Jurors' Use of Instructions on Negligence

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At the end of a trial, the judge gives jurors a set of instructions that explain the laws that are applicable to the case and that direct jurors to reach a verdict in accordance with those laws. Little is known about how well jurors understand instructions in civil cases. We assess the extent to which jurors understand judicial instructions in negligence cases. We address 3 issues: (a) To what extent do they understand these instructions? (b) To what extent is their comprehension enhanced by access to a written copy of the instructions? and (c) What effect does deliberation have on jurors' comprehension levels? Overall comprehension was approximately 64% and access to written instructions did not enhance comprehension, but the opportunity to deliberate did.

During a trial, jurors are informed that they will have to perform three tasks in the course of their service. First, they will have to attend to the evidence and determine the facts; second, they will learn about the relevant legal standards from the judge; and third, they will apply these standards to the facts and thereby reach a verdict. If the process unfolds as intended, jurors will interpret the evidence in a reasonable and informed manner, they will understand and use the judge's instructions correctly, and the resulting verdict will be both rational and defensible. Not infrequently, the system works as intended, especially in relatively simple cases that involve few witnesses and reasonably clear law. On occasion, however, and particularly in complex cases that involve multiple causes of action and complicated claims, things can go wrong (Cecil, Hans, & Wiggins, 1991).

In the present paper, we focus on the second task and the possibility that things go wrong when jurors attempt to learn about the relevant law from the judge. In particular, we assess the extent to which jurors understand judicial instructions that are routinely given in negligence cases, a type of civil case commonly tried by juries.

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Jury instructions, provided by the judge to the jury near the end of the trial, play a crucial role in every case. They explain the laws that are applicable to the case and direct jurors to reach a verdict in accordance with those laws. Judges have some discretion over the precise wording of the instructions, and the format that they select can make a significant difference in the trial process, the application of the law, and the outcome of the case (Thornburg, 1998). In fact, many appeals involve claims of error in the jury instructions, and every day, cases that had entailed months or years of preparation and litigation are reversed on appeal because the trial judge failed to state the law accurately (Reifman, Gusick, & Ellsworth, 1992).

To minimize the use of jury instructions as a tool for obtaining appellate reversals, courts have developed standardized or pattern instructions that emphasize technical accuracy in the way they convey the law. Unfortunately, committees that draft pattern jury instructions and judges who deliver them to jurors have largely overlooked one crucial issue. Jurors are supposed to learn about the relevant legal standards from the instructions. However, highly technical directives, although legally accurate, are often incomprehensible to laypeople (Lieberman & Sales, 1997). Indeed, confusion over the meaning of jury instructions undermines jurors' ability to complete the second of their assigned tasks; namely, learning about the law they are to apply to the facts.

Numerous studies have shown that jurors misunderstand or fail to understand the laws that are given to them by the judge (Elwork, Sales, & Alfini, 1977; Forston, 1975; Hastie, Penrod, & Pennington, 1983; Severance, Greene, & Loftus, 1984). Reifman et al. (1992) provide several explanations for these deficiencies. The most obvious source of confusion is the legal language itself. It is often convoluted, technical, and full of legal jargon with which laypeople are unfamiliar.  

For example, here is an instruction from a case involving misappropriation of trade secrets:

If you find that (the plaintiffs) have proved by a preponderance of the evidence that (the defendant) tortiously interfered with their prospective economic advantage, and if you also find that (the plaintiffs) suffered injury or damage as a proximate result of (defendant's) conduct, then you must award (plaintiffs) an amount that will justly and fairly compensate them for their monetary losses. For damage to be the proximate result of such interference,

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3 For example, the word negligence appears once per million words in the English language; preponderance appears 0.26 times, and proximate appears 0.02 times per million words (Zeno, Ivens, Millard, & Duvvuri, 1995).
it must be shown that, but for the tortious interference, the damage
would not have occurred. (American Bar Association, 1991,
p. 563)

Some civil jury instructions pose difficulties not because they are overly tech-
nical, but because they are vague. For example, Vidmar (1995) cites the follow-
ing instruction as standard legal guidance on pain and suffering:

Damages should include such amount as you find, by the greater
weight of the evidence, is fair compensation for the actual physical
pain and mental suffering which were the immediate necessary
consequences of the accident. There is no fixed formula for pain
and suffering. You will determine what is fair compensation by
applying logic and common sense to the evidence. (p. 206)

Structural features of the trial also contribute to jurors' comprehension diffi-
culties. Typically, the jury listens passively as the judge reads the instructions
aloud. Jurors may or may not be provided with a written copy of the instructions,
and they are almost never given the opportunity to ask questions in the courtroom
to clarify misunderstandings that they may have about the law. Concerned about
having their judgments scrutinized and verdicts overturned by appellate courts,
many trial judges opt simply to recite the pattern instructions that are relevant to
the dispute. Obviously, this situation is far from ideal in terms of conveying cru-
cial information about the law to the jury.

