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Judicial Instructions and the Juror's Ability to Disregard Inadmissible Evidence: Can Varying the Timing and Content of Judicial Instructions Influence Juror Decision-Making?

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JUDICIAL INSTRUCTIONS AND THE JUROR'S
ABILITY TO DISREGARD INADMISSIBLE EVIDENCE:
CAN VARYING THE TIMING AND CONTENT OF JUDICIAL INSTRUCTIONS
INFLUENCE JUROR DECISION-MAKING?

By

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This manuscript has been read and accepted for the
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Abstract

JUDICIAL LIMITING INSTRUCTIONS AND THE JUROR'S
ABILITY TO DISREGARD INADMISSIBLE EVIDENCE:
CAN RAISING JUROR SUSPICION INFLUENCE THE DECISION-MAKING
PROCESS?

by

Courtney Hougham

Advisor: Professor Maureen O'Connor

During the course of a trial, a judge will instruct the jury on how they are to act and reach decisions. The purpose of this study was to examine the effect of different judicial instructions on a juror's ability to evaluate testimony. The research looked at how instructions can interact with a juror's ability to disregard a piece of evidence ruled inadmissible for different reasons. The design was a 3x5 complete factorial design. The stimulus material was a murder trial summary with weak evidence against the defendant, with the key piece of testimony being a hair found on the victim that matches the defendant. This evidence was objected to and admitted or not admitted into evidence depending on the condition. The hypotheses test how a juror's decision-making process is influenced by a combination of judicial instructions, including one designed to raise suspicion, the ruling – admitted or not admitted, and the reason behind the ruling.

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Chapter 1.

“Because I have no doubt that serious-minded and responsible men are able to shut their minds to unreliable information when exercising their judgment, I reject the assumption of the majority that giving instructions to a jury to disregard...is an empty gesture.”

(Justice White, *U.S. v. Bruton*, 391 U.S. 123, 1968)

“If you throw a skunk into a jury box, you can’t instruct the jury not to smell it.”

(Justice Gewin, *Dunn v. U.S.*, 307 F.2d 883, 1962, Fifth Circuit)

During the course of a trial, a judge will instruct the jury on how they are to act and reach decisions. One set of instructions is issued prior to the start of the trial and another is issued prior to deliberations when the judge charges the jury on how they are to render a verdict and apply the law to the admissible evidence presented during the course of the trial. Within the trial, a judge may need to admonish the jury to disregard evidence that has been deemed inadmissible, but either purposely or inadvertently is inserted into the proceedings. This admonition to the jury to disregard the information is an attempt to remove any prejudicial implications produced by the evidence, which could influence the verdict.

Psychological research suggests that people have a difficult time ignoring information once they have heard it. This is particularly problematic in the courtroom where jurors are often instructed to disregard information they have heard. The ability or inability of a jury to comply with judicial instructions affects the court proceedings and the overall fairness of the legal system. Verdicts are sometimes reversed based on the belief by appellate courts that a judicial admonition to ignore evidence is not enough and

that jurors are not able to ignore inadmissible testimony when they have been instructed to do so; however, verdicts are also upheld even after potentially damning inadmissible evidence has been introduced. Varying the timing and the content of instructions may reduce the psychological challenge of ignoring information once it has been introduced.

This study explored the effects of judicial pre-trial instructions specifically aimed at inadmissible evidence, both in a general instruction and in an instruction designed to raise juror suspicion levels, while including further judicial admonitions in the trial. For the purpose of this research, the term “suspicion” is used to refer to raising participants’ awareness and making them more critical of the evidence by questioning motives.

The effectiveness of pre-trial, in-trial, and suspicion-arousing instructions are examined through the lens of the “just verdict” hypothesis (Kassin & Sommers, 1997). The just verdict hypothesis suggests that jurors are interested in rendering a verdict that is accurate or “just” - guilty for defendants perceived as guilty, not guilty for others. In order to render a just verdict, jurors will use all the information available to them as long as they find it to be relevant to the case at hand and reliable or accurate. As such, Kassin and Sommers argue jurors can and will disregard inadmissible evidence that is unreliable because it does not help in reaching a just verdict. However, jurors will not disregard evidence that is inadmissible solely for due process - or legal - reasons if the juror perceives that evidence as reliable. For example, evidence that is the result of an illegal search -- if the murder weapon is found in the defendant’s house as a result of an illegal search and jurors are told to disregard that information -- they would be hard pressed to ignore it because they want to render a just or accurate verdict.

This study examined whether the “just verdict” effect could be reduced by a

simple pre-trial instruction warning jurors of the possibility of inadmissible evidence that would need to be ignored. If that simple warning were not enough, this study also examined whether the “just verdict” effect could be reduced by a pre-trial instruction designed not only to warn of the possibility of inadmissible evidence but also to raise suspicion regarding the motives behind the introduction of certain evidence. In doing so, this study varied both the timing and content of judicial instructions by drawing on the strong points of previous research endeavors and exploring factors that are relatively absent in the literature.

Additionally, the study explored the effect of an in-trial admonition on the decision-making process. Would instructing participants to “give the evidence the weight they think it deserves” make them think more critically about the evidence?

Literature Review

Case Law: Inadmissible evidence and harmless error

United States Federal Rules of Evidence (F.R.E.) 401 and 403 define relevant evidence for Federal trials and specify certain situations when relevant evidence is not admissible. F.R.E. 401 states that relevant evidence is “evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.” Relevant evidence may be excluded when “its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative

evidence.” (F.R.E. 403). Although these rules govern Federal trials, most states have similar approaches to dealing with relevancy and admissibility.

Despite the rules, there are times when evidence is presented at trial that had been or is subsequently deemed inadmissible by the judge. When this happens, a judge has it within her rights to declare a mistrial; however, this is not the preferred solution. Instead, the judge is likely to instruct the jury that they are to disregard the evidence and that the evidence has been stricken from the record. Although this has been the longstanding solution to overcoming the potentially prejudicial impact of inadmissible evidence, there is little consensus among courts on when such an admonition is effective or the manner in which the court is meant to apply the standards.

