

No. 84-1865

IN THE
Supreme Court of the United States

OCTOBER TERM, 1985

A. L. LOCKHART, DIRECTOR
ARKANSAS DEPARTMENT OF CORRECTION,
Petitioner,

v.

ARDIA V. MCCREE,
Respondent.

On Writ of Certiorari to the United States
Court of Appeals for the Eighth Circuit

**BRIEF FOR AMICUS CURIAE
AMERICAN PSYCHOLOGICAL ASSOCIATION
IN SUPPORT OF PETITIONER**

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**BRIEF FOR AMICUS CURIAE
AMERICAN PSYCHOLOGICAL ASSOCIATION
IN SUPPORT OF PETITIONER**

INTEREST OF AMICUS CURIAE

The American Psychological Association (APA), a non-profit, scientific, and professional organization founded in 1892, is the major association of psychologists in the United States. The APA has more than 60,000 members, including the vast majority of psychologists holding doctoral degrees from accredited universities in the United States. Its purpose, as reflected in its Bylaws, is to "advance psychology as a science and profession, and as a means of promoting human welfare."

A central issue in this case is the applicability and methodological rigor of the social science evidence introduced and considered in the courts below. Experimental social psychologists have generated almost all the significant research pertinent to these issues and provided most of the expert testimony introduced in this and similar cases. A substantial number of APA's members are concerned with these issues, and more broadly, with the usefulness of experimental psychology to the legal system.

The APA contributes *amicus* briefs only where it has special knowledge to share with the Court; it has felt it particularly important to do so where scientific issues have been in the forefront. *E.g.*, *Mills v. Rogers*, 457 U.S. 291 (1982) (risks and benefits of psychotropic medication); *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766 (1983) (measurability of psychological harm in potential disasters). The APA regards this as one of those cases, and as an opportunity to offer this Court an objective analysis of the social science evidence germane to a thoughtful resolution of the serious constitutional questions confronting it.

Petitioner and respondent have consented to the filing of this *amicus* brief. Their letters of consent are on file with the Clerk of this Court.

INTRODUCTION AND SUMMARY OF ARGUMENT

Among the 270 exhibits introduced in the *habeas corpus* proceedings below were a wide variety of studies generated primarily by social psychologists specializing in research designed to address legal questions. The court heard from several social science experts as well. These researchers and experts have addressed the empirical question whether a "death-qualified" jury (one formed under standards developed in *Witherspoon v. Illinois*, 391 U.S. 510 (1968)),¹ is more likely to convict a capital criminal defendant than a jury that—like juries formed in all non-capital criminal cases—also includes members of the venire who because of absolute scruples against imposing the death penalty are excluded from death-qualified juries.

In *Witherspoon*, this Court declined to rule that death-qualified juries are "less than neutral with respect to guilt," *id.* at 520 n.18, and therefore unconstitutional, because the research and data then extant was, in its view, too "tentative and fragmentary." *Id.* at 517. The Court expressly left open the possibility it would rule differently if further research more clearly demonstrated death-qualified juries' non-neutrality. Since that time, researchers, particularly psychologists, have conducted new research designed to answer definitively the question whether death-qualified juries are "conviction prone."

In ruling that excluding jurors who have absolute scruples against imposing the death penalty at the guilt/innocence (culpability) phase² violates the Constitution,

¹ With respect to the impact of *Adams v. Texas*, 448 U.S. 38 (1980), and *Wainwright v. Witt*, 105 S. Ct. 844 (1985), on the social science research findings relevant to this case, see *infra*, pp. 29-30.

² Not at issue in this case is the State's authority to exclude such jurors during the *sentencing* phase. Also not at issue is the State's

the courts below relied heavily on this research. In urging affirmance of the Eighth Circuit's decision, respondent does as well. The States³ attack the research on several grounds, and at petitioner's urging the integrity of the data is one of the major questions this Court has agreed to answer. See Petition for Writ of Certiorari at 20; 54 U.S.L.W. 3223 (U.S. October 8, 1985).

To aid this Court in resolving this conflict, the APA will abstract and critique the methodology and major empirical findings in the relevant research. *Amicus* concludes that the extant research addresses the Sixth and Fourteenth Amendment issues that are at the heart of this controversy. As *amicus* demonstrates, without credible exception, the research studies show that death-qualified juries are prosecution prone, unrepresentative of the community, and that death qualification impairs proper jury functioning. Point I.

Amicus next evaluates the data in light of the States' eight major criticisms of this research. APA concludes that the States' objections are either mistaken or unrelated to the relevant research. Further, *amicus* concludes that the research clearly satisfies the criteria for evaluating the methodological soundness, reliability, and utility of empirical research. Point II.

In sum, the research now addresses and answers the empirical question left open in *Witherspoon*. Insofar as those data help resolve the constitutional questions at issue here, they support the position of the respondent and the decision below.

authority to exclude jurors during both the culpability and sentencing phases whose "attitude toward the death penalty would prevent them from making an impartial decision as to the defendant's guilt." *Witherspoon v. Illinois*, 391 U.S. at 522-523 n.21.

³ By "States," APA refers to Petitioner Lockhart, as well as 16 States that submitted a Brief *Amici Curiae* in support of petitioner.

ARGUMENT

I. THE SOCIAL SCIENCE DATA TENDERED BY RESPONDENT DEMONSTRATE THAT DEATH-QUALIFIED JURIES ARE MORE PRO-PROSECUTION AND UNREPRESENTATIVE THAN TYPICAL CRIMINAL JURIES AND THAT DEATH QUALIFICATION IMPAIRS JURY FUNCTIONING.

A. The Social Science Research has Focused on the Relevant Categories of Prospective Jurors, Including that Subset of Jurors Excludable Under *Witherspoon*.

Understanding the relevant research first requires familiarity with the categories of the venire generally used by researchers and judges addressing the issues before this Court. The members of the venire competent to act as jurors can be aligned along a spectrum of attitudes concerning the imposition of the death penalty. This continuum may be usefully divided into the following classifications:⁴

Automatic Death Penalty Group (ADP)—These jurors will always vote for the death penalty in a capital case.

Favor Death Penalty Group (FDP)—These jurors favor the death penalty but will not vote to impose it in every capital case.

Indifferent Group—These jurors neither favor nor oppose the death penalty.

Oppose Death Penalty Group (ODP)—These jurors either oppose the death penalty or have doubts about it but nevertheless will sometimes vote to impose it.

⁴ This classification is adapted from *Hovey v. Superior Court*, 28 Cal. 3d 1, 616 P.2d 1301, 1311, 168 Cal. Rptr. 128 (1980). It was adopted in substantially similar form by the district court below. *Grigsby v. Mabry*, 569 F. Supp. 1273, 1288 (E.D. Ark. 1983), *aff'd*, 758 F.2d 226 (8th Cir. 1985). See Berry, *Death Qualification and the "Fireside Induction"*, 5 U. ARK. LITTLE ROCK L. J. 1, 2 (1982) [hereinafter Berry].

