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Representation through Participation: A Multilevel Analysis of Jury Deliberations

Erin York Cornwell

Valerie P. Hans

Fully participatory jury deliberations figure prominently in the idealized view of the American jury system, where balanced participation among diverse jurors leads to more accurate fact-finding and instills public confidence in the legal system. However, research more than 50 years ago indicated that jury-room interactions are shaped by social status, with upper-class men participating more than their lower-class and female counterparts. The effects of social status on juror participation have been examined only sporadically since then, and rarely with actual jurors. We utilize data from 2,189 criminal jurors serving on 302 juries in four jurisdictions to consider whether—and in what conditions—participation in jury deliberations differs across social groups. Our results indicate the continuing importance of social status in structuring jury-room interactions, but also reveal some surprising patterns with respect to race and gender that depart from earlier research. We also find that contextual factors including location, case characteristics, and faction size shape the relationship between social status and participation. We conclude with a critical discussion of our results and urge other researchers to take into account contextual factors when examining how individual juror characteristics shape what happens inside the jury room.

The ideal of a fully representative jury is a compelling one. In a series of cases dating back to 1880, the U.S. Supreme Court has established and reaffirmed the defendant's right to a jury drawn from a representative cross-section of the community (*Strauder v. West Virginia* 1880; *Thiel v. Southern Pacific Co.* 1946; *Peters v. Kiff* 1972; *Taylor v. Louisiana* 1975; *Duren v. Missouri* 1979). Representative juries, in which individuals from a wide range of backgrounds,

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life experiences, and perspectives participate fully and equally in deliberation and decision making, reflect key American values of equality, opportunity, and fair treatment for all citizens. Yet social scientific research conducted over the past 50 years suggests that even if juries are representative of their communities, this idealized process of egalitarian group decision making may be undermined by social status disparities.

In this article, we use data from jurors who served in actual felony trials in four U.S. state courts to empirically analyze jurors' participation in deliberations. Specifically, we examine whether jurors' participation varies according to their gender, race or ethnicity, and social class. We also move beyond previous work on this issue by putting juror behavior in context. We employ multilevel regression models to explore whether case and jury characteristics directly affect jurors' participation or shape the relationship between social status characteristics and participation.

The Case for Fully Participatory Juries

In general, high levels of juror participation should promote the jury's central goal of fact-finding. Jury research has identified two typical styles of deliberation: evidence-driven and verdict-driven (Hastie et al. 1983). High levels of participation are characteristic of evidence-driven deliberations, which focus on the review of case facts, evidence, and judicial instructions. In contrast, verdict-driven deliberations are marked by early and frequent polling and pressures to conform to the majority. Evidence-driven deliberations have been found to include more wide-ranging discussions (Devine et al. 2007), while, paradoxically, verdict-driven deliberations have been associated with increased likelihood of a hung jury (Davis et al. 1989; Hannaford-Agor et al. 2002; Hastie et al. 1983).

High levels of participation may be especially beneficial for jury fact-finding when jurors are drawn from all segments of the community. Full participation by jurors from diverse backgrounds allows the jury to draw on personal experiences, social perspectives, and knowledge that differ across individuals and social groups (Abramson 1994; Marder 2002; *Peters v. Kiff* 1972; Sommers 2006). Diverse juries may engage in wider-ranging deliberations that include topics and considerations that might be missed, or even avoided by, less diverse juries. For example, Sommers (2006) finds that mock jurors serving on racially diverse juries are more likely than those serving on all-white juries to openly discuss racial issues involved in a case. Therefore, when jurors from many different segments of the community participate actively in deliberation, it is more likely that relevant information will be presented and

exchanged. As a result, verdicts should be more accurate reflections of the community's knowledge and perspectives.

Relatedly, some scholars argue that full participation within a diverse jury may help to counterbalance the inevitable biases that jurors bring with them into the jury room. When these biases are tested and debated through vigorous deliberations in diverse juries, they may be reduced (Ellsworth 1989; Hastie et al. 1983; Wilkenfeld 2004). In contrast, the biases brought to the deliberations of more homogeneous juries are more apt to be reinforced and even amplified as a result of group discussion (Kerr et al. 1996). If jury participation is unequally divided, and deliberation is dominated by a few individuals, neither the deliberation nor the verdict will reflect the full range of insights and perspectives of all members of the jury.

From a broader perspective, jury participation is also important because the experience of jury service can foster other forms of civic engagement. As "one of the most effective means of popular education at society's disposal" (Tocqueville 1835/2000: 275), jury service helps to educate and engage citizens. Jury service may be especially beneficial to jurors when the deliberations are highly participatory and egalitarian. Gastil et al. (2010) find that a citizen's participation in full, robust jury deliberations promotes other forms of political participation, including voting. Jurors who experience high-quality deliberations, where all members of the jury are provided with speaking opportunities and can listen to one another's viewpoints, are especially likely to participate in other forms of civic engagement following jury duty.

Satisfying jury experiences also increase confidence in the jury system and the legal system as a whole. Verdicts from diverse juries are viewed as more legitimate (Ellis & Diamond 2003; Vidmar & Hans 2007). On the other hand, unrepresentative juries weaken the perception of fairness and legitimacy of the legal system (MacCoun & Tyler 1988), particularly among members of minority racial and ethnic groups (Wilkenfeld 2004). If jurors from historically dominant status groups participate more, and thereby wield more power in the jury room than those from lower-status groups (Hastie et al. 1983; York & Cornwell 2006), jury deliberations may reinforce existing social inequalities.

Jury Procedures and the Realities of Social Stratification

Several rules of jury procedure are designed to promote egalitarian deliberation, including the requirement of unanimous verdicts and jury instructions that encourage full and equal participation in deliberations (American Judicature Society 1999; Massachusetts Trial Juror's Handbook 1984). In this way, the jury

constitutes an unusual opportunity for individuals from different walks of life to deliberate as equals (York & Cornwell 2006). But, do juries actually attain this goal? The ideal of fully participatory deliberations may be impeded by the dynamics typical of small groups. A large body of sociological and social psychological research confirms that members of historically dominant status groups often steer group discussions in workplaces, classrooms, and experimental groups (for reviews, see Correll & Ridgeway 2006; Webster & Driskell 1978). For example, in mixed-sex groups, gender shapes performance expectations, conversational norms, and behavioral outcomes (Andersen 2009; Balkwell & Berger 1996; Meeker & O'Neill 1977; Ridgeway & Smith-Lovin 1999).

Whether these general principles of social status in groups apply to the jury context was a key question in the earliest systematic work on the American jury. This work began with the Chicago Jury Project in the 1950s, in which realistic mock jury deliberations using individuals chosen from the jury rolls revealed that participation levels varied widely across jurors. The highly participatory jurors tended to be upper-class men with higher status occupations (James 1959; Strodtbeck et al. 1957; Strodtbeck & Mann 1956).

The field of jury studies expanded dramatically starting in the 1970s, but only a modest amount of research has explored the effect of social status on jury-room interactions, partly because legal and methodological barriers have made it difficult to examine actual jury-room interactions (Cornwell 2010; Devine et al. 2001). The few studies that have explored the role of social status in jury deliberation have found signs of persistence in the effects of status. Despite substantial change in gender roles over time, for example, a number of mock jury studies have found that women participate less than men (Hastie et al. 1983; Kirchmeyer 1993; Nemeth et al. 1976). A recent study that taped and analyzed actual civil jury deliberations in Arizona likewise found that male jurors spoke more than did female jurors (Rose et al. 2006). A handful of mock jury studies indicate that jurors with higher occupational statuses, higher levels of education, and higher incomes participate more than do their lower-status counterparts (Diamond & Casper 1992; Hastie et al. 1983). Age also structures jury participation, with middle-aged jurors participating more than either younger or older jurors (Hastie et al. 1983).

The earliest studies lacked racial variation in jury composition, and more recent jury research has not adequately assessed the role of race and ethnicity (Sommers & Ellsworth 2003). However, research on small groups finds that members of minority races are often relegated to positions of low status (Asante & Davis 1985; Goar 2007) and receive fewer opportunities to participate (Elsass & Graves 1997). A study of civil jurors in Arizona discovered that

Hispanic jurors were less satisfied with their jury experiences than were white jurors; and jurors' satisfaction with their jury experience was influenced by the extent to which one or two jurors dominated the deliberations (Antonio & Hans 2001).

Differential likelihood of being selected as a foreperson is an additional mechanism through which social status characteristics shape juror participation. Jurors who are chosen as forepersons participate more than non-forepersons (Hastie et al. 1983; Velasco 1995) and are viewed as more influential in deliberations (Diamond & Casper 1992; York & Cornwell 2006). These jury leaders are disproportionately male and have higher occupational status than non-forepersons (Diamond & Casper 1992; Strodbeck et al. 1957; York & Cornwell 2006).

Social Context and Jury Participation

A key limitation of previous work on juror participation is its relatively narrow conceptualization of social status. Most of this work treats social status as a purely individual-level factor. The underlying assumption is that social statuses—like race, gender, and class—operate the same way under different conditions. However, intersections of age, gender, race or ethnicity, and class may affect the role of social status in jury-room interactions today. There is also reason to believe that contextual factors related to the case, court, and community may affect the process of jury deliberation, including both overall participation and the egalitarianism of deliberations. For example, sociological research indicates that the integration of women and racial minorities in workplaces and other organizations is shaped by a variety of institution-specific factors as well as the broader social and cultural context (see, e.g., Hirsh 2009; Miller-Loessi 1992).