The purpose of the present study is to assess jurors' ability to comprehend
pattern jury instructions in a civil negligence case. We chose to examine under-
standing of negligence instructions because, in comparison to other, more com-
plicated directives that are given to civil jurors, negligence instructions are
succinct and relatively straightforward. In addition, negligence is the claim raised
by large numbers of plaintiffs.

We already have some data that raise concerns about civil jurors' capacity to
understand their instructions. In an early study, Charrow and Charrow (1979)
asked mock jurors to paraphrase 14 standard civil jury instructions from Califor-
nia. Their psycholinguistic analysis of the paraphrased instructions revealed that
jurors had considerable difficulty understanding these instructions and that spe-
cific linguistic constructions may impede their comprehension. In another early
study, Elwork et al. (1977) found that mock jurors who received negligence
instructions were no more able to understand the law than were mock jurors who
had no instructions. Steele and Thornburg (1988) found that jurors understand
less than half of the content of pattern instructions commonly used in civil cases.
Further, they discovered that although most jurors try to use the instructions dur-
ing deliberation, they are often confused about the instructions' meaning.
More recently, Reifman et al. (1992) sent questionnaires to Michigan residents who had been selected to serve on juries and to those who were called to jury duty but who did not serve. Obviously, the former group had received jury instructions and the latter had not. All participants were asked 10 questions related to procedural rules and 19 questions related to substantive law. Reifman et al. found that jurors who heard instructions in civil cases averaged only 4.18 correct on procedural issues, compared to 3.81 correct among uninstructed jurors, a small but statistically significant difference. So, although instructed jurors scored somewhat better than did uninstructed jurors, the difference was not large and the absolute level of understanding was rather low for both groups. On questions about substantive legal issues, jurors instructed in the law were no more likely to be correct in their understanding of that law than were jurors who had not been instructed (41% vs. 35%, a nonsignificant difference). As Reifman et al. note, the law as communicated by judges is not well understood by jurors.

Finally, Landsman, Diamond, Dimitropoulos, and Saks (1998) collected some data relevant to comprehension of civil jury instructions as part of their larger study of the impact of bifurcation on awards for compensatory and punitive damages in a products liability case. Participants, all of whom were jury-eligible adults who had been instructed by the judge, answered four multiple-choice questions related to the jury instructions on liability and compensatory damages. The data were highly skewed: Jurors had quite good understanding of the requirements for liability (approximately 80% recognized the correct answer) and the factors they were to consider in determining compensatory damages (approximately 90% correct), whereas they had significant difficulty understanding the standard of proof (approximately 25% correct) and knowing who would win if the evidence was equally balanced (approximately 31% correct).

In the present study, we address three straightforward issues. First, to what extent do individual jurors understand information contained in the instructions given by the judge in a civil negligence case? (In operational terms, we assess how well they recognize the correct answer.) Second, to what extent is their comprehension enhanced by access to a written copy of the instructions? Third, what effect does deliberation have on jurors' comprehension levels?

The Impact of Written Jury Instructions

Some states require judges to supplement their oral instructions with written copies, and other states explicitly prohibit the practice. In most states, judges may do so at their discretion. What are the consequences of providing written as well as oral instruction?

Heuer and Penrod (1989) gave considerable thought to the potential advantages and disadvantages of this practice. They hypothesized that some or all of the following advantages might accrue when written instructions were provided:
comprehension, retention, and application of the instructions would be enhanced (the issue we examine in the present study); jurors would be more satisfied with their verdicts because they would have confidence that they applied the law correctly; jurors would experience less confusion about the instructions as they are being delivered and would have fewer questions about them during their deliberations; and deliberation time would decrease because there would be fewer disputes among jurors about the meaning and application of the instructions. Heuer and Penrod suggest the following disadvantage to providing written instructions: Jurors might spend relatively more time discussing the instructions and less time evaluating the evidence.

To test these hypotheses, Heuer and Penrod (1989) conducted a field study using jurors in actual cases from various courts in Wisconsin. Judges who participated in the study agreed to vary whether a jury panel had access to a written copy of the instructions. In all, written instructions were included in 35 trials and were withheld in 32 trials; approximately half of these cases involved civil jury instructions. Jurors, attorneys, and judges were all asked questions about the procedures.

