IMPROVING THE ABILITY OF JURORS TO COMPREHEND AND APPLY CRIMINAL JURY INSTRUCTIONS

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The complexity and linguistic construction of jury instructions can inhibit jurors' ability to comprehend and apply the law. Study 1 analyzes questions asked by actual deliberating jurors in order to identify sources of juror misunderstanding in criminal pattern jury instructions. Instructions concerning "reasonable doubt," criminal "intent," the use of evidence concerning prior convictions, and the general duties of jurors, are selected for further investigation. Study 2 uses videotaped trial materials to pinpoint linguistic problems that confuse jurors and interfere with their abilities to accurately comprehend and apply the selected pattern jury instructions. Available knowledge concerning psycholinguistics is then applied to rewrite the troublesome instructions; in addition, legal expertise is consulted to help assure that the rewritten instructions are legally valid. Study 3 demonstrates that the rewritten instructions improve jurors' understanding relative to Pattern or No instructions. Overall, the research indicates the availability to the criminal justice system of improved methods for instructing jurors accurately and effectively in the law.

In criminal cases, the right of accused persons to trial by jury is guaranteed under the Sixth Amendment to the U.S. Constitution. The jury's duties in a criminal trial are to decide the facts by examining evidence and testimony presented during trial and then to apply the law, as received through instructions from the judge, to reach a verdict of guilty or not guilty. From a legal perspective, the judge's instruction on the law is crucial information intended to provide the jury with the proper legal standards for reaching a verdict.[1]

A major problem for criminal defendants and for jurors is the fact that laypersons who serve on juries are often unable to understand the instructions on the law given by the judge. Misunderstanding arises from the syntax of the instructions, from the manner of presentation, and from the general

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[1] See, for example, *In re Winship* (1970), in which the U.S. Supreme Court required that in every criminal trial, the jury be instructed on the standard of proof needed to convict a defendant ("proof beyond a reasonable doubt").

unfamiliarity of laypeople with legal terminology (see, e.g., Elwork *et al.*, 1977; Strawn and Buchanan, 1976; Charrow and Charrow, 1979; Elwork *et al.*, 1982).

The language of any specific set of criminal jury instructions is determined by the presiding judge after a conference with the lawyers representing the defendant and the state. Each lawyer submits instructions he/she thinks should be given to the jury. The judge reviews these instructions and selects those that will actually be delivered to the jury. The judge may select any combination of instructions offered by the lawyers, or instructions not submitted by either party. The choice of jury instructions is crucial from a legal standpoint, because these instructions must present an accurate statement of the applicable law. A jury verdict may be appealed to a higher court based on a claim of error in instructing the jury if the appealing party submitted an instruction correctly stating the law and the judge rejected that instruction at the time instructions were being selected. Appeals based on errors in instructing the jury occur frequently in the practice of criminal law, and a verdict will often be reversed if the instructions to the jury have misstated the law. Since seemingly minor changes in wording have been the basis for successful appeals,[2] trial judges tend to adopt a conservative approach and are reluctant to deviate from language approved by higher courts, however difficult it might be for the untrained layperson to understand.

Over the years, appellate courts have issued numerous opinions on the proper form for particular instructions to take. Reviewing judges have struggled to achieve legal accuracy, but have largely bypassed or ignored one important question: do instructions written to be legally accurate convey a correct understanding of the law to the jurors they are intended to instruct?

An unfortunate side effect of appellate review based on errors in jury instructions has been the gradual emergence of instructions with convoluted sentence structure, legal jargon, and uncommon words. These instructions can be difficult to understand unless one has been trained in the law. As one Oregon trial judge put it, "When I read instructions to the jury, I hope that I will see a light go on in the jurors' eyes, but I

[2] See, for example, *People* v. *Garcia* (1976), in which some half-dozen erroneous variations in instructions on the meaning of "proof beyond a reasonable doubt" are reviewed. See also Orfield (1963).

never do."[3] Other commentators have more formally expressed similar views:

> Since error in instructing the jury often has been cited as the single most frequent cause for reversal . . . [a] cautious judge will often deliver his instructions in such a manner and form that, although the instructions accurately state the applicable law, they are heard by the jury as nothing more than a string of meaningless abstractions (Hames, 1975).

In some jurisdictions the problem of misunderstanding is aggravated by the practice of not allowing a written copy of the instructions to be available to the jury during deliberations.[4] One rationale for this restriction is that written instructions might unduly increase influence on the deliberations by more literate jurors, but there is no direct evidence testing this assertion.

I. INTERDISCIPLINARY PERSPECTIVE ON JURY INSTRUCTIONS

The problems raised by the need to instruct the jury can be analyzed in terms of two concerns: achieving legal accuracy and effectively conveying information to jurors. Both aspects of the problem must be taken into account in attempting to improve jury instructions.

In recent years, many state jurisdictions have responded to the problem of achieving legal accuracy in jury instructions by developing sets of standardized or "pattern" instructions. Nieland (1979) notes that the emergence of pattern instructions was motivated in part by a desire to simplify for lawyers and judges the process of selecting appropriate jury instructions and in part by a desire to reduce appellate court caseloads caused by claimed error in jury instructions. As a means of simplifying the lawyers' and judges' tasks in selecting instructions, the pattern instructions have generally been helpful. As a means of reducing the number of appeals based on erroneous instructions, pattern instructions have apparently had only marginal success. Illinois, for example, adopted civil

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[3] Personal communications to L. Severance.

[4] In criminal trials, Nieland (1979) reports that jurors are prohibited from receiving copies of instructions in seven states (Alabama, Louisiana, West Virginia, Minnesota, Pennsylvania, Maine, and Georgia). However, jurors must be provided with written copies of the judge's instructions in twelve states (Alaska, Arizona, Colorado, Idaho, Illinois, Missouri, New Mexico, North Dakota, Ohio, South Dakota, Tennessee, Washington, and Wyoming). In most other jurisdictions, the matter is discretionary with the trial judge. There is a clear suggestion in the available research that access to written instructions in the jury room improves the quality of deliberations (see Forston [1975]). This may be due in part to the optimal effects of presenting material in both visual and auditory modes (see Sales *et al.* [1977]).

pattern instructions in 1961 and criminal pattern instructions in 1968; in 1971, both sets of instructions were made mandatory when applicable to the facts of a case. Nieland (1978) analyzed 2,049 Illinois Supreme Court cases between 1956 and 1973 in order to evaluate the impact of those pattern instructions. He found that the pattern instructions had no reliable effect in reducing the total number of appeals, the number of times instructional errors were raised on appeal, or the number of reversals and retrials granted in the Illinois Supreme Court. Data from Arkansas and New York as well as Illinois, however, suggest that pattern instructions may reduce the number of reversals based on specific allegations that the law was incorrectly stated (see, generally, Nieland, 1979).

The comprehensibility of pattern instructions for jurors is still open to question. A few state jurisdictions have sought the advice of communications experts in developing pattern jury instructions, but most have not,[5] and pattern instructions continue to be criticized for not effectively communicating the law to jurors. One criticism is that pattern instructions are too abstract: because they are written to apply in general, they do not apply effectively to any case in particular. Another criticism is that because the language of pattern instructions derives from statutory and case law definitions, many pattern instructions continue to embody the same linguistic problems as their predecessors. An example embodying both of these types of problems is the Washington criminal pattern jury instruction on the legal definition of "knowledge." It reads, in part: "A person knows or acts knowingly or with knowledge when: (1) he or she is aware of a fact, facts, or circumstances or results described by law as being a crime . . ." (Washington Pattern Instructions—Criminal, 10.02). The use of five "or" conjunctions in the definition, adopted directly from statutory language, is linguistically awkward. The excessively abstract language of the five conjunctions derives from the attempt to make the definition apply to all possible situations. If the conjunctions are eliminated, twenty-four separate versions are required to describe the possible different situations to which the instructions would apply. In short, while the goal of accurately stating the law may be achieved with pattern instructions, the goal of effectively communicating the legal standards to the jury is not necessarily attained.

[5] The exceptions are Arizona, Florida, and Pennsylvania, which have made some efforts toward making pattern jury instructions understandable for laypersons. See O'Mara (1972) and Sales *et al.* (1977).

Recent empirical studies of juror comprehension provide dramatic evidence concerning the scope of the problem lay persons have in understanding pattern jury instructions. Strawn and Buchanan (1976) assessed juror comprehension of oral pattern jury instructions used in Florida criminal cases by showing a 25-minute sequence of videotaped instructions to a random sample of Florida jurors. Jurors who viewed the taped instructions were compared to a similarly selected group of jurors who did not receive the instructions. The jurors' understanding was measured by a combination of multiple choice and true/false test items. Strawn and Buchanan found that the videotaped instructions helped jurors' understanding relative to no instructions, but that instructed jurors still missed 27 percent of the test items and failed to show any improved comprehension for four of nine crucial content areas addressed by the instructions.[6] Strawn and Buchanan's work is limited by the fact that jurors in their research never viewed a trial and were never asked to apply the instructions they heard to a concrete factual situation. Actual jurors always receive and are asked to apply instructions in the context of specific evidence or facts. Strawn and Buchanan also did not try to extend their work to develop improved instructions. Nevertheless, their results point out the presence of linguistic problems in at least some pattern instructions.

Elwork, Sales, and Alfini (1977) examined juror understanding of Michigan civil pattern instructions concerning negligence by comparing groups that received no instructions, pattern instructions, or revised instructions that had been rewritten with the specific objective of clarifying meaning. Elwork *et al.* relied on numerous psycholinguistic factors in developing their revised jury instructions. Their primary changes were in terms of vocabulary, grammar, and organization. In their vocabulary changes, the investigators tried assiduously to avoid the use of legal jargon and uncommon words. They cited some of the hundreds of studies indicating that unfamiliar words are less easily perceived, remembered and comprehended. For example, instructions that include the words "violated" or "statutes" suffer from the general unfamiliarity with these words. Such terms were replaced with more common words like "broke" and "law."

[6] Instructed jurors failed to comprehend the meaning of "reasonable doubt," "information," "material allegation," and "breaking and entering" any better than the control group of jurors that had received no instructions.

The investigators also replaced abstract words with more concrete ones (e.g., accident rather than occurrence) and avoided using homonyms (words with more than one meaning, such as the word *respect*, which can be taken to mean "esteem" rather than "reference"). Negatively modified words were replaced when possible (e.g., "ignore" instead of "disregard"). Changes in grammar included the attempt to avoid self-embedded sentences, compound sentences, and awkward passive constructions. For example, "The defendant had a duty to . . ." was preferred to "It was the duty of the defendant. . . ."