Evidence from jury research is consistent with the idea that contextual factors affect overall levels of jury participation. Research on deliberation length, which may be indicative of participation, points to several case characteristics that may shape levels of participation. Longer trials, more complex cases, more severe charges, and the presence of expert testimony all are associated with longer deliberations (Brunell et al. 2009; Kalven & Zeisel 1966; Maass et al. 1985). Larger-sized juries (Hans 2001; Saks 1977) and juries required to be unanimous (Diamond et al. 2006; Hans 2001) also tend to have longer deliberations.

Jury composition may also affect participation. Compared to all-white mock juries, racially diverse mock juries tend to deliberate longer, exchange a wider range of information, and more openly discuss race-related issues (Sommers 2006). Similarly, jurors who serve on gender-diverse juries report more thorough and longer

deliberations (Marder 2002). These findings are consistent with the claim that diverse juries will have more wide-ranging discussions because jurors from different demographic groups bring different experiences and perspectives to the table. Alternatively, the racial or gender composition of the jury may shape the relationship between social status and jury participation. Research on small groups has found that as the proportion of minorities within the group increases, minority group members become more extroverted (Li et al. 1999). Translated to the jury room, minority jurors should be more participatory when there is greater racial or ethnic diversity within the jury. Another possibility is that the presence of minority jurors may inhibit majority group members from participating if they become cautious about expressing prejudicial views, particularly when the defendant is from the same group as the minority group jurors (Vidmar & Hans 2007).

Once the jury begins deliberating, the emergence of factions supporting particular points of view can have a profound effect on the course of jury interactions. Previous mock jury work has shown that the larger the faction size, the lower the participation by members of the faction (Hawkins 1962). This makes sense because larger factions have more individuals who are capable of arguing in support of the faction's position; jurors in smaller factions must rely on themselves and a small number of others to get their arguments across. If this is the case, status differences in participation may be highlighted among jurors in larger factions, where high-status jurors take over for their lower-status colleagues in making arguments for their side.

Reviewing empirical scholarship on race and jury representation, Rose (2009) argues that research on the effects of race on jury dynamics needs to consider both institution- and individual-level predictors. However, previous research on juries has been limited in its ability to contextualize jurors' participation because of a lack of variation in, or information about, case- and jury-level characteristics. These issues motivate us to examine contextual factors that may influence jury deliberations, and the potential role they play in augmenting or suppressing the impact of social status on juror participation.

Research Questions

We have noted several limitations in the body of work that has linked social status to jury participation, and much of the research is dated. In revisiting this issue, we are guided by two broad research questions. First, does juror participation still differ across social groups? Prior research suggests that women participate less than men, that racial and ethnic minorities participate less than

whites, and that jurors with high levels of education and income participate the most. However, jury participation may not be as structured by social status as it once was. Today's juries are more representative than those of the past, and cultural shifts and the creation of protected categories based on race and gender in the last several decades have altered how people from different walks of life interact with each other.

A second research question is whether juror participation varies by location, case factors, and jury characteristics. We explore whether case and jury characteristics affect the participation levels of all—or some—jurors. For example, all jurors might participate more when a case is more complex. Or, case factors and jury characteristics might interact with juror social status to affect participation. It is possible, for example, that high-status jurors have especially high participation in complex cases. And, minority jurors serving on more-diverse juries may participate more than those who serve on less-diverse juries. Our data include a wide variety of criminal cases and capture case, jury, and juror characteristics, thereby presenting a rare opportunity to examine whether—and if so, in what conditions—historically-privileged social groups continue to dominate jury deliberations.

Data and Methods

We employ case and questionnaire data collected as part of a National Center for State Courts (NCSC) project on hung juries (Hannaford-Agor et al. 2002), which was funded by the National Institute of Justice. These data have been used in a number of articles examining jury decision making (Eisenberg et al. 2005; Eisenberg & Hans 2009; Garvey et al. 2004; Givelber 2005; Givelber & Farrell 2008; Hannaford-Agor & Hans 2003; Hans et al. 2003; Heise 2004; Spencer 2007; Waters & Hans 2009). The NCSC's report (Hannaford-Agor et al. 2002) thoroughly describes the data collection procedures. Therefore, we provide an abbreviated description here.

Data collection took place from 2000 to 2001 at four different sites: the Central Division, Criminal, of the Los Angeles County Superior Court, California, the Maricopa County Superior Court (Phoenix), Arizona, the Bronx County Supreme Court, New York, and the Superior Court of the District of Columbia. Within each of these sites, data were collected for all non-capital felony jury trials in all courtrooms for the duration of the data collection period. This included cases that proceeded to jury deliberations and did not end by a plea agreement, dismissal, or mistrial for a reason other than the jury's inability to arrive at a unanimous

verdict. Thus, juries that reached verdicts and juries that could not agree unanimously on verdicts were both included in the sample.

Our analyses rely on data collected in case data forms completed by clerks or judges, judge questionnaires, and juror questionnaires. Court personnel distributed questionnaires to jurors after the verdict was announced or a mistrial declared. Completed questionnaires and case data forms were placed in envelopes and forwarded to the NCSC for data entry and analysis. A total of 401 cases was identified for potential inclusion in the study. Response rates were substantial: 351 case data forms were returned for an 87.5 percent response rate, and judicial questionnaires were completed in 357 cases, for an 89.0 percent response rate. Juror questionnaires were completed by 3,626 jurors for an 80.0 percent response rate, with consideration of jury size (Hannaford-Agor et al. 2002: 32). From these, the NCSC identified 382 usable cases with 3,497 juror respondents. We base our analyses on these data, which are distributed by the Inter-University Consortium for Political and Social Research (ICPSR).

Because the NCSC did not report the jury pool characteristics, we cannot say anything about the extent to which the jurors in our study are representative of those who served on juries or were in jury pools in these four jurisdictions at the time of the data collection. Furthermore, we do not have any information about jurors who did not complete the questionnaire, so we are unable to compare respondents to nonrespondents. Readers should bear these limitations in mind.

Missing data on case-related variables collected on the case data forms and judge questionnaires cause 54 cases (and the 376 juror respondents who served on those cases) to drop out of our models. It is difficult to determine whether any case characteristics are associated with judges' or clerks' likelihood of completing these forms. There were some differences in case data form completions across the four study sites, for example, but supplemental analyses indicate that case data form completion is not significantly associated with variables relevant for our study such as jury composition, faction split, or length of deliberations. This provides some reassurance that the dropped cases do not differ from included cases in ways that are central to our research.

Missing data related to item-level nonresponse on the juror questionnaire leads additional cases to drop out of our analyses. After excluding jurors with missing data on key variables, our models include 2,189 juror respondents from 302 juries. Of those who served on cases where relevant case characteristics were provided, 236 jurors (7.56 percent) did not respond to the question about participation, which is our dependent variable. Another 203

jurors (7.04 percent) did not provide their racial or ethnic background, and 193 additional jurors (7.20 percent) did not indicate their gender. To assess the sensitivity of our results to missing juror-level data, we applied juror-level weights (based on the inverse of their likelihood of being included in our final sample) to each of our models in supplemental analyses, and the results were consistent with what we present below.

Variables

Several aspects of this dataset make it particularly useful for an examination of juror participation. The data include real cases with actual jurors, serving on diverse juries in four different urban areas. Additionally, the dataset captured jurors' self-rated participation as well as their social status characteristics, including gender, race/ethnicity, educational attainment, and income. Finally, information on case characteristics, including the type and complexity of the case, and jury-level features, such as voting patterns, faction size, and diversity, allow us to update jury research on status by considering whether these contextual factors also shape jury participation.

Our dependent variable is *juror participation*. Because direct measures of participation are not available, we estimate juror participation using jurors' self-reports of their own contributions to deliberations. Without the ability to observe actual jury deliberations, many researchers employ post-verdict juror surveys to gauge jurors' perceptions of the deliberations (e.g., Devine et al. 2007; Hannaford-Agor et al. 2002; Marcus et al. 2000; Waters & Hans 2009; York & Cornwell 2006). In this study, a question about participation was included on the juror questionnaire that was completed following deliberations. Each juror was asked, "How much did you participate in the jury deliberations?" Responses to this question were arranged along a scale, ranging from 1 ("not at all") to 7 ("a great deal"). Summary statistics for participation, as well as the predictors described below, are presented in Table 1.

