.
The distribution of years of education in civil cases of qualified panelists (n = 569), those peremptorily challenged by the plaintiff (n = 75), those peremptorily challenged by the defense (n = 77), and jurors (n = 284).

This analysis is supplemented in Appendix C by an examination, analysis, and discussion of individual cases. Our supplementary analysis simply reinforces the conclusions reached here: there is no evidence of systematic bias at any stage of the jury selection process.

Finally, in Table 3 we compare the educational attainment of jurors to that of the Connecticut population as a whole, as reported by the 2000 census. The differences between the census and the jury venires are striking: jurors appear to be significantly better educated than the general population. Among the general population in Connecticut, 31.4% attained a bachelor's degree or higher. However, fully 46% of jurors in our study completed sixteen years or more of education (roughly equivalent

to a bachelor's degree).[55]

EDUCATIONAL ATTAINMENT

Population (25 years and older)	**Jury**	**Census**
Less than 12th grade, no diploma	3.76%	16.0%
High school graduate (includes equivalency)	23.48	28.5
Some college, less than 4 years	26.76	24.1
4 years of college or more	46.00	31.4
Percent high school graduate or higher	96.24	84.0
Percent bachelor's degree or higher	46.00	31.4

Table 3. A comparison of the percentage of jurors and the general Connecticut population (as reported by the 2000 census)[56] with high school and college degrees.

In conclusion, we find no evidence that judges or attorneys systematically excuse or exclude potential jurors in such a way that results in relatively undereducated juries. Members of venires with relatively higher levels of education are not excused or excluded in disproportionate numbers at any stage of the selection process. With respect to education levels, our juries adequately and accurately reflect our pools, and they are relatively better educated than the population as a whole.

D. *Limitations*

Our study is neither definitive nor without limitations. First, we look only at jury selection in Connecticut federal courts. We would not be surprised to find that different methods of jury selection yield somewhat different results. For instance, jurisdictions allowing greater numbers of peremptory challenges might be more prone to jury pool manipulation. However, we doubt that even this would make a great deal of difference in the final analysis. Although it is true that only three peremptory challenges are

[55] We caution that this comparison has somewhat limited reliability. The census data reflects the general Connecticut population (adjusted for particular age groups of interest), regardless of whether individuals surveyed are actually eligible for jury service. The census data includes those who would be disqualified from jury service: non-citizens, non-residents of Connecticut, and non-English speakers. For an explanation of how this might occur, see U.S. Census Bureau, Special Census Program Frequently Asked Questions, http://www.census.gov/field/www/specialcensus/files/faq.htm#9 (last visited Jan. 2, 2006). Nevertheless, we believe that the comparison has some merit because the differences are so striking that we would find it difficult to attribute them all to the more expansive population set reported by the census. Furthermore, we have confidence in this comparison because it is supported by other studies, *see* citations *supra* note 53, even if not by conventional wisdom.

[56] U.S. Census Bureau, Connecticut Profile of Selected Social Characteristics, http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=04000US09&-qr_name=DEC_2000_SF3_U_DP2&-ds_name=DEC_2000_SF3_U&-_lang=en&-_sse=on (last visited Nov. 5, 2005).

exercised by each side in federal civil trials (fewer than permitted in many state courts), more are available in federal criminal trials.[57] Our analysis shows no greater targeting of relatively educated members of the pool in criminal cases than in civil cases, despite the greater number of peremptory challenges available in criminal cases. Therefore, we see no evidence that would lead us to conclude that attorneys given more peremptory challenges target the relatively educated.

Of course, we cannot discount the possibility that different analytic procedures would yield different results, and we recommend that further studies be conducted. However, even if studies were to reveal that our results cannot be generalized to the jury system as a whole, we would see this as confirmation of the importance (rather than limitation) of such studies. Indeed, if that were the case, we would suggest that rather than adopt the radical and untested solutions offered by commentators, courts should adopt the practices and procedures modeled by Connecticut federal courts, which appear to work.[58]

Second, our study did not observe any trials that were expected to last longer than roughly seven days,[59] and theorists believe that longer, more complex trials are likely to exhibit more education bias than shorter, simpler trials.[60] Further empirical studies examining this potential problem should be conducted. However, our study shows that we can have confidence that the vast majority of jury trials are not subject to a statistically significant education bias.