In general, jurors liked having access to the instructions, but there is little evidence that they benefited from the practice. They were not more satisfied with the trial process than were jurors without instructions, nor did the presence of written instructions reduce deliberation time. On the other hand, a copy of the instructions did aid in settling disputes that arose among jurors. The proposed disadvantage was also not borne out by the data: Jurors who had access to instructions did not spend a disproportionate amount of deliberation time discussing the instructions. Reifman et al. (1992) have also shown that although jurors indicate that written instructions aid their understanding of the law, there is little evidence of this occurrence.

Other researchers have shown that written instructions can improve comprehension of the law, however. Kramer and Koenig (1990) investigated how well 600 actual jurors in Michigan understood jury instructions in criminal trials. They found that jurors who had access to written instructions scored significantly higher on true/false comprehension questions than did jurors who had only oral instructions. Finally, Prager, Deckelbaum, and Cutler (1989) showed that the presence of written jury instructions enhances comprehension of the law on intervening causation.

The Impact of Jury Deliberations

An optimistic theory about the effects of group deliberation on comprehension of jury instructions posits that it takes only one person to understand the instructions at the time they are given and that this person can explain the meaning of the instructions to fellow jurors during deliberations. An alternative theory
is that deliberations will enhance comprehension only if the majority of jurors correctly grasp the meaning of the instructions when they are presented. If the instruction is discussed during deliberation, the majority viewpoint will prevail (Kramer & Koenig, 1990).

What effect does discussion of jury instructions during deliberation have on comprehension levels? One might predict that comprehension would improve among jurors who initially did not understand their instructions. Indeed, some studies have shown positive effects of deliberation on comprehension. For example, Forston (1975) found that jurors' comprehension of certain civil instructions improved from 59% to 70% following deliberations. Kerwin and Shaffer (1994) found that jurors who deliberated were more likely to follow instructions to ignore inadmissible testimony than were jurors who did not. Finally, echoing Kramer and Koenig's (1990) less optimistic theory, Diamond and Levi (1996) showed an improvement in jurors' comprehension of legal instructions following deliberations, but only when a significant proportion of jurors began deliberations with correct information. Otherwise, deliberations simply reinforced the misunderstandings of the majority.

Deliberations can apparently enhance comprehension of the evidence without improving understanding of the jury instructions (Ellsworth, 1989). Ellsworth content-analyzed the discussions of mock jurors who deliberated after watching a simulated homicide trial. She found that in the process of deliberation, jurors were able to correct errors in interpretation of the facts and weed out irrelevant facts and implausible scenarios. Unfortunately, deliberations did not have the same ameliorative effect on jurors' understanding of the law. Deliberation analyses showed that 21% of jurors' comments referred to questions of law and the judge's instructions, suggesting considerable attention and concern. Of these, 52% were correct references to the law, 21% were incorrect, and 28% were unclear.

Finally, we note that when Landsman et al. (1998) tested the impact of deliberation on comprehension of four issues related to liability and damages, they found reduced comprehension on three of the four items following deliberation. In this case, a core of jurors may have been misinformed about these issues and may have led the others astray. Because of the mixed findings on the impact of deliberation on comprehension of civil jury instructions, we decided to examine this issue in more detail.

Comprehension of Instructions in Criminal and Civil Cases

Much of what we know about comprehension of jury instructions comes from criminal cases. In general, those studies show that jurors have significant difficulty understanding highly technical and complex language contained in the jury instructions, despite the fact that these directives may be legally accurate.
Obviously, the types of evidence, legal issues, and burdens of proof are different in civil cases than in criminal cases. For several reasons, differences in jurors' familiarity with the legal issues in the two contexts could influence their ability to understand the instructions.

Jurors undoubtedly have greater familiarity with criminal as opposed to civil law concepts and cases. As any consumer of prime-time television can attest, portrayals of crime easily outnumber disputes between commercial banks or insurance companies. O'Barr and Conley (1988) showed that even plaintiffs in small-claims court confused criminal and civil trial concepts, and Hans (1992) gives examples of jurors' misuse of criminal law terminology in civil cases.

In one sense, jurors' lack of familiarity with concepts of civil law might portend well for their ability to understand and use the judge's instructions. Why? Because their lay knowledge will not interfere with what the judge instructs them to consider. As Smith (1991) has shown, people have prototypical representations of crimes, such as what constitutes a typical kidnapping. According to Smith, jurors base their verdicts on the extent to which the facts of the case fit their crime prototype and not on whether the evidence fits the legal definition of the crime as detailed in the jury instructions.