In U.S. v. Escalante (1980), the U.S. Court of Appeals for the Ninth Circuit ruled, “where evidence heard by the juror is later ruled inadmissible, a cautionary instruction is ordinarily sufficient to cure any alleged prejudice to the defendant.” However, the same circuit court recognized in U.S. v. Gann (1984) that “declaring a mistrial is appropriate only where cautionary instruction is unlikely to cure the prejudicial effect.” As a result, some cases are upheld on appeal and some are overturned with no clear indication to a layperson as to why certain evidence is considered prejudicial while other evidence is not.

Bruton v. U.S. (1968) involved hearsay confession evidence against two co-defendants. A witness testified that co-defendant Evans had told him that he, Evans, and Bruton had committed the crime. The court instructed the jury to disregard the evidence against Bruton but they could use it against Evans. The jury convicted both men. On appeal, the appellate court upheld the conviction on the grounds that the instructions were

sufficient. The U.S. Supreme Court disagreed reversing Bruton's conviction. Justice Black, in a concurring opinion, stated that the "admonition to the jury to use a confession as evidence only against the confessor...is ineffective in that the effect of such a confession cannot be wiped from the brains of the jurors."

In State v. Nowakowski (1982), the defendant moved for a mistrial after a prosecution witness asked why the defendant had not given a statement if he was innocent – a question that is inappropriate as it violates the defendant's Sixth Amendment rights. The trial judge denied the request for a mistrial and instructed the jury to disregard the statement. On appeal, the defendant claimed the instruction failed to eliminate the prejudicial effect of the statement. The defendant relied on State v. Tinsley (1980) in which the Supreme Court of Connecticut found that it was unlikely that the prejudicial effect of inadmissible evidence could be cured by the instruction; the Tinsley case involved sexual assault. The Supreme Court of Connecticut did not accept Nowakowski's *Tinsley* claim and upheld Nowakowski's conviction finding the instruction was adequate.

In Greer v. Miller (1987), the prosecutor asked Greer why he had remained silent after he was arrested. The defense objected, the judge sustained the objection, and instructed the jury to disregard questions to which objections were sustained. The prosecutor did not continue the line of questioning. On appeal, the court reversed the verdict stating that the error was not harmless beyond a reasonable doubt because the other evidence was not overwhelming and the instruction to disregard was "insufficient to cure the error." The Supreme Court did not agree and decided both the sustained objection and cautionary instruction protected the defendant's right to a fair trial.

The standard that appellate courts apply when dealing with erroneously introduced evidence is whether the error is “harmless.” The harmless error standard was established by Congress in a 1919 statute in order to quell the number of trial reversals (Cooper, 2002). This statute states: “on the hearing of any appeal or writ of certiorari in any case, the court shall give judgment after an examination of the record without regard to errors or defects which do not affect the substantial rights of the parties” (28 USCS §2111). It was in this statute where the phrase “substantial rights” was introduced – a decision could not be overturned unless it was deemed that a person’s substantial rights were affected. This language was adopted in 1944 in Rule 52 of the Federal Rules of Criminal Procedure, which defines harmless error as “any error, defect, irregularity, or variance that does not affect substantial rights must be disregarded.”

Since the introduction of this standard, application of the harmless error standard has followed two central interpretations. Although these two interpretations vary, they are not necessarily distinct. The first interpretation asks whether the error affected how the specific jury in the case reached its verdict. The second interpretation asks whether the remaining evidence - ignoring the error - was sufficient for a hypothetical jury to reach a guilty verdict.

The Supreme Court articulated the first interpretation of the harmless error standard in 1946 in Kotteakos v. United States. The defendants were charged with a single count of conspiracy even though the United States admitted that the evidence actually pointed to multiple offenses with one central figure. The defendants claimed that because of the error in the charge, the jury verdict had been prejudiced. The Court reversed the conviction and focused on whether the error affected how the jury reached

its verdict and whether it affected the defendant's "substantial rights."

In 1967, the Supreme Court extended the harmless error interpretation put forth in Kotteakos by adding, "the reviewing court must be satisfied beyond a reasonable doubt that the error did not contribute to the defendant's conviction" (Chapman v. California, 1967). The Chapman defendants claimed to have been denied their constitutional rights when the prosecutor's continuous adverse references to their failure to testify implied that they were guilty. The Court held that the repeated references were not harmless error and the verdict was overturned.

In Harrington v. California (1969), the defendant claimed he was denied his constitutional rights to confront his accusers when two co-defendants who confessed and placed him at the scene of the crime did not testify. The Supreme Court ruled that this constitutional error was harmless because the other evidence against the defendant was overwhelming. Three justices dissented and argued that the state had not proved beyond a reasonable doubt that the confessions had no effect on the verdict. The majority opinion opted for the second interpretation of the harmless error standard and decided that the remaining evidence without the error was enough to convict, while the dissent followed the standard set forth in Chapman.

In Neder v. United States, a 1999 Supreme Court case, the jury was not instructed on one of the elements of the crime. The Court narrowly ruled that "the harmless-error inquiry with respect to a failure by the trial court to instruct on an element of the charged offense...is whether it is clear beyond a reasonable doubt that a rational jury would have found the defendant guilty absent the error."

Depending on the actual error, the Court has vacillated between looking at the

effect the error had on the jury's decision versus looking at how a hypothetical jury would have ruled without the error. With the case of Neder, it seems the court has decided to focus on what a hypothetical jury would do in the face of the other evidence minus the error and not on the effect the error had on the jury's verdict.