Juror Characteristics

To assess the relationship between jurors' status characteristics and their participation in deliberations, we rely on self-reported age, gender, race/ethnicity, income, and education from the juror questionnaire. Jurors categorized their age within one of six categories, where 1 indicates "18 to 25 years," 2 indicates "26–35 years," and so on, up to 6, which indicates "over 65 years." A binary variable indicates juror gender (1 = female, 0 = male). Jurors were asked to indicate their racial/ethnic background, and we categorize

Table 1. Means (and Standard Deviations) or Proportions for Juror Participation and Juror, Case, and Jury Characteristics

Dependent Variable	Overall	Within Counties			
		Bronx	Los Angeles	Maricopa	D.C.
Juror's self-reported participation (range = 1,7)	5.764 (1.213)	5.967 (1.287)	5.690 (1.244)	5.643 (1.132)	5.780 (1.189)
Juror Characteristics					
Age (range = 1,6)	3.110 (1.311)	2.793 (1.206)	3.118 (1.328)	3.291 (1.309)	3.174 (1.331)
Female	.576	.596	.556	.504	.635
Black	.247	.396	.130	.026	.412
Hispanic	.211	.389	.326	.139	.059
Highest degree received					
High school or less	.168	.319	.139	.126	.121
Some college	.303	.319	.349	.408	.176
College graduate	.284	.275	.301	.267	.290
Post-graduate work	.245	.088	.211	.199	.414
Income (range = 1,7)	5.305 (1.646)	4.475 (1.647)	5.303 (1.615)	5.714 (1.495)	5.544 (1.588)
Faction size (range = 1,12)	5.742 (2.970)	5.316 (2.856)	6.257 (2.993)	5.553 (2.865)	5.777 (3.054)
Case/Jury Characteristics					
Case Type					
Murder/ manslaughter	.177	.178	.230	.102	.194
Sexual assault/rape	.056	.068	.032	.077	.049
Drug crimes	.286	.286	.364	.160	.326
Other violent crimes	.264	.259	.303	.259	.241
Other non-violent crimes	.217	.209	.070	.402	.191
Case complexity (range = -.974, 3.154)	-.028 (.816)	.029 (.730)	-.162 (.817)	-.068 (.880)	.070 (.802)
Timing of first vote (range = 1,6)	3.021 (1.048)	3.207 (.965)	3.605 (1.036)	2.671 (1.039)	2.717 (.878)
Proportion of jurors who are female (range = 0,1)	.576 (.182)	.612 (.174)	.545 (.144)	.496 (.168)	.639 (.194)
Proportion of jurors who are non-white (range = 0,1)	.473 (.270)	.791 (.171)	.465 (.152)	.173 (.146)	.502 (.206)
Racial/ethnic range of the jury (range = 1,6)	3.264 (1.189)	3.622 (1.027)	4.497 (.823)	2.350 (.875)	2.784 (.762)
Number of jurors	2,189	455	525	532	677
Number of juries	302	83	55	76	88

jurors who identified themselves as “black/African American” as black (= 1, else = 0) and jurors who identified as “white/Hispanic” or “non-white/Hispanic” as Hispanic (= 1, else = 0). The reference category for race/ethnicity includes “white/Caucasian” jurors ($n = 1,074$; 46.83 percent of sample), as well as those who identified as “Asian/Pacific Islander” ($n = 110$, 4.66 percent of sample) and “Native American” ($n = 20$; 0.91 percent of sample).

We assess social class using self-reported education and income. Jurors noted their level of educational attainment by selecting one of five categories ranging from “less than four years of high school” to “post-graduate work.” Jurors were asked to indicate their total household income during the previous year along a 7-point continuum, ranging from 1 = “under \$10,000” to 2 = “between \$10,000 and \$19,999,” 3 = “between \$20,000 and \$29,999,” and so on, up to 7 = “over \$75,000.”

Examination of the juror’s faction size during deliberations allows us to begin to put his or her participation in context. We estimate faction sizes based on reports of jurors’ pre-deliberation verdict preferences. The juror questionnaire asked: “Before you began deliberating with your fellow jurors at the end of the trial (after all of the evidence and the judge’s instructions had been presented), which side did you favor?” Response categories were arrayed on a scale ranging from 1 (“prosecution strongly favored”) to 7 (“defense strongly favored”). We collapsed these responses by categorizing jurors who indicated 1–3 as “pro-prosecution,” those who indicated 5–7 as “pro-defense,” and those who indicated 4 as “undecided.” For each jury, we calculated how many jurors expressed each of three pre-deliberation preferences. For example, a 12-person jury might have 3 jurors who were pro-prosecution, 7 jurors who were pro-defense, and 2 jurors who were undecided prior to deliberations. We used this jury-level information to create a juror-level variable that indicates the number of jurors who held the same view as a given juror respondent at the beginning of deliberations. For the aforementioned jury, a juror who expressed a pre-deliberation preference for the prosecution has a faction size of 3, one who favored the prosecution has a faction size of 7, and one who was undecided has a faction size of 2. As a result, the faction size variable provides a general indicator, for each juror, of the number of jurors who favored the side he or she favored prior to deliberations.

Note that faction sizes range from 1 to 12 for those who served on 12-person juries and from 1 to 8 for those who served on 8-person juries. Supplemental analyses indicate that our results are robust to the exclusion of the 303 jurors who served on the 8-person juries in Maricopa. For respondents who served on juries where not all of their fellow jurors completed the post-verdict

questionnaire, faction size ranges from 1 to the total number of juror respondents from that jury. In these cases, we likely underestimate jurors' faction sizes.

Case Characteristics

One of our main contributions is to explore the role that context plays in shaping participation and status processes. First, we examine whether juror participation varies according to case type and complexity. The judge or clerk indicated the type of the case based on a list of 18 noncapital crimes. We use this information to create binary variables for six different case categories. Murder/manslaughter (= 1, else = 0) includes first- and second-degree murder, manslaughter, and attempted-murder charges. Charges of rape, sexual battery, and sexual conduct with a minor are categorized as sexual assault/rape (= 1, else = 0). Drug cases (= 1, else = 0) include cases involving drug possession, sale, and manufacture. Cases of robbery, nonsexual assault, and child abuse or neglect are categorized as other violent cases (= 1, else = 0). Finally, we combine nonviolent crimes (= 1, else = 0), including burglary, larceny or theft, arson, DUI/DWI, weapons charges, forgery, unlawful flight, leaving the scene of a crime, and failure to stop for police.

Case complexity is estimated with a scale combining three variables. Judges rated the complexity of the evidence and the complexity of the law in each case on scales ranging from 1 ("not at all complex") to 7 ("very complex"). In addition, the judge or clerk indicated on the case data form the total number of counts considered by the jury. The complexity scale is constructed by standardizing these three variables and then averaging their values for each case. The resulting scale has satisfactory internal consistency (Cronbach's alpha = .74; item-rest correlations range from .42 to .63). Higher scale scores indicate greater case complexity.

Jury Characteristics

Because prior research suggests vote timing is associated with deliberation processes, we include the timing of the jury's first vote. Asked when the jury took its first vote, jurors could respond "right at the beginning of deliberations" (1), "within the first 10 minutes of deliberations" (2), "early on during deliberations" (3), up to "only at the very end of deliberations" (6). We averaged responses to this item from all of the juror-respondents in each jury to create a jury-level variable that estimates the timing of the jury's first vote, where lower numbers indicate an earlier vote. The timing of the first vote may be endogenous to juror participation; that is, whether a juror participates might influence the timing of the first vote. Despite the potential interpretation problems, however, we include

it in one of the models as a predictor of participation, since other research finds that early first votes can shape deliberation content (Devine et al. 2007).

For each jury, we calculate multiple measures of jury diversity, including the proportion of jurors who are female and the proportion of jurors who belong to minority racial/ethnic groups. The latter measure is determined as the sum of jurors who identified as “black/African American,” “non-white/Hispanic,” or “white/Hispanic” divided by the total number of juror-respondents within each jury. We also calculate the range of different racial/ethnic groups represented by jurors within each jury. This is determined by a simple count of the number of different racial/ethnic groups with which jurors in a particular jury identify. The groups include “black/African American,” “white/Caucasian,” “white/Hispanic,” “non-white/Hispanic,” “Native American,” and “Asian/Pacific Islander,” and “Other.” This variable ranges from 1 (where all jurors on a jury have the same racial/ethnic background) to 7 (where all of the racial/ethnic backgrounds included in the response categories are represented on the jury). We experimented with alternative measures of jury diversity such as the index of qualitative variation (Agresti & Agresti 1978) and the Herfindahl index of ethnic homogeneity (see Ellison et al. 1996); results for these indices are consistent with those reported here. As shown in Table 1, about half of the members of the average jury in this study belong to minority racial or ethnic groups. Thus, the data set overcomes the obstacle of low minority representation found in earlier studies of social status and jury participation.

Analytic Approach

We investigate whether juror-level characteristics and the broader context of the jury as a whole, the case, and the community affect juror participation. To account for variation in juror participation according to juror characteristics and case/jury characteristics, we employ multilevel regression analysis, also known as hierarchical linear modeling (HLM) (Raudenbush & Bryk 2002). This modeling technique is appropriate for analyzing individual behavior that occurs within structural units such as neighborhoods, classrooms, or, in this case, juries. Multilevel regression models bring two key advantages for our study. First, they adjust standard errors to account for the non-independence of jurors who serve on the same jury. Second, they allow simultaneous estimation of two levels of variation in juror participation: variation within juries (level 1) and variation across juries (level 2). The within-juries model regresses juror participation on juror characteristics (level 1 predictors) such as juror gender, race/ethnicity, and education. The

between-juries model estimates jury-level participation based on location, as well as case and jury characteristics (level 2 predictors) such as case type, case complexity, and measures of jury diversity or composition. Coefficients for the level 2 predictors effectively adjust the intercept of the within-juries (level 1) model, giving each jury a unique intercept based on jury and case characteristics. We also incorporate cross-level interactions to test whether the estimated slopes (i.e., coefficients) for juror characteristics vary according to case or jury characteristics. For example, we find that the relationship between gender and participation is not the same across all of the study sites.