Principles guiding changes in organization were employed to insure a logical structuring of the paragraphs. Both "hierarchical" and "algorithmic" structures were used. In a hierarchical structure, high-level concepts are broken down into their lower-level components and are then integrated. Myers and Jones (1979) discuss several examples of "hierarchical structuring." For example, suppose a defendant charged with robbery wishes to assert drunkenness as a defense. The jury would need to be instructed on the charge of robbery, the legal defense of drunkenness, and perhaps on how to evaluate witness credibility. Each of these issues in turn needs to be organized in a logical and coherent manner. For instance, the issue of drunkenness requires that certain conditions be met before the jury can accept the defense, and that the jury know that the effect of this defense is reduced culpability. Myer and Jones claim that the logical order for explaining drunkenness as a defense is to first state the effect of the defense and then present the requisite conditions for accepting the defense. In this way general concepts are broken down into component parts (e.g., drunkenness is presented in terms of effects and conditions). Another method of structuring involves an "algorithmic structure," in which ideas are presented so that the understanding of any particular idea follows from the understanding of previous ideas.

The principles advocated and used by Elwork *et al.* are similar to those that have been recognized by others who have written about jury instructions (e.g., Myers and Jones, 1979; Nieland, 1979). These other sources can be consulted for additional psycholinguistic theory utilized in the writing of clear jury instructions.

Elwork, Sales, and Alfini (1977) presented the groups receiving pattern or revised instructions with a videotape of a judge giving instructions. A third group of subjects received no

instructions. In one of their studies, the instructions were presented in the context of an entire trial in order to address the problems of external validity that arise where instructions are given in the absence of a factual situation. In that study, Elwork, *et al.* found no reliable differences between the no instructions and pattern instruction groups, and concluded that the pattern instructions were conveying very little new meaning to jurors. However, the instructions that had been rewritten in accordance with empirical knowledge of what elements affect perception, memory, and comprehension of language, significantly improved the understanding of the instructions.

The work of Elwork *et al.* helps to highlight the importance of distinguishing between comprehension of instructions and the ability to apply the appropriate legal criteria to the facts of the case. In their results, jurors' comprehension was improved by revising the instructions according to psycholinguistic principles, but there was no evidence of improvement in jurors' abilities to apply the correct legal criteria to the facts of the case. Since the task always faced by actual jurors is to apply law to the facts of a specific case, it is crucial that research efforts to improve jury instructions focus on jurors' abilities to apply, as well as comprehend, jury instructions.

Charrow and Charrow (1979) also investigated changes aimed at improving pattern jury instructions, using a somewhat unique approach. Starting with California Civil Jury instructions, these investigators presented instructions orally and asked subjects to paraphrase what they had heard. The paraphrasing task was used to identify comprehension difficulties. With this approach, a number of specific linguistic features that impede comprehension were isolated. Charrow and Charrow then rewrote the instructions, applying psycholinguistic principles to eliminate difficult features. The major psycholinguistic principles they applied included: (1) substituting active voice for passive voice; (2) inserting "whiz" phrases (". . . which is . . . or ". . . that is . . .") where needed; (3) substituting verbs (e.g., "we did") for nominalizations (e.g., "the doing of"); (4) eliminating multiple negatives; (5) reorganizing sentences to properly locate misplaced phrases and eliminate complicated embedding (e.g., "You must never speculate to be true any insinuation suggested by a question asked a witness" contains two clauses in the passive voice, which forces one to be embedded within the other); (6) reducing item lists and strings to no more than

two, where possible; (7) using directives such as "must," "should," and permissive such as "may" to help focus the juror's attention; (8) replacing uncommon words with ones that were more common in the language (e.g., "negligence must be imputed to the plaintiff" changed to "negligence would transfer to the plaintiff"); and (9) rearranging existing instructions into a more logical organization (e.g., modifying an introductory instruction to read "As you listen to these instructions of law, there are three things you must keep in mind: First . . . Second . . . Third . . ." in place of the original version that did not use this orderly organization). The instructions rewritten according to these principles substantially improved subjects' abilities to correctly paraphrase the key information embodied in the instructions. This procedure, like that of Strawn and Buchanan (1976), compromised external validity by not presenting the instructions in the context of a trial or factual situation so that jurors' abilities to apply legal criteria could be assessed. Nevertheless, it enabled Charrow and Charrow to focus on specific linguistic features as sources of comprehension difficulty in civil pattern instructions. The revised language introduced by Charrow and Charrow evidently improved comprehension; however, there is no evidence from their research as to whether or not the revisions affected jurors' abilities to apply legal criteria to specific facts.

More recently, Elwork, Sales, and Alfini (1982) have investigated comprehension of civil and criminal pattern jury instructions among large samples of jurors from the Midwest. Their results indicate that, prior to deliberating on a defendant's guilt or innocence in a criminal trial, the average juror may understand only half of the legal instructions presented by a judge. Elwork *et al.* conclude that many verdicts reflect misunderstanding of the juror's role and what the law requires. Building on these findings, they have developed a step-by-step approach to writing jury instructions that is designed for use by committees and others who must draft pattern instructions. Elwork *et al.* have left it to others to adopt and utilize their approach in the context of specific jurisdictions.

An important problem that arises in any approach to revising jury instructions is to assure that revisions in language that are made to improve meaning do not destroy the legal accuracy of the instructions as correct statements of the law. For example, the procedures used by Elwork *et al.* (1977) and Charrow and Charrow (1979) to revise instructions focused on

applying psycholinguistic principles without formally evaluating the legal acceptability of the rewritten instructions as statements of the law. Since the revised instructions are presumably targeted for use by courts, it is important that procedures for revising jury instructions include checks that the revisions comport with legal accuracy.

Certain instructions are used so commonly that it makes sense to develop one "best" version to be used in multiple jurisdictions, rather than waiting for the instruction to be written anew by each drafting committee. The focus of the present research is on identifying and improving such instructions by utilizing an empirically based interdisciplinary approach.

II. OVERVIEW OF THE PRESENT RESEARCH

The present approach extends previous work in several ways. First, we examined the difficulties that actual deliberating juries have in understanding and applying criminal jury instructions. We collected a one-year sample of court records for criminal jury trials and analyzed all questions sent by juries to judges during the course of actual deliberations. From this analysis we focused on selected criminal jury instructions that were legally crucial in every jurisdiction, frequent in use, yet apparently difficult for jurors to comprehend.

Second, we developed an experimental approach to pinpoint comprehension problems and difficulties in applying instructions. This approach utilized videotaped trials and instructions so that our experimental subjects were tested in a format similar to that in which actual jurors operate. We avoided the bare use of instructions without accompanying factual situations.

Third, we utilized two different measures of jurors' understanding: comprehension of material stated in the instructions and jurors' abilities to apply jury instructions to specific factual situations. These measures allowed us to more fully tap into the processes of understanding that actual jurors are expected to master.

Fourth, we applied an interdisciplinary approach to improve upon difficult-to-comprehend existing jury instructions. Starting with pattern instructions that are accepted as legally adequate, we have applied psycholinguistic principles to rewrite the instructions in order to enhance meaning. We have then asked lawyers and judges familiar with

criminal law to evaluate the rewritten instructions, and provide feedback to help assure that the psycholinguistic revisions do not erode the legal adequacy of the instructions as correct statements of the law. It is through this process of interplay between legal and psychological perspectives that improved instructions are developed. The revised instructions are tested and compared to existing pattern instructions in order to evaluate their effectiveness in communicating information.

The major product of this research is a set of revised criminal jury instructions that improve jurors' understanding of crucial legal concepts. These revisions focus on key instructions that are applicable in many jurisdictions and in many trials. Their utilization should better enable jurors to comply with the charge from the judge that, in reaching a verdict, they must decide the facts and correctly apply the law.

III. COMPREHENSION DIFFICULTIES AMONG DELIBERATING JURIES (STUDY 1)

A relatively direct way of identifying specific instructions that jurors have trouble understanding would be to monitor actual jury deliberations to learn just where confusion seems to arise. This approach is not possible, however: the law permits no one to monitor the deliberation process.[7]

After a verdict has been reached and jurors are dismissed, they may be permitted to discuss the case (Warren and Mauldin, 1980). It is unclear, however, how useful such post-decision recollections are for gaining insight into the deliberation process. Jurors who have committed themselves to a verdict may assimilate the group's views and have stronger recollections of aspects of the case that support the decision they have reached.[8]

Another source of information remains that may provide more reliable insights into the cognitive processes of deliberating jurors. Deliberating juries are permitted to submit written questions to the presiding judge when, during the

[7] "Researchers are forbidden to intrude upon the jury's working processes by recording and analyzing their private discussions" (Meyer and Rosenberg, 1971:105). Special thanks are extended to Maurice Rosenberg for his thoughtful input into the development of all of the research reported herein.

[8] For example, empirical work derived from cognitive dissonance theory (e.g., Festinger, 1964) suggests that once a person has made a decision, cognitions about the decision will subsequently be altered to justify the decision that has been made. As applied to jurors, such theorizing suggests that jurors will selectively attend to and recall facts supportive of the verdict reached, and selectively avoid or forget facts unsupportive of the verdict reached.

course of deliberations, they come upon questions which they cannot resolve among themselves. Although juries may not specifically be informed of this opportunity, the law permits the judge to receive and respond to such questions in order to facilitate the jury's performance of its duties and reduce the probability that the jury will base a verdict on a misunderstanding. Many judges are reluctant to elaborate on instructions that have been given to the jury for fear of creating an appealable issue. Nevertheless, where the questions concern instructions in the law, the trial judge is supposed to give supplemental instructions that are sufficient to guide the jury in its deliberations.[9]

At least some trial courts make a general practice of preserving written questions submitted by the jury and answers given by the judge. Such record keeping preserves the trial court's proceedings so that later, if appellate review is sought, a full and complete record is available to each party and to the reviewing Court.[10] Meyer and Rosenberg (1971) suggested an innovative and unobtrusive method for learning about jurors' perceptions and misperceptions as decision makers: evaluating the written record of questions that jurors ask during the course of their deliberations. They applied the method to analyze questions asked by jurors in the context of civil trials involving the issue of negligence.

We reasoned that a similar procedure would help illuminate some of the sources of comprehension difficulty among jurors in criminal trials. We hypothesized that a record of the questions posed by deliberating juries and the answers given by presiding judges would yield insight about what instructions are likely to be misunderstood and what approaches judges take to clarify misunderstanding.

Not all points of misunderstanding may be captured with this procedure. Jurors may sometimes think they have understood instructions when they have not. O'Mara and von Eckartsberg (1977) evaluated jurors' understanding of proposed Pennsylvania civil and criminal pattern instructions and found that jurors believed they understood better than they did according to the investigator's ratings of the jurors' understanding. While the jury as a group may be better at

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[9] See *Bollenbach* v. *United States* (1946); *Wright* v. *United States* (1957); *Walsh* v. *Miehle-Gross-Dexter, Inc.* (1967).