Although mock jurors' expectations can apparently influence their judgments in civil cases as well (Bornstein & Rajki, 1994), jurors are probably unlikely to have well formed prototypes of various actions that lead to civil lawsuits and would be less influenced by these prototypes when determining the facts and accepting the law in a civil suit. Their relatively blank slates can be written upon. According to this theorizing, to the extent that civil jury instructions are written in clear language about straightforward concepts (a questionable assumption), jurors' understanding of instructions in civil cases might be impressive. Further, because jurors lack lay knowledge of many civil law issues, they may find that written jury instructions are especially useful in helping them to understand these concepts.

On the other hand, not all of jurors' lay knowledge concerning criminal law is erroneous, and judicial instructions on certain concepts relevant to criminal law may serve to reinforce or supplement jurors' own correct interpretations of these concepts. However, because jurors have considerably less knowledge of the issues that arise in civil cases, they may have fewer resources on which to rely when attempting to understand the novel ideas presented to them in civil trials. Jurors' ability to comprehend difficult, unfamiliar, and technical terms often contained in a set of civil jury instructions may be lacking, even when those terms are presented in writing. We conducted the present study to test these varying notions concerning jury comprehension of civil negligence instructions.

All of the mock jurors in our study heard an audiotape of a simulated negligence case that included oral jury instructions on negligence, cause, and damages. Half of them were provided with a written copy of the jury instructions to
use during their deliberations and while completing a comprehension questionnaire, and the other half were required to rely on their memory of the instructions. To assess the impact of deliberations on comprehension, we measured jurors’ understanding of the instructions both before and after deliberations.

Method

Jurors were randomly assigned to one of two cells in what took the form of a two-factor mixed design. The presence of written jury instructions (present, absent) was a between-subjects factor, and the timing of the comprehension questionnaire was a within-subjects factor (predeliberation, postdeliberation).

Participants

The participants were 417 jury-eligible adults drawn from the population of a medium-sized city; 234 participants had access to written instructions, and 183 did not. In order to be eligible for jury duty, a participant was either registered to vote or had a valid state driver’s license. Participants were also screened for eligibility based on the following criteria: (a) They resided in the county where the study was being conducted, (b) they had no felony convictions, (c) they were able to write and understand English, and (d) they were at least 18 years old. Advertisements soliciting participation were placed in local newspapers and periodicals and were broadcast as public-service announcements on local radio stations. The mean age of participants was 42.5 years, with a range of 18 to 79 years. The majority of participants were female (n = 267 or 64%), identified themselves as White (n = 359 or 86%), and had received at least some college or vocational instruction (n = 371 or 89%); 104 (25%) had previously served on a jury. All mock jurors were paid for participating in the study.

Materials

**Trial transcripts.** A negligence case was chosen based on the following criteria: (a) The case involved only one plaintiff, (b) the plaintiff did not bear any responsibility for the accident (i.e., no comparative negligence), and (c) the defendant was an individual. The facts of the case were based on a case tried in Denver District Court in 1997 (Jeansonne v. Landau et al.).

On the basis of these facts, we prepared a 10-page trial transcript that included testimony from lay and expert witnesses. Facts of the case were as follows: The driver of a semi-truck (the sole defendant) was forced to negotiate

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4Participants consisted of 63 (15%) between the ages of 18 and 25 years, 121 (29%) between ages 26 and 40 years, 146 (35%) between 41 and 55 years, 67 (16%) between 56 and 70 years, and 17 (4%) over 71 years.
road conditions in the vicinity of a construction site. Four lanes on a four-lane highway were required to merge into two lanes, and these two remaining lanes were diverted around the construction area. In this area of the highway, the defendant lost control of his semi-truck and crashed into the guardrail. As a result of the collision, the front axle was dislodged from the semi-truck, took flight, and landed on the plaintiff's oncoming automobile. The driver of the automobile suffered injuries when struck by the truck's axle. This information was presented in both written and audiotaped format. At the conclusion of the trial, all of the jurors heard jury instructions on negligence, causation, the burden of proof, and damage awards. These instructions were taken from the Colorado Civil Jury Instructions (1989) and are included in the Appendix A.

Comprehension questionnaire. To assess comprehension levels of various elements of the jury instructions, we wrote 10 multiple-choice comprehension questions. The questions were designed to tap participants' understanding of the legal definition of negligence (Questions 1, 2, 3, and 7), the definition of cause (Question 4), burden of proof issues (Questions 5, 6 and 8), and the legal standards for proof (Questions 9 and 10). These questions are included in Appendix B

Procedure

Mock jurors participated in the study in groups ranging in size from 10 to 16. All jurors in a group read and listened to an audiotape of the trial transcript together. After the instructions were delivered, each group was divided in half, with participants randomly assigned to one of two mock juries ranging in size from 5 to 8 participants. Participants then completed an individual questionnaire that asked whether the defendant was negligent (Yes/No) and that included 10 jury-instruction comprehension questions (predeliberation questionnaire). Upon completion of the questionnaire, participants were directed to deliberate as a jury for up to 45 min. Jurors were instructed that their verdict had to be unanimous. After deliberating to a verdict on the negligence of the defendant, individual jurors completed another questionnaire that consisted of a verdict preference (negligence: Yes/No), several demographic questions, and the same 10-item jury-instruction comprehension questions (postdeliberation questionnaire).