Results

Jurors in our sample reported relatively high levels of engagement in deliberations. As shown in Table 2, nearly 85 percent of all jurors reported participation in one of the three highest categories. And, about a third reported that they participated “a great deal” in deliberations. The distribution of self-reported participation is skewed toward high-end responses, which can create statistical problems, so we assessed the sensitivity of our results to alternative operationalizations of the dependent variable. In supplemental analyses, we ran multilevel regressions predicting logged self-rated participation and multilevel ordered logistic regressions predicting quartiles of the participation distribution. Our main findings were very consistent across these different approaches. We present

Table 2. Distribution of Self-Reported Participation Across Juror Race/Ethnicity

“How much did you participate in the jury deliberations?”	All jurors	By juror race/ethnicity ^a		
		Black	Hispanic	White/Other
Proportion of jurors				
1 “Not at all”	.006	.006	.013	.003
2	.010	.006	.011	.012
3	.025	.019	.030	.026
4	.114	.080	.149	.115
5	.201	.165	.199	.218
6	.308	.257	.277	.343
7 “A great deal”	.336	.470	.320	.283
Mean participation ^b	5.761	6.041	5.623	5.692
Standard deviation	1.215	1.160	1.323	1.172
Number of jurors	2,189	541	462	1,186

^a $\chi^2(df=12) = 99.54; p < .001$.

^bMean participation among black jurors is significantly higher than mean participation among Hispanic jurors ($F(df=1, 2188) = 27.64; p < .001$) and white/other jurors ($F(df=1, 2188) = 32.89; p < .001$).

multilevel models predicting self-rated participation on the original 7-point scale so that readers can more easily interpret the results. The coefficients we report in the following models indicate predicted change on the 7-point participation scale.

Social Status and Participation

Because these are some of the first data to allow detailed examination of actual jury participation according to jurors' racial and ethnic backgrounds, it is worth looking more closely at participation across race and ethnicity. Contrary to the findings of small-group research, Table 2 shows that minority jurors do not participate less than their white counterparts. Instead, we find that black jurors report significantly higher mean participation than white and Hispanic jurors. This difference seems to be largely driven by the clustering of black jurors' participation ratings in the highest category of participation. Nearly half of black jurors reported the highest level of participation, compared with less than a third of their white and Hispanic counterparts.

Table 3 presents results from our multilevel regression models. The first model indicates that jurors' status characteristics are significantly associated with jury participation, which echoes previous research on social status in the jury room. In this model, gender does not emerge as a significant influence on participation. However, we find that social class predicts jury participation. Participation generally increases with educational attainment. Jurors who have a high-school degree or less, and those who attended college but did not receive a degree have participation scores that are about a quarter of a point lower on the 7-point participation scale than those who pursued postgraduate studies ($b = -.226$; $p = .008$ and $b = -.260$; $p = .001$, respectively). Consistent with Hastie et al. (1983), we find some evidence that age has a curvilinear relationship with jury participation, as the squared-term for juror age achieves marginal significance ($p = .051$). The results show a general pattern where middle-aged jurors report more participation than their younger and older counterparts.

Perhaps the most interesting result from the first model is the relationship between juror participation and juror race/ethnicity. Jury studies and experiments with small groups led us to anticipate that members of minority groups would participate less than whites, yet, as noted above, blacks report participating more than other jurors. Even once we control for age and education in Model 1, we confirm that black jurors are more participatory than jurors of other racial or ethnic backgrounds. Black jurors' participation levels are more than a third of a point higher than those of white jurors ($b = .397$; $p < .001$). Hispanic jurors' participation does not

Table 3. Multilevel Regression Models Predicting Juror Participation

	Model 1		Model 2		Model 3	
	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)
<i>Level 1 Predictors</i>						
Age	.151†	(.090)	.105	(.093)	.098	(.093)
(Age) ²	-.026†	(.013)	-.020	(.014)	-.019	(.014)
Female	-.058	(.052)	-.050	(.053)	.026	(.061)
Black	.397***	(.065)	.413***	(.066)	.385***	(.072)
Hispanic	-.032	(.069)	-.023	(.069)	-.088	(.072)
Education						
High school or less	-.226**	(.085)	-.172†	(.090)	-.230*	(.092)
Some college	-.260**	(.072)	-.232**	(.073)	-.272**	(.077)
College degree	-.116	(.071)	-.106	(.072)	-.143	(.073)
Postgraduate work (<i>ref.</i>)	—	—	—	—	—	—
Income			.032†	(.018)	.041*	(.018)
Faction size						
Faction size by Black juror						
Faction size by Hispanic juror						
<i>Level 2 Predictors</i>						
County						
Maricopa, AZ (<i>ref.</i>)					—	—
Bronx, NY					.265**	(.090)
Los Angeles, CA					.197†	(.105)
Washington, D.C.					-.073	(.082)
Case Type						
Murder/manslaughter						
Sexual assault/rape						
Drug						
Other violent						
Non-violent (<i>ref.</i>)						
Case complexity (scale)						
Jury Characteristics						
Timing of first vote						
Proportion of female jurors						
Proportion of minority jurors						
Racial/ethnic range						
<i>Cross-Level Interaction</i>						
Female juror by Los Angeles					-.299*	(.121)
Intercept	5.684***	(.151)	5.559***	(.166)	5.490***	(.179)
Within-juries variance	1.408		1.405		1.397	
Between-juries variance	.029		.031		.027	
Number of jurors	2,189		2,189		2,189	
Number of juries	302		302		302	

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

differ significantly from that of white jurors, but we find (in supplemental analyses) that Hispanic jurors participate significantly less than black jurors.

The second model introduces an indicator of jurors' income. Jurors who report higher incomes are more participatory overall, although the differences across income are modest and the relationship is only marginally significant ($b = .032$, $p = .075$). Recall that income is measured on a 7-point scale. The difference in predicted participation scores at the two extremes of income is therefore just under a quarter of a point on the participation scale—roughly the same magnitude of the difference between jurors with high school and postgraduate educations.

Table 3. Continued

	Model 4		Model 5		Model 6	
	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)
<i>Level 1 Predictors</i>						
Age	.097	(.093)	.106	(.093)	.100	(.093)
(Age) ²	-.019	(.014)	-.020	(.014)	-.020	(.014)
Female	.041	(.061)	.039	(.060)	.054	(.064)
Black	.378***	(.071)	.376***	(.071)	.374***	(.071)
Hispanic	-.085	(.072)	-.086	(.072)	-.082	(.072)
Education						
High school or less	-.230*	(.091)	-.227*	(.091)	-.229*	(.091)
Some college	-.274**	(.076)	-.275**	(.076)	-.278***	(.076)
College degree	-.137†	(.072)	-.138†	(.084)	-.138†	(.072)
Post-graduate work (<i>ref.</i>)	—	—	—	—	—	—
Income	.038*	(.018)	.038*	(.018)	.039*	(.018)
Faction size						
Faction size by Black juror						
Faction size by Hispanic juror						
<i>Level 2 Predictors</i>						
County						
Maricopa, AZ (<i>ref.</i>)	—	—	—	—	—	—
Bronx, NY	.267**	(.088)	.264**	(.088)	.256**	(.091)
Los Angeles, CA	.235*	(.103)	.245*	(.103)	.219*	(.107)
Washington, D.C.	-.061	(.080)	-.068	(.080)	-.058	(.082)
Case Type						
Murder/manslaughter	.163†	(.085)	.087	(.093)	.086	(.095)
Sexual assault/rape	.241†	(.123)	.159	(.129)	.149	(.132)
Drug	-.163*	(.076)	-.152*	(.076)	-.147†	(.077)
Other violent	-.164*	(.076)	-.183*	(.076)	-.182*	(.077)
Non-violent (<i>ref.</i>)	—	—	—	—	—	—
Case complexity (scale)			.072†	(.037)	.073†	(.038)
Jury Characteristics						
Timing of first vote					.033	(.026)
Proportion of female jurors					-.102	(.162)
Proportion of minority jurors						
Racial/ethnic range						
<i>Cross-Level Interaction</i>						
Female juror by Los Angeles	-.322**	(.121)	-.318**	(.121)	-.323**	(.121)
Intercept	5.538***	(.181)	5.545***	(.181)	5.507***	(.206)
Within-juries variance	1.397		1.397		1.396	
Between-juries variance	.010		.007		.007	
Number of jurors	2,189		2,189		2,189	
Number of juries	302		302		302	

†*p* < .10; **p* < .05; ***p* < .01; ****p* < .001 (two-tailed tests).