A possible reason for the variation is the difficulty in determining whether a piece of evidence entered through error had an effect on the jury's verdict (Cooper, 2002). The reviewing judges do not have the opportunity to sit in the courtroom and hear all the nuances of the case; they are instead reviewing the case from the record. The reviewing judges must rely on the trial judge's view of the evidence presented at trial. It seems nearly impossible for reviewing judges to determine the effect that evidence entered in error had on the specific jury without also thinking about the other evidence and what the verdict might have been if the error had not come in to the proceedings. If the evidence against the defendant is strong, one could argue that the erroneous piece of evidence had no further effect, but there would be no real way of knowing whether that one piece of evidence prejudiced the rest of the evidence for the sitting juror.

The fact that these cases sometimes go through an appeals court that says "yes the instruction was sufficient" or "no the instruction was not sufficient" only to be brought to the Supreme Court and have them decide otherwise demonstrates that as a practical matter there are few hard and fast rules defining what is or is not prejudicial. In fact, what the court finds legally prejudicial, may not be actually prejudicial to jurors. Schul and Goren (1997) found that strong inadmissible evidence actually had a weaker prejudicial effect on the jury than did weak evidence. When the strong evidence was admissible, participants, as expected, had higher judgments of guilt when compared to

participants who had read the weak evidence. However, when participants were told to ignore the strong evidence, they had lower judgments of guilt when compared to participants who had read the weak evidence. Schul and Goren (1997) hypothesized that their participants were “overadjusting” their decisions when asked to ignore strong evidence. This finding calls into question the courts’ ability to determine, after the fact, whether a piece of evidence in a particular instance is prejudicial to the specific jury that heard the evidence. Based on Schul and Goren’s (1997) findings, it seems a challenging task to ask an appeals court to determine what effect even a seemingly innocuous remark had on a jury.

Judicial Instructions

When a judge rules that evidence is inadmissible and orders a jury to disregard the information the admonition can be classified as what Johnson (1994) calls a “specific forget instruction.” Johnson (1994) indicated that specific forget instructions are narrow in scope and ask that one should forget specific parts of what one has learned. Johnson (1994) suggested that people establish links between pieces of information particularly when they are not informed beforehand that they will be expected to forget certain facts. When these links occur, a juror would have a difficult time mentally separating the inadmissible evidence from the admissible information because the inadmissible evidence will have been encoded with the admissible evidence.

Demaine (2008) distinguishes between two traditional approaches to admonishments used in the courtroom in an attempt to minimize prejudicial effects of inadmissible evidence – the “elaborate forget instruction” and the “minimal forget instruction”. She argues there is an inherent problem in both approaches since they both

literally ask the jurors to forget what they have heard – a difficult or impossible task (Demaine, 2008).

An “elaborate instruction” is one in which the judge specifically instructs the juror to forget the evidence, to put it out of her mind, like it never existed (Demaine, 2008). A “minimal forget instruction” by contrast uses the more terse “disregard the witness’s last answer” (Demaine, 2008, p. 104). The minimal instruction is thought to be beneficial because it does not reaffirm the inadmissible evidence by referring to it.

Demaine suggests that rather than giving jurors the impossible task of forgetting what they have heard, judicial instructions should instead aim to neutralize the bias produced by the evidence. To test this hypothesis, Demaine (2008) gave participants one of three instructions – a traditional elaborate forget instruction, a traditional minimal forget instruction, and a neutralization instruction. The neutralization instruction alerted jurors to the fact that the inadmissible evidence may bias their judgment even if they thought they had disregarded it and they should adjust their verdict. Her results suggested that participants in both the elaborate instruction and the neutralization instruction groups responded similarly while those in the minimal instruction group more closely resembled the group in which the evidence was admissible; thus, the minimal instruction group had a more difficult time disregarding the evidence. This finding calls into question the theory that an elaborate instruction draws unwanted attention to the evidence.

Although Demaine found participants in the minimal forget group rated their motivation to disregard at the same rate as the other inadmissible groups, they were less aware of the impact of the evidence on their future judgments. Even though the

instructions were different, members of both the elaborate instruction group and the neutralization group used a neutralization method in order to reach their decision and more effectively disregard the evidence (Demaine, 2008). This study points to the fact that jurors may be able to disregard evidence even when the instructions ask them to “forget” as long as the instructions are more explicit.

Theories regarding inability to disregard inadmissible evidence

Several theories provide partial explanations as to why limiting instructions may be ineffective. For example, limiting instructions may be ineffective based on how the information is encoded or stored by the people receiving the information (Johnson, 1994; Schul & Burnstein, 1985). In addition, limiting instructions may be ineffective because they make the information more salient (Wegner, 1994), or people are fighting to regain a lost freedom (Brehm, 1966), or simply because people choose to ignore the instruction in order to make a “just verdict” (Kassin & Sommers, 1997). Whatever the reason, the result is the same; sometimes people cannot disregard information when they are told to do so.

Inability to disregard based on encoding strategies. Both Johnson (1994) and Schul and Burnstein (1985) discuss the problems with discounting information based on the way the information is encoded by the person receiving the information.

Intentional forgetting. Although Johnson (1994) did not discuss trials directly, she would say that a limiting instruction asks an individual to engage in intentional forgetting. Intentional forgetting is “a motivated attempt to limit the future expression of specific memory content” (Johnson, 1994, p.274). Three factors influence intentional forgetting – how the information is initially encoded, how the forget instruction is

processed, and the specificity of the information to be accessed later (Johnson, 1994).

Information can be encoded using either a learning strategy or a maintenance strategy. An individual who does not expect to have to ignore information uses a “learning strategy.” She assumes that she is allowed to use all the information she is encountering and the information becomes part of memory. A person would then need to use intentional forgetting in order to comply with a limiting instruction. However, if a person is warned that she may need to ignore certain information, she could use what Johnson calls a “maintenance strategy.” In this case, the information is not immediately integrated into memory, but instead held until a further instruction to remember or forget.