E. *Explanations*

The theories that have been offered by the commentators are plausible and intuitive. Therefore, we fully expected to detect a substantial bias against education in the selection process, and were surprised by our results. However, upon reflection, we offer a number of tentative, and by no

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[57] *See supra* text accompanying notes 41–44; *see also, e.g.*, GA. CODE ANN. § 15-12-122 (West, Westlaw through 2005) (allowing between six and twelve peremptory challenges in civil cases, depending on whether the ultimate jury is to comprise six or twelve jurors).

[58] These practices include judge-conducted and limited *voir dire* and limited peremptory challenges. *See supra* Part III.A.

[59] It is not that we excluded such trials from our study (indeed, we had hoped we would gather data to study from longer trials). Rather, no long trials were conducted during the period we compiled our data or, if they were, the data sets were never provided to us.

[60] Scholars offer various theories for this. First, relatively educated members of the venire are likely to have stronger excuses if the trial is expected to be long. *See supra* notes 14–15 and accompanying text. Second, longer trials are expected to include complex evidence, and some lawyers would likely peremptorily challenge relatively educated potential jurors who might be too analytical (and not sympathetic enough) for their client's taste. *See supra* text accompanying notes 20–22. The only empirical study of which we are aware that addresses this question found "a significant and direct correlation between juror education level and case complexity. *More complex cases tended to have jurors with higher levels of education*." Paula L. Hannaford et al., *The Timing of Opinion Formation by Jurors in Civil Cases: An Empirical Examination*, 67 TENN. L. REV. 627, 642 (2000) (emphasis added).

means mutually exclusive, explanations of our counter-intuitive findings.

First, our results are limited by the constraints on our study, and may not extend to different types of trials or different selection procedures. For this reason, we recommend further study.

Second, we tentatively suggest that scholars who have leveled this critique of jury selection may be colored by their own social circumstances and experiences. Most people who write law journal articles are highly educated, as are the people with whom they are likely to associate. There may be a tendency to assume that juries are relatively undereducated because they are composed of people with, on average, lesser education than academics, *even though* the juries are at least as educated as society in average.

Finally, and most importantly, we believe that the disparity between what we observe in courtrooms and what we expect based on articles in law review journals points to the chasm between practice and theory. Scholars who put great stock in the education critique may not be familiar with the actual practices of lawyers and the jury consultants who guide them in jury selection. Indeed, we have not found a single piece of practical literature on jury selection that encourages attorneys to exercise peremptory challenges based on education. In fact, some consultants explicitly prefer educated jurors, even in those cases in which scholars expect the opposite.[61] Moreover, empirical studies consistently demonstrate that education levels are not reliable predictors of verdicts.[62] The practical literature paints a far more complex picture of jury behavior and demographics, and they simply cannot be reduced to choosing jurors based on education.[63]

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[61] *See* NEIL J. KRESSEL & DORIT F. KRESSEL, STACK AND SWAY: THE NEW SCIENCE OF JURY CONSULTING 81–82 (2002) (explaining that jury consultants advocate that criminal defendants choose "educated, broad-minded jurors" who are less inclined to blindly trust the government's attribution of guilt and are thus "more willing to embrace the legally ordained presumption of innocence"). *Contra* Willard, *supra* note 4, at 486 (arguing that criminal defendants prefer undereducated juries).

[62] *See* Dennis J. Devine et al., *Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups*, 7 PSYCHOL. PUB. POL'Y & L. 622, 673 (2001) (reviewing various empirical studies and concluding that demographic factors, including education, are only "weakly and inconsistently" correlated to verdict preferences); Rita Simon, *Race in the Jury Room*, *in* A HANDBOOK OF JURY RESEARCH 23-1, 23-7 (Walter F. Abbott & John Batt eds., 1999) (concluding that individual demographic factors, including education, do not correlate strongly with a particular verdict, and what little significance was noted was largely due to gender).

[63] *See*, *e.g.*, JEFFREY T. FREDERICK, MASTERING VOIR DIRE AND JURY SELECTION 185–247 (1995) (providing sample *voir dire* questions and juror questionnaires covering a range of subjects including the jurors' understanding of applicable burdens of proof and appropriate weightings of various types of evidence); Shari Seidman Diamond, *Scientific Jury Selection: What Social Scientists Know and Do Not Know*, 73 JUDICATURE 178, 181 (1989) ("[T]here is no profile of the good defense (or prosecution or plaintiff) juror that can be used across cases."). *But see* Stuart Taylor, Jr., *Selecting Juries: Dumb and Dumber*, LEGAL TIMES, Apr. 14, 1997, at 33 (quoting a prosecutor as saying: "Smart people will analyze the hell out of your case . . . . You don't want those people."). Note that even this casts doubt on the story told by commentators, because they believe that prosecutors tend to prefer educated jurors.