Half of the participants had access to written instructions while completing both the pre- and postdeliberation questionnaire and while deliberating. The other half was not permitted access to written jury instructions during completion of either questionnaire or during the deliberations. These jurors heard the

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5The audiotape lasted approximately 20 min.
6Although the Colorado jury instructions have been revised, the relevant instructions are still used.
7Most of the juries (66%) found the defendant negligent, 9% found no negligence, and 25% were hung juries.
instructions only once; the judge read them after the evidence was presented. Upon completion of the postdeliberation questionnaire, participants were debriefed, paid, and thanked for their participation.

Results

Demographic Factors and Comprehension

We examined the relationships between participant background factors (i.e., age, educational level, prior jury service, and gender) and pre- and postdeliberation comprehension (i.e., number correct out of 10). Educational level was the only factor that was modestly correlated with both pre- and postdeliberation comprehension. Educational level was measured on a 4-point ordinal scale: 1 = high school or less, 2 = some college or vocational schooling, 3 = college degree, and 4 = postgraduate work. Participants with more education had higher comprehension levels for both pre- and postdeliberation: predeliberation, Spearman \( r = +.32, p < .001 \); postdeliberation, Spearman \( r = +.34, p < .001 \).

Overall Comprehension

Juries ranged in size from 5 to 8 mock jurors. A one-way ANOVA was computed to assess any possible effects of jury size on overall comprehension levels. There was no effect of jury size on total number correct for predeliberation responses, \( F(3, 396) = 0.28, p > .80 \); or postdeliberation responses, \( F(3, 392) = 1.07, p > .30 \). Consequently, all analyses were collapsed across jury size.

Overall comprehension levels for the 10 items were measured by summing each mock juror’s total number correct (maximum = 10) on both the pre- and postdeliberation questionnaires. A 2 x 2 (Presence of Written Instructions x Time of Questionnaire) repeated-measures ANOVA was conducted, with participants’ total number correct as the dependent variable. There was a significant effect of time of questionnaire, \( F(1, 386) = 5.67, p = .01 \). Mock jurors got more items correct after deliberating (\( M = 6.45, SD = 2.26 \)) than they did before deliberating (\( M = 6.28, SD = 2.35 \); \( d = .073 \)). The main effect for presence of written instructions and the Presence of Written Instructions x Time of Questionnaire interaction failed to reach significance. These data are shown in Table 1.

Individual Items

Table 2 shows the percentages of mock jurors who chose the correct answer to each item before and after deliberations for both instruction conditions. Comprehension of civil jury instructions (as measured by the percentage of jurors over all conditions who gave a correct response to the multiple-choice question)
Table 1

Mean Number Correct of Comprehension Questions as a Function of Presence of Written Instructions and Timing of Questionnaire

<table>
<thead>
<tr>
<th>Presence of written instructions</th>
<th>Time of questionnaire</th>
<th></th>
<th></th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predeliberation</td>
<td>Postdeliberation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written instructions</td>
<td>6.27 (2.31)</td>
<td>6.35 (2.30)</td>
<td>6.31</td>
<td></td>
</tr>
<tr>
<td>No written instructions</td>
<td>6.29 (2.38)</td>
<td>6.56 (2.16)</td>
<td>6.43</td>
<td></td>
</tr>
<tr>
<td><em>M</em>_</td>
<td>_6.28_a</td>
<td><em>6.45_b</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Numbers represent number correct out of 10 questions. Standard deviations are presented in parentheses. Means with different subscripts differ significantly at _p < .01._

exceeded 70% for only half of the 10 items. Mock jurors were reasonably able to understand the concept of negligence (Question 3: 74% correct) and knew which factors should be considered in determining negligence (Question 7: 80% correct) despite the fact that they could neither define negligence (Question 1: 31% correct) nor identify the legal standards that correspond to it (Question 2: 36% correct). They also had reasonably good understanding of the legal definition of cause (Question 4: 78%). They generally knew which party had the burden of proof (Question 5: 84% correct). Finally, they understood what happens in a case if the plaintiff fails to meet his burden of proof (Question 8: 80% correct).