The type of forget instruction given is also a factor in whether the intentional forgetting will be successful. A “specific forget instruction” asks individuals to forget only certain points of what they have learned (Johnson, 1994). When using a learning strategy, the information gets integrated forming links and associations between all the learned pieces. When given a specific forget instruction, the links do not break easily so when recalling the items that need to be remembered, one may also recall the items to be forgotten (Johnson, 1994).

The final factor for intentional forgetting is task execution. There is directed retrieval and undirected retrieval (Johnson, 1994). Directed retrieval requires the person to remember specific items from a learning task whereas undirected retrieval requires the person to recall “some information” which can be learned items or conclusions based on the learned items (Johnson, p. 277). With a specific forget instruction, the retrieval process does matter as the individual has been asked to remember some things but forget others.

Research supporting intentional forgetting. Most of the research focused on intentional forgetting uses what is known as the list method (Bjork & Bjork, 1996). Participants are given a list of words and told they may be asked to forget or they may be asked to remember. In all instances, the participants start the task by thinking they have to remember. Halfway through the list, the participant is cued to either forget the preceding words and only remember the subsequent set (“forget-remember”) or to remember the preceding words *and* the subsequent (“remember-remember”) (Bjork & Bjork, 1996). The findings indicate that people are better at recalling subsequent list items in the forget-remember condition than they are in the remember-remember condition (Bjork & Bjork, 1996). The evidence suggests that once an individual is told to forget preceding information, there is less cognitive load allowing for better memory of subsequent items. However, following the word list, when participants were distracted with a recognition task (i.e. “were you supposed to remember this word?”) that included items to be forgotten, recall in the forget-remember condition decreased to the level of the remember-remember condition (Bjork & Bjork, 1996). This is evidence that the words are not actually “forgotten” and once they are triggered in the recognition task, they create static in the recall task.

An employer, to comply with fair hiring policies, may be asked to intentionally forget information regarding an applicant’s sex, race, religion, etc. so as not to influence hiring procedures. Oien and Goernert (2003) tested whether this was possible. Participants received four job applications, one of which contained “forbidden” information on the first page referred to as the “Target” (Oien & Goernert, 2003). Some participants were also pre-instructed about types of forbidden information that may

appear on the application and told that that they should ignore this information. This was an attempt to disrupt the encoding process. Although comparisons to the control group that did not receive a pre-instruction indicated that participants who had been instructed rated the Target as more favorable and recalled fewer items from the forbidden list, overall the “Target” applicant was viewed as less hire-able when compared to all other applicants(Oien & Goernert, 2003). While the pre-instruction may have inhibited integrative encoding or inhibited retrieval, it did not completely erase the influence of the information.

One possible reason is that the participants were provided with seven pieces of information on the first page of the Target application including items such as “spent night in detox” and “has DUI conviction” while the comparative list for the other applicants contained non-relevant (and banal) information such as “has good health” and “hobbies” (Oien & Goernert, 2003, p. 101). This study could be redone with either fewer pieces of forbidden information mixed with non-relevant information or by including less memorable forbidden items with fewer negative connotations in order to further test the use of a pre-instruction to disrupt encoding.

The fact that so many studies involving intentional forgetting rely on the “list method” in a laboratory or some other scientific setting make them virtually ungeneralizable. Oien and Goernert (2003) made a point of mentioning that they tried to keep their materials as close to the “list method” as possible. These studies occur in a vacuum, asking people to remember or forget lists of words that have no meaning to each other or to the participants; this is not realistic.

Application of intentional forgetting to inadmissible evidence. There are few

studies that attempt to explore intentional forgetting in the courtroom setting, which is a result of the difficulty in testing this type of hypothesis. Mallard and Perkins (2005) hypothesized that participants would have a more difficult time separating admissible and inadmissible testimony if it came from the same witness compared to if the same testimony came from two separate witnesses. This hypothesis was based on the intentional forgetting literature; Mallard and Perkins assumed that inadmissible and admissible testimony that came from the same source would be encoded and associated together in the mind of the participant, thus interfering with instructions to forget only one piece of evidence presented by the witness. Using a trial summary adapted from Kassin and Sommers (1997), Mallard and Perkins (2005) found their hypothesis was not supported. The results indicated that it did not matter whether the two pieces of testimony came from the same source or from different sources. Although there may have been problems with the strength of the manipulation, this finding is promising evidence that jurors can disregard specific items.

Discrete vs. integrative encoding. In another approach to encoding and discounting, Schul and Burnstein (1985) discussed two types of encoding strategies – discrete and integrative. In discrete encoding, arguments are stored separately with few links to other arguments. In integrative encoding, arguments are stored together with strong associations to other arguments. When an individual tries to discount information, it seems logical to assume that discounting is easier if the original information was encoded discretely. Discounting specific items within an integrative encoding strategy requires associations between the arguments to be broken. Even if the information can be discounted, the remaining information may have been interpreted with the information to

be discounted.

Schul and Burnstein (1985) discuss two discounting contexts. In the first context, the individual's attention is focused on the information to be used. Individuals are told which pieces of information they may attend to out of a whole set of information. In the second context, the focus is on the information that is to be discounted. Individuals are told which pieces of information they cannot use when reaching a decision. According to Schul and Burnstein, in this second context, there is an increase in the salience of the discounted information.

Schul and Burnstein (1985) hypothesized that discounting would fail when the information had been encoded in an integrative process and when the individuals were focused on the information to be disregarded. They hypothesized that asking the individuals to ignore specific information would make that information more salient *and* if they had used an integrative encoding strategy, that information would be linked to the other information. Combined, these two situations should have made it difficult to disregard the requested information. Schul and Burnstein found that discounting was actually better when the focus was on the information to be ignored even though telling participants to ignore it made the information more salient. However, it was only better when a discrete encoding strategy had been used.