We suspect that legal practitioners—those actually involved in the jury selection process—are familiar with this literature; given that few commentators cite it, we suspect they are not. This might help explain why we did not find the expected education bias.[64]

IV. IMPLICATIONS AND CONCLUSIONS

Commentators are understandably concerned about the possibility that juries are relatively undereducated compared to the venires from which they are chosen. However, given the wealth of publications on the subject, one would think that the fact of relatively undereducated juries has already been established. To the contrary, this fact rests on theory and anecdote rather than hard evidence. Although our results do not definitively demonstrate a lack of bias against education in the jury selection process, they do suggest that the problem is not as monumental as the sheer number of articles (and their alarmed tone) would imply. In the end, it seems that, *contra* Spencer, Twain, and piles of law journal articles, juries are better educated than society as a whole,[65] and no less educated than the pools from which they are selected. At the very least, we found evidence to support the claims and proposals of those who would radically reform the process.

It is possible, of course, that follow-up studies performed under different circumstances—that is, in different jurisdictions and on a more diverse range of trials—would show that there are circumstances in which the critique holds. We enthusiastically advocate such follow-up studies as the next step in evaluating the education critique. However, even if such studies were to reveal that different methods of jury selection (such as attorney-conducted *voir dire* and greater numbers of peremptory challenges) result in relatively undereducated jurors, we would maintain that jurisdictions using those methods would do well to emulate the jury selection procedures used in the District of Connecticut in order to reduce bias against education, rather than resorting to the more radical proposals offered by scholars.

It is important to recognize, however, that there may be other reasons to adopt some of the proposals recommended by commentators. For in-

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[64] Other results from our study similarly demonstrate that theory is not reflected in empirics. For instance, scholars have posited that older retired people tend to be represented in disproportionately high numbers on juries. *E.g.*, Mark A. Behrens & Cary Silverman, *Improving the Jury System in Virginia: Jury Patriotism Legislation is Needed*, 11 GEO. MASON L. REV. 657, 661 (2003). However, when we compare our results to data collected in the 2000 census, *see infra* Appendix B, we find that people over 65 are represented on venires and juries in disproportionately *low* numbers, whereas people between the ages of 35 and 54, and especially those between 45 and 54 (precisely those people whom commentators tells us are most likely to have plausible business-related excuses) are represented in disproportionately high numbers. *See also* Richard A. Posner, *An Economic Approach to the Law of Evidence*, 51 STAN. L. REV. 1477, 1496 (1999) ("Contrary to legend, retired people are underrepresented rather than overrepresented on juries."). These and other demographic data we collected in our study deserve further analysis and review.

[65] *See* sources *supra* note 55.

stance, it might be wise to eliminate all peremptory challenges, not because they lead to relatively undereducated jurors, but because they are unnecessary, anachronistic, or used to discriminate.[66] More radically, it may make sense to rethink use of the jury and/or its composition in some kinds of cases. Perhaps complex cases (or, in the extreme, all cases) should be decided by specialists, experts, judges, or other informed decision-makers rather than by laypeople unschooled in the law and perhaps unequipped to render verdicts in which society will have great confidence. We offer no opinion on these proposals because they are beyond the scope of this paper. Nevertheless, we caution that consideration of these proposals should not be based on mere supposition about the educational makeup of juries relative to society. If we choose to introduce special juries, then we should do so based on empirical observation as to the *performance* of our juries, and not on unsupported beliefs as to the *makeup* of our juries.

Our study suggests that if juries are ill-equipped to evaluate evidence, then it is *not* because the jury is less educated than either society or the jury venire; rather, it is because members of society are, on average, themselves ill-equipped to deal with modern cases. In other words, the problem (if one exists) is not with the way we select our juries, but with our baseline notion that representative juries make good decisions.