[10] It is not known by these investigators how widespread the practice is of preserving written questions asked by jurors. Clearly there are opportunities for cross-jurisdictional studies of the extent to which this practice is common.

recognizing areas of difficulty than are individual jurors, such biases in jurors' perceptions suggest that the questions they ask of judges may underestimate confusion. Thus, the procedures suggested by Meyer and Rosenberg (1971) probably provide a conservative estimate of juror misunderstanding of instructions.

Applying this approach in jurisdictions where written instructions are not regularly supplied to the jury would yield a mixture of questions based on lack of recall as well as misunderstanding. Applying the approach in a jurisdiction where jurors do receive a written copy of the instructions, such as in Washington state, should yield questions that reflect misunderstanding rather than misrecollection.

Method

Judges in the Superior Courts of King County, Washington, were asked to provide lists of all jury trials for a one-year period (July 1, 1979, to June 30, 1980) in which the jury, during the course of its deliberations, sent any written question to the judge. For each such case, the court's legal file was consulted to determine the following information:

(1) the exact question or questions asked by the jury;

(2) the specific jury instruction or topic giving rise to the question

(3) the judge's exact response to each question.

Analysis

The data thus collected were examined in detail and finally organized into categories that seemed to meaningfully summarize the nature of the questions and the sources of confusion. A first category of questions pertained to the elements of the crime charged. In criminal law, the commission of any crime involves a combination of a mental state (for example, intent, knowledge, recklessness, or negligence) and a behavioral act (for example, an unlawful entry into a building, or a taking of a car without permission).[11] Some of the jury questions sought to clarify definitions of mental state elements; others sought to clarify definitions of criminal behavioral acts; still other questions encompassed both elements.

[11] In legal terminology, these are referred to as the requirements of *mens rea* and *actus reus*, respectively.

A second broad category of questions pertained to the decision criteria to be used by the jury in weighing the evidence and arriving at a verdict. Within this category were questions about the meaning of reasonable doubt, questions about the requirement of a unanimous decision,[12] and questions concerning how to properly weigh the evidence. A third broad category of questions concerned how to properly reach a verdict when the defendant was accused of multiple crimes, or alternative (lesser included) crimes. A final category of questions were requests concerning evidence: questions about unprovided physical evidence, questions about oral testimony, or requests for materials not presented during trial (e.g., a map, a dictionary).

Results

Nineteen Superior Court judges from King County, Washington, provided information from their Court dockets for use in this study.[13] In all, for the one-year period under investigation, these judges presided over 405 jury trials. During the jury deliberations for those 405 trials, 99 juries (24.4 percent) submitted written questions to the presiding judge. Among those 99 juries that asked questions, 66 had heard criminal trials, and 33 had heard civil trials. These two groups of juries asked about the same number of questions per trial: $\bar{X} = 1.36$ for civil trials; $\bar{X} = 1.41$ for criminal trials. It is not known, however, whether juries in criminal trials were more or less likely to ask any question, since the proportion of criminal trials to civil trials for the total sample is not known.

Table 1 summarizes the questions submitted by the juries in the criminal cases and the answers given by the judges, for each of the four content categories described above. Where the jury's questions concerned particular pattern instructions, specific references to those instructions appear in the table.[14]

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[12] Washington law requires a unanimous verdict by 12 jurors in order to convict a criminal defendant. Some states allow a smaller jury size, not below six, or a less than unanimous decision criterion, such as 10 out of 12 jurors to convict. On the issue of jury size, see *Williams* v. *Florida* (1970). On the issue of unanimous vs. nonunanimous verdict, see *Johnson* v. *Louisiana* (1972).

[13] Special thanks are extended to Judge Francis E. Holman for facilitating data collection. Thanks are also extended to Judges Lloyd Bever, Warren Chan, H. Joseph Coleman, Eugene G. Cushing, Frank J. Eberharter, Robert M. Elston, William C. Goodloe, Frank D. Howard, David Hunter, Richard M. Ishikawa, Jerome M. Johnson, Arthur E. Piehler, Stephen Reilly, George H. Revelle, Frank H. Roberts, Jr., Horton Smith, Herbert M. Stephens, Liem E. Tuai, and Robert W. Winsor for providing information from their court dockets.

[14] All pattern instructions mentioned in Table 1 come from Washington Pattern Instructions—Criminal (WPIC), 11 Wash. Pract. Crim. (1977).

Table 1. Sources of Juror Confusion about Criminal Jury Instructions: Questions Juries Ask

Subject Matter	Questions Asked by the Jury	Answer Given by the Judge
A. *Elements of the Crime*		
1. Questions regarding mental state (*mens rea*)		
a. Intent, as defined in the WPIC pattern instruction 10.01.	Jury seeks clarification of definition of "intent,"	"No additional instructions will be given."
	"Does the [pattern] intent instruction mean 'to accomplish *any* action which results in a crime'?"	"The court cannot clarify any instructions."
	"We are 11-1, one person feels they need a better definition of intent."	"Please read the instructions again."
	Jury wants to know if intent can occur after a sequence of events has begun, or whether it must occur initially.	"Please read your instructions and continue your deliberations."
b. Inferring a criminal intent, where a defendant enters or remains unlawfully in a building (See RCW 9A.52.050.)	"Does 'may be inferred' mean that the jury is obliged to make this inference unless convinced that no criminal intent existed? If so, does this not conflict with Instruction No. 2, reasonable doubt (presumption of innocence, WPIC 4.01)?"	(Oral answer given; unknown.)
c. Knowledge	Is an emotional state, drunkenness, or blows on the head sufficient to legally absolve the defendant from knowledgeable thought and action?	"You have been instructed . . . The court cannot instruct you further."
	"To convict [of advancing prostitution], is it required for the defendant to know that _____ was under 18 years of age?"	"One must knowingly advance prostitution of someone who happens to be under 18 years of age."
2. Questions regarding criminal behavior (*actus reus*)	Jury seeks a legal definition of "imminent."	"No additional information will be given."

Subject Matter	Questions Asked by the Jury	Answer Given by the Judge
	Jury seeks clarification of "advances prostitution."	"You have received all of the instructions of the court. No clarification will be provided."
	Jury seeks clarification of "theft in the second degree."	"No further clarification will be given."
	Jury asks: "What is 'criminal conduct'?"	"Follow the instructions."
	"Does about to be injured mean according to immediate past action, or evidence of future action?"	"Review the instructions."
	"Please define 'dominion,' 'control,' and 'dominion and control.' "	"No additional instructions will be given."
	"What constitutes converting money to one's own use or the use of another: (1) Is there a time limit on returning the money? (2) If a person holding money suddenly ceases communication with the owner, does that constitute conversion?	Written clarification is provided: "(1) The law imposes no time limit . . . (2) Ceasing of communication may be considered together with all of the other evidence in determining whether the money was converted.
	"To convict of forgery, must the forged instrument be prepared in King County?"	"No."
	"What does 'on or about' mean?"	"It really means on June 7, 1979, in this case."
	"In establishing the value of an item, may we only use retail value, or may we use fair market value?" (charge was possession of stolen property).	"Please reread the instructions."
	"Can a simple assault verdict be reached when a weapon is used?"	"You have the instructions. I cannot instruct you further."
3. Questions involving *mens rea* and *actus reus*	"Is there such a thing as assault without intent?"	"See the instructions."

Subject Matter	Questions Asked by the Jury	Answer Given by the Judge
	"Does a first degree assault conviction require both intent and assault with a deadly weapon."	"I cannot instruct you further. You must read the instructions themselves."
	"Is there a legal difference between robbery and burglary."	"The defendants are not charged with robbery. Burglary is defined in the court's instructions."
	The jury expressed confusion about what the charge was (burglary in the first degree).	No response given.
	Where two different "To convict . . ." instructions are given, must all items of each be proved?	"No."
B. *Decision Criteria*		
1. The meaning of "reasonable doubt." (See WPIC 4.01.)	"Can reasonable doubt apply to the jury as a whole and not just to individual jurors?"	"Read the instructions. All twelve of you must agree to return a verdict."
	"Is there clarification for 'reasonable doubt' beyond what is given in the third paragraph [of the pattern instruction]?"	"You have already been instructed on the definition of 'reasonable doubt.'"
	"We request further clarification of 'reasonable doubt' as it pertains to credibility of the witnesses."	"You have already been instructed on the definition of 'reasonable doubt.'"
2. Requirement of a unanimous decision.	"If we agree unanimously on 14 of 17 counts, . . . does disagreement on the remaining three hang the jury on all counts?"	"No. See the court's instructions."
	"Must the verdict be unanimous?	"Please refer to the instructions given you by the court."
	HUNG JURIES: e.g., "We are unable to reach a verdict and request the court's instruction." (Five juries fall in this category.)	(No written response.)
3. Weighing the evidence:		

Subject Matter	Questions Asked by the Jury	Answer Given by the Judge
a. Credibility	"If part of the witnesses' testimony is perceived as unbelievable, should we generalize that all of their testimony is unbelievable and therefore non-credible?"	"You must rely on your instructions and your memories."
b. Use of limiting instructions	In response to an instruction, a jury seeks clarification as to the use of evidence admitted to show identity of a perpetrator, but *not* to show bad character or disposition to commit crimes.	"Follow the instructions and reach a verdict . . . There will be no additional instructions."
C. *Multiple charges*		
1. Lesser included offenses (see, e.g., WPIC 4.11)	"Can an accomplice be found guilty of a lesser included offense?"	"Please read the instructions."
	"Can the jury test the defendant for [a lesser included offense] without reaching a verdict on a greater charge?"	"Please review the instructions."
	"Does the jury have to agree unanimously on [a lesser included] or can some want the greater offense to render a verdict of guilty on the lesser offense?"	"Read the instructions. All 12 of you must agree for you to return a verdict."
2. Multiple counts	"Must we ballot separately on each count and keep the ballots?"	"Yes."
D. *Requests Concerning Evidence*		
1. Questions concerning physical evidence	"Please provide us with exhibit _____."	"You have been provided with all of the exhibits which have been admitted into evidence."
	"Can we see the police riot helmet?"	"It cannot be provided unless offered in evidence. Such was not done."
	"What was the victim's original written statement?"	The court refers the jury to its introductory instruction WPIC 1.01.