Application of discrete vs. integrative encoding to inadmissible evidence. Schul and Manzury (1990) argue that appealing to jurors to discount information can work in a courtroom because there is other testimony to support discounting. Because jurors are aware that some of the testimony and evidence they hear may be invalid, integrative encoding may actually be restrained in the courtroom, with jurors opting for a discrete

method of encoding (Schul & Manzury, 1990).

Participants were presented with a trial summary where testimony from a prosecution witness was invalidated by either weak testimony from defense witnesses or through both the weak testimony and one strong testimony. Specifically to engage participants in integrative encoding, Schul and Manzury (1990) asked participants to think about how the testimonies they had heard fit together. The non-integrative encoding group was asked to memorize the testimonies to be matched to the witness. The results indicated that the type of encoding strategy did not affect ability to discount the invalid prosecution testimony. Participants were also able to discount the prosecution's information regardless of the strength of the defense witnesses. An effect for encoding strategy was found in the ratings of defendant aggressiveness when compared to the control who was not asked to do anything additional with the testimony (Schul & Manzury, 1990). This does suggest that the manipulation worked to some extent.

Schul and Manzury (1990) argue that their findings are proof that jurors do not need additional evidence in order to discount invalid testimony and that integrative encoding did not affect discounting in the courtroom setting. However, it is possible that the case against the defendant was weak in general so adding defense witnesses to invalidate the prosecution's star witness only served to make the case weaker. In addition, the case involved an assault incident that occurred outside of a bar; the idea that alcohol was involved in the assault may have led jurors to question the whole scenario. As a result, the argument that encoding strategy does not matter and that jurors can discount the testimony in a courtroom setting needs further examination.

Psychological Reactance Theory. One social psychological theory that may account for the inability to disregard inadmissible evidence is psychological reactance theory. Hammock and Brehm (1966) defined psychological reactance as “a motivational state directed toward the re-establishment of the eliminated freedom” (p. 546). At any given point in time, a person has “free behaviors” – these are thoughts, actions, or decisions they can perform now or in the future (Brehm, 1966). In order for the behavior to be free, Brehm states that the individual must be capable of engaging in those behaviors both physically and psychologically. The individual must also be aware that she can engage in those behaviors. This knowledge may be informal such as past experience or general customs or it may be more formal such as a contract or agreement between the parties (Brehm, 1966).

When an individual feels that one of her free behaviors is threatened or lost, the individual may experience psychological reactance; however, it is not guaranteed that reactance will occur when a free behavior is threatened or removed. Brehm indicates that there are certain situations where reactance will be stronger. First, the strength of the reactance is determined by the value of the threatened or lost free behavior and the value of the alternative behaviors. If the behavior that is threatened or removed is seen as highly valuable to the individual and the alternatives are viewed as less valuable, there will be a stronger attempt to re-establish the lost freedom. Second, the number of free behaviors that are being threatened or removed determines the strength of the reactance. The number of threatened behaviors needed to arouse reactance is based on a proportion of all the free behaviors available – if a large proportion of free behaviors are threatened, reactance is more likely to be aroused. Finally, the reactance is determined by the

strength of the threat; the stronger the threat, the stronger the reactance. According to Brehm, reactance will not occur when there is no chance of recovering a lost freedom.

When an individual only has two choices and one is removed, the individual feels she has essentially lost all freedom as there is only one choice remaining and it is either pick that option or choose nothing. As a result, reactance is aroused and the lost alternative becomes more desirable, while the only remaining option becomes less desirable (Hammock & Brehm, 1966). The longing for the threatened free behavior increases, which also increases that freedom's attractiveness (Brehm, 1966). In the case of a trial, the free behavior is the ability to consider any information that the juror himself deems relevant to the case. When a judge admonishes a jury to disregard specific information, the free behavior is threatened, thus making the banned information more attractive.

In an attempt to regain this lost freedom after being told to ignore evidence, individuals may rely more heavily on the information than they would have if they had been allowed to use it in the first place. This is known as the "backfire effect." In one of the first studies to demonstrate the backfire effect, Broeder (1959) found that when jurors were told a driver had liability insurance, they awarded the victim more than when they knew the driver had no insurance. However, when the insurance information was ruled inadmissible, jurors awarded the victim more than triple the original amount.

Research supporting psychological reactance theory. Psychological reactance theory is often employed in the health education field. Psychological reactance has been used as a framework to test the effectiveness of persuasive health messages on topics ranging from binge drinking and drug use to exercise (Quick & Consideine, 2008) and

flossing (Dillard & Chen, 2005). If the health message evokes reactance, the individual will fight to regain freedom, will ignore the message and will continue with self-destructive behaviors. Within this framework, policymakers in the health field must find a way to put forth an informative and persuasive message without arousing psychological reactance.

Quick and Considine (2008) examined messages designed to persuade adults to join exercise programs. One message contained forceful language regarding the health problems in society and ended with “you have to do it” (Quick & Considine, 2008, p.491). The other message contained language that suggested people “give it a try” (Quick & Considine, 2008, p. 491). Quick and Considine (2008) hypothesized that the forceful message would be seen as a threat to freedom and participants would attempt to regain the lost freedom. The findings showed that those in the forceful message condition found the message less persuasive than those in the less forceful condition. Those in the forceful message condition also reported that they would be less likely to attend that particular exercise program. These findings suggest that when it comes to health messages, people may respond more favorably to a gentler message where they feel they have a choice.

Knowledge of psychological reactance can also be helpful when dealing with children and teenagers. Driscoll, Davis, and Lipetz (1972) found that parental interference increased feelings of romantic love in couples. When parental interference decreased, feelings of romantic love decreased. Driscoll, et al. (1972) dubbed this finding the Romeo and Juliet effect. A parent interfering in a relationship arouses psychological reactance. In order to regain lost freedom, the teenager remains in the

relationship. Once parental interference decreases, the threat to freedom is gone and so is the relationship.

Application of psychological reactance theory to inadmissible evidence. Several studies have tested reactance within the context of the courtroom, more specifically as relating to inadmissible evidence. A judicial admonition to disregard information can be viewed as a threat to freedom and as such, should arouse psychological reactance within jurors.