Automatic Life Imprisonment Group (ALI)—These jurors will always vote for life imprisonment rather than impose the death penalty. They may be challenged for cause at the sentencing phase under the standards set forth in *Witherspoon* and are characteristically known as "Witherspoon Excludables" (WEs).

WEs are further subdivided into two subsets, distinguished on the basis of an evaluation of their impartiality at the culpability phase. One subset is not impartial; its members state that they cannot be fair and impartial in deciding guilt, knowing that a guilty verdict might ultimately result in imposition of the death penalty. These members of the venire are characteristically described as "Nullifiers." See *Wainwright v. Witt*, 105 S. Ct. at 852; *Adams v. Texas*, 448 U.S. at 48; *Witherspoon v. Illinois*, 391 U.S. at 522-523.

The second WE subset consists of those who, although they would never vote to impose the death penalty, state they can be impartial on the issue of the defendant's guilt or innocence. These members of the venire are characteristically denominated as "Guilt Phase Includables" (GPIs). But because almost all American jurisdictions use the same jury to decide both culpability and sentence in capital cases, see Gillers, *Deciding Who Dies*, 129 U. PA. L. REV. 1, 101-129 (1980), GPIs are excluded prior to the culpability phase along with Nullifiers.

B. Social Science Research Conducted Over the Course of Three Decades Directly Addresses the Constitutional Issues at Stake.

The empirical question whether death-qualified juries systematically favor the prosecution at the culpability phase bears upon three distinct but related constitutional doctrines under the Sixth and Fourteenth Amendments.⁵ First, the process of death qualification may produce juries that are less than neutral with respect to guilt and uncommonly prone to convict. *E.g.*, *Witherspoon v.*

⁵ APA will leave to the parties an extended discussion of the case law that develops these doctrines.

Illinois, 391 U.S. 510 (1968). This relates to the outcome and verdict of the jury. Second, the systematic exclusion from the jury of a group of eligible citizens possessing distinctive and relevant attitudes and perspectives diminishes the representativeness of capital juries, and may implicate the fair cross-section requirement. *E.g.*, *Duren v. Missouri*, 439 U.S. 357 (1979); *Taylor v. Louisiana*, 419 U.S. 522 (1975). This relates to the selection and demographic and attitudinal composition of the jury. Third, the exclusion of these distinct perspectives may impair proper functioning of the jury by reducing diversity of jurors, lessening the accuracy of jury decisionmaking, and diminishing the potential for the counterbalancing of community viewpoints. *E.g.*, *Ballew v. Georgia*, 435 U.S. 223 (1978). This relates to jury deliberation and adjudication.

1. The data show that death-qualified juries are conviction prone.

The question whether a jury qualified to carry out capital sentencing is more apt to convict than juries in other criminal cases was first systematically analyzed and answered in the affirmative in a seminal article by Oberer in 1961.⁶ The article prompted Witherspoon's use of three then-unpublished studies in his 1968 challenge to his death sentence. These *Witherspoon* studies, subsequently discussed in this Court's decision in his case, were authored by Wilson, Goldberg, and Zeisel⁷ and are abstracted in Table 1.

⁶ Oberer, *Does Disqualification of Jurors for Scruples Against Capital Punishment Constitute Denial of Fair Trial on Issue of Guilt?* 39 TEXAS L. REV. 545 (1961) [hereinafter Oberer].

⁷ Wilson, *Belief in Capital Punishment and Jury Performance* (Univ. of Chicago 1967) (unpublished manuscript); Goldberg, *Attitude Toward Capital Punishment and Behavior as a Juror in Simulated Cases* (Morehouse College, undated) (unpublished manuscript); subsequently published as Goldberg, *Toward Expansion of Witherspoon: Capital Scruples, Jury Bias, and the Use of Psychological Data to Raise Presumptions in the Law*, 5 HARV. C.R.-C.L. L. REV. 53 (1970); Zeisel, *Some Insights into the Opera-*

Table 1. Studies of Conviction-Proneness Before the Court in *Witherspoon*

Author	Jurors	Stimulus Materials	Death Qualifying Question	Results	Sig. Level ^a
Wilson ^b	248 college students	Written descriptions	ODP & WE	Jurors favoring DP more likely to convict	p. < .02
Goldberg ^c	200 college students	Written descriptions	ODP & WE	As above	p. < .06
Zeisel ^d	264 actual jurors	Actual felony trials	Scruples against DP	As above	p. < .04

^a This category measures statistical significance. "p" value of .01 is highly significant; .05 is significant; .10 is marginally significant. For full discussion of statistical significance see *infra*, pp. 22-23.

^b Jurors were asked to agree/disagree with 15 statements measuring bias toward prosecution and were given 5 descriptions of murder cases involving 6 defendants. 17% scrupled jurors (conscientious scruples against death penalty) voted for guilt in 5-6 cases compared to 30% of nonscrupled jurors. Jurors favoring death penalty also more likely to assign severe punishments, more likely to agree with pro-prosecution statements, and more likely to reject insanity defense.

^c 100 whites and 100 blacks (116 male; 84 female), read synopses of 16 capital cases. Nonscrupled jurors voted to convict more often than scrupled jurors (75% vs. 69%) and imposed more severe sentences. Blacks more likely to oppose imposition of death penalty (76%) than whites (47%).

^d On their last day of jury service, jurors asked to disclose their jury's first ballot vote and their own first ballot vote, yielding 464 split first ballot votes. Weight of evidence controlled by dividing data into 11 different "constellations" of guilty/not guilty splits on first ballots. A "constellation" was defined by how many jurors voted "guilty" on a particular ballot. Nonscrupled jurors reached point of "equal likelihood" of voting either guilty or not guilty when strength of evidence yielded 4 first ballot guilty votes. Scrupled jurors did not exceed "equal likelihood" point until there were 8 first ballot guilty votes. In 10 of 11 first ballot constellations, nonscrupled jurors voted guilty more often than scrupled jurors.

These early studies supported the hypothesis that death-qualified juries favor the prosecution. But, to a greater or lesser extent, they possessed at least one of four methodological problems that made them, *standing alone*, less than definitive in guiding this Court's resolution of the constitutional issues before it. First, the short written descriptions that Wilson and Goldberg used as stimulus materials were not sufficiently realistic to permit confident generalization to the real world.⁸ Second, the participants in the Wilson and Goldberg studies were college students. Although many of them may have been eligible to be jurors, the extent to which students are representative of real jurors is not clear. Third, the student jurors voted for guilt/innocence without group deliberation. Fourth, all three studies identified participants by the legally appropriate standards used at the time. Because *Witherspoon* had not yet articulated the proper standard, the researchers asked whether a jury formed by excluding all jurors having scruples against the death penalty was more likely to convict than a jury comprised of those not having such scruples. The difference in conviction behavior between those groups of jurors does not directly address the *Witherspoon* issue because the scrupled group includes those opposed to the death penalty (ODPs) and both subsets of WEs (Nullifiers and GPIs), rather than consisting solely of GPIs.