Do these patterns of juror participation differ across locations? The third model indicates that jurors in the Bronx and in Los Angeles report higher participation than those in Maricopa and Washington, D.C. Furthermore, a cross-level interaction indicates that the relationship between gender and participation varies across counties. Specifically, female jurors serving in Los Angeles reported significantly lower participation than female jurors in other locations—nearly a third of a point lower, on average (*b* = -.299; *p* = .015). In additional analyses, we find evidence that the gender effect in Los Angeles is primarily due to gender differences among Asian American jurors there. In Los Angeles, mean

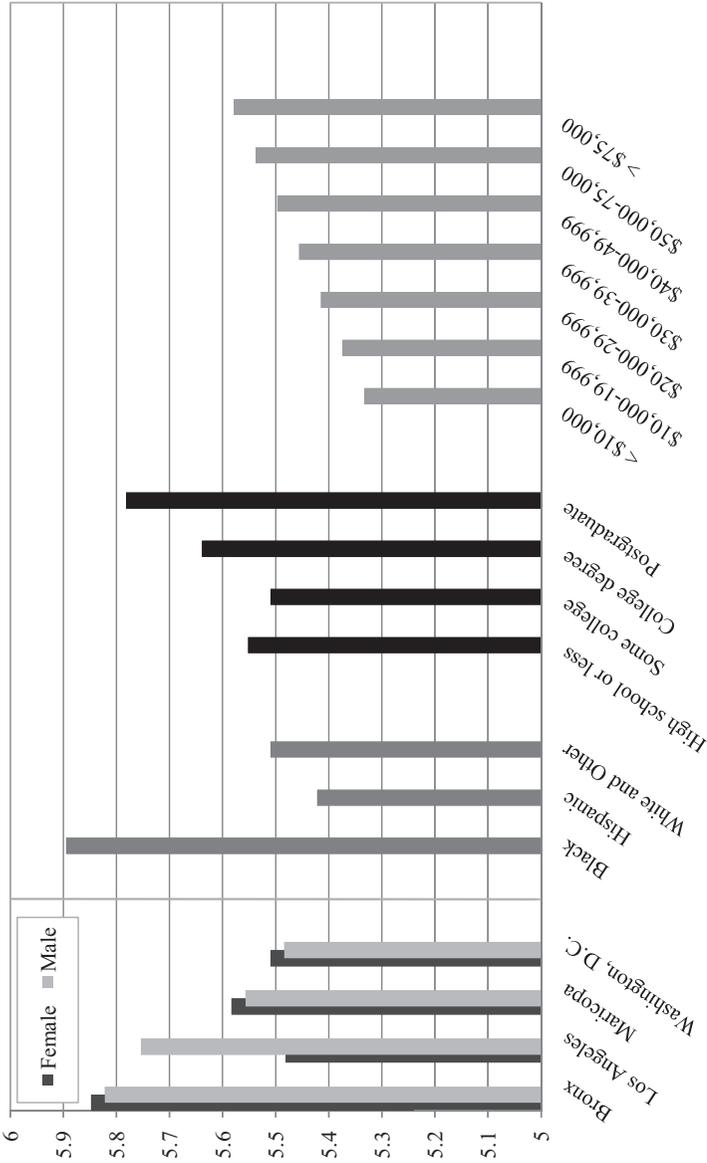
Table 3. Continued

	Model 7		Model 8		Model 9	
	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)
<i>Level 1 Predictors</i>						
Age	.106	(.092)	.105	(.093)	.107	(.092)
(Age) ²	-.020	(.014)	-.020	(.014)	-.020	(.013)
Female	.038	(.060)	.038	(.060)	.034	(.060)
Black	.366***	(.075)	.375***	(.071)	-.019	(.138)
Hispanic	-.095	(.075)	-.085	(.072)	-.300*	(.142)
Education						
High school or less	-.227*	(.091)	-.226*	(.091)	-.234*	(.091)
Some college	-.275**	(.076)	-.275**	(.076)	-.277***	(.076)
College degree	-.138†	(.072)	-.138†	(.072)	-.144*	(.072)
Post-graduate work (<i>ref.</i>)	—	—	—	—	—	—
Income	.039*	(.018)	.038*	(.018)	.040*	(.018)
Faction size					-.055***	(.012)
Faction size by Black juror					.070**	(.021)
Faction size by Hispanic juror					.037†	(.021)
<i>Level 2 Predictors</i>						
County						
Maricopa, AZ (<i>ref.</i>)	—	—	—	—	—	—
Bronx, NY	.230†	(.122)	.278**	(.095)	.256**	(.087)
Los Angeles, CA	.227*	(.111)	.268*	(.121)	.265*	(.102)
Washington, D.C.	-.086	(.091)	-.068	(.081)	-.069	(.079)
Case Type						
Murder/manslaughter	.086	(.094)	.090	(.094)	.093	(.092)
Sexual assault/rape	.161	(.129)	.160	(.130)	.143	(.129)
Drug	-.151*	(.076)	-.152*	(.076)	-.126†	(.076)
Other violent	-.184*	(.077)	-.184*	(.077)	-.155*	(.076)
Non-violent (<i>ref.</i>)	—	—	—	—	—	—
Case complexity (scale)	.071†	(.037)	.071†	(.037)	.086*	(.037)
Jury Characteristics						
Timing of first vote						
Proportion of female jurors						
Proportion of minority jurors	.065	(.160)				
Racial/ethnic range			-.011	(.030)		
<i>Cross-Level Interaction</i>						
Female juror by Los Angeles	-.316*	(.121)	-.318**	(.121)	-.308*	(.120)
Intercept	5.535***	(.183)	5.573***	(.196)	5.834***	(.190)
Within-juries variance		1.397		1.397		1.388
Between-juries variance		.007		.008		.003
Number of jurors		2,189		2,189		2,189
Number of juries		302		302		302

†*p* < .10; **p* < .05; ***p* < .01; ****p* < .001 (two-tailed tests).

participation among Asian women (4.66) is about one point lower than that reported by Asian men (5.65). The difference is statistically significant ($F_{(df=1,618)} = 10.68$; $p < .01$). Gender differences in mean participation rates within other racial and ethnic groups in Los Angeles are much smaller and none are significant (among whites, means are 5.87 and 5.84 for women and men, respectively; among blacks 6.00 and 6.27; and among Hispanics 5.28 and 5.61). Other interactions crossing location with juror characteristics are not significant.

Variations in participation across locations and across jurors are illustrated in Figure 1, which presents adjusted mean participation



Notes: Adjusted mean participation ratings were calculated using coefficients from Table 3, Model 3. We set level 1 covariates at the sample-wide mean or mode (i.e., female, white, some college). Intercepts for the calculation of estimated means across race/ethnicity, education, and income categories were based on Washington, D.C.

Figure 1. Predicted participation by juror status characteristics.

levels across social groups. The left side of the figure shows gender differences in participation by site, contrasting the nonsignificant gender differences in the Bronx, Maricopa, and Washington, D.C., with the distinctly lower levels of female participation in Los Angeles. The figure also depicts the relatively large magnitude of the differences in participation across racial and ethnic groups, compared to those associated with educational achievement and income.

Social Context, Social Status, and Participation

Interestingly, variance components from our multilevel regression analyses indicate that most of the variation in jurors' participation is found *within* juries rather than *across* juries.¹ This suggests that if we want to understand why some jurors participate more or less than others, we will learn more by looking at differences between jurors. Nevertheless, we find a number of case- and jury-level factors that are associated with juror participation.

Model 4 in Table 3 indicates that jury-level participation is somewhat higher in murder/manslaughter ($b = .163$; $p = .057$) and sexual assault/rape cases ($b = .241$; $p = .051$) than in cases involving nonviolent crimes. In fact, jurors who deliberated on cases involving sex crimes reported participation that was about a quarter of a point higher, on average, than jurors serving on nonviolent cases, such as burglary and larceny cases. Drug-related cases and the category of violent crimes that includes robbery, assault, and child abuse have lower overall juror participation than other nonviolent cases ($b = -.163$; $p = .033$, and $b = -.164$; $p = .032$, respectively).

The jury research literature led us to expect that jurors from some social groups might participate more in particular cases, because of the distinctive perspectives or knowledge they might be able to bring to the deliberation. To examine whether case type affects the link between social status and participation, in separate analyses not shown here we tested interaction terms crossing jurors' gender, race, education, and income with murder, drug, violent, and sex-related cases. However, we found very little evidence that jurors from particular social groups become more or less participatory in certain types of cases. We did not find any evidence that black jurors are especially participatory in certain types of cases. Women participate more in violent (but not murder) cases compared to nonviolent cases ($b = .295$; $p = .012$). But women did not participate more in sex offense cases compared to other types of

¹ An unspecified multilevel regression model indicates that more than 95 percent of the variance in juror participation is found within juries (variance component = 1.427, compared to a between-juries variance component of .045).

Table 4. Coefficients from Multilevel Regression Models Including Defendant Race^a

	Model 1		Model 2		Model 3	
	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)	<i>b</i>	(s.e.)
<i>Level 1 Predictor</i>						
Juror Race (<i>ref.</i> = white/other)						
Black	.380***	(.074)	.380***	(.074)	.186	(.121)
Hispanic	-.112	(.076)	-.115	(.076)	-.127	(.076)
<i>Level 2 Predictor</i>						
Defendant Race (<i>ref.</i> = non-black)						
Black			-.063	(.064)	-.123	(.071)
<i>Cross-Level Interaction</i>						
Black juror by Black defendant					.275*	(.137)
Number of jurors	1,987		1,987		1,987	
Number of juries	269		269		269	

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

^aAll variables in Table 4, Model 1 are also included in these models.

cases. We also examined the relationship between juror participation and other case characteristics, including case complexity. None of these variables were associated with participation, and the inclusion of these interaction terms in the models did not change the results presented here.