Cox and Tanford (1989) found that jurors pay greater attention to, and rely more heavily on, information after it has been ruled inadmissible. Wolf and Montgomery (1977) found that when inadmissible evidence was accompanied by a weak admonition, it did not bias the verdicts. However, when the evidence was followed by a strong admonition, the admonition did produce biasing effects. One possible explanation for this backfire effect is that the judge's strong admonition was viewed as a greater threat to freedom, which resulted in a reliance on the evidence in an attempt to regain that lost freedom.

Similar to Wolf and Montgomery (1977), Lee, Krauss, and Lieberman (2005) manipulated the strength of the judicial admonition following the introduction of hearsay evidence in a civil trial. Evidence of psychological reactance was found in two measures – confidence in liability verdicts and the award of punitive damages (Lee et al., 2005). In both measures, those in the strong admonition condition were significantly different from those in the weak admonition condition. Those who heard a strong admonition were more confident in the plaintiff's case and were more likely to award punitive damages.

Despite these findings, Lee et al. (2005) did not find differences in the actual

liability verdicts or in the amounts awarded for compensatory and/or punitive damages. Although a strong admonition may have aroused psychological reactance and influenced the participants' confidence in favor of the plaintiff, it did not affect the actual verdict. The lack of significant differences in verdicts may be explained by the case itself. Overall, a large majority of the verdicts, including 80% of participants in the control condition, were in favor of the plaintiff.

Clark (1994) found that psychological reactance was aroused when the judge censored a minority opinion during jury deliberations. Participants read that the judge had learned one juror had discussed inadmissible evidence during deliberations. The juror had made three arguments in favor of acquittal. In the highest level of censorship, participants were informed that jury had been instructed to ignore two out of the three arguments *and* that the juror had been removed from deliberations. Participants in this strongest condition were least likely to think the defendant was guilty when compared to all other conditions, including two different censorship conditions (Clark, 1994). Interestingly, those who had only had one argument censored were no different on probability of guilt ratings when compared to the group who did not have any arguments censored.

Clark attributed these results to psychological reactance; however, the only dependent measure was a 9-point Likert scale rating the probability of guilt. With no other dependent measures to operationalize "psychological reactance," it is difficult to draw that conclusion. Perhaps the juror being removed from deliberations drew attention to the minority's argument more so than just being told to disregard.

Theory of ironic mental processes. A second social psychological theory that

could account for the inability to disregard inadmissible evidence is the theory of ironic mental processes (Wegner, 1994). Wegner's theory states that in order to control one's thoughts, one must not be distracted or stressed, under time pressure or increased cognitive load. When a person has reduced mental capacity due to other pressures, not only will the individual be unable to control the mental process, but also any attempt to do so will have the opposite effect. Wegner calls this phenomenon the rebound effect.

Wegner's (1994) theory assumes two processes for mental control: an operating process; and, an "ironic" monitoring process. The operating process requires conscious effort and is the process that searches the mind for the thoughts or memories that will produce the desired result. The effort-requiring operating process works in tandem with the relatively unconscious monitoring process. The monitoring process searches the mind for any thoughts or memories that will not produce the desired results. When the monitoring process finds content that demonstrates a lack of mental control, it is a signal to restart the operating process in an attempt to return to the desired results. Because the monitoring process is relatively automatic, items that indicate a lack of control come into consciousness and with conscious effort are suppressed by the operating process. However, if the individual is suffering from cognitive overload, the operating process will be impaired and the thoughts that should be suppressed will remain in the consciousness. This is the irony of the process – the mind, in an attempt to suppress certain thoughts, actually brings these thoughts into consciousness and increases their accessibility.

Asking a juror to disregard information is asking the juror to suppress a thought. The desired result is not to think of the piece of evidence. What makes this difficult is

the fact that the operating process, in order to achieve the desired result, needs to search the mind for everything *but* that thought – a “feature negative search” (Wegner, 1994). Meanwhile, the monitoring process has the easier job of searching for that thought – a “feature positive search.” A juror may want to comply with the judge’s admonishment, but may be unable to do so due to the reality of ironic mental processes.

Lieberman and Arndt (2000) suggested that jurors are likely to distract themselves with other case relevant information. By using courtroom-related distractors, the juror unintentionally links the inadmissible evidence to other case information. As Johnson (1994) suggested, once information is linked, a specific forget instruction provided by a judge fails to ensure separation of the evidence. Also, further efforts to suppress the information may lead to the backfire effect, as the evidence will become more salient in the mind of the juror. Consequently, the ineffectiveness of limiting instructions may actually be a function of jurors trying to comply with those instructions.

Research supporting theory of ironic mental processes. The classic test of the theory of ironic mental processes is the white bear experiment (Wegner, Schneider, Carter, & White, 1987). Participants were assigned to a suppression condition or an expression condition. In the suppression condition, participants were first told to “not think of a white bear” during a 5-minute stream of consciousness; they were then told they should think of a white bear during a subsequent 5-minute stream of consciousness. Those in the expression condition were instructed in the reverse order – first told to think of the white bear, followed by instructions to suppress the thoughts. In all conditions, participants were told to ring a bell whenever they mentioned or thought of a white bear.

Those who were first told to suppress, then allowed to think about the white bear

had an increase in bell rings over their second 5-minute stream of consciousness (Wegner et al., 1987). In all other time periods, participants decreased bell-ringing over the 5 minutes suggesting that thoughts of the white bear were there initially, but lessened over time. This is evidence of the rebound effect. After suppressing the thought of a white bear for a 5 minute time period, participants thought about the white bear at a much higher rate than the other groups in the subsequent 5 minutes.

Application of theory of ironic mental processes to inadmissible evidence.