Subject Matter	Questions Asked by the Jury	Answer Given by the Judge
	The jury requests a videotape recorder and a videotape.	The judge grants the request for a videotape recorder but denies the request for the video tape. (!!)
2. Questions about oral testimony:	"What were the dates of [certain phone calls]?"	"You have received all of the evidence . . . use your collective memory."
	"Can we have a copy of witness _____ testimony?"	"Use your collective memory."
	"May we have a transcript? If not may we be given dates of photographs marked as exhibits?" (Note: similar requests were made by a total of three juries.)	"Not available. Rely on your collective memories of the testimony."
	"Did the doctor say that the victim had been raped or that there was evidence of intercourse?"	The jury is referred to its introductory instruction that it must review the evidence and decide (WPIC 1.02).
	"What time was _____ stopped by the police?"	"Please rely on your collective memories of the testimony."
	"How old was the victim?"	"Use your collective memory."
3. Extra-evidentiary	The jury requests a dictionary.	Request is denied.
	The jury requests a map.	"You have heard and received all of the evidence which will be provided."

The data in Table 1 show several sources of confusion for actual juries during deliberations in criminal trials. First, it is apparent that there is confusion with regard to jury instructions about the elements of the crime that need to be proved in order to convict. In particular, a number of juries sought clarification concerning the definition of "intent," a mental state element included in the legal definition of many crimes.[15] Three of those juries needed a more complete

[15] The Washington pattern instruction given to juries when "intent" is an element of an alleged crime states: "A person acts with intent or intentionally when acting with the objective or purpose to accomplish a result which constitutes a crime" (WPIC 10.01).

definition of intent, while a fourth jury asked about the timing of intent. In all, seven questions were aimed at clarifying the *mens rea* or mental state elements, eleven questions were aimed at clarifying *actus reus* or behavioral elements, and an additional five questions indicated confusion about the fact that both mental state and behavioral elements are required to prove a crime.

A second group of questions showed apparent confusion over instructions about how to reach a verdict. A total of twelve questions asked by deliberating juries concerned what decision criteria should be used to arrive at a verdict. Of these questions, three sought clarification of the meaning of "reasonable doubt."[16] Seven more sought clarification about the requirement of a unanimous decision and/or what should be done in the event a unanimous verdict could not be reached. Two questions were asked about how to properly weigh the evidence: one asked about how to properly evaluate a witness' credibility; the other asked for further clarification concerning a limiting instruction which asked the jury to use certain evidence on the issue of identity, but not as evidence of bad character or disposition to commit crimes.

A third group of questions showed confusion among jurors about how to reach a decision when multiple charges were involved. Three of these questions concerned how to reach a verdict where lesser included charges were involved, and one question concerned how to properly decide the case when the same defendant was charged with multiple counts. A final group of questions, unrelated to jury instructions, concerned physical evidence and oral testimony. Among these, there were four requests for physical evidence that had not been admitted, eight questions as to what a witness had said during the trial, and two requests for evidence not presented at trial (a map, a dictionary).

These questions represent half of those asked; miscellaneous questions, such as requests to call home, do not appear in the table, because they are not relevant to the issue of confusion about jury instructions.

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[16] Washington Pattern Instruction—Criminal, no. 4.01, instructs the jury concerning the burden of proof, presumption of innocence, and meaning of reasonable doubt. Concerning "reasonable doubt" it states: "A reasonable doubt is one for which a reason exists. A reasonable doubt is such a doubt as would exist in the mind of a reasonable person after fully, fairly and carefully considering all of the evidence or lack of evidence. If, after such consideration, you have an abiding belief in the truth of the charge, you are satisfied beyond a reasonable doubt."

The judges' responses to the juries' questions are also noteworthy. With unexpected homogeneity, the judges answered questions seeking clarification of instructions by simply referring the jury to the instructions without further comment.[17] A similar pattern emerged among answers concerning the evidence, with most judges simply telling the jury to rely on their collective memory.

Discussion

Nearly one quarter of the 405 juries included in the sample requested some written clarification, and a significant number of those requests for clarification pertained to pattern jury instructions. Among the criminal pattern instructions that seem most problematic are those defining "intent" and "reasonable doubt." Inasmuch as many crimes require proof of intent to commit a crime, and every element of every crime must be proved beyond a reasonable doubt,[18] there is a clear need to focus on comprehension problems inherent in these instructions and to seek ways of improving their meaning.

Some of the general confusion among jurors might be dispelled if the general introductory instruction, which explains their duties and responsibilities, were clearly understood. At least two judicial responses to questions specifically referred the jury to the general introductory instruction,[19] and many other judicial responses referred the jury to their instructions generally. Clarification of instructions concerning lesser included offenses and multiple counts also seems warranted on the basis of juror confusion observed in this study.

Earlier it was noted that judges have a responsibility to clarify for a jury instructions in the law that are necessary to its deliberations. The present data raise a question of whether there is sufficient judicial concern and responsiveness to juries' comprehension difficulties. While simply referring the jury to the instructions may be appropriate in some instances, a general policy of refusing to attempt clarification may be inappropriate and possibly subject to challenge on appeal. For example, the U.S. Supreme Court stated in *Bollenbach* v. *U.S.* (1946):

> When a jury makes explicit its difficulties a trial judge should clear them away with concrete accuracy . . . the trial judge had no business

[17] In Washington, a written copy of the judge's instructions accompanies the jury into the jury room and is available during deliberations.

[18] See footnote 1.

[19] Washington Pattern Instruction—Criminal, no. 1.02.

to be "quite cursory" in the circumstances in which the jury here have asked for supplemental instruction.

It is clear from the present data that some juries feel they need additional guidance in order to meet their responsibilities to reach a verdict based on proper determination of the facts and correct application of the relevant law.

Participants in the court system may find an examination of these data instructive. Judges may wish to evaluate their own responses to jury questions in light of these data. Lawyers involved in criminal trials may gain useful insights into jurors' comprehension difficulties from these data and use those insights to formulate ways of addressing problems of miscomprehension in *voir dire* questions[20] and in structuring closing arguments to the jury.[21]

IV. IDENTIFYING COMMUNICATION DIFFICULTIES IN CRIMINAL PATTERN JURY INSTRUCTIONS (STUDY 2)

The research reported in Study 1 identified particular pattern jury instructions which evoked questions among jurors. To the extent that instructions from the judge about the law do not convey clear meaning, jurors are left to make decisions in the absence of full understanding of the law. Even though the jury is "instructed," verdicts may still be based on idiosyncracies of particular jurors, misunderstandings about the relevance of particular facts, and incorrect interpretations of the proper decision criteria. The administration of justice will be improved to the extent that recurring difficulties in understanding instructions can be identified and eliminated.

In this study, three specific instructions and one general instruction were singled out for further investigation based on their wide usage and apparent difficulty. An experimental approach was utilized to identify specific sources of difficulty for jurors. Specifically, we explored the influence of jury instructions on two types of abilities in jurors: (1) the ability to comprehend the meaning of instructions by being able to

[20] *Voir dire* occurs prior to a trial, when lawyers for each side, and/or the judge, question prospective jurors for possible bias that might affect their judgment. *Voir dire* is used by many trial attorneys as an opportunity to educate the jury as to the meaning of certain instructions and as to their duties during the trial and deliberations.

[21] Closing arguments occur after all of the evidence has been presented, and are the one opportunity during a trial when the attorneys can emphasize and explain instructions they think are important for the jury to understand. Although jurors are usually instructed that the lawyers' arguments are not evidence, many trial attorneys consider closing arguments to be an important part of the advocacy process, capable of swaying jurors' perceptions of the case.

distinguish correct from incorrect expressions of their meaning; and (2) the ability to apply instructions to specific fact patterns in order to reach legally correct decisions. In short, our major goal was to pinpoint sources of misunderstanding among the selected criminal jury instructions as a starting point for later improvement of those instructions.

Choice of Pattern Instructions

The pattern instructions tested in this study were ones concerning the meaning of "reasonable doubt"[22] and "intent,"[23] and an instruction on limiting the use of evidence concerning prior conviction.[24] In addition, an introductory instruction concerning the jurors' general duties was evaluated.[25]

Reasonable doubt In Study 1, deliberating juries showed confusion as to the meaning of "reasonable doubt" by the questions they asked. The meaning of reasonable doubt is closely linked to the presumption of innocence. In the United States, an accused person is presumed to be innocent until proven guilty. The prosecution bears the burden of proving guilt, and a strict standard of proof—proof beyond a reasonable doubt—is needed to convict. The limited amount of behavioral research done on the reasonable doubt standard corroborates the data from Study 1 in suggesting that its meaning is unclear to jurors. Buchanan, Pryor, Taylor, and Strawn (n.d.) found that Florida's reasonable-doubt pattern jury instructions made absolutely no difference in comprehension measures of the concept when jurors receiving the instruction were compared to jurors receiving no instructions.[26] The impact of instructions on application to concrete fact situations was not assessed in that study. In contrast, Kerr, Atkin, Stasser, Meek, Holt and Davis (1976) varied the stringency of the standard implied by the definition of reasonable doubt in the context of a factual situation and found that the variations produced a difference of over 26 percent in mock juror conviction rates. They further

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[22] See footnote 16.

[23] See footnote 15, and Washington Pattern Instruction—Criminal, no. 4.01.

[24] The pattern instruction used was Washington Pattern Instruction—Criminal, no. 5.05, which states: "Evidence that the defendant has previously been convicted of a crime is not evidence of the defendant's guilt. Such evidence may be considered by you in deciding what weight or credibility should be given to the testimony of the defendant and for no other purpose."

[25] See Washington Pattern Instruction—Criminal, no. 1.02.

[26] Buchanan, R.W., Pryor, B., Taylor, K.P., and Strawn, D.U. Legal communication: An investigation of juror comprehension of pattern instructions. Unpublished report.

observed that in the absence of any instruction, the meaning of the concept of reasonable doubt was not obvious to their college student subjects. In light of apparent juror confusion—and because the U.S. Supreme Court has held that all criminal defendants are entitled to have the jury instructed that, in order to convict, every element of a crime charged must be proved "beyond a reasonable doubt"[27]—we included a pattern instruction concerning reasonable doubt in this study. The pattern instruction we selected describes both the presumption of innocence and reasonable doubt (see Table IV). Understanding of the combination of these two concepts was tested by our dependent measures.

Intent In jurisdictions throughout the United States, the mental state of intent is a necessary element in the definition of numerous crimes. A person may be innocent of a crime if certain admitted acts occurred in the absence of criminal intent, but guilty if those same acts occurred with intent to accomplish an illegal result. Proof of criminal intent is likely to be required in many criminal trials. The data examined in Study 1 indicated that deliberating juries are left with questions about the meaning of "intent" even after receiving a pattern instruction defining the concept. On the basis of its frequent use as a legal concept and the apparent comprehension problems it poses for jurors, we included a pattern instruction concerning "intent" in this study.