Finally, our findings are highly instructive in another area altogether. The theories we have discussed and examined are intuitive, but they are not quite right. The policy recommendations offered by commentators are elegant, but they may not be necessary. As always, the academy has done a great service by framing the issues and providing avenues for thought and study. However, our results provide further evidence that empirical analysis should be part of any policy discussion. Further, scholars are advised to consider a broader range of resources on how practitioners actually make decisions. We ought to close the gap between theory and practice, for it is larger in practice than it ought to be in theory.

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[66] *See*, *e.g.*, Baldus et al., *supra* note 18, at 10 ("[D]iscrimination in the use of peremptory challenges on the basis of race and gender by both prosecutors and defense counsel is widespread.").

Appendix A: The Survey

This survey is being conducted for statistical purposes only. No identifying data will ever be released. THANK YOU FOR PARTICIPATING!

1. Juror number: _____ **2.** How old are you? _____

3. Gender: ___ **Male** ___ **Female** **4.** Are you retired? ___ **Yes** ___ **No**

5. Are you employed? ___ **No** ___ **Yes**; my occupation is: _____

6. What is your residential zip code? _____ Town of residence: _____

7. Have you completed high school or passed the GED exam?

___ **No.** The highest grade of school which I completed was:

1 2 3 4 5 6 7 8 9 10 11

___ **Yes.** Please indicate your total number of years of education after high school. Study towards any degree program should be counted, whether or not the degree was actually completed. Some examples appear at the bottom of the page.

0 1 2 3 4 5 6 7 8 9 10 or more

Examples:

Example 1. Jim studied half-time for six years. He should circle "3" above, because six years of half-time study is equivalent to three years full-time.

Example 2. Shandra spent two years studying at a community college, and then transferred to a dental school where she studied for three more years. She should circle "5" above.

Appendix B: Demographics

Although this paper focuses on the level of education through the various stages of the jury selection process, the distribution of age and gender is also of interest. As with education, we are able to study changes in these demographics for our thirty cases and also compare the distributions to the comparable segment of the population in Connecticut.

The slight differences between the distribution of 1895 ages in the venires and the distribution of 442 ages in the juries are not surprising. Table B-1 offers a comparison of these distributions, where we also include information on the distribution of age in the comparable segment of the population in Connecticut from the 2000 census. Although our study does not specifically analyze the selection of the venires from the population, it is interesting to note that the younger and older segments of the population are underrepresented in the venires.[67] Table B-2 offers a similar comparison on the basis of gender, and we simply note that the differences observed in the table are not of statistical significance and are not evidence of gender discrimination in the selection process. Table B-3 offers a complete summary of the distribution of years of education.

Population (20 years and older)	**Jury**	**Qualified Panel**	**Jury Venires**	**Census**
20 to 24 years	3.62%	3.70%	4.96%	7.75%
25 to 34 years	10.86	11.31	12.61	18.73
35 to 44 years	21.27	22.78	22.59	24.08
45 to 54 years	35.97	35.05	30.87	19.86
55 to 59 years	10.86	12.27	12.78	7.32
60 to 64 years	11.31	9.64	9.60	5.49
65 to 74 years	5.88	5.06	6.17	9.58
75 to 84 years	0.23	0.19	0.42	7.19

Table B-1. The distribution of age (percentages) from the census,[68] aggregated venires, qualified panels, and juries. The younger and older segments of the population are underrepresented in the jury venires, qualified panels, and juries.

[67] *See supra* note 64.
[68] U.S. Census Bureau, *supra* note 56.

Gender	Jury	Qualified Panel	Jury Venires	Census
Male	52.26	49.46	52.35	48.4
Female	47.74	50.54	47.65	51.6

Table B-2. The distribution of gender (percentages) from the census,[69] aggregated venires, qualified panels, and juries. The differences between the venires, the qualified panels, and the juries are not statistically significant; these swings could occur simply by chance and are not evidence of gender discrimination in the selection process.

EDUCATIONAL ATTAINMENT **Population** (25 years and older)	**Jury 426 of 1895**	**Qualified Panel 989 of 1895**	**Jury Venires 1801 of 1895**	**Census**
Less than 12th grade, no diploma	3.76%	3.13%	3.89%	16.0%
High school graduate (includes equivalency)	23.48	20.63	20.71	28.5
Some college, less than 4 years	26.76	30.03	28.37	24.1
4 years of college or more	46.00	46.21	47.03	31.4
Percent high school graduate or higher	96.15	96.88	96.11	84.0
Percent bachelor's degree or higher	46.00	46.21	47.03	31.4

Table B-3. The distribution of education (percentages) from the census,[70] aggregated venires, qualified panels, and juries. The differences between the census and the venires are striking, but are not the focus of this study. Differences between the venires, qualified panels, and juries are insignificant.