Zeisel's study was open only to the last criticism. Furthermore, because it used actual jurors in actual trials, Zeisel demonstrated that the differences in conviction rates shown in other studies extend to actual situations, a demonstration that heightens the reliability of results gleaned from simulations. And despite these criticisms,

tion of Criminal Juries (Univ. of Chicago 1957) (unpublished manuscript); subsequently published as H. ZEISEL, SOME DATA ON JUROR ATTITUDES TOWARD CAPITAL PUNISHMENT (Center for Studies of Criminal Justice, Univ. of Chicago Law School, 1968) [hereinafter Zeisel].

⁸ See J. CARLSMITH, P. ELLSWORTH & E. ARONSON, METHODS OF RESEARCH IN SOCIAL PSYCHOLOGY (1976).

this early research taken together provided the foundation for later, more sophisticated studies.

The *Witherspoon* Court's reluctance to rely on these studies was supported by more than these methodological problems. Throughout the appeals process, Witherspoon's counsel had contended that "the prosecution-prone character of 'death qualified' juries presented 'purely a legal question.'" *Witherspoon v. Illinois*, 391 U.S. at 517 n.11. He proffered these three studies for the first time in his brief to this Court. Thus, they had not been "subjected to the traditional testing mechanisms of the adversary process." *Ballew v. Georgia*, 435 U.S. 223, 246 (1978) (Powell, J., concurring).

In that light, the *Witherspoon* Court stated it could "only speculate . . . as to the precise meaning of the terms used in those studies, the accuracy of the techniques employed, and the validity of the generalizations made." 391 U.S. at 517 n.11. The Court concluded that "[t]he data adduced by the petitioner . . . are too tentative and fragmentary to establish that jurors not opposed to the death penalty tend to favor the prosecution in the determination of guilt." *Id.* at 517. Although it declined to rely on these data, the Court invited "a defendant convicted by [a death-qualified] jury . . . in some future case [to] attempt to establish that the jury was less than neutral with respect to *guilt*." *Id.* at 520 n.18. Although writing separately, Justice White shared this view. *Id.* at 541 n.1 (White, J., dissenting).

Social scientists have responded to *Witherspoon*. They have produced research involving participants classified by more precisely stated, legally-relevant *Witherspoon* standards, under conditions that more closely approximated the real-life setting of the courtroom. This research, which we label in Table 2 as the post-*Witherspoon* behavior studies, included work by Jurow; Harris; and Cowan, Thompson & Ellsworth.⁹

⁹ Jurow, *New Data on the Effect of a "Death Qualified" Jury on the Guilt Determination Process*, 84 HARV. L. REV. 567 (1971);

Table 2. Post-Witherspoon Behavioral Studies of Conviction-Proneness

Author	Jurors	Stimulus Materials	Death Qualifying Question	Results	Sig. Level ^a
Jurow ^b	211 persons, 1/3 former jurors	2 audiotapes of simulated murder trials	Appropriate WE questions	Jurors "not opposed" to DP more likely to convict	p. < .01 (Case I) p. < .10 (Case II)
Harris ^c	Nationwide random sample of 2068 adults	Written descriptions	Appropriate WE questions	As above	p. < .0001
Cowan <i>et al.</i> ^d	288 jury-eligible & former jurors	Videotape of murder trial	Precise WE, GPI questions	As above	p. < .01

^a See Table 1, note a.

^b Audiotapes included opening statements, examination of witnesses, closing arguments, jury instructions. Although Jurow found Case II only marginally statistically significant. Berry, *supra* note 4 at 20 nn.44, 45, argues that differences in both of Jurow's cases were statistically significant. See also Cowan *et al.* at 58, who used the same cases, and show that 44.7% of death-qualified jurors (DQs) vote to convict in Case I as compared with 33.3% of WEs; in Case II, 60% of DQs vote to convict compared to 42.9% of WEs.

^c In face-to-face interviews, jurors given 4 descriptions of criminal cases. In each case, DQs voted to convict more often than ALLs. Overall, DQs voted to convict in 63% of cases compared to 56% for WEs. DQs significantly more willing to ignore procedural safeguards to vote for conviction than ALLs.

^d See discussion in text.

The Jurow and Harris studies are subject to legitimate reservations. The WEs in both groups may have included Nullifiers. Because Nullifiers plainly may be excluded under the rule in *Witherspoon*, the failure to distinguish them may have created an overinclusive group. Moreover, neither Jurow nor Harris examined jury, as well as juror, behavior.

These two methodological gaps—whether GPIs differ in conviction rates from those who are death-qualified under *Witherspoon*, and whether the findings concerning juror behavior survive deliberation by juries—were filled in by Cowan *et al.*, the most sophisticated conviction-rate study to date. Participants were told to assume they were being called as jurors in a first degree murder trial and that the judge would ask them about their attitudes toward the death penalty. Each participant then was asked whether as a juror he/she would be unwilling to consider voting to impose the death penalty in any case. Those who answered unequivocally in the affirmative were classified as WEs, in the negative as death-qualified jurors (DQs). Then the participants were asked whether in the culpability phase they could follow the judge's instructions and decide the question of guilt or innocence in a fair and impartial manner based on the evidence and the law. Those who said they could not be fair and impartial in deciding culpability knowing that

Louis Harris & Associates, Inc., STUDY No. 2016 (1971) (unpublished manuscript), reported in White, *The Constitutional Invalidity of Convictions Imposed by Death-Qualified Juries*, 58 CORNELL L. REV. 1176, 1178 n.12, 1185, 1194 (1973) and discussed in *Hovey v. Superior Court*, 616 P.2d 1301, 1321 (1980); Cowan, Thompson & Ellsworth, *The Effects of Death Qualification on Jurors' Predisposition to Convict and on the Quality of Deliberation*, 8 L. HUM. BEHAV. 53 (1984) [hereinafter Cowan *et al.*].

Cowan *et al.* and several other studies to be discussed, *infra*, come from a special issue on death qualification in *Law and Human Behavior*, the journal of the American Psychology-Law Society, an APA division. For the convenience of the Court, nine copies of the journal have been lodged with the Clerk of the Court.

conviction might lead to the death sentence were classified as Nullifiers and excluded from the study. In this manner, 258 participants were identified as DQs and 30 as GPIs.

These remaining 288 participants, 104 of whom had actually served on juries, viewed a two and one-half hour videotaped reenactment of an actual murder trial.¹⁰ The judge and the attorneys, portrayed by an actual judge and two experienced criminal lawyers, read the entire original transcript of the trial and spontaneously improvised the reenactment. The case was complex and afforded several plausible interpretations and verdict preferences (first or second degree murder, voluntary manslaughter, accidental homicide, self-defense). The tape was pretested and judged as "convincing and realistic." Cowan *et al.*, *supra* note 9, at 64.