Edwards and Bryan (1997) found that the rebound effect described by Wegner et al. (1987) was worse when participants were asked to suppress emotionally charged inadmissible evidence when compared to participants asked to suppress the same information that had no emotional aspect. The theory of ironic mental processes would predict that any attempt to suppress information would result in a rebound effect. Edwards and Bryan (1997) hypothesized that trying to suppress the emotional evidence only served to make it more accessible and more likely to influence future judgments.

“Just verdict” hypothesis. The problem with the above theories in the jury decision-making literature is that they predict the same outcome -- an unconscious inability to disregard inadmissible evidence – through very different processes. For example, it has been shown that mock jurors rely more heavily on information after it has been ruled inadmissible (Cox & Tanford, 1989, Wolf & Montgomery, 1977 Lee et al., 2005, Clark, 1994). Psychological reactance theory explains this “backfire effect” by claiming that the stronger the threat to freedom, the more the individual will try to restore that freedom, thus relying more heavily on inadmissible evidence. The theory of ironic mental processes explains this “rebound effect” by claiming the more someone tries to

suppress a thought, the more accessible that thought will become. In the first instance, the individual is rebelling; in the latter, the individual is attempting to comply, but the result is the same and hard to test because the processes are unconscious.

Kassin and Sommers (1997) proposed another theory, the “just verdict hypothesis,” which is not based on previous social psychological theories and is specifically aimed at understanding how juror motivation influences the ability or inability to disregard information. They argued that jurors comply with limiting instructions on a selective basis. Jurors are motivated “to render a “just” verdict, regardless of whether this decision conforms to the rules of evidence” (Sommers & Kassin, 2001, p 1369). Jurors are faced with what can sometimes be a contradictory task; they are asked to render justice, but they are also asked to uphold the applicable law (Demaine, 2008). Sometimes these tasks conflict with each other, especially when a juror is told to disregard evidence that she sees as relevant and reliable. It is interesting in the quotation from Justice White above that he refers to his confidence in a jury’s ability to disregard “unreliable information” but sometimes, inadmissible evidence *is* reliable, just not legally allowed.

Research supporting “just verdict” hypothesis. Testing the “just verdict” theory, Kassin and Sommers (1997) examined whether jurors would ignore information ruled inadmissible for lacking credibility, but not ignore evidence ruled inadmissible for violating due process. Research participants were introductory psychology students in the role of non-deliberating mock jurors. Each participant read one of four versions of a 23-paragraph murder trial summary (Kassin & Sommers, 1997). Following each paragraph, the individual jurors rated whether the paragraph had made the defendant

seem innocent or guilty by using a digital dial in front of them. The control version of the summary contained weak, circumstantial evidence. The remaining three versions contained an illegal wiretap obtained from an unrelated case in which the defendant confessed to the murder (Kassin & Sommers, 1997). In one version, the wiretap was admissible. In the remaining two versions, the wiretap was inadmissible for reasons of due process or for reasons of reliability.

The jurors showed selective compliance with the judge's admonitions. In fact, the inadmissible/unreliable group had the same conviction rate as the control group (24%) (Kassin & Sommers, 1997). After the wiretap was introduced, those in the inadmissible/due process group were more likely than both the control group and the inadmissible/reliability group to vote guilty on the digital dial on subsequent items of evidence even though they did not later cite the evidence as having swayed their decisions (Kassin & Sommers, 1997). Jurors may think that they are complying with the instructions without realizing that the evidence is affecting future judgments. This study suggests that jurors can comply with limiting instructions and discount evidence on cue, but they do so on a selective basis.

Pickel (1995) found some support for the just verdict hypothesis. Jurors were better able to follow instructions to disregard inadmissible evidence when the evidence was hearsay, which is a form of unreliable evidence, than they were when the evidence was a prior conviction, which was inadmissible for due process reasons. However, as pointed out by Kassin and Sommers, the results were from two separate studies and so the evidence manipulation may not be the full reason for the difference between the two.

Interestingly, Mallard and Perkins (2005), which started as a test of intentional

forgetting, ended as support for the just verdict hypothesis. If the evidence was ruled inadmissible because it was unreliable, the participants were able to ignore it regardless of whether the source provided both admissible and inadmissible testimony or solely inadmissible testimony.

Use of instructions to reduce the influence of inadmissible evidence

Regardless of the theory, all of the above psychological processes lead to the same result – individuals have trouble ignoring or forgetting information once they have heard it. One possible solution is to offer an instruction; however, it is not just an instruction that is important; it is the timing and the content of that instruction. An instruction offered prior to receiving information may be more helpful than receiving an instruction after exposure to the information and an instruction that addresses psychological realities could have a different effect than one that does not.

Timing of instructions to reduce the influence of inadmissible evidence.

Schul (1992) hypothesized that by giving people a warning that they may not be required to use all the upcoming information, they may hold off on combining all the information and only evaluate the evidence once they have learned which of the pieces was “invalid.” By examining pieces of evidence as distinct pieces of information not to be combined until one is sure she is using only admissible evidence could improve a juror’s ability to disregard inadmissible information.

Schul (1992) had participants read eight pieces of information regarding a fictional person and make judgments about the person following the reading. Some participants were warned ahead of reading the information that some of the descriptors might not be valid and would have to be ignored at the end of the reading. Participants

were not told until afterward which descriptors were to be ignored. Other participants received not only this early warning but also a reminder during the reading. The reminder was not explicit, but a bizarre descriptor, which was meant to serve as a reminder that not all the material was valid. Schul (1992) hoped to break the integrative process such that integration only occurred after all information had been provided and some marked as invalid. The ability to disregard information was increased when participants received *both* an early warning and a reminder later on (Schul, 1992). Because participants were told at the onset that some pieces of information were meant to be ignored, they may have demonstrated demand characteristics in an attempt to comply with the researcher's instructions. However, the group that received only the early warning, but not the reminder, actually did slightly worse in ignoring the information than did a group that received no warning at all, suggesting that the results are not due to demand characteristics. Only when participants read the early warning and the reminder in the form of bizarre information was discounting successful.