Limiting the use of prior convictions The rules of evidence in many jurisdictions state that if a defendant (or any witness) takes the stand to testify, evidence of the witness' prior convictions may be introduced for the purpose of attacking his or her credibility, if the prior crime was a felony or involved dishonesty or false statement.[28] Where such evidence is presented, the jury is supposed to use that evidence only to decide whether or not the defendant is telling the truth, and not as a basis for inferring that the defendant has a general criminal disposition or may have acted in conformity with his/her prior criminal behavior. When prior convictions are

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[27] See footnote 1.

[28] Federal Rule of Evidence 609, used in federal courts and adopted in many state jurisdictions, permits the use of a prior conviction to impeach a witness, if it is elicited from him/her or established by public record during cross-examination and if the prior conviction was for a felony (a crime punishable by death or imprisonment in excess of one year), or if the prior conviction was for a crime involving dishonesty or false statement, regardless of the punishment.

admitted into evidence, a limiting instruction is given to the jury to explain the proper way in which that evidence is to be used.[29]

Despite the strong legal presumption that juries are capable of following such instructions, many defense attorneys discourage defendants with admissible prior convictions from testifying. They fear that those convictions will unduly affect the jury as evidence of present guilt rather than as evidence to be used in assessing the defendant's credibility. In short, there is concern whether jurors understand limiting instructions, and further concern whether jurors can follow the instructions if they understand them. In Study 1, only one deliberating jury asked a question concerning the use of a limiting instruction. That one question may not be indicative of the frequency and magnitude of the problem. There is no record of how many juries received limiting instructions and, moreover, the instruction may not create a conscious problem if jurors frequently simply ignore or discount the judge's directive.

Some of the available psychological literature has addressed the extent to which jurors can successfully be instructed to ignore information for some purposes but not for others. Doob and Kirshenbaum (1973) tested whether mock jurors' verdicts could be affected by instructions limiting the use of prior conviction evidence. They presented mock jurors with a written description of testimony, including evidence of prior convictions, and then provided limiting instructions to half the jurors. The researchers found that the limiting judicial instruction had no effect on the decisions of the jurors.

General instructions concerning the jury's duties Judges normally instruct the jury concerning its general duties, in addition to giving instructions on the law pertinent to particular allegations against the defendant. We included a general instruction in the study because it is invariably given in actual cases. Furthermore, if other instructions in frequent use are revised, it may be desirable to revise the general instruction so that it is not obviously different in its language, terminology, or syntactic structure.

Overview

Subjects were presented with a videotaped burglary trial followed by either (1) no instructions; (2) general pattern

[29] The Washington Pattern Instruction—Criminal, no. 505 provides a typical example of such an instruction (see footnote 24).

instructions concerning the jury's duties, but excluding any specific definitions; or (3) general pattern instructions plus the three additional specific pattern instructions (described above) pertaining to "reasonable doubt," "intent," and the limited uses of evidence concerning prior convictions. After observing the videotaped trial and being exposed to an instruction condition, half of the subjects deliberated to a verdict and the other half did not. Thereafter, all subjects completed questionnaries designed to measure their comprehension of and ability to apply the concepts embodied in the instructions. Thus, the study combined three versions of an Instruction variable (No, General, General + Specific) and two versions of the deliberation variable (No deliberation, Deliberation) to create six experimental groups.

Methodology

Two hundred and sixteen (216) students from the University of Washington who were also registered voters and thus subject to being called for jury duty, participated in this research. Subjects participated in groups of three or more. In all cases, there were six persons in each deliberating jury.[30] A total of 36 persons participated in each of the six experimental groups.

The videotaped trial was a burglary trial in which the accused allegedly took tools from a construction site. The trial was an enactment, occurring in an actual court with an actual judge and credible actors as witnesses. The facts were intentionally balanced so that the defendant was not clearly innocent or guilty. The defendant in the trial had one prior conviction, which he admitted to while being questioned as a witness. The trial lasted one hour.[31]

All instructions used in the study were pattern instructions developed for juries in criminal trials in the state of Washington.[32] The No Instruction groups received no instructions. The General Instruction groups heard a tape-recorded general introductory pattern instruction at the close of the videotaped trial. The General + Specific Instruction

[30] This rule was followed to keep the procedures consistent with the rule established in *Ballew* v. *Georgia* (1978), that juries of less than six persons in criminal trials are unconstitutional.

[31] Thanks are extended to Dr. Barbara Hart, University of Texas, who made the videotape available for our research.

[32] The instructions included Washington Pattern Instruction—Criminal (WPIC) no. 1.02 (General Introductory); 4.01 (Burden of Proof; Presumption of Innocence; Reasonable Doubt); 5.05 (Use of Prior Conviction to Impeach Defendant); and 10.01 (Intent).

groups heard the general instruction plus instructions on reasonable doubt, the element of intent, and the limited use of prior convictions.[33]

When subjects arrived for the experiment, they were led into a room in which a videotape recorder and monitor were located. The experimenter explained that they would be viewing a videotape of an actual trial after which they would be asked to reach a verdict concerning the innocence or guilt of the accused. The videotaped trial was then played. At the close of the trial, after all of the evidence had been presented by both sides, subjects receiving General or General + Specific Instructions listened to tape recorded instructions on the law. Subjects in the No Instruction group did not hear or receive any instructions.

Half of the participants were randomly assigned to deliberate and the other half were not. Those in the deliberating groups were given a written set of the judge's instructions, asked to choose a foreperson, placed in a room to deliberate, and asked to notify the experimenter when a verdict had been reached. They were then left to deliberate for up to thirty minutes. All deliberations were tape recorded. Upon reaching a verdict, or after 30 minutes, each subject was given a questionnaire to complete. Subjects in the No Deliberation condition were each given a questionnaire immediately after the trial (and instructions) had been presented.

All subjects responded to identical questionnaire items. The questionnaires first elicited a verdict of "guilty" or "not guilty" and then asked subjects to indicate how certain they were that their verdict was correct. Additional series of items measured comprehension of the concepts embodied in the instructions, ability to apply those concepts to novel fact situations, and recall for details of the facts presented in the videotaped trial.

The comprehension measures were presented in a multiple choice format similar to that used by Strawn and Buchanan (1976). Nine items tested general understanding of a juror's role. Nine items probed subjects' understanding of the concepts embodied in the "reasonable doubt" instruction; five items involved the instruction limiting the use of prior

[33] Thanks are extended to the Honorable Charles Z. Smith, Professor of Law and former Superior Court Judge, who recorded the instructions used in this research.

convictions; and seven items involved the "intent" instruction.[34]

The application measures consisted of ten single-paragraph descriptions of factual situations, each of which asked for a judgment that tested subjects' abilities to use concepts embodied in the pattern instructions in order to reach a legally correct decision.[35] Subjects indicated on a scale ranging from −3 (Strongly Disagree) to +3 (Strongly Agree) whether they concurred with a proposed solution at the end of each factual situation. Responses to 30 multiple-choice recall items involving information presented in the videotaped trial were summed for each subject to yield a measure of recognition for details of the videotaped trial. Finally, the tape recordings of the deliberations were content analyzed to test whether the quality of deliberations was affected by the instruction manipulations.

Results

Verdicts Overall, 118 subjects (54.6 percent) found the defendant guilty, and 98 subjects (45.4 percent) found the defendant not guilty. There were no significant effects of the independent variables on verdicts, although there was a significant two-way interaction for the measure of verdict certainty, $F(2,210) = 3.94$, $p<.02$: deliberating jurors who had no instructions were significantly more certain of their verdicts than were nondeliberating jurors who had no instructions, $p<.05$ by Neuman-Keuls test.

Comprehension The comprehension data for each type of instruction, as well as the overall results, are summarized in Table 2 as percentages of erroneous responses to test items. Across all multiple-choice comprehension measures, subjects who received No Instructions erred 35.6 percent of the time; subjects with General pattern instructions erred 34.7 percent of the time; and subjects with General + Specific pattern

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[34] An example of a comprehension measure for "intent" is the following:
Intent to commit a crime:
(a) cannot be proved without the testimony of a psychologist;
(b) cannot be proved since it rests within a person's mind;
(c) is assumed whenever a crime is committed;
(d) can be proved when a person acts with a clear purpose.
(d) is the correct answer.

[35] An example of an application test item for "reasonable doubt" is the following:
A used car dealer claims that the accused hot-wired one of his cars and drove it to the ocean 200 miles away, where it was found the next day. The accused has the burden of proving beyond a reasonable doubt that he was not in the vicinity at the time of the alleged crime, nor ever in the stolen car.

instructions erred 29.6 percent of the time, F (2,210) = 5.04, p<.007. The difference between the No instructions and General + Specific instructions groups was significant, p<.05 by Neuman-Keuls test.

Table 2. Errors in Comprehension (Study 2)* **

TARGETED LEGAL CONCEPT	INSTRUCTION CONDITION		
	No	General	General + Specific
Intent	$39.1\%_{a}$	$36.9\%_{a}$	$35.2\%_{a}$
Reasonable Doubt	$32.1\%_{a,b}$	$34.0\%_{a}$	$26.2\%_{b}$
Limiting Instruction	$52.0\%_{a}$	$62.5\%_{a}$	$52.0\%_{a}$
General Instruction	$27.5\%_{a}$	$20.8\%_{b}$	$19.1\%_{b}$
Overall	$35.6\%_{a}$	$34.7\%_{a,b}$	$29.6\%_{b}$

*Percentage of incorrect responses to multiple choice items testing each concept.

**Row means with different subscripts differ at the .05 level of significance (Neuman-Keuls Test).

"Reasonable doubt" was the only target concept for which a specific instruction significantly reduced errors. Measures for comprehension of reasonable doubt showed an error rate of 32.1 percent with No instructions, and 34 percent with the General instruction only, but a somewhat reduced error rate of 26.2 percent with General + Specific instructions, which included a pattern instruction about the meaning of reasonable doubt, F (2,210) = 4.03, p<.02. Post hoc tests revealed that there was a significant difference between the General instruction group and the General + Specific instruction group, p<.05 by Neuman-Keuls test.

Understanding of "intent" and of how to limit the use of evidence of prior convictions were not significantly affected by the availability of instructions. Miscomprehension of "intent" was substantial among subjects receiving No instructions (39.1 percent), and was slightly but not significantly reduced among subjects who received the General instruction (36.9 percent) or the General + Specific instructions (including a pattern instruction about "intent") (35.2 percent), F (2,210) = 0.87, p = n.s. Similar results were obtained for items measuring comprehension of limiting instructions. Persons receiving No instructions showed substantial miscomprehension (52 percent error rate); persons receiving the General instruction erred on 62.5 percent of the comprehension measures; and persons receiving the General + Specific instructions (including a pattern instruction about limiting the use of prior convictions)

performed no differently than persons receiving No Instructions (52 percent), F (2,210) = 2.26, p = n.s.[36]

The General instruction helped subjects to comprehend their general roles as jurors: subjects receiving No instructions showed 27.5 percent errors; errors were reduced to 20.8 percent when the General instruction was presented, and to 19.1 percent when the General + Specific instructions were presented, F (2,210) = 5.29, p<.006.