As soon as the taped presentation was completed, participants were asked to record how they would vote. The vote was used as the basic measure of predisposition to convict. All GPIs were then assigned to mixed juries composed of 8-10 DQs and 2-4 GPIs. These juries were told to deliberate for one hour. The deliberations were recorded on audio- and videotape. Jurors once again recorded their personal verdicts. This vote was used as the measure of post-deliberation proneness to convict. The results are indicated in Table 3.

Table 3. Verdict Choices of DQ and GPI Jurors in Cowan *et al.*

Verdict	Predeliberation Ballot		Postdeliberation Ballot	
	DQ	GPI	DQ	GPI
1st Degree	7.8%	3.3%	1.0%	3.4%
2nd Degree	21.3%	23.3%	17.3%	13.8%
Manslaughter	48.9%	26.7%	68.0%	48.3%
Not Guilty	22.1%	46.7%	13.7%	34.5%

¹⁰ The tape was prepared by Reid Hastie, Ph.D., an expert witness for respondent in the trial below, who used the tape in his research on the jury deliberation process. See R. HASTIE, S. PENROD & N. PENNINGTON, *INSIDE THE JURY* 47-51 (1983).

The difference between the DQ and GPI subjects on the pre-deliberation ballot are significant beyond the .01 level (1 in 100), indicating that DQ subjects are more likely than GPIs to vote guilty after viewing precisely the same trial. The post-deliberation personal verdict preferences permitted the researchers to test the robustness of jurors' initial verdict preferences after jury deliberation. The differences remained after deliberation and continued to be significant at the .01 level.¹¹

Two important findings emerge from the study, as inspection of Table 3 reveals. First, GPIs take their duties seriously and will vote to convict. Over one-half of them voted to convict of some degree of homicide prior to deliberation and an even greater proportion (65%) voted to convict after deliberation in mixed juries. Second, after deliberation the modal (most common) verdict among GPIs was manslaughter, the same as that for DQs, although GPIs acquittal rate remained significantly higher.

A legitimate criticism that may be made of the Cowan *et al.* study is that none of the juries deliberated to a verdict. Two factors attenuate any possible effects this factor may have had on the ultimate conclusions. First, research shows that jurors' initial vote preference predicts the jury's ultimate decision to a highly significant extent.¹² Second, these data are not idiosyncratic. They comport with the findings from all other studies, regardless of methodology, subjects, and stimulus materials.

¹¹ To assure that the results were not due to extraneous variables, the authors used a statistical procedure to discover whether factors other than attitudes toward the death penalty were associated with conviction rate. They found that age, education, prior jury experience, and employment status were unrelated to voting behavior.

¹² H. KALVEN & H. ZEISEL, *THE AMERICAN JURY* 488 (1966); see R. HASTIE, S. PENROD & N. PENNINGTON, *INSIDE THE JURY* (1983); M. SAKS, *JURY VERDICTS* (1977).

The research discussed in this section shows that death qualified juries act more favorably to the prosecution. In addition, there is a distinct and independent prosecution effect created by death qualification during the *voir dire* process itself. All capital jurors experience the process of death qualification. Because many prospective jurors "may not know how they will react when faced with imposing the death sentence, or may be unable to articulate, or may wish to hide their true feelings," *Wainwright v. Witt*, 105 S. Ct. 844, 852 (1985), the *voir dire* process may be quite lengthy. In many jurisdictions *voir dire* occurs in the presence of other prospective jurors and can also be highly repetitive. Haney¹³ has studied the effects of *voir dire* on conviction proneness.

After WEs were excluded from the sample, Haney randomly assigned 67 jury-eligible adults to one of two experimental conditions. They watched either a two-hour videotape of a standard criminal *voir dire* including death qualification or an identical tape from which the death-qualification portion had been deleted. At the conclusion of the tapes, all subjects responded to a series of items designed to measure their attitudes and beliefs about the case whose *voir dire* they had just observed.

Those exposed to the death-qualification *voir dire* were significantly more conviction prone and were more likely to believe that the judge, the prosecution, and even the defense attorneys thought the defendant was guilty. Haney also found disturbing evidence of the effects of the death-qualifying *voir dire* on jurors' attitudes toward the appropriate sentence. Of the 32 jurors who heard an ordinary *voir dire*, only seven said that if the defendant were convicted of a capital crime, death was the appropriate penalty. Of the 35 jurors exposed to the death-

¹³ *On the Selection of Capital Juries: The Biasing Effects of the Death-Qualification Process*, 8 L. & HUM. BEHAV. 121 (1984) (lodged with the Court).

qualifying *voir dire*, 20 said that death would be the appropriate penalty.

In a parallel examination of actual capital *voir dire*, Haney¹⁴ found that judges and attorneys frequently lapsed into language even more prejudicial than that used in his experiment. They used phrases that made the verdict seem a foregone conclusion, such as, by the court: "When I instruct the jury at the end of this trial, I will outline in detail the factors to be weighed in deciding whether to impose a death penalty," *id.* at 138; and "There are two parts to this case," *id.* at 137; and by the prosecutor: "You know all [sic] that you are going to have to go through with the second phase," *id.* at 138.

In sum, a substantial, internally consistent body of research demonstrates that the exclusion of jurors who cannot accept capital punishment but who *can* be fair and impartial with respect to guilt, leaves a population of eligible jurors who are predisposed in favor of the prosecution as compared to population of citizens who comprise typical criminal juries. This basic conclusion is supported by three decades of accumulated research. It is uncontradicted by the results of any credible empirical study.¹⁵ Furthermore, a recent, methodologically rigorous study demonstrates that the death-qualification process during *voir dire* in capital cases creates further prosecution biases.

¹⁴ *Examining Death Qualification*, 8 L. & HUM. BEHAV. 133 (1984) (lodged with the Court); see also Haney, *Juries and the Death Penalty: Readdressing the Witherspoon Question*, 26 CRIME & DELINQ. 512 (1980).

¹⁵ The only study that disputes these findings is Osser & Bernstein, *The Death-Oriented Jury Shall Live*, 1 U. SAN FERN. V. L. REV. 253 (1968). This study, not in evidence in this case, was discussed in *Hovey* where the court indicated that both defense and prosecution experts criticized its methodology. *Hovey v. Superior Court*, 616 P.2d 1301, 1325 n.80 (1980).

2. The data show barring of "Witherspoon Excludables" creates unrepresentative juries, thereby implicating defendant's right to a jury composed from a fair cross-section of the community.

The empirical evidence addresses three questions relevant to the Sixth Amendment requirement that a jury be chosen from a fair cross-section of the community. First, the evidence may yield information as to the size of each of the directly relevant groups, most particularly the WEs and their subsets—Nullifiers and GPIs. Second, it may reveal whether WEs share relevant attitudes, making them a distinct and cognizable subset of the population. Third, the evidence can inform us whether the exclusion of WEs results in underrepresentation of other distinct and cognizable groups on the jury, particularly blacks and women.

a. Death qualification excludes a significantly large subset of the population.