By contrast, comprehension was quite low (less than 50% correct on average) for the following items: “What was the definition of negligence?” (Question 1: 31% correct), “What is the legal standard for negligence?” (Question 2: 36% correct), and “What happens when the evidence weighs evenly on both sides?” (Question 10: 48% correct). Comprehension was somewhat higher for the following questions: “What percentage of evidence equals a preponderance of evidence?” (Question 9: 52% correct), and “By what standard must the plaintiff prove his case?” (Question 6: 66% correct).

We analyzed these comprehension levels using _z_ tests for differences between two proportions. These analyses indicate that comprehension was enhanced by deliberation for three items, all of which dealt in some form with the burden of proof: “Who has the burden of proof?” (_z_ = 2.20, _p_ < .05, for participants with access to written instructions); “By what standard must the plaintiff prove his case?” (_z_ = 2.30, _p_ < .05, for participants with access to written instructions; and _z_ = 2.60, _p_ < .05, for participants without access to written instructions); and “What percentage of the evidence equals a preponderance of evidence?” (_z_ = 2.15, _p_ < .05, for participants without access to instructions). There were no
Table 2

Percentage of Jurors Choosing the Correct Answer

<table>
<thead>
<tr>
<th>Item</th>
<th>Presence of written instructions</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No instructions</td>
<td>Prede-liberation</td>
<td>Postde-liberation</td>
<td>Instructions</td>
<td>Prede-liberation</td>
</tr>
<tr>
<td>1. What is the definition of negligence?</td>
<td>36</td>
<td>26</td>
<td>34</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>2. What is the legal standard for negligence?</td>
<td>35</td>
<td>38</td>
<td>35</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>3. What does negligence mean?</td>
<td>76</td>
<td>76</td>
<td>72</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>4. What is the legal definition of cause?</td>
<td>82</td>
<td>74</td>
<td>82</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>5. Who has the burden of proof?</td>
<td>82</td>
<td>86</td>
<td>81&lt;sub&gt;a&lt;/sub&gt;</td>
<td>88&lt;sub&gt;b&lt;/sub&gt;</td>
<td></td>
</tr>
<tr>
<td>6. By what standard must the plaintiff prove his case?</td>
<td>60&lt;sub&gt;a&lt;/sub&gt;</td>
<td>74&lt;sub&gt;b&lt;/sub&gt;</td>
<td>59&lt;sub&gt;a&lt;/sub&gt;</td>
<td>73&lt;sub&gt;b&lt;/sub&gt;</td>
<td></td>
</tr>
<tr>
<td>7. Which factors can be used in determining negligence?</td>
<td>80</td>
<td>80</td>
<td>82</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>8. What happens if the plaintiff fails to meet the burden of proof?</td>
<td>80</td>
<td>81</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>9. What percentage equals a preponderance of evidence?</td>
<td>49&lt;sub&gt;a&lt;/sub&gt;</td>
<td>64&lt;sub&gt;b&lt;/sub&gt;</td>
<td>47</td>
<td>50&lt;sub&gt;a&lt;/sub&gt;</td>
<td></td>
</tr>
<tr>
<td>10. What happens when the evidence weighs evenly on both sides?</td>
<td>40</td>
<td>46</td>
<td>52</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>62</td>
<td>65</td>
<td>62</td>
<td>63</td>
<td></td>
</tr>
</tbody>
</table>

Note. Percentages with different subscripts differ at $p < .05$, based on Z test for difference between two proportions.

differences in comprehension levels as a function of deliberation for the other seven items, and there was only one significant difference in comprehension levels as a function of access to instructions. Surprisingly, after deliberations, participants who had access to written instructions understood the notion of preponderance of evidence less well than did participants without access to instructions ($z = 2.15$, $p < .05$).
In addition to collecting data related to instruction comprehension, we also assessed mock jurors' verdicts in the simulated automobile negligence case. Specifically, we asked individual jurors to decide both before deliberating and after deliberating whether the defendant was negligent. Here we examine the effects of comprehension level and jury instructions on those individual verdicts.

To assess the effect of comprehension level on verdicts, we divided participants into two groups using a median split based on their individual comprehension level. (The median comprehension level for individuals was 7 out of 10 questions answered correctly at both pre- and postdeliberation.). The low-comprehension group was comprised of mock jurors who scored below 7, and the high-comprehension group was comprised of mock jurors who scored above 7. (Jurors who scored 7 were excluded in order to create equal-sized groups.) We then conducted separate $2 \times 2 \times 2$ (Comprehension Level $\times$ Presence of Written Instructions $\times$ Negligence Verdict) hierarchical loglinear analyses for multilevel contingency tables on data from the predeliberation and postdeliberation questionnaires. The relevant individual negligence decision (either pre- or postdeliberation) served as the dependent variable for these analyses.