Analyses with a subset of 269 cases with information on defendant race allow us to examine whether defendant race shapes juror participation. More than half of these cases involved an African-American defendant (88.51 percent of cases in Washington, D.C., 61.11 percent in Los Angeles, 45.45 percent in the Bronx, and 32.25 percent in Maricopa). We ran a multilevel regression model using the same level 1 and level 2 predictors included in Model 4 of Table 3 on the 269 cases which have information on defendant race. We then introduced defendant race (black = 1, non-black = 0) and an interaction term crossing defendant race with juror race. Three findings are worth noting, so we present relevant coefficients in Table 4. First, as shown in Model 2 of Table 4, defendant race is nonsignificant, indicating that it does not affect overall levels of juror participation. Second, the coefficient for black jurors does not change from Model 1 to Model 2. It remains positive and significant ($b = .380$; $p < .001$) even with the inclusion of defendant race. Thus, black jurors report higher participation than their white counterparts in cases with black defendants and in cases with non-black defendants. Finally, in the third model, an interaction term crossing black jurors with black defendants is also positive and significant ($b = .275$; $p = .022$), indicating that black jurors are especially participatory in cases where the defendant is also black. In this smaller set of cases, then, we find that black jurors participate more than whites regardless of the race of the defendant—but the gap between black and white participation is especially large when the defendant is black.

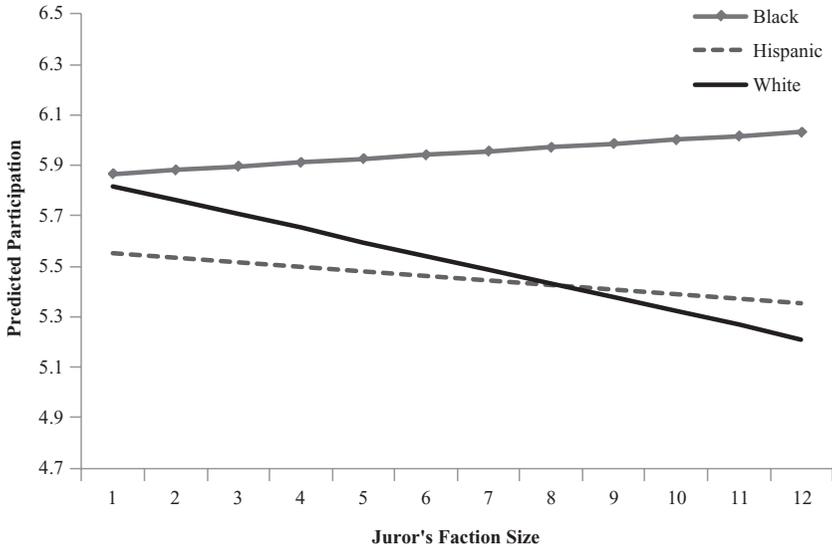
Returning to the analyses presented in Table 3, we find that the higher rates of participation in murder/manslaughter and sexual assault/rape cases are largely due to the greater complexity of these cases. When case complexity is included in Model 5, the coefficients for murder/manslaughter and sexual assault/rape become nonsignificant. Indeed, these cases tend to be more complex and jurors participate more when they serve on more complex cases ($b = .072$; $p = .055$). Recall that case complexity is measured with a scale that ranges from about -1 to 3 . Juries serving on extremely complex cases would therefore be expected to have average participation ratings that are about $.288$ higher ($.072 * 4$) than juries that heard simpler cases.

Models 6–8 examine whether characteristics of the jury itself affect jury-level participation. The timing of the jury's first vote is not significant. More surprisingly, we find no differences in participation according to jury diversity. Overall participation is not associated with the proportion of female jurors, the proportion of nonwhite jurors, or the number of different racial and ethnic groups included on the jury. Supplemental analyses reveal no significant interactions between jury composition and jurors' status characteristics. For example, female jurors do not participate more when the jury includes more women than men. Similarly, black and Hispanic jurors' participation is not affected by the proportion of nonwhite jurors on their jury or the overall racial and ethnic diversity of the group.

Faction Size

The final model in Table 3, Model 9, examines whether a juror's participation varies significantly by his or her faction size, or the number of other jurors with whom he or she is in agreement at the beginning of deliberations.² We find that the relationship between faction size and participation is not consistent across racial and ethnic groups. The difference is depicted in Figure 2. Among white jurors (and a small number of Asian/Pacific Islanders and Native Americans who are included in this racial/ethnic category), each additional juror in one's faction decreases predicted participation by $.055$ ($p < .001$). Hispanic jurors' participation also decreases—but only slightly—when they are part of larger factions. For Hispanic jurors, each additional juror in one's faction decreases predicted participation by about $.018$. Black jurors participate more than white and Hispanic jurors at all faction sizes—and their

² Supplemental analyses indicate that the relationship between faction size and participation does not vary according to jurors' stances as pro-prosecution or pro-defense.



Notes: Predicted participation ratings were calculated using the constant and coefficients from Table 3, Model 9. We set level 1 covariates at the mean or at the mode (for binomial variables) and estimate intercepts based on a nonviolent case of average complexity in Washington, D.C.

Figure 2. Predicted participation by juror race and faction size.

participation actually increases with faction size. For black jurors, each additional juror in one's faction leads to a net increase of about .015 in predicted participation.

The magnitude of the differences in participation according to faction size is largest among white jurors. White jurors and black jurors who stand alone are predicted to have similar levels of participation (5.816 for whites and 5.867 for blacks). But sharing one's opinion on the case with a large majority noticeably reduces white jurors' participation. In fact, predicted participation decreases by nearly two-thirds of a point on the participation scale (to 5.211) for white jurors who are part of a 12-person faction. White jurors who find that they are part of a large majority are more likely to allow others to do the talking. Hispanic and black jurors' participation is less affected by faction size. Perhaps the most surprising pattern here is that even when it appears that deliberations are going their way, black jurors are the least likely of all to remain silent and let others do the talking, and the most likely to keep the discussion going.

Discussion

Our goal has been to revisit the role of social status in jury deliberations, a topic first addressed half a century ago in the

pioneering work of the Chicago Jury Project and examined only sporadically since then. By analyzing data from 2,189 jurors on criminal cases in four jurisdictions, and considering juror-level, jury-level, and case-level factors, we have been able to offer a contextualized assessment of variations in participation in jury deliberations. Taking context into account, we find that despite the social, judicial, and democratic ideal of egalitarian deliberations, jury participation is structured by individual-level social status characteristics.

Socioeconomic status continues to be a central factor in shaping participation in jury deliberations. Participation increases with both education and income. Jurors who have postgraduate education report particularly high participation compared to those who lack college degrees. Even after accounting for the role of education, jurors who have higher incomes also tend to report more participation. These findings are consistent with sociological research suggesting that social class is increasingly the most pervasive status distinction in American society (Fischer & Mattson 2009; Wilson 1980). How and why social class influences jury room participation remains to be seen. Social class may create performance expectations since it is typically an achieved status related to competence, intelligence, and expertise outside of the jury room (Berger et al. 1966, 1972; Thye 2000). It is unclear how much jurors learn about their fellow jurors' educational backgrounds or income levels, but research suggests that jurors can "read" social class from others' dress, speech, and casual references to experiences (Phillips 2010; Strodtbeck et al. 1957). This may lead jurors to defer to others who are, or seem to be, of higher status (York & Cornwell 2006).

Another possibility is that interactions such as those that occur in jury-room deliberations may be more familiar for higher-status jurors, who are likely to participate in meetings of community groups, voluntary associations, or businesses (Brady et al. 1995; York & Cornwell 2006). The intellectual and persuasive tasks of articulating and justifying one's position may come more easily to those who experience it at work, for example. Regardless, it is clear that the upper-income and more highly educated jurors maintain a dominant presence in the jury room that may threaten the ability of lower-status jurors to advance their views.

The results for juror gender are mixed. There are no overall differences in participation by gender in three of the counties, but Asian-American women report significantly lower participation in Los Angeles juries. This reiterates the value of diverse samples, and the importance of studying social status with a keen eye to the potentially distinctive experiences of different gender, racial, and ethnic groups and subgroups. Women appear to have made gains in some jury contexts, but the presence of gender differences

among Asian American men and women in Los Angeles suggests that subgroups of women jurors may still have some disadvantages compared to others when it comes to contributing to the jury's deliberations.

Perhaps the most surprising set of findings pertain to the effects of the jurors' racial and ethnic backgrounds on jury participation. Previous small-group studies, mock jury experiments, and the handful of studies of real juries led us to expect that minority jurors would participate less in jury deliberations. We found just the opposite, as black jurors report significantly higher jury participation than white and Hispanic jurors. (Participation rates of Hispanic jurors did not differ significantly from those of whites.) Black jurors' higher participation persists even after gender, education, and income are taken into account, and it is consistent across a variety of case characteristics and jury characteristics. Black jurors participate more than their non-black, non-Hispanic counterparts whether they are part of large or small factions, although the gap is most prominent when we look at jurors who are part of large factions. Black jurors participate more in murder cases, drug cases, nonviolent criminal cases, and complex cases, as well as cases involving black and non-black defendants.

These findings regarding race and ethnicity deserve some discussion. First, all of the juries in our study operated under a unanimity rule that requires that all members of the jury agree to the final verdict. That should enhance the position of jurors arguing minority positions and increase their participation and influence in deliberations (Taylor-Thompson 2000).

Additionally, it is important to note that the actual level of the diversity of the jury, measured in several ways, did not affect self-reports of participation. That is, black and Hispanic jurors' participation ratings are not affected by the diversity of the jury on which they serve. This result is at odds with previous mock jury research showing that both white and minority jurors on diverse juries participate more than members of all-white mock juries (Sommers 2006) and small-group research showing that the proportion of minorities boosts minority group participation (Li et al. 1999). The lack of differences in reported participation across more- and less-diverse juries could be related to the fact that all of the locations for our study are relatively diverse urban areas, and the juries themselves were remarkably diverse. On average, approximately half of the members of the typical jury belonged to minority racial or ethnic groups. And, although none of the juries included individuals from all seven racial/ethnic backgrounds, the average jury in this study includes members of at least three different racial or ethnic groups. This distinguishes our research project from most prior jury studies, where non-white jurors were very much in the minority.