Given the wide time-span over which the studies were done and the different classifications used, no one number can define the proportion of WEs in the population, but the data are uniformly within a rather narrow range of 10-17%, supporting their reliability.¹⁶ Two surveys, using

¹⁶ Bronson, *On the Conviction Proneness and Representativeness of the Death-Qualified Jury: An Empirical Study of Colorado Veniremen*, 42 U. COLO. L. REV. 1 (1970) [hereinafter Bronson I] (jury lists, 11% WEs; classification only approximated *Witherspoon* standard); Bronson, *Does the Exclusion of Scrupled Jurors in Capital Cases Make the Jury More Likely to Convict? Some Evidence from California*, 3 WOODROW WILSON L. J. 11 (1980) [hereinafter Bronson II] (author replicated study in California with a more legally relevant *Witherspoon* question and found 93% overlap of his "strongly opposed" group in Bronson I with WEs in Bronson II); Jurow, *supra* note 9 (nonrandom sample, 10% WEs; data likely to underestimate size of WEs in general population as author's sample 99% white and 80% male); Fitzgerald & Ellsworth, *Due Process vs. Crime Control: Death Qualification and Jury Attitudes*, 8 L. & HUM. BEHAV. 31 (1984) (random sample, 17% GPIs) [hereinafter Fitzgerald & Ellsworth] (lodged with the Court); Arkansas Archival Study (1981) (unpublished) cited at *Grigsby v.*

random samples and asking sophisticated *Witherspoon* questions, found that 11% and 17%, respectively, of subjects are classifiable as GPIs.¹⁷ In Arkansas, where McCree was tried, a review of *voir dire* transcripts revealed that WEs comprise 14% of venire members.¹⁸ All of these data were offered by respondent and subjected to cross-examination in the *habeas* proceedings below.¹⁹

b. Those excluded through death qualification share common attitudes on issues related to criminal justice.

Studies by Bronson (I & II), Harris, and Fitzgerald & Ellsworth²⁰ all demonstrate that jurors' attitudes toward the death penalty are systematically related to their ideological position on a broad spectrum of issues related to criminal justice. These studies used different methods of defining subjects on the basis of their death penalty attitudes, e.g., "scrupled" vs. "nonscrupled"; "strongly

Mabry, 758 F.2d 226, 234 (8th Cir. 1985) (*voir dire* transcripts, 14% WEs); Precision Research Study (1981) (unpublished) discussed by trial court at 569 F. Supp. at 1294 and appellate court at 758 F.2d at 233 (random sample, 11% GPIs).

¹⁷ Precision Research Study, *supra* note 16; Fitzgerald & Ellsworth, *supra* note 16.

¹⁸ Arkansas Archival Study, *supra* note 16.

¹⁹ After listening to the testimony, the district court indicated it would "readopt[]" what it stated in its first '*Grigsby*' opinion concerning the size of the excluded group, adding only that the evidence presented at the hearing after remand reinforces the conclusion that the group [of WEs] is of substantial size both nationally and within the state of Arkansas." *Grigsby v. Mabry*, 569 F. Supp. at 1285.

²⁰ Bronson I, *supra* note 16 (718 persons drawn from jury lists asked 5 attitudinal items; participants favoring death penalty more likely to agree with pro-prosecution items; sig. level = $p < .001$); Bronson II, *supra* note 16 (755 members of venire in one survey and 707 in another interviewed regarding position on death penalty showed that those favoring death penalty more likely to support pro-prosecution positions); Harris, *supra* note 9; Fitzgerald & Ellsworth, *supra* note 16.

oppose" vs. all others; and some, the newest and most careful, compared DQs and WEs as defined by *Witherspoon*. All yielded the same conclusion: Those who are more favorable to the death penalty share attitudes toward criminal justice that are significantly more favorable to the prosecution.

Fitzgerald & Ellsworth is the most methodologically rigorous of the studies and exemplifies the nature of the attitudes investigated. The study was conducted under the auspices of an independent research firm that interviewed 811 randomly selected, jury-eligible participants. Interviewees were asked to indicate their position on the death penalty, from "strongly favor" to "strongly oppose." DQs and WEs were classified in precisely the same manner as in *Cowan et al.*, *supra* note 9, thus removing Nullifiers and permitting the researchers to compare DQs directly to GPIs. The 717 interviewees remaining after Nullifiers were removed then responded to 13 items designed to tap, *inter alia*, specific attitudes toward self-incrimination ("A person on trial who doesn't take the stand and deny the crime is probably guilty"); inadmissible evidence ("If the police obtain evidence illegally it should not be permitted in court, even if it would help convict a guilty person"; "Despite the judge's instructions to ignore a confession reported in the media but not in evidence, I would take the confession into consideration since it clearly indicates the defendant's guilt"); as well as feelings about opposing counsel ("District attorneys have to be watched carefully, since they will use any means they can to get convictions"; "Defense attorneys have to be watched carefully, since they will use any means to get their clients off").²¹

On all 13 items, DQs answered in such a way as to indicate attitudes more favorable to the prosecution than

²¹ These questions were carefully phrased. To reduce response bias and enhance the reliability of results, the direction of the items were balanced, so that those favoring prosecution and those favoring defense were in equal proportions.

GPIs. The differences in responses between the two groups were significant at the .05 level or beyond with respect to 11 items (four were significant beyond .001), marginally significant with respect to one item, and non-significant with respect to one. Conversely, GPI's responses were significantly different from DQs' responses on 11 of 13 questions, and less favorable to the prosecution on all 13. Combining the results from all 13 items into a general index of prosecution-proneness, the authors found a highly statistical significant difference in the proportion of pro-prosecution attitudes between DQs and GPIs ($p < .0001$). See *Hovey v. Superior Court*, 616 P.2d 1301, 1337 (1980). Thus, the data show that GPIs share common attitudes on relevant issues.²²

c. *Death qualification results in underrepresentation on juries of blacks and women.*

All the studies reporting relevant information²³ indicate that death qualification has strong racial and gender effects, decreasing the proportion of blacks and women eligible to serve as jurors during the culpability phase of the trial. Table 4 depicts the percentage of WEs or GPIs by race and gender, as revealed in these studies.²⁴

Table 4. Percent of Cognizable Groups Classified as WEs or GPIs^a

Author	Black	White	Female	Male
Harris	46%	29%	37%	24%
Fitzgerald & Ellsworth	26%	16%	21%	13%
Precision Research	29%	9%	13%	8%

^a In Harris, jurors classified as WEs; in other two, jurors classified as GPIs.