[69] *Id.*
[70] *Id.*

Appendix C: Supplementary Analysis

An analysis of the jury selection process for each of the thirty cases supports the main finding of this paper: there is no systematic evidence of bias in the selection process correlated with education. Table C-1 examines the judges' roles in the process, as some individuals are excused for cause and others form the qualified panels. The mean years of education (with numbers of individuals provided in parentheses) are provided, along with p-values from 2-sample t-tests[71] comparing the education of the qualified panels to the individuals excused for cause. Although several cases (4, 12 and 13) show signs of significant differences in the education levels of these groups, we are not surprised to find several isolated results in a study of thirty different cases. Aggregate analysis of these cases provides no statistically significant evidence of an overall downward shift in the level of education. In fact, we note that the excused individuals often are less educated than the qualified pool; we do not observe a systematic pattern of the more educated individuals being excused by the judges.

Similarly, Table C-2 examines the lawyers' roles in the process. We offer a comparison of the two sets of challenges, as well as a comparison of the total challenges with the final jury. As expected, only a small number of these comparisons illustrate notable differences, with no evidence supporting claims of systematic bias in the system. The most interesting case, number 11, witnessed the lawyers seemingly working in concert to exclude well-educated members of the qualified panel, resulting in a less-educated jury. We were unable to obtain detailed information about this case, but again, we are not surprised to find such an example in an exhaustive analysis of the multi-stage selection process of thirty different cases.

[71] Permutation tests yield virtually identical results but are less convenient for aggregating results across trials.

Case	Type	Venire	Excused	Qualified Panel	p-value[72]
1	Criminal	14.8 (68)	14.6 (10)	14.6 (34)	0.49
2	Criminal	15.1 (82)	14.5 (47)	15.8 (35)	0.97
3	Criminal	14.8 (68)	14.8 (12)	14.9 (56)	0.55
4	Criminal	16.0 (83)	18.6 (8)	15.7 (38)	0.01
5	Criminal	14.7 (75)	14.2 (21)	14.9 (54)	0.75
6	Criminal	15.4 (72)	15.4 (13)	15.4 (59)	0.49
7	Criminal	15.7 (64)	15.4 (16)	15.8 (30)	0.65
8	Criminal	15.5 (100)	15.6 (24)	15.7 (43)	0.53
9	Criminal	14.2 (58)	13.3 (6)	14.5 (34)	0.80
10	Criminal	15.0 (85)	14.6 (10)	15.1 (75)	0.69
11	Civil	15.4 (59)	15.2 (15)	15.7 (15)	0.73
12	Civil	15.5 (78)	19.0 (3)	15.8 (23)	0.05
13	Civil	15.0 (60)	16.2(12)	14.7 (48)	0.04
14	Civil	15.5 (58)	16.1 (15)	15.3 (43)	0.13
15	Civil	15.5 (53)	16.2 (19)	15.1 (34)	0.14
16	Civil	14.8 (69)	13.5 (14)	15.1 (55)	0.97
17	Civil	15.7 (89)	16.1 (10)	15.9 (17)	0.46
18	Civil	15.0 (51)	15.0 (6)	14.6 (16)	0.36
19	Civil	14.7 (61)	14.5 (12)	14.7 (49)	0.60
20	Civil	15.5 (69)	15.0 (5)	15.5 (31)	0.62
21	Civil	15.3 (61)	14.1 (10)	15.6 (18)	0.87
22	Civil	15.0 (51)	15.5 (17)	14.7 (34)	0.20
23	Civil	15.3 (51)	13.4 (5)	15.9 (18)	0.93
24	Civil	15.1 (45)	15.0 (11)	15.2 (34)	0.56
25	Civil	14.9 (69)	15.2 (20)	14.8 (49)	0.26
26	Civil	14.8 (45)	14.2 (9)	15.0 (13)	0.71
27	Civil	15.0 (49)	15.0 (14)	15.0 (16)	0.50
28	Civil	15.7 (36)	15.6 (14)	15.7 (22)	0.53
29	Civil	15.3 (40)	15.7 (12)	15.6 (21)	0.47
30	Civil	15.0 (46)	16.7 (3)	15.3 (13)	0.31

Table C-1. Mean years of education for the venire, those excused by the judge, and the qualified panel, with group sizes in parentheses. Note that some members of the venire are not interviewed by the judge. The p-value reflects tests of the equality of the mean years of education of these two groups.