Opportunity to deliberate caused only one significant effect: comprehension for "intent" was better for subjects who deliberated than for those who did not (34.1 percent errors, as compared to 40 percent errors), F (2,210) = 5.77, p<.02.

Table 3. Application Measures (Study 2)*

A. Degree of Agreement with Correct Application**

TARGETED LEGAL CONCEPT	INSTRUCTION CONDITION No	General	General + Specific
Intent	$.80_a$	$.39_b$	$.60_{a,b}$
Reasonable Doubt	$.94_a$	$.89_a$	1.15_a
Limiting Instruction	$.27_a$	$.08_a$	$.66_b$
Overall	$.69_{a,b}$	$.45_a$	$.78_b$

**Scale values range from −3 (strongly disagree) to +3 (strongly agree).

B. Mean Percentage Correct on Application Measures***

TARGETED LEGAL CONCEPT	INSTRUCTION CONDITION No	General	General + Specific
Intent	$65\%_a$	$57\%_a$	$58\%_a$
Reasonable Doubt	$62\%_a$	$60\%_a$	$66\%_a$
Limiting Instruction	$45\%_a$	$44\%_a$	$56\%_b$
Overall	$58\%_a$	$54\%_a$	$60\%_a$

***A response was correct if it was a 1, 2, or 3 in the correct direction.

*Row means with different subscripts differ at the .05 level of significance (Neuman-Keuls Test).

Ability to apply instructions In Table 3, subjects' abilities to correctly apply the targeted legal concepts are shown in terms of the strength of agreement or disagreement with legally correct applications (Part A), and in terms of the average percentage of subjects' responses that indicate accurate agreement or disagreement, regardless of the strength of that

[36] Fewer test items on this measure made the power of this test somewhat lower than the tests involving the other instructions.

agreement or disagreement (Part B). The data in Table 3A indicate that, across all items, subjects agreed more strongly with the correct solutions when specific instructions were available than when they were not, $F\ (2,210) = 4.01$, $p<.02$. Neuman-Keuls tests indicated that the difference between the General instruction group and the General + Specific instruction group was significant, $p<.05$.

From the analysis of the specific target concepts, it appears that instructions diminished agreement with correct applications of "intent," $F\ (2,210) = 2.99$, $p<.05$; the group receiving the General instruction performed significantly worse than the group receiving No instructions, $p<.05$, by Neuman-Keuls test. The instruction manipulations had no significant impact on applications of "reasonable doubt," $F\ (2,210) = 0.85$, p = n.s. However, instructions enhanced agreement with correct applications of limiting instructions, $F\ (2,210) = 5.77$, $p<.004$, with the group receiving General + Specific instructions agreeing more with correct applications than the groups receiving No instructions or only the General instruction, in both cases $p<.05$ by Neuman-Keuls test.

The data in Table 3B show only one significant result: a greater percentage of subjects correctly apply the limiting instruction when they have received a specific limiting instruction than when they have not, $F\ (2,213) = 4.14$, $p<.01$. Except for this finding, the instructional variations had no other significant effects on subjects' abilities to apply the law. There were no significant effects of Opportunity to Deliberate on the application measures in this study.

Recall There were no significant effects of the independent variables on recall for details of the trial.

Quality of deliberations The impact of the independent variables on the quality of deliberations was evaluated by examining the content of the deliberations on a series of dependent measures formed by the content of statements made during deliberations. Statements were coded into the four content categories formed by the instructions under examination (general duties of jurors, intent, reasonable doubt, limiting the use of prior convictions). Deliberations were also coded for the number of "arguments/opinions favoring guilt" and "arguments/opinions favoring innocence." Juror statements asking for or offering clarification of facts constituted another separate category of coded statements, and

statements that were irrelevant to the trial formed a final measure.

Two judges listened independently to the tape recordings of the deliberations and counted the number of times deliberating jurors made statements falling into each of the above categories. Inter-judge reliabilities were calculated, and the judgments for each category were then analyzed for any effects caused by the instruction manipulations. Inter-judge reliability coefficients ranged considerably, from .86 (arguments/opinions favoring guilt) to .20 (general duties of jurors), with an average inter-judge reliability of .68 for all coded items. Analyses revealed no significant effects of the instruction manipulations on the quality of deliberations.

Discussion

The data from Study 2 show that legally untrained people have some difficulty understanding or applying pattern instructions. Presenting specific instructions about the target concepts reduced some errors, but still left an overall error rate of 29.6 percent for comprehension measures, and an overall level of agreement with correct applications of the instructions that was not significantly different from receiving No instructions. Overall, these data suggest that the standard pattern instructions do not convey the full meaning they are intended to convey. Assuming that the average juror is not better educated than our college student subjects, there is little likelihood that actual jurors would learn more from pattern instructions than did our subjects. Clearly the results suggest that there is room for improvement through revising the instructions to convey meaning more effectively.

V. ENHANCING THE MEANING OF CRIMINAL JURY INSTRUCTIONS (STUDY 3)

The purpose of Study 3 was to develop and empirically test revisions in the target instructions to enhance subjects' comprehension and ability to apply the instructions. In developing revised instructions, we employed both psychological and legal perspectives.

From a psychological perspective, the work of Elwork *et al.* (1977), Charrow and Charrow (1979), and Elwork *et al.* (1982) suggested specific psycholinguistic principles that might be applied to eliminate problematic language, simplify meaning, and present target information in a clear, logical way. On the other hand, a survey of appellate decisions in which trial error

was claimed because of incorrect instructions to the jury indicated the potential folly of tampering with existing instructions to any great degree for fear of creating language that, however psycholinguistically improved, would not be likely to survive appellate review. For example, *People* v. *Garcia*, (1976) cites at least seven proposed versions of the "reasonable doubt" instruction and articulates a typical judicial response to revised jury instructions:

> Well intentioned efforts to "clarify" and "explain" [reasonable doubt] criteria have had the result of creating confusion and uncertainty, and have repeatedly been struck down by the courts of review. . . .

The task of revising jury instructions must thus be not only to enhance meaning but also to retain legal sufficiency. This requires input from both psychological and legal perspectives. We first examined the standard pattern instructions in light of psycholinguistic principles and proposed changes in the language to improve meaning. In general we tried to follow Grice's maxim of quantity: say no more and no less than is necessary to convey the message (1975). The specific principles for improving understanding identified by Elwork *et al.* (1977), Charrow and Charrow (1979), and Elwork *et al.* (1982) were important sources of guidance for this phase of our work.

Second, some of the revisions we made were suggested by an analysis of subjects' errors in comprehending existing instructions. On the basis of an item analysis of the dependent measures employed in Study 2, we identified specific sources of confusion in existing instructions. For example, with regard to "intent," many subjects (29 percent) indicated doubts as to whether a mental state such as intent could ever be proved beyond a reasonable doubt, even though the law clearly intends such a possibility. We made some additions to existing pattern instructions in order to reduce this type of apparent confusion.[37] The intent of these revisions was to address apparent inadequacies in the existing instructions' clarity of legal concepts.

These proposed changes were then submitted for comment and criticism to two legal scholars familiar with the issues relevant to criminal jury instructions in order to seek validation

[37] In defining "intent" our revised instruction read: "A person acts with intent or intentionally when he or she acts with the objective or purpose to accomplish a result that is a crime. It is possible to prove intent beyond a reasonable doubt by either direct or circumstantial evidence." Likewise, in the "reasonable doubt" instruction we substituted "A reasonable doubt about guilt is not a vague or speculative doubt but is a doubt for which a reason exists" for "A reasonable doubt is one for which a reason exists."

from a legal perspective as to the probable adequacy of the revised instructions.[38] Further revisions were made as necessary to satisfy their concerns. The resulting work product, instructions with psycholinguistic improvements that were still legally proper in the judgment of our legal experts, were the focus of empirical investigation in Study 3. The results of these procedures appear in Table 4, where standard pattern instructions and our revisions are listed side by side.

Table 4. Examples of Pattern Instructions and Their Revised Counterparts

TOPIC	PATTERN INSTRUCTION	REVISED INSTRUCTION
Use of Prior Conviction to Impeach a Defendant (WPIC 5.05)	Evidence that the defendant has previously been convicted of a crime is not evidence of the defendant's guilt. Such evidence may be considered by you in deciding what weight or credibility should be given to the testimony of the defendant and for no other purpose.	Evidence that the defendant has previously been convicted of a crime is not evidence of the defendant's guilt in this case. You may not use this evidence in deciding whether he or she is guilty or innocent. You may use evidence of prior convictions only to decide whether to believe the defendant's testimony and how much weight to give it.
Intent (WPIC 10.01)	A person acts with intent or intentionally when acting with the objective or purpose to accomplish a result which constitutes a crime.	A person acts with intent or intentionally when he or she acts with the objective or purpose to accomplish a result that is a crime. It is possible to prove intent beyond a reasonable doubt by either direct or circumstantial evidence.
Burden of Proof; Presumption of Innocence; Reasonable Doubt (WPIC 4.01)	The defendant has entered a plea of not guilty. That plea puts in issue every element of the crime charged. The plaintiff has the burden of proving each element of the crime beyond a reasonable doubt. A defendant is presumed innocent. This presumption continues throughout the entire trial unless you find it has been overcome by the evidence beyond a reasonable doubt. A reasonable doubt is one for which a reason exists!* A reason-	The defendant has entered a plea of not guilty. That plea puts in issue every element of the crime charged. The defendant is presumed to be innocent and is not required to prove his or her innocence or any fact. This presumption of innocence is present at the beginning of the trial and continues unless you decide after hearing all the evidence that there is proof beyond a reasonable doubt that the defendant is guilty. The state has the burden of proving each element of the crime beyond a reasonable doubt. A reasonable doubt about guilt is not a vague or speculative doubt but is a doubt for which a reason exists. A reasonable doubt is a doubt that would exist in the mind of a reasonable person after that

[38] Professor John Junker of the University of Washington School of Law, and former Superior Court Judge and Professor Charles Z. Smith provided invaluable legal insight in developing revised instructions.

TOPIC	PATTERN INSTRUCTION	REVISED INSTRUCTION
	able doubt is such a doubt as would exist in the mind of a reasonable person after fully, fairly and carefully considering all of the evidence or lack of evidence. If, after such consideration, you have an abiding belief in the truth of the charge, you are satisfied beyond a reasonable doubt.	person has fully, fairly and carefully considered all of the evidence or lack of evidence. If, after such thorough consideration, you believe in the truth of the charge, you are satisfied beyond a reasonable doubt. If you are satisfied beyond a reasonable doubt that all elements of the charge have been proved, then you must find the defendant guilty. However, if you are left with a reasonable doubt about the proof of any element, then you must find the defendant not guilty.