²² The evidence concerning attitudinal similarity is germane not only to the fair cross-representation issue but to the neutrality issue as well. The DQ process creates not only a less diverse jury, but insofar as pro-prosecution attitudes are related to conviction-proneness (and they appear to be), it creates a less than neutral jury as well. The studies should be read in that light.

²³ Harris, *supra* note 9; Fitzgerald & Ellsworth, *supra* note 16; Precision Research Study, *supra* note 16.

²⁴ See *Hovey v. Superior Court*, 616 P.2d 1301, 1337-1339 (1980) (collecting and summarizing data). These data comport with the

These indirect effects of death qualification on such cognizable groups pose independent constitutional problems. See, e.g., *Taylor v. Louisiana*, 419 U.S. 522 (1975); *Peters v. Kiff*, 407 U.S. 493 (1972).

3. The data suggest that death qualification interferes with the proper functioning of the jury.

This Court has defined some of the attributes of a properly functioning jury—qualities that make for effective jury deliberation. It has emphasized thorough, accurate, impartial factfinding; robust debate; critical evaluation of testimony; “the counterbalancing of various biases”; and the correct comprehension and application of rules of law and the standard of reasonable doubt.²⁵ There is evidence that death qualification impairs these attributes.

Cowan *et al.*, *supra* note 9, studied two types of juries, one comprised totally of DQs and one comprised of 8-10 DQs and 2-4 GPIs (mixed). They found that those who had participated on the mixed juries were able, to a significant extent, to remember more of the facts and the evidence than those who served on DQ juries. Jurors who had participated in the mixed juries were more critical of both defense and prosecution witnesses than those who had served on the death-qualified juries.

extensive findings of Zeisel, *supra* note 7, which include data derived from three national Gallup polls conducted between 1960-1965 and from other researchers as well. See Vidmar & Ellsworth, *Public Opinion and the Death Penalty*, 26 STAN. L. REV. 1245 (1974); see also Smith, *A Trend Analysis of Attitudes Toward Capital Punishment, 1936-1974*, in *STUDIES OF SOCIAL CHANGE SINCE 1948* (J. Davis ed. 1976). Other demographic variables such as age, religion, and education are only weakly related to death penalty attitudes. See Fitzgerald & Ellsworth, *supra* note 16, at 35.

²⁵ *Ballew v. Georgia*, 435 U.S. 223 (1978); *Apodaca v. Oregon*, 406 U.S. 404 (1972); *Johnson v. Louisiana*, 406 U.S. 356 (1972). See generally R. HASTIE, S. PENROD, N. PENNINGTON, *INSIDE THE JURY* (1983).

Thompson, Cowan, Ellsworth & Harrington²⁶ showed participants a videotape of the conflicting testimony of a black defendant and a white police officer. To a highly significant extent ($p < .0002$), the death-qualified jurors were more likely than the excludable jurors to interpret the testimony as favorable to the prosecution. The exclusion of GPIs, therefore, seriously diminishes the opportunity for the presentation of conflicting views.

In this same research report, the authors suggest another mechanism that affects the proper functioning of the jury. They found that WEs felt that mistaken convictions were a more regrettable error than mistaken acquittals, while DQs did not differentiate the two. This indicates that WEs' attitudes may more properly fit the mandated asymmetry of the reasonable doubt standard.²⁷

Compared with the long history of research on neutrality and representativeness, the research on the effects of death qualification is quite recent, and as yet there are few studies. Nonetheless, the record is consistent, uncontroverted by the petitioner, and indicates that adding the distinctive perspective of GPIs may improve the performance of juries with respect to accurate factfinding, critical scrutiny of testimony, and the proper application of the standard of reasonable doubt.

II. CONTRARY TO THE STATES' CRITICISMS, WHICH ARE EITHER ERRONEOUS OR UNRELATED TO THE PERTINENT RESEARCH, THE SOCIAL SCIENCE DATA TENDERED BY RESPONDENT SATISFY APPLICABLE CRITERIA FOR EVALUATING THE SOUNDNESS OF SCIENTIFIC RESEARCH.

The States' advance what *amicus* construes as eight criticisms of the studies relied upon by respondent and

²⁶ *Death Penalty Attitudes and Conviction Proneness: The Translation of Attitudes into Verdicts*, 8 L. & HUM. BEHAV. 95 (1984) (lodged with the Court).

²⁷ Cf. *Addington v. Texas*, 441 U.S. 418 (1979); *In re Winship*, 397 U.S. 358 (1970).

discussed above.²⁸ *Amicus* concludes that none of these criticisms supplies a reason to disregard these studies.

1. *Proof Based on Statistically Significant Findings is Used by All Sciences and Endorsed by this Court.* The issue the States stress most is that social science evidence demonstrating that death-qualified juries are proper prosecution depends upon statistical significance as proof. Although the terminology is different, the underlying logic of significance testing has been known to the law for centuries and is useful in resolving empirical questions relevant to legal decisions, see *Hazelwood Sch. Dist. v. United States*, 433 U.S. 299, 311 n.17 (1977); *Castenada v. Partida*, 430 U.S. 482, 496 n.17 (1977), as it is in all other fields that are concerned with realities, not just abstract theories.

Significance levels, in fact, provide rigor and discipline for empirical researchers. When faced with data (evidence) that is arguably ambiguous, statistical decision theory requires that a "null hypothesis" be adopted as the starting point. The null hypothesis is an assumption of "no differences," equivalent to the legal presumption that the plaintiff's or prosecution's case is not proven until the evidence is submitted. The presumption will prevail if the data are insufficient to permit its rejection.

A significance level is, thus, the statistical equivalent of a legal standard of proof. It states the level of certainty the data must reach to reject the presumption of no differences. In most fields, social science included, that standard is set by convention at .05 or lower. In other words, if, after considering the evidence, the probability of an erroneous rejection of the null hypothesis is less likely than 1 in 20, then the null hypothesis can be rejected. This customary level of statistical signifi-

²⁸ APA believes these criticisms are a fair summary of the material contained in the States' briefs. See Brief for Petitioner at 40-50; Brief for *Amici Curiae* at 23-30. Criticisms 1 & 2 are contained in both briefs; criticisms 3, 4, 5, 6, & 8 come primarily from the petitioner; criticism 7 is unique to the *amici* States.

cance is roughly equivalent to proof beyond a reasonable doubt. As such, it is far more reliable than most evidence relied upon by the courts.

This Court has relied on tests of statistical significance to support the strength of empirical evidence in cases of fundamental constitutional dimensions, particularly with regard to juries. The Court has asked and answered empirical questions when deciding whether a selection system has unconstitutionally excluded minorities from petit juries, *Alexander v. Louisiana*, 404 U.S. 625 (1972); *Carter v. Jury Commission*, 396 U.S. 320 (1970), and grand juries, *Castenada v. Partida*, 430 U.S. 482 (1977). It has relied upon empirical evidence in determining whether reduced size affects the process or product of jury deliberation, *Ballew v. Georgia*, 435 U.S. 223 (1978); *Colgrove v. Battin*, 413 U.S. 149 (1973); *Williams v. Florida*, 399 U.S. 78 (1970), and whether nonunanimous juries deliberate or decide differently from unanimous juries, *Apodaca v. Oregon*, 406 U.S. 404 (1972); *Johnson v. Louisiana*, 406 U.S. 356 (1972). In fact, tests of statistical significance are fundamental to research and decisionmaking in every empirical field in contemporary society.²⁹

2. *The Studies Measure Actual Behavior of Jurors, Not Only Their Attitudes.* Contrary to the States' assertion, the record is not limited to attitudinal studies.