However, the unanimity requirement and the diversity of the locales do not fully explain the strong participation of black jurors. For one thing, Hispanic jurors and jurors of other racial and ethnic backgrounds reported lower levels of participation than blacks. Our findings point to the need for more research to understand whether and how the deliberation process is shaped by the racial and ethnic composition of the jury and other contextual factors. Our divergent results for blacks and Hispanics also underscore the point made by many race scholars that combining distinct racial and ethnic groups for the purposes of analysis can produce misleading conclusions.

In light of research that points to underrepresentation of blacks within jury pools and through jury selection (Fukurai & Krooth 2003; Rose 2005), it is reassuring to find relatively high levels of participation among black jurors. If they are selected for service, black jurors in these jurisdictions seem to be highly engaged jurors who participate actively in jury room discussions. It is also encouraging that a strong majority of all jurors indicated very substantial participation in deliberations. However, from another perspective, our results point to some continuing disparities in participation across race, social class, and, to a lesser extent, gender. The case and jury characteristics that we have examined do not fully account for these disparities in participation. If, as previous research suggests, participation in deliberations is a mechanism through which jurors from different backgrounds contribute their unique perspectives (Abramson 1994; Marder 2002; *Peters v. Kiff* 1972; Sommers 2006) and influence the jury's verdict (York & Cornwell 2006), then we might be concerned about the viewpoints that are not represented when some groups systematically participate less in the discussion. Even if courts succeed in empanelling diverse juries, these groups may fall short of achieving the full inclusion of diverse perspectives through egalitarian deliberations.

Limitations and Directions for Further Research

Our analysis has a number of strengths, including its utilization of a relatively recent and substantial sample of actual jurors from four diverse urban areas who decided a broad range of serious criminal cases. However, it is important to identify several limitations of our empirical approach to jury participation, which highlights the need for more research in this area and suggests several potentially fruitful directions.

One limitation is our reliance on jurors' self-reports of participation, which may vary in the extent to which they are accurate reflections of actual participation, speaking turns, or speaking

time. In self-ratings of participation, jurors may interpret the question differently, may not remember correctly, or may respond inaccurately, each of which may lead to a gap between actual participation and reported participation. Case and jury characteristics may also shape jurors' recollections of their contributions to deliberations. And high-participating jurors may have been more likely to complete the questionnaire, so that our analyses overestimate overall levels of juror participation in deliberations. A universal bias in self-reporting of participation should not affect our findings regarding the existence of status differences, but if members of different social groups are more or less accurate in reports of their participation, our results could be biased. For example, there may be differences across social groups about the desirability of presenting oneself as confident and outspoken or quiet and demure. Unfortunately, there is no way to directly examine the reliability or validity of self-reported participation using the NCSC data.

Reassuringly, self-reported participation is associated with several other variables that we would expect to be related to actual participation. In supplementary analyses, we find that self-reported participation within our sample of juries is positively associated with actual deliberation length ($r = .21; p < .001$), and with jurors' reports of having time to express their views ($r = .20; p < .001$), spending time and effort convincing others ($r = .12; p < .001$), feeling that all points of view were considered ($r = .24; p < .001$), self-reported influence ($r = .42, p < .001$), and overall satisfaction with the deliberations ($r = .08; p < .001$). All of these findings are consistent with the idea that self-reported participation reflects actual participation. Finally, there is convergence between some of our basic results about the continuing significance of social status and the results of a project that directly observed actual juror participation (Rose et al. 2006).

Of course, although we can compare reported participation, we cannot say much about the significance or importance of each juror's contributions. All participation is not equally relevant, meaningful, or persuasive for the task of deliberating toward a verdict, so an important question for further research is how participation relates to other outcomes, such as influence, verdicts, and juror satisfaction. Recent surveys of actual jurors suggest that a juror's self-rated participation is associated with the likelihood that other jurors view him or her as influential, regardless of the juror's gender, race, or social class (York & Cornwell 2006).

Whatever the relationship to actual jury-room participation, we believe that self-reported participation is meaningful in its own right. Jurors' representation of their own participation during deliberations likely reflects how they viewed their role in the

process. It may also indicate what they will tell others about their jury experience. And, more broadly, self-reported jury participation may reflect jurors' perceptions of their role and status within the legal system or the community (e.g., the extent to which the juror has a "voice" in the system, whether the juror views himself or herself as an active member of the community).

There are a number of potentially relevant factors that we are unable to consider in this study. Because of data problems, we could not analyze the impact of being the foreperson of the jury on juror participation. Furthermore, all four jurisdictions required juries to reach unanimous verdicts, so we are unable to examine whether participation is greater when unanimity is required, compared to cases where nonunanimous verdicts are permitted. We also have limited ability to analyze jury size, since Maricopa was the only jurisdiction that allowed juries consisting of fewer than 12 persons. In light of our finding that racial and ethnic participation varies according to faction size, further research is needed to examine how policy-relevant aspects of jury procedure, such as jury size and unanimity of verdict, could affect patterns of participation. For example, the higher participation rates observed among black jurors, most prominent within large factions, may be attenuated when nonunanimous verdicts are permitted.

Finally, on account of missing data and lack of variation in defendant characteristics, we were unable to fully explore the extent to which the defendant's race or gender shapes jury participation by jurors of different racial groups. This could be important in helping to explain racial and ethnic differences in jury participation. Despite these limitations, we believe that our study signals the importance of taking a contextualized approach to the study of jury participation. We urge other scholars to broaden their scope to include jury-level factors, case characteristics, and location when examining how individual juror characteristics affect what goes on inside the jury room.

References

- Abramson, Jeffrey (1994) *We, the Jury: The Jury System and the Ideal of Democracy*. New York: Basic Books.
- Agresti, Alan, & Barbara F. Agresti (1978) "Statistical Analysis of Qualitative Variation," 9 *Sociological Methodology* 204–37.
- American Judicature Society (1999) *Behind Closed Doors: A Guide for Jury Deliberation*. Chicago, IL: American Judicature Society (Wisconsin court version available online at <http://www.wicourts.gov/services/juror/docs/deliberate.pdf>).
- Andersen, Margaret (2009) *Thinking about Women: Sociological Perspectives on Sex and Gender*, 8th ed. Boston, MA: Allyn & Bacon.

- Antonio, Michael E., & Valerie P. Hans (2001) "Race and the Civil Jury: How Does a Juror's Race Shape the Jury Experience?," in Ronald Roesch et al., eds., *Psychology in the Courts: International Advances in Knowledge*. New York: Routledge.
- Asante, Molefi, & Alice Davis (1985) "Black and White Communication: Analyzing Work Place Encounters," 16 *J. of Black Studies* 77-93.
- Balkwell, James W., & Joseph Berger (1996) "Gender, Status, and Behavior in Task Situations," 59 *Social Psychology Q.* 273-311.
- Berger, Joseph, et al. (1966) "Status Characteristics and Expectation States," in J. Berger et al., eds., *Sociological Theories in Progress, Vol. 1*. Boston: Houghton Mifflin.
- (1972). "Status Characteristics and Social Interaction," 3 *American Sociological Rev.* 241-55.
- Brady, Henry E., et al. (1995) "Beyond SES: A Resource Model of Political Participation," 89 *American Political Science Rev.* 271-94.
- Brunell, Thomas, et al. (2009) "Factors Affecting the Length of Time a Jury Deliberates: Case Characteristics and Jury Composition," 5 *Rev. of Law & Economics* 555-78.
- Cornwell, Erin York (2010) "Opening and Closing the Jury Room Door: A Sociohistorical Consideration of the 1955 Chicago Jury Project Scandal," 31 *Justice System J.* 49-73.
- Correll, Shelley J., & Cecilia L. Ridgeway (2006) "Expectation States Theory," in J. Delamater, ed., *Handbook of Social Psychology*. New York: Kluwer.
- Davis, James, et al. (1989) "Some Social Mechanics of Group Decision Making: The Distribution of Opinion, Polling Sequence, and Implications for Consensus," 57 *J. of Personality and Social Psychology* 1000-12.
- Devine, Dennis J., et al. (2001) "Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups," 7 *Psychology, Public Policy, and Law* 622-727.
- (2007) "Deliberation Quality: A Preliminary Examination in Criminal Juries," 4 *J. of Empirical Legal Studies* 273-303.
- Diamond, Shari Seidman, & Jonathan Casper (1992) "Blindfolding the Jury to Verdict Consequences: Damages, Experts, and the Civil Jury," 26 *Law & Society Rev.* 513-63.
- Diamond, Shari Seidman, et al. (2006) "Revisiting the Unanimity Requirement: The Behavior of the Non-Unanimous Jury," 100 *Northwestern Univ. Law Rev.* 201-30.
- Eisenberg, Theodore, et al. (2005) "Judge-Jury Agreement in Criminal Cases: A Partial Replication of Kalven and Zeisel's *The American Jury*," 2 *J. of Empirical Legal Studies* 171-206.
- & Valerie P. Hans (2009) "Taking a Stand on Taking the Stand: The Effect of a Prior Criminal Record on the Decision to Testify and on Trial Outcomes," 94 *Cornell Law Rev.* 1353-90.
- Ellis, Leslie, & Shari Seidman Diamond (2003) "Race, Diversity, and Jury Composition," 78 *Chicago-Kent Law Rev.* 1033-58.
- Ellison, Christopher G., et al. (1996) "Religious Homogeneity and Metropolitan Suicide Rates," 76 *Social Forces* 273-99.
- Ellsworth, Phoebe C. (1989) "Are Twelve Heads Better Than One?," 52 *Law and Contemporary Problems* 205-24.
- Elsass, Priscilla M., & Laura M. Graves (1997) "Demographic Diversity in Decision-Making Groups: The Experiences of Women and People of Color," 22 *Academy of Management Rev.* 946-73.
- Fischer, Claude S., & Greggor Mattson (2009) "Is America Fragmenting?," 35 *Annual Rev. of Sociology* 435-55.
- Fukurai, Hiroshi, & Richard Krooth (2003) *Race in the Jury Box: Affirmative Action in Jury Selection*. Albany: State Univ. of New York Press.
- Garvey, Stephen P., et al. (2004) "Juror First Votes in Criminal Trials," 2 *J. of Empirical Legal Studies* 371-98.