*Additional language stating: "You are not to consider any doubts that are unsupported by evidence or lack of evidence" was held to be reversible error in *State* v. *Walker*, 19 Wn. App. 255 (1977).

GENERAL INTRODUCTORY INSTRUCTION - PATTERN (WPIC 1.02)	GENERAL INTRODUCTORY INSTRUCTION - REVISED
It is your duty to determine the facts in this case from the evidence produced in court. It is also your duty to accept the law from the court, regardless of what you personally believe the law is or ought to be. You are to apply the law to the facts and in this way decide the case. The order in which these instructions are given has no significance as to their relative importance. The attorneys may properly discuss any specific instructions they think are particularly significant. You should consider the instructions as a whole and should not place undue emphasis on any particular instruction or part thereof. The information in this case is only an accusation against the defendant which informs the defendant of the charge. You are not to consider the filing of the information or its contents as proof of the matters charged. The evidence you are to consider consists of the testimony of the witnesses and the exhibits admitted into evidence. It has been my duty to rule on the admissibility of evidence. You must not concern yourselves with the reasons for these rulings. You will disregard any evidence which either was not admitted or which was stricken by the court. In determining whether any proposition has been proved, you should consider all of the evidence introduced by all parties bearing on the question. Every party is entitled to the benefit of the evidence whether	As jurors in this case, you have several duties: First, it is your duty to determine the facts in this case from the evidence produced in court; Second, it is your duty to accept the law as I will instruct you, regardless of what you personally believe the law is or ought to be; Third, to reach a verdict, you are to apply the law to the facts and in this way decide the case. With regard to your duty to determine the facts in this case, the evidence you are to consider consists of the testimony of the witnesses and exhibits which I have admitted into evidence. It has been my duty to rule on the admissibility of evidence. You must not concern yourselves with the reasons for these rulings. You will disregard any evidence which either was not admitted or which was stricken by me. In determining what facts have been proved, you should consider all of the admitted evidence. Every party is entitled to the benefit of all the evidence, whether produced by that party or by another party. The law does not permit me to express my views about the facts or evidence in any way and I have not intentionally done so. The law also does not permit me to try to influence your judgment as to the believability or credibility of witnesses. You are the sole judges of the credibility of witnesses and of what weight is to be given to the testimony of each. In evaluating the testimony of any witness, you may take into account the following factors: the opportunity and

GENERAL INTRODUCTORY INSTRUCTION - PATTERN (Continued)

produced by that party or by another party.

You are the sole judges of the credibility of the witnesses and of what weight is to be given the testimony of each. In considering the testimony of any witness, you may take into account the opportunity and ability of the witness to observe, the witness' memory and manner while testifying, any interest, bias or prejudice the witness may have, the reasonableness of the testimony of the witness considered in light of all the evidence, and any other factors that bear on believability and weight.

Counsel's remarks, statements and arguments are intended to help you understand the evidence and apply the law. They are not evidence, however, and you should disregard any remark, statement or argument which is not supported by the evidence or the law as given to you by the court.

The lawyers have the right and the duty to make any objections which they deem appropriate. Such objections should not influence you, and you should make no presumption because of objections by counsel.

The law does not permit me to comment on the evidence in any way and I have not intentionally done so. If it appears to you that I have so commented, during either the trial or the giving of these instructions, you must disregard such comment entirely.

You have nothing whatever to do with the punishment to be inflicted in case of a violation of law. The fact that punishment may follow conviction cannot be considered by you except insofar as it may tend to make you careful.

You are officers of the court and must act impartially and with an earnest desire to determine and declare the proper verdict. Throughout your deliberations you will permit neither sympathy nor prejudice to influence you.

GENERAL INTRODUCTORY INSTRUCTION - REVISED (Continued)

ability of the witness to observe the facts; the accuracy of the witness' memory; the witness' manner while testifying; any interest in the case or bias or prejudice the witness may have shown; the reasonableness of the witness' testimony considered in light of all the evidence; and any other factors that bear on believability and weight. If it appears to you that I have expressed my opinion concerning the evidence or the witnesses at any time, you must disregard such opinion entirely.

With regard to your duty to accept the law as I will instruct you, you should consider the instructions as a whole and should not place undue emphasis on any particular instruction or part of an instruction. The order in which the instructions are given has no significance as to their relative importance. The lawyers may properly discuss any specific instructions they think are particularly significant.

With regard to your duty to apply the law, the fact that the defendant has been charged is only an accusation. You are not to consider the filing of a written charge or its contents as proof of the matters charged. The lawyer's remarks, statements and arguments are intended to help you understand the evidence and apply the law. They are not evidence, however, and you should disregard any remark, statement or argument that is not supported by the evidence or by my instructions on the law.

The lawyers have the right and the duty to make any objections which they think are appropriate. Such objections should not influence you, and you should make no presumption because of objections by the lawyers.

You have nothing whatever to do with the punishment in case of a violation of law. The fact that punishment may follow conviction cannot be considered by you except that it may tend to make you careful.

Throughout your deliberations you will permit neither sympathy nor prejudice to influence you. You are officers of the court and must act impartially and with an earnest desire to determine and declare the proper verdict.

GENERAL INTRODUCTORY INSTRUCTION - PATTERN (WPIC 1.02)	GENERAL INTRODUCTORY INSTRUCTION - REVISED
	To reach a verdict, your decision must be unanimous.

Overview

Study 3 employed a 3 × 2 between-subjects factorial design with three levels of Instructions (No Instructions, Pattern Instructions, Revised Instructions) and two levels of Opportunity to Deliberate (Deliberation, No Deliberation). With minor revisions, the dependent measures used in Study 3 were the same as those employed in Study 2.

Method

Subjects were 216 college students who were also registered voters, recruited from psychology courses at the University of Washington. The same videotaped trial and procedures employed in the previous experiment were used in this experiment. Our intention was to provide a basis for comparing our revised instructions to the standard pattern instructions and to no instructions under conditions comparable to those of the first experiment. With the exception of the instruction manipulations described below, all other aspects of the procedure were identical to Study 2.

Using the procedure described above, revised versions of the "reasonable doubt" instruction, the instruction limiting the use of prior convictions, and the "intent" instruction were developed. In addition, a revised version of the "general instruction" was developed (see Table 4).

Subjects in the Revised Instructions condition heard a tape recording of these instructions at the close of the videotaped trial. Subjects in the Pattern Instructions condition were exposed to the identical pattern instructions that were used in the General + Specific instructions condition of Study 2. Subjects in the No Instruction control group were treated identically to the comparable group in Study 2.

A few minor revisions were made in the dependent measures of Study 2 where item analyses indicated confusion due to a question's format. These revisions were made to enhance the sensitivity and reliability of the measurement devices.[39]

[39] Grammatical changes and word substitutions, such as "accused person" in place of "defendant" were made to enhance clarity of the comprehension measure and may explain the lower rate of errors in Study 3 as compared with

Results

Verdicts Overall, 77 subjects (35.6 percent) found the defendant guilty, and 139 subjects (64.4 percent) found the defendant not guilty. The pattern of verdicts is summarized in Table 5. A chi square analysis performed on the verdicts in Table 5 indicated that the independent variables did significantly affect verdicts in this study. There are fewer guilty verdicts among deliberating jurors than nondeliberating jurors, $\chi^2 = 23.33$, df = 1, $p<.001$.[40] The instructions jurors received affected verdicts, with the fewest guilty verdicts among subjects receiving the Revised Instructions (n=1), $\chi^2 = 7.79$, df = 2, $p<.02$. The degree of certainty that subjects had in their verdicts was affected by Opportunity to Deliberate, F (1,210) = 23.52, $p<.001$. Subjects who deliberated were less certain of their verdicts than were subjects who did not deliberate.

Table 5. Number of Guilty Verdicts (Study 3)

(n = 36 per cell)

		INSTRUCTION CONDITION		
		No Instructions	Pattern Instructions	Revised Instructions
Opportunity to Deliberate	NO	20	19	17
	YES	14	6	1

Comprehension The results of Study 3 are summarized in Table 6. The pattern of results for No Instructions and Pattern Instructions was similar to that of Study 2. The overall comprehension error rate was 29.3 percent with No Instructions compared to an error rate of 24.3 percent when General + Specific Pattern Instructions were available, and a 20.3 percent error rate when the Revised Instructions were available, F (2,210) = 8.65, $p<.001$. Post hoc tests revealed that in these overall results, the No Instruction condition differed significantly from the other two instruction conditions, Neuman-Keuls tests $p<.05$ in both cases, but the difference between the latter two conditions, though in the predicted direction, was not significant.

Study 2 for identical experimental conditions. There is little basis for predicting any other systematic shifts in results between Study 2 and Study 3 as a result of these minor changes alone.

[40] Note that in comparison to nondeliberating subjects, deliberating subjects interacted for up to 30 minutes prior to completing the dependent measures. Their verdicts and other responses are thus not strictly independent of one another. For example, 12 of the 14 guilty verdicts among deliberating subjects who received No instructions occurred in two of the six-person groups; all six of the guilty verdicts among the deliberating subjects who received Pattern instructions occurred in one six-person group.

Table 6. Errors in Comprehension (Study 3)* **

Independent Variable Condition:	No Instructions	Washington Pattern (General + Specific) Instructions	Revised Instructions
Targeted legal concept:			
Intent	$31.7\%_a$	$30.7\%_a$	$24.9\%_a$
Reasonable Doubt	$24.1\%_a$	$22.3\%_a$	$20.2\%_a$
Limiting Prior Convictions	$47.3\%_a$	$34.0\%_b$	$31.5\%_b$
General duties of a juror	$25.3\%_a$	$17.3\%_b$	$12.2\%_b$
Overall	$29.3\%_a$	$24.3\%_b$	$20.3\%_b$

*Percentage of incorrect responses to multiple choice items testing each concept.

**Row means with different subscripts differ at the .05 level of significance (Neuman-Keuls Test).

Inspection of Table 6 reveals a consistent pattern of results across each of the target instructions included in the study. Errors in comprehension were consistently lower when pattern instructions were presented and were lower still when Revised rather than Pattern instructions were provided. The overall difference across the three conditions was of borderline significance for Intent, $F\ (2,210) = 2.91$, $p<.057$, and was significant for Limiting Instructions, $F\ (2,210) = 5.10$, $p<.007$, and for General Instructions, $F\ (2,210) = 12.13$, $p<.001$. Neuman-Keuls tests indicated reliable decreases in error rates from the No Instructions to the Pattern Instruction condition for the limiting and general instructions, but not for the intent instruction or for a reduction in error rates from the Pattern to the Revised Instructions for the intent, limiting, and general instructions. There were no effects of Opportunity to Deliberate on comprehension error rates.