²⁹ *E.g.*: Agriculture—R. MEAD & R. CURNOW, *STATISTICAL METHODS IN AGRICULTURE AND EXPERIMENTAL BIOLOGY* (1983); Business—P. JEDAMUS, *STATISTICAL ANALYSIS FOR BUSINESS DECISIONS* (1976); Economics—B. EASTMAN, *INTERPRETING MATHEMATICAL ECONOMICS AND ECONOMETRICS* (1985); Engineering—I. GUTTMAN, *INTRODUCTORY ENGINEERING STATISTICS* (3d ed. 1983); G. JACKSON, *DECISIONS UNDER CERTAINTY: DRILLING DECISIONS BY GAS AND OIL OPERATORS* (1979); Medicine—W. DANIELS, *BIostatISTICS: A FOUNDATION FOR ANALYSIS IN THE HEALTH SCIENCES* (1983); A. DELAUNOIS (ed.), *BIostatISTICS IN PHARMACOLOGY* (1979); E. MURPHY, *BIostatISTICS IN MEDICINE* (1982); Physics—R. KUBO, *STATISTICAL PHYSICS* (1985); and even law—D. BARNES, *STATISTICS AS PROOF: FUNDAMENTALS OF QUANTITATIVE EVIDENCE* (1983).

Zeisel found that death penalty attitudes, as revealed by a single question, predicted the votes of jurors in actual felony trials.³⁰ All of the studies in Tables 1 and 2, *supra*, measured actual votes in real or simulated cases, not just attitudes. Moreover, in all of the studies, juror attitudes *did* predict juror behavior.

There has been considerable controversy among social scientists about the *general* correlation between attitudes and behavior. In some contexts, for example, where there is strong cultural pressure to express certain attitudes, reported attitudes may be a poor predictor. In others, such as election polls, they are an excellent predictor. The major relevant findings are that attitudes are better predictors of behavior when people are forced to behave one way or another and cannot simply leave the situation, and when the relevance of the attitudes to the behavior is clear.³¹ These conditions are met in the jury context, which may explain the high correlation between attitude and behavior observed in all studies.

3. *The Findings are Not Based Solely on Simulations or Adversely Affected by "Misclassification."* Taken as a Whole, They are Demonstrably Reliable. The States claim the data are unreliable because they are based on simula-

³⁰ Zeisel's work has now been supported by Moran & Comfort, *Neither "Tentative" nor "Fragmentary": Verdict Preference of Impaneled Felony Jurors as a Function of Attitude Toward Capital Punishment*, 71 J. APPLIED PSYCHOL. (in press) [hereinafter Moran & Comfort]. The authors, studying actual jurors serving on capital juries, found a significant relationship between attitude toward death penalty and conviction proneness. According to the study, those who strongly favor the death penalty are more likely to be pro-prosecution, white, male, and politically conservative.

³¹ See Abelson, *Three Models of Attitude-Behavior Consistency* in 2 VARIABILITY AND CONSISTENCY OF SOCIAL BEHAVIOR: THE ONTARIO SYMPOSIUM 131 (M. Zanna, C. Herman, E. Higgins eds. 1982) [hereinafter Ontario Symposium]; Snyder, *When Believing Means Doing: Creating Links Between Attitudes and Behavior* in ONTARIO SYMPOSIUM.

tions. This criticism is not supportable. Two studies (Zeisel; Moran & Comfort) were based on post-deliberation interviews with actual jurors. Moreover, the simulation studies in the record are not unrealistic. A variety of stimulus materials have been used, ranging from written descriptions of cases, to half-hour audiotapes, to a highly realistic two and one-half hour videotape followed by a judge's jury instructions and jury deliberation. Moreover, as the simulations in the studies become more realistic, the differences between DQs and WEs become more pronounced. Apparently, any lack of realism in a given study has diluted the magnitude of the observed differences. Without credible exception, the substantial body of data supports the same conclusion.³²

The States' suggestions that researchers have misclassified some jurors as WEs or DQs and that such misclassifications have created spurious differences between groupings of jurors are likewise unsupported and untenable. The States complain particularly about studies classifying jurors on the basis of a single death-qualification question rather than a more extended *voir dire*. First, the method of classifying jurors has differed across studies (including those conducted by Dr. Shure, an expert witness for the State, see Brief for Petitioner at 44), with researchers varying the number and form of the questions without producing substantial changes in the numbers of jurors classified as WEs, GPIs, or DQs.

³² It would be theoretically possible to do a naturalistic experiment by simultaneously trying a capital defendant before a variety of juries, *e.g.*, some containing DQs only, some with GPIs only, some with mixed DQs and GPIs, and then assessing the relative tendency of these groups to convict or acquit. See Konecni & Ebbesen, *Social Psychology and the Law: The Choice of Research Problems, Settings, and Methodology* in THE CRIMINAL JUSTICE SYSTEM: A SOCIAL-PSYCHOLOGICAL ANALYSIS 27 (V. Konecni & E. Ebbesen eds. 1982). However, given three decades of consistent findings with a wide variety of stimulus materials, such an experiment would be only marginally useful. Moreover, this "ideal experiment" would raise serious practical, legal and ethical problems. Berry, *supra* note 4, at 5-6.

Second, if "misclassification" did occur in any study, it would yield *underestimates*, not overestimates, as implied by the States, of the true differences in conviction proneness among different groupings of jurors. To the extent DQs are misclassified as WEs, or vice versa, they will dilute the homogeneous character of each group, make the two groups more like each other, and thereby obscure real differences.

Third, the research by Haney, *supra* notes 13 & 14, demonstrates that the lengthy death qualification portion of *voir dire* adds a further prejudicial factor influencing death qualified juries against the defendant. Thus, if any effects on verdicts were produced by use of a full *voir dire* to classify jurors, it would be expected to increase, not decrease, observed empirical differences.

4. *Use of Diverse Methodologies Enhances the Reliability of the Research at Issue.* The States argue that the studies are suspect because researchers' use of different methods reveals a "lack of consensus" vitiating the reliability of the evidence. In fact, the variety of approaches used by investigators—all of which led to the same result—*reinforces* their reliability.