- Gastil, John, et al. (2010) *The Jury and Democracy: How Jury Deliberation Promotes Civic Engagement and Political Participation*. New York: Oxford Univ. Press.
- Givelber, Daniel (2005) "Lost Innocence: Speculation and Data About the Acquitted," 42 *American Criminal Law Rev.* 1167–99.
- & Amy Farrell (2008) "Judges and Juries: The Defense Case and Differences in Acquittal Rates," 33 *Law & Social Inquiry* 31–52.
- Goar, Carla (2007) "Social Identity Theory and the Reduction of Inequality: Can Cross-Cutting Categorization Reduce Inequality in Mixed-Race Groups?," 35 *Social Behavior and Personality* 537–50.
- Hannaford-Agor, Paula, et al. (2002) *Are Hung Juries a Problem?* Williamsburg, VA: National Center for State Courts. Available online at http://www.ncsconline.org/WC/Publications/Res_Juries_HungJuriesPub.pdf.
- & Valerie P. Hans (2003) "Nullification at Work: A Glimpse from the National Center for State Courts' Study of Hung Juries," 78 *Chicago-Kent Law Rev.* 1249–77.
- Hans, Valerie P. (2001) "The Power of Twelve: The Impact of Jury Size and Unanimity on Civil Jury Decision Making," 4 *Delaware Law Rev.* 1–31.
- Hans, Valerie P., et al. (2003) "The Hung Jury: The American Jury's Insights and Contemporary Understanding," 39 *Criminal Law Bulletin* 33–50.
- Hastie, Reid, et al. (1983). *Inside the Jury*. Cambridge, MA: Harvard Univ. Press.
- Hawkins, Charles H. (1962) "Interaction Rates of Jurors Aligned in Factions," 27 *American Sociological Rev.* 689–91.
- Heise, Michael (2004) "Criminal Case Complexity: An Empirical Perspective," 1 *J. Empirical Legal Studies* 331–69.
- Hirsh, C. Elizabeth (2009) "The Strength of Weak Enforcement: The Impact of Discrimination Charges, Legal Environments, and Organizational Conditions on Workplace Segregation," 74 *American Sociological Rev.* 245–71.
- James, Rita M. (1959) "Status and Competence of Jurors," 64 *American J. of Sociology* 563–70.
- Kalven, Harry, Jr., & Hans Zeisel (1966) *The American Jury*. Boston: Little, Brown.
- Kerr, Norbert L., et al. (1996) "Bias in Judgment: Comparing Individuals and Groups," 103 *Psychological Rev.* 687–719.
- Kirchmeyer, Catherine (1993) "Multicultural Task Groups: An Account of the Low Contribution Level of Minorities," 24 *Small Group Research* 127–48.
- Li, Ji, et al. (1999) "The Effects of Proportional Representation on Intragroup Behavior in Mixed-Race Decision-Making Groups," 30 *Small Group Research* 259–79.
- Maass, Anne, et al. (1985) "Testifying on Eyewitness Reliability: Expert Advice is Not Always Persuasive," 15 *J. of Applied Social Psychology* 207–29.
- MacCoun, Robert J., & Tom R. Tyler (1988) "The Basis of Citizens' Perceptions of the Criminal Jury," 12 *Law and Human Behavior* 333–52.
- Marcus, David K., et al. (2000) "Studying Perceptions of Juror Influence In Vivo: A Social Relations Analysis," 24 *Law and Human Behavior* 173–86.
- Marder, Nancy S. (2002) "Juries, Justice, and Multiculturalism," 75 *Southern California Law Rev.* 659–726.
- Massachusetts Trial Juror's Handbook* (1984) Boston, MA: Office of the Jury Commissioner for the Commonwealth. Available online at <http://www.mass.gov/courts/jury/handbook.htm>.
- Meeker, Barbara Foley, & Patricia A. Weitzel-O'Neill (1977) "Sex Roles and Interpersonal Behavior in Task Oriented Groups," 42 *American Sociological Rev.* 679–716.
- Miller-Loessi, Karen (1992) "Toward Gender Integration in the Workplace: Issues at Multiple Levels," 35 *Sociological Perspectives* 1–15.
- Nemeth, Charlan, et al. (1976) "From the '50s to the '70s: Women in Jury Deliberations," 39 *Sociometry* 293–304.
- Phillips, Scott (2010) "Status Disparities in the Capital of Capital Punishment," 43 *Law & Society Rev.* 807–37.

- Raudenbush, Stephen W., & Bryk, Anthony S. (2002) *Hierarchical Linear Models: Applications and Data Analysis Methods*, 2nd ed. Newbury Park, CA: Sage.
- Ridgeway, Cecilia L., & Lynn Smith-Lovin (1999) "The Gender System and Interaction," 25 *Annual Rev. of Sociology* 191–216.
- Rose, Mary R. (2005) "A Dutiful Voice: Justice in the Distribution of Jury Service," 39 *Law & Society Rev.* 601–34.
- (2009) "Access to Juries: Some Puzzles Regarding Race and Jury Participation," 12 *Sociology of Crime, Law, and Deviance* 119–44.
- Rose, Mary R., et al. (2006) "He Said/She Said: An Analysis of Gender and Participation in Real Jury Deliberations." Presented at the annual meeting of the American Sociological Association, Montreal, Quebec.
- Saks, Michael J. (1977) *Jury Verdicts*. Lexington, MA: Lexington Books.
- Sommers, Samuel R. (2006) "On Racial Diversity and Group Decision Making: Identifying Multiple Effects of Racial Composition on Jury Deliberations," 90 *J. of Personality and Social Psychology* 597–612.
- & Phoebe C. Ellsworth (2003) "The Jury and Race: How Much Do We Really Know About Race and Juries? A Review of the Social Science Theory and Research," 78 *Chicago-Kent Law Rev.* 997–1031.
- Spencer, Bruce D. (2007) "Estimating the Accuracy of Jury Verdicts," 4 *J. of Empirical Legal Studies* 305–29.
- Strodtbeck, Fred L., & Richard D. Mann (1956) "Sex-Role Differentiation in Jury Deliberations," 19 *Sociometry* 3–11.
- et al. (1957) "Social Status and Jury Deliberations," 22 *American Sociological Rev.* 713–19.
- Taylor-Thompson, Kim (2000) "Empty Votes in Jury Deliberations," 113 *Harvard Law Rev.* 1261–320.
- Thye, Shane R. (2000) "A Status Value Theory of Power in Exchange Relations," 65 *American Sociological Rev.* 407–32.
- Tocqueville, Alexis de (1835/2000). *Democracy in America*. Trans. by George Lawrence. New York: HarperCollins.
- Velasco, Pilar de Paul (1995) "The Influence of Size and Decision Rule in Jury Decision-Making," in G. Davies et al., eds., *Psychology, Law, and Criminal Justice: International Developments in Research and Practice*. Berlin: Walter De Gruyter.
- Vidmar, Neil, & Valerie P. Hans (2007) *American Juries: The Verdict*. New York: Prometheus.
- Waters, Nicole L., & Valerie P. Hans (2009) "A Jury of One: Opinion Formation, Conformity, and Dissent on Juries," 6 *J. of Empirical Legal Studies* 513–40.
- Webster, Murray, Jr., & James E. Driskell, Jr. (1978) "Status Generalization: A Review and Some New Data," 43 *American Sociological Rev.* 220–36.
- Wilkenfeld, Joshua (2004) "Newly Compelling: Reexamining Judicial Construction of Juries in the Aftermath of *Grutter v. Bollinger*," 104 *Columbia Law Rev.* 2292–327.
- Wilson, William Julius (1980) *The Declining Significance of Race: Blacks and Changing American Institutions*. Chicago: Univ. of Chicago Press.
- York, Erin, & Benjamin Cornwell (2006) "Status on Trial: Social Characteristics and Influence in the Jury Room," 85 *Social Forces* 455–77.

Cases Cited

- Duren v. Missouri*, 439 U.S. 357 (1979).
- Peters v. Kiff*, 407 U.S. 492 (1972).
- Strauder v. West Virginia*, 100 U.S. 303 (1880).
- Taylor v. Louisiana*, 419 U.S. 522 (1975).
- Thiel v. Southern Pacific Company*, 328 U.S. 217 (1946).

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