Analysis of the predeliberation verdicts did not reveal any significant effects of comprehension levels or the presence of written instructions on negligence verdicts. Analysis of the individual postdeliberation verdicts did reveal significant differences. Specifically, the loglinear model of best fit between observed and expected frequencies showed a main effect of comprehension level on individual negligence verdicts, $G^2(3, 323) = 2.01, p > .50, Z = 2.56$. Jurors in the low-comprehension group were more likely to find the defendant negligent (86%), compared to jurors in the high-comprehension group (74%), partial $\chi^2(N = 323) = 6.61, p = .01$. Although we cannot make an objective evaluation about the legal appropriateness of these verdicts, these results give some indication that comprehension of the jury instructions may play a role in verdict choice.

Discussion

Jurors' overall comprehension level was slightly above 60%; participants averaged 6.37 items correct out of 10 multiple-choice questions. Clearly, the instructions convey some information that is accessible and understandable to jurors, but not all of it is easily comprehended. Like Landsman et al. (1998), we found significant disparity in comprehension levels across questions. More than 80% of our mock jurors understood the legal definition of cause, the factors that should be used to determine negligence, which party has the burden of proof, and what happens if that party fails to prove its case. By contrast, only approximately

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8 Keep in mind, however, that chance accuracy was 25%.
one third of our mock jurors could recognize the definition of negligence or knew the legal standard associated with negligence.

What effects did written instructions have on comprehension levels? Like others, we found that the presence of written instructions had no helpful effects on jurors' understanding of these concepts. Although not statistically significant, jurors were slightly more likely to recognize the correct answers when they had no written instructions than when they did. And, on one item ("What percentage of the evidence corresponds to a preponderance of evidence?"), jurors who had just deliberated were significantly more likely to be wrong when they had written instructions than when they did not.

Some commentators have suggested that because jurors express the desire to have access to written instructions and because this is feasible at low cost to the courts, written instructions should be provided whenever possible (Diamond, 1993). We do not dispute this. However, we caution those who anticipate that the presence of written instructions will enable jurors to understand legal concepts that they would otherwise misinterpret or misunderstand. Even when jurors are looking directly at the instructions, they sometimes lack understanding. Providing jurors with a copy of abstract and convoluted instructions will grant them neither clarity nor wisdom.

We were also interested in the impact of deliberations on comprehension of these instructions, and assessed the effects of group discussion by comparing pre-deliberation comprehension levels with postdeliberation levels. In general, deliberation enhanced understanding of these concepts. On three items ("Who has the burden of proof?"; "By what standard must a civil plaintiff prove the case?"; and "What percentage equals a preponderance of evidence?"), comprehension levels were significantly higher after deliberation. This modest improvement in comprehension after deliberation has implications for jury researchers. The vast bulk of juror-related research is conducted on individuals who do not deliberate, typically under the assumption that group judgments are a direct reflection of individual jurors' predilections. Our finding suggests that data from individual jurors may underestimate jury performance.9 According to our data (but contrary to that of Landsman et al., 1998), individual jurors may be aided somewhat in the process of deliberating by the collective knowledge and ability of fellow jurors.

We acknowledge a limitation of the methodology that we used in the present study. We chose to assess comprehension via a multiple-choice questionnaire. Obviously, mere guessing can lead to a certain percentage of correct answers, making it difficult for us to get an exact read on comprehension levels. And surely, being able to distinguish the preferred answer in a multiple-choice format does not imply that one has complete understanding of the concept. Other researchers have opted to have jurors generate their own responses to

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9We thank Brian Bornstein for making this point clear to us.
comprehension questions (Lieberman & Sales, 1997), a procedure that will likely give lower comprehension levels.

On a positive methodological note, mock jurors in some studies deal with instructions in isolation, rather than in the context of an actual case. That was not true here. Rather, our jurors had instructions embedded in the reenactment of an actual case and needed to apply those instructions as they deliberated to a verdict. This procedure required them to do more than simply decipher the words. Jurors had to actually use the instructions in their decision-making process.

Despite the fact that jurors in this study were more likely to be correct than incorrect when they completed the comprehension questionnaires, we are not particularly optimistic that civil jurors in general are more often right than wrong in their understanding of jury instructions. First, jurors in our sample were well educated (89% had at least some college or vocational instruction). Actual jurors are likely to have lower education levels, and thus experience greater difficulty comprehending these instructions. Second, our mock jurors were presented with only four relatively short instructions. In many cases, the instructions are voluminous, seemingly repetitive, lacking in context and title, and written in unfamiliar and technical jargon. Although clearly an empirical question, we suspect that comprehension levels of these denser, more complicated instructions would be significantly less than 60%.