[72] Comparing those excused to the qualified panel. These p-values are based on 2-sample t-tests of equality of education against the one-sided alternative that those excused are better educated than those forming the qualified panel.

Case	Type	Qualified Panel	Prosecution / Plaintiff Challenges	Defense Challenges	Jury	p-value[73]	p-value[74]
1	Criminal	14.6(34)	15.0(5)	14.7(9)	14.4(20)	0.33	0.77
2	Criminal	15.8(35)	17.8(8)	14.2(11)	15.9(16)	0.59	0.02
3	Criminal	14.9(56)	15.2(5)	14.5(11)	14.4(18)	0.33	0.63
4	Criminal	15.7(38)	14.5(8)	16.0(10)	16.4(16)	0.83	0.33
5	Criminal	14.9(54)	14.1(8)	13.9(8)	15.1(14)	0.76	0.89
6	Criminal	15.4(59)	13.4(5)	14.8(10)	15.1(15)	0.80	0.16
7	Criminal	15.8(30)	15.2(6)	15.9(10)	15.9(14)	0.59	0.72
8	Criminal	15.7(43)	15.4(7)	16.3(10)	15.7(13)	0.42	0.68
9	Criminal	14.5(34)	15.9(7)	14.3(12)	14.1(16)	0.25	0.35
10	Criminal	15.1(75)	15.7(7)	13.5(10)	16.2(16)	0.95	0.16
11	Civil	15.7(15)	17.8(4)	17.8(4)	13.4(7)	<0.0001	1.00
12	Civil	15.8(23)	14.6(5)	16.2(5)	16.1(14)	0.72	0.47
13	Civil	14.7(48)	13.3(3)	13.7(3)	14.8(42)	0.86	0.82
14	Civil	15.3(43)	14.8(5)	14.8(4)	14.6(9)	0.49	0.95
15	Civil	15.1(34)	17.0(3)	14.3(3)	14.5(8)	0.24	0.21
16	Civil	15.1(55)	14.0(4)	16.2(4)	15.0(9)	0.57	0.27
17	Civil	15.9(17)	15.5(4)	14.5(4)	16.8(9)	0.84	0.66
18	Civil	14.6(16)	13.5(4)	14.8(4)	14.9(9)	0.71	0.12
19	Civil	14.7(49)	13.8(4)	13.3(3)	14.8(18)	0.81	0.85
20	Civil	15.5(31)	16.4(5)	13.5(4)	15.7(23)	0.75	0.23
21	Civil	15.6(18)	14.0(3)	17.2(4)	15.4(11)	0.37	0.16
22	Civil	14.7(34)	16.2(4)	15.2(5)	14.4(25)	0.15	0.57
23	Civil	15.9(18)	14.0(4)	18.3(3)	15.9(11)	0.51	0.16
24	Civil	15.2(34)	15.8(4)	14.2(4)	14.9(27)	0.21	0.74
25	Civil	14.8(49)	15.6(5)	15.2(5)	14.4(9)	0.36	0.86
26	Civil	15.0(13)	14.0(2)	19.3(3)	13.6(8)	0.03	0.14
27	Civil	15.0(16)	15.7(3)	12.7(3)	15.5(10)	0.79	0.20
28	Civil	15.7(22)	16.0(4)	17.6(5)	14.9(13)	0.08	0.59
29	Civil	15.6(21)	15.5(2)	17.5(4)	15.1(15)	0.12	0.47
30	Civil	15.3(13)	16.7(3)	15.3(3)	14.7(7)	0.30	0.73

Table C-2. Mean years of education for the qualified panel the two types of peremptory challenges, and the jury, with group sizes in parentheses. The p-values for tests of equivalence of the mean education levels of each type of challenge, as well as for comparing all the challenges to the final jury, are included.

[73] Comparing those challenged to the jury. These p-values are based on 2-sample t-tests of equality of education against the one-sided alternative that those challenged are better educated than those forming the jury.

[74] Comparing defense and plaintiff challenges. These p-values are based on 2-sample t-tests of equality of education of those peremptorily challenged by the opposing lawyers, against the two-sided alternative.