The use of diverse subjects, stimulus materials, and empirical methods does not reveal a "lack of consensus" but comports fully with the goal of "generalization," the accepted rubric for evaluating how far beyond the specific facts of any one particular study one can apply its findings. In making this evaluation, one must first consider whether the findings can be generalized across persons, *i.e.*, whether the subjects who participated in the research differ in important ways from the people to whom the research is being generalized. Next, one must consider whether the findings can be generalized across settings, *i.e.*, whether they apply in situations not directly involved in the study. Finally, one must consider whether findings can be generalized over time. Thus, the trustworthiness and generalizability of a study increases as independent investigators arrive at a common conclusion. The more

often a study confirms prior research or is confirmed by subsequent research and the more often a body of research with differing methodologies supports a common proposition, the less likely it is that chance fluctuations in the data or methodological anomalies account for the findings.³³

The studies reported here meet these tests. Regardless of the decade in which the research was done, the population studied, the stimulus materials used, the research design employed (retrospective interviews with actual jurors, national public opinion surveys, or increasingly sophisticated and controlled laboratory simulations), and regardless of the contemporary state of public opinion about the death penalty, the results have been the same—death-qualified jurors are more likely to convict than their "excludable" counterparts.

5. *The Findings Have Remained Remarkably Stable Over Almost 30 Years.* The States charge that the findings will change over time. The short answer is that the basic relationship between attitudes toward the death penalty and conviction proneness have remained markedly stable over three decades, from 1957 (Zeisel) to the present (Moran & Comfort). It is especially notable that the relationship has been robust regardless of whether, at the time the study was performed, the death penalty was popular or unpopular.

6. *ADPs Are So Small a Group That Their Absence Has no Impact on the Validity of the Findings.* Studies reveal that the prevalence of jurors who would always vote for the death penalty regardless of the evidence is exceedingly small,³⁴ ranging from 0.5% to 2%.³⁵ Statisti-

³³ See generally Monahan & Walker, *Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law*, 133 U. PA. L. REV. (in press).

³⁴ See Louis Harris & Assoc., Inc., STUDY NO. 814022 (1981) (0.7%); Arkansas Archival Study, *supra* note 16 (0.5%); Jurov, *supra* note 9 (2%).

³⁵ Gerald Shure, Ph.D., a psychologist expert who testified for the petitioner, stated during the trial that in a telephone survey

cal analysis based upon the data from these studies demonstrates that "taking the automatic death penalty jurors into account will have little impact on the findings" of Fitzgerald & Ellsworth and Cowan *et al.*³⁶

A related criticism concerns the fact that the studies compared death-qualified and excludable jurors, rather than death-qualified and typical criminal juries. Inevitably, juries composed of a mixture of death-qualified and GPIs jurors will fall somewhere between a jury composed solely of GPIs or DQs. Death-qualified jurors are more conviction prone than such mixed juries would be. Thus, the size of the difference between the pure WE and pure DQ groups in the research studies cannot be taken as an accurate estimate of the size of the difference between jury verdicts, although the existence and direction of the effect is clear from the studies. The precise magnitude of difference in a given case will change as a result of many variables, *e.g.*, quality of lawyering, first ballot verdict, number of WEs on mixed juries, strength of the evidence.

The research demonstrates that the composition of juries in terms of death penalty attitudes is an important variable and that over the long run eliminating GPIs will increase the number of guilty verdicts. The closer the case, the more the attitudinal and behavioral differences found between DQs and GPIs are crucial to the outcome. It is in close cases where neutral juries comprised

conducted in a wealthy area of West Los Angeles he found 33.3% of his sample to be ADPs. But the trial court criticized his methodology, indicated that Dr. Shure had himself acknowledged potential errors and omissions in his study, and concluded that the percentage of ADPs, both nationwide and in Arkansas, is negligible. 569 F. Supp. at 1307-1308. The Eighth Circuit agreed. 758 F.2d at 237-238. This Court has also concluded that such jurors "will be few indeed." *Adams v. Texas*, 448 U.S. 38, 49 (1980).

³⁶ Kadane, *After Hovey: A Note Taking into Account Automatic Death Penalty Jurors*, 8 L. & HUM. BEHAV. 115 (1984) (lodged with the Court); see Kadane, *Juries Hearing Death Penalty Cases: Statistical Analysis of a Legal Procedure*, 78 J. AM. STAT. A. 544 (1983).

of jurors representing a fair cross-section of the community, who can critically and accurately evaluate the testimony and correctly apply the law, are most essential.³⁷

7. *It is Implausible that the Results are Products of Researcher Bias.* There is no support whatsoever for the States' claim that "researcher bias" produced the findings at issue. Because the findings converge across a wide variety of methods and have emerged from any laboratories, it is improbable that all the researchers share a common bias. In at least two cases (Harris; Fitzgerald & Ellsworth) the data were gathered by disinterested research firms whose livelihood depends on their reputations for impartiality. Perhaps most importantly, the data presented here have withstood trial in the twin crucibles of journal review by anonymous expert peers and the adversarial process of cross-examination in a courtroom. These independent procedures, from science and law, are designed to identify precisely the types of bias alleged by the States.³⁸

8. *Use of Adams/Witt, Rather than Witherspoon Standards Decreases the Death-Qualified Jury's Neutrality, Representativeness, and Effectiveness.* This Court's decisions in *Wainwright v. Witt*, 105 S. Ct. 844 (1985), and *Adams v. Texas*, 448 U.S. 38 (1980), clarified and broadened the permissible standard for exclusion of jurors developed in *Witherspoon*. This modification, however, does nothing to undermine the integrity of the findings presented here. In broadening the criteria for exclusion, *Adams/Witt* has the effect of removing from the jury

³⁷ The States' criticism concerning proper comparisons does not in any way affect the analysis of the data in regard to the Sixth Amendment requirements that juries must function properly and be comprised of a fair cross-section of the community. See pp. 16-21, *supra*.

³⁸ See *Barefoot v. Estelle*, 463 U.S. 880, 901 (1983) ("We are unconvinced . . . that the adversary process cannot be trusted to sort out the reliable from the unreliable evidence").

some additional number of jurors who are disinclined toward the death penalty, and transferring them from the DQ to the WE category. The result, then, is to make the death-qualified juries under the *Adams/Witt* rule even more different from normal criminal juries than they were under *Witherspoon*, e.g., less diverse, less able to properly evaluate the evidence, more pro-prosecution—all exacerbating the effects of death qualification on the fact-finding process at the culpability phase.

CONCLUSION

The data demonstrating that death-qualified juries are less than neutral with respect to guilt, unrepresentative, and ineffective as compared to normal criminal juries are now neither tentative nor fragmentary. The terms used in the relevant studies have been precisely defined. The techniques employed have been carefully articulated. The stability and convergence of the findings over three decades lend impressive support to their validity. The studies of the past decade, particularly, have closely approximated the real-life setting of the courtroom. Insofar as the social science data are relevant to the resolution of the constitutional issues at stake in this case, therefore, *amicus* believes they support affirmance of the decision below.

Respectfully submitted,

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