Ability to apply instructions Overall, Revised Instructions led subjects to agree more strongly with correct applications of the targeted legal concepts than did Pattern Instructions or No Instructions, $F\ (2,210) = 8.15$, $p<.001$ (see Table 7A). Post hoc Neuman-Keuls tests revealed that the Revised instructions enhanced performance relative to both Pattern instructions ($p<.05$) and No Instructions ($p<.05$), whereas Pattern instructions did not enhance performance relative to No instructions (p = n.s.).

Table 7. Application Measures (Study 3)*

A. Degree of Agreement with Correct Application**

TARGETED LEGAL CONCEPT	INSTRUCTION CONDITION: No Instructions	Washington Pattern (General + Specific) Instructions	Revised Instructions
Intent	$.46_{a,b}$	$.40_{a}$	$.79_{b}$
Reasonable Doubt	$.99_{a}$	1.07_{a}	1.46_{a}
Limiting Instruction	$.52_{a}$	$.88_{b}$	1.15_{b}
Overall	$.64_{a}$	$.75_{a}$	1.10_{b}

**Scale values range from −3 (strongly disagree) to 0 (uncertain) to +3 (strongly agree).

B. Mean Percentage Correct on Application Measures***

TARGETED LEGAL CONCEPT	INSTRUCTION CONDITION: No Instructions	Washington Pattern (General + Specific) Instructions	Revised Instructions
Intent	$53\%_{a}$	$57\%_{a}$	$64\%_{b}$
Reasonable Doubt	$60\%_{a}$	$65\%_{a,b}$	$73\%_{b}$
Limiting Instruction	$55\%_{a}$	$63\%_{a,b}$	$69\%_{b}$
Overall	$56\%_{a}$	$61\%_{b}$	$68\%_{c}$

***Response was correct if it was a 1, 2, or 3 in the correct direction.

*Row means with different subscripts differ at the .05 level of significance (Neuman-Keuls Test).

The data for individual target concepts, presented in Table 7A, indicate that instructions on reasonable doubt did not significantly improve subjects' abilities to apply the instructions, $F\ (2,210) = 2.56$, p = n.s. However, the ability to apply the concept of "intent" did improve, $F\ (2,210) = 3.15$, $p<.05$, particularly with the Revised Instructions. The ability to apply the limiting instructions was generally improved by instructions, $F\ (2,210) = 6.57$, $p<.002$. Both Pattern and Revised Instructions on limiting prior convictions yielded improvements over the No Instructions condition, but the Revised instruction did not significantly improve performance over the Pattern instruction.

In Table 7B it can be seen that the Pattern Instructions produced a significant increase in the percentage of correct applications of the law over the No Instruction condition, and the Revised Instructions led to a further increase in accuracy (a significant main effect for the overall application measures, F

(2,213) = 11.78, p<.001). Significant effects of Instruction condition were obtained on all of the individual target concepts (intent, F (2,213) = 4.62, p<.01; reasonable doubt, F (2,213) = 3.45, p<.03; and limiting instructions, F (2,213) = 4.77, p<.01). Post hoc comparisons revealed that the Pattern Instructions did not significantly differ from the No Instruction condition on any of the three target concepts, although the means in each case favored the Pattern Instructions. The Revised Instructions produced the highest rates of accuracy for each target concept, significantly higher for intent when compared with the No Instruction and Pattern Instruction conditions, and significantly higher than the No Instruction condition for the reasonable doubt and limiting instructions.

The opportunity to deliberate affected subjects such that those who deliberated comprehended the general instructions better than those who did not deliberate, F (1,210) = 5.73, p<.02. Aside from this finding, Opportunity to Deliberate exerted no other effects on the measures of comprehension and ability to apply the instructions.

The Effects of Jurors' Understanding on Verdicts If jury instructions convey meaning to jurors, and that meaning affects deliberations as the law intends, then a relationship can be predicted between clarity of instructions on the one hand and verdicts on the other hand, with accuracy of understanding as an intervening variable. It is also possible, however, that the verdicts are influenced by other qualities of the altered instructions apart from their increased clarity. To examine these possibilities, a multiple regression analysis was performed with the guilty verdicts presented in Table 5 as dependent variables, and the Instruction conditions, Deliberation conditions, and two measures of understanding (overall comprehension accuracy and overall accuracy of application) as independent variables. The regression equation had a multiple R of .42 (R^2 = .17), F (5,210) = 8.81, p<.001. As earlier analyses indicated, the two manipulated independent variables, availability of Instructions and Opportunity to Deliberate, significantly contributed to the explained variation. Opportunity to deliberate explained eleven percent of the variance (p<.001) and availability of Instructions added three percent (p<.03). Application accuracy added an additional two percent (p<.109), suggesting that more legally knowledgeable respondents were marginally more likely to acquit in this case.

When Availability of Instructions was eliminated as an independent variable and a second regression analysis was performed, explained variance dropped only slightly. The new R was .39 (R^2 = .155), F (3,212) = 12.96, p<.001. Opportunity to deliberate still explained 11 percent of the variance (p<.001), and application accuracy explained the additional three percent (p<.06). The overlap in explanatory power of the instruction condition and application accuracy suggest that at least part of the effect of instructions on verdict was due to increases in juror comprehension.

Recall As in Study 2, there were no significant effects of the independent variables on recall for details of the trial.

Quality of deliberations As in Study 2, the quality of deliberations was evaluated by having independent judges code the content of the deliberations into a series of categories which were then submitted to analysis. The content categories utilized in this study were identical to those utilized in Study 2. This analysis indicated three ways in which the manipulation of Instructions affected the quality of deliberations. First, the groups that received instructions discussed less irrelevant information, i.e. information not brought up in the trial, F (2,11) = 6.07, p<.02. Post hoc analysis of this effect showed significant differences between No instructions ($\bar{X}$ = 15.5) and Pattern instructions ($\bar{X}$ = 5.75), p<.05 by Neuman-Keuls Test, and also between No instructions and Revised instructions ($\bar{X}$ = 3.38), p<.05 by Neuman-Keuls Test. The interjudge reliability of ratings for this dependent variable was reflected in a .87 correlation, p<.001.

Second, jurors' statements asking for or offering clarification of facts were marginally affected by the Instruction manipulations, with those who received No Instructions tending to request most clarification ($\bar{X}$ = 20.17), those who received Pattern Instructions requesting less ($\bar{X}$ = 11.08), and those who received Revised Instructions requesting least clarification ($\bar{X}$ = 7.00), F (2,11) = 2.67, p<.11. Judges' ratings for this dependent measure correlated .54, p<.02.

Third, the Instruction manipulations marginally affected the number of times deliberating juries discussed concepts addressed in the General instructions. Groups receiving instructions discussed those concepts somewhat more than the group receiving No Instructions, F (2,11) = 2.87, p<.10. The

inter-judge reliability of this measure was low, .49, but significant, $p<.04$.

VI. DISCUSSION AND CONCLUSIONS

Study 3 provides concrete evidence that psycholinguistic changes in pattern instructions can improve jurors' abilities to both comprehend and apply jury instructions. The most powerful indication of these effects is the overall improvement in subjects' abilities to apply the instructions after receiving Revised Instructions as compared to Pattern or No Instructions. The results presented in Table 7A indicate that jurors' confidence in applying the law increases when the Revised instructions are available. Moreover, the results presented in Table 7B show that jurors are more accurate in applying the law when they receive revised instructions. Although individual comparisons do not generally reach significance, the same overall pattern is repeated for each of the individual target instructions. In addition, the pattern of comprehension results is consistent, with lowest error rates among subjects who received Revised instructions. In general, these data show that psycholinguistic improvements in criminal pattern instructions can aid jurors in correctly applying the instructions to novel factual situations, and can increase their comprehension of the target legal concepts.

While our findings demonstrate the value of using psycholinguistic principles to rewrite pattern jury instructions, the measures reveal that considerable numbers of errors in comprehension and application remain even with the revised instructions. One explanation may be that measures of comprehension and application are affected by misunderstanding of trial evidence as well as judicial instructions. Measures of comprehension and correct application may also reflect the acceptance or resistance of jurors to legal instructions; to the extent that the instruction conflicts with an individual juror's personal sense of justice, that conflict may reduce his or her comprehension and application scores.

Of course it is also possible that errors remain in the juror comprehension and application measures because better instructions can be devised than those we have developed and tested here. Our continuing research in the area will attempt to test both of these possibilities.

If jurors' understanding of the instructions is improved by psycholinguistic revisions, what are the implications for their

behavior in deliberations? The results of this study suggest two answers. First, the data on verdicts indicate fewer guilty verdicts among deliberating jurors who receive instructions than among deliberating jurors who receive no instructions. Table 5 shows that pattern and revised instructions both had the effect of reducing the number of guilty verdicts among deliberating jurors. This relationship between Instruction condition and verdicts may be due to an increased understanding of the law fostered by the instructions. Some support for this notion appears in the multiple regression analyses performed in Study 3.

Given the ambiguous facts in the videotaped trial used in our research, the jury instructions tended to reduce guilty verdicts to the extent that they were understood and properly applied, particularly among deliberating jurors (see Table 5). By comparison, if the facts had clearly indicated guilt, clear instructions might have enhanced the number of guilty verdicts. In general, we would predict that clearly understood instructions on the law will enhance a just determination of guilty or not guilty by sharpening the relevant decision criteria that jurors are supposed to apply to the facts.

The content analysis of the deliberations suggests a second way in which instructions helped to focus jurors on the relevant issues. Subjects who received instructions talked less about irrelevant facts and appeared to need less clarification of the evidence than subjects who did not receive instructions. These results tended to be most pronounced among subjects receiving the Revised Instructions. The data thus suggest that the quality of deliberations as well as the verdicts may be affected by the degree to which jurors understand their duties.

The work presented in this paper is based on an interdisciplinary perspective. We sought information from deliberating juries as a basis for guiding our research focus, and we attempted to cross-validate the revisions that we introduced against psychological and legal criteria. We believe there are advantages to this approach for researchers who are interested in identifying issues of relevance to the legal community and addressing those issues through the use of social science methodology.

One limitation of the work reported here is that the subjects who participated in our research were not jurors, and our procedures did not occur in a setting with high ecological validity, inasmuch as the data were collected on a University campus rather than in a court setting. Work is currently

underway to address these concerns (Severance *et al.*, 1983). We are attempting to replicate the findings reported here with jurors and ex-jurors who have first-hand experience with the judicial system. Furthermore, in our research with jurors we are conducting the procedures in courtrooms and having deliberations occur in jury rooms. In these ways, we hope to extend the relevance of the present findings for the legal community, and extend the empirical basis for proposing changes that could be adopted.

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