Many scholars of jury instructions have suggested that comprehension can be improved by careful revision of the standard pattern instructions using commonly accepted principles of psycholinguistics (e.g., minimizing or eliminating the use of abstract terms, homonyms, negatively modified sentences, and passive voice; and structuring the instructions in hierarchical or algorithmic fashion; Charrow & Charrow, 1979; Elwork et al., 1977). Some researchers have undertaken revision of instructions along these lines (e.g., Steele & Thornburg, 1988), and there is empirical evidence that comprehension of civil jury instructions can be improved by such rewriting. For example, Charrow and Charrow revised a subset of the California Civil Jury Instructions and found a 36% improvement in comprehension. Even with this improvement, however, participants understood only 59% of these instructions.

It may be exceedingly difficult to write (or rewrite) comprehensible jury instructions in complicated civil cases because legal doctrine in these cases is sometimes unclear even to lawyers and judges (American Bar Association, 1991). If lawyers and judges dispute the meaning of certain legal concepts, clearly we cannot expect jurors to excel.

But even in these cases (and certainly in simpler cases), small steps can and should be taken to enhance jurors' understanding of the law. Simpler words and phrases should be substituted for arcane and complex ones, instructions that set out legal terms that are defined only in subsequent instructions should be eliminated (Saltzberg, 1993), and jurors should be given some assistance in
understanding to which claims various instructions refer. If we expect civil jurors to make rational and defensible judgments about complicated disputes, then we must furnish them with instructions that are clear, succinct, and intelligible.

References


Jeansonne v. Landau et al. (1997). Unreported Denver County District Court case that was resolved by settlement before judgment was reached.


Jury Instructions

Negligence means a failure to do an act which a reasonably careful person would do, or the doing of an act which a reasonably careful person would not do, under the same or similar circumstances to protect others from bodily injury.

The word cause as used in these instructions means an act or failure to act which in natural and probable sequence produced the claimed injury. It is a cause without which the claimed injury would not have been incurred.

The burden of proof is on the plaintiff to establish his case by a preponderance of the evidence. A fact or proposition has been proved by a preponderance of the evidence if, considering all the evidence, you find it to be more probably true than not. If a party fails to meet his or her burden of proof or if the evidence weights so evenly that you are unable to say that there is a preponderance on either side, you must resolve the question against the party who has the burden of proof and in favor of the opposing party.

In determining damages, you should consider the following:

Any noneconomic losses or injuries incurred to the present time or which will probably be incurred in the future, including: pain and suffering, inconvenience, emotional stress, and impairment of the quality of life; and

Any economic losses incurred to the present time, or which will probably be incurred in the future, including: loss of earnings or impairment of earning capacity; and reasonable and necessary medical, hospital, and other expenses.
Appendix B

*Jury Instructions Questionnaire*

1. The definition of *negligence* focuses on
   a. the results of the defendant's actions.
   b. the defendant's financial condition.
   c. *the defendant's conduct*.
   d. all of the above.

2. The legal standard by which the defendant's negligence is evaluated is
   a. fairness.
   b. *reasonableness*.
   c. appropriateness.
   d. safety.
   e. all of the above.

3. *Negligence* means
   a. doing something that might cause bodily harm.
   b. not doing something that might prevent bodily harm.
   c. neither a nor b.
   d. *both a and b*.

4. According to the legal definition, an act caused an injury if
   a. it preceded the injury.
   b. it was done by the defendant.
   c. it was done by the plaintiff.
   d. *without it, there would have been no injury*.

5. In cases like this, the burden of proof is on the
   a. plaintiff.
   b. defendant.
   c. government.
   d. court.

6. In order to win a civil case, the plaintiff must prove his case by what standard?
   a. *preponderance of the evidence*
   b. clear and convincing evidence
   c. beyond a reasonable doubt
   d. all of the above

(appendix continues)
Appendix B (Continued)

7. Which of the following factors can be considered in determining whether the defendant was negligent?
   a. the extent of the plaintiff's injuries
   b. the amount of sympathy you feel for the plaintiff
   c. any remedial measures taken by the defendant since the wrongful act
   d. the defendant's financial condition
   e. none of the above

8. What happens if the plaintiff fails to meet his burden of proof in presenting his case?
   a. the defendant wins
   b. the parties tie
   c. the lawsuit is retired
   d. the judge decides who wins

9. What percentage of the evidence corresponds to preponderance of evidence?
   a. 50%
   b. 51%
   c. 75%
   d. 95%

10. What happens when the evidence weighs evenly on both sides?
    a. the plaintiff wins
    b. the defendant wins
    c. the lawsuit is retired
    d. the judge decides who wins

Note. The correct answers are italicized.