This finding can be applied to the courtroom in the form of a pre-trial jury instruction. A judge could instruct the jury before they hear any evidence concerning the possibility that some evidence may be inadmissible and they may be instructed to disregard this evidence. The judge could go even further by indicating that each piece of evidence received should be regarded separately until the end of the trial. Johnson's (1994) notion of "specific forget instructions" suggests that a juror who is encouraged to process pieces of evidence separately may be better able to specifically forget one particular piece of information, i.e. that which is inadmissible. The "reminder" occurs in the trial and comes in the form of the judicial admonition immediately following the

introduction of the inadmissible evidence and subsequent ruling and again at the end of trial instructions. Thus, in practice, jurors often receive two post-evidence reminders; but rarely do they receive a pre-trial evidence warning. This is an idea that is relatively absent from the literature, but could have some interesting implications on judicial instructions.

Cruse and Brown (1987) studied the effect of timing of legal definitions, specifically the definition of grand larceny. Either participants heard the definition before the testimony, after the testimony, before *and* after the testimony, or they did not hear a definition. Timing – before or after - had no effect, but the group that received the definition twice was significantly different from the other groups. This is an indication that it may not matter when a juror hears the information; what matters is how many times the juror hears it. This is similar to what Schul (1992) found in that participants were better able to disregard information when they received an early instruction and were given a reminder later.

Kassin and Wrightsman (1979) found that jurors who received instructions prior to the trial regarding the burden of proof and reasonable doubt were less likely to convict when compared to participants who only received the instructions afterward or not at all. Timing of the instruction had no significant effect between groups on ratings of evidence strength or interpretations of reasonable doubt. Participants in the pre-instruction condition thought it less likely that the defendant was guilty (Kassin & Wrightsman, 1979). Kassin and Wrightsman concluded that participants in the pre-instruction conditions presumed the defendant was innocent while the other presumed he was guilty. In this study, the participants were instructed after the opening statements and before the

start of the evidence. No group received the instructions both before and after the evidence was presented, so the effects of repetition on the participants' verdicts could not be tested.

Paglia and Schuller (1998) presented participants with hearsay evidence and one of two instructions – limiting, which allowed the evidence in, but limited its use, and disregard, which admonished jurors to ignore the evidence. The instruction was presented either right after the testimony, at the end of the trial, or in both places. Additionally, there were three control conditions – the witness presented the evidence as firsthand rather than hearsay, no hearsay evidence was admitted, or the hearsay evidence was admitted without objection or instruction. There were no differences across the manipulated variables for verdict or strength of case (Paglia & Schuller, 1998). One possibility for this is that the defense introduced alibi evidence demonstrating that the defendant was somewhere else at the time of the murder. With a weak case and hearsay evidence, which can be viewed as unreliable regardless of whether it was allowed or not, the strength of the case diminished and resulted in not guilty verdicts.

Stebly, Hosch, Culhane, and McWethy (2006) conducted a meta-analysis examining how judicial instructions to disregard inadmissible evidence impact juror verdicts. They found that inadmissible evidence led to more guilty verdicts even with an immediate judicial admonition. However, when evidence was ruled admissible there were more guilty verdicts than when the same evidence was deemed inadmissible (n=16). The effect of inadmissible evidence was diminished when the judge explained why the evidence was not reliable (n=3), if a general judicial instruction was given at the end of the trial (n=3), during jury deliberation (n=4), and for hearsay evidence (n=5). Evidence

that was objected to and ruled inadmissible made for more guilty verdicts suggesting that the objection and inadmissible ruling alone have an adverse impact. The judge's charge at the end of the trial was moderately effective at reducing the effect of inadmissible evidence. Interestingly, groups that did not hear any inadmissible evidence ($n = 4$) but still heard an end of trial charge still had an increased rates of conviction. There was some evidence that a pre-trial instruction affected the impact of inadmissible evidence, but the data set contained a small number of this type of experimental design and in two of the four studies, the pre-trial instruction related to pre-trial publicity as the inadmissible evidence and not evidence presented in the trial.

Throughout the meta-analysis, Steblay et al. (2006) analyzed the impact of moderator variables, such as type of evidence, reason for inadmissibility and type of case. The meta-analysis revealed some support for the "just verdict" hypothesis. For example, evidence that was illegally obtained had a statistically significant impact on verdicts; however, it was not the main focus of the analysis and in some analyses, the number of studies used was very small due to a separation of so many moderating variables. Since the focus was on judicial instruction and inadmissible evidence, the only studies included were those in which a judicial instruction was used in the experimental design; this reduced the sample size sometimes to the point of using $n = 1$ to look for effects. With small sample sizes for several of the analyses, the results are not conclusive and there is room for further investigation.

Content of instructions – use of suspicion to reduce the influence of inadmissible evidence. Although an instruction prior to the start of a trial, followed by a reminder, may reduce bias from inadmissible evidence, a further step would be to raise a

juror's awareness by arousing suspicion about motives behind behavior. Fein and his colleagues have conducted numerous studies regarding the arousal of suspicion and its effect on decision-making. Hilton, Fein, and Miller (1993) define suspicion as entertaining "the notion that the target is trying to hide something that has the potential to discredit the meaning of the target's behavior" (p 502). Once suspicion is aroused, judgment is reserved because the individual is actively entertaining "multiple, plausibly rival hypotheses about the motives or genuineness of a behavior" (p 502). When someone is suspicious, she is less likely to take behavior at face value and instead will hold the actor to a higher standard of proof before belief (Fein, 1996). Once suspicious, the individual may view everyone involved as having ulterior motives and not just the person the suspicion is directed toward (Fein). An individual who is suspicious may attend to and process information more carefully. Fein, Morgan, Norton, and Sommers (1997) suggest that suspicion is effective at increasing one's ability to discount information without the need to *forget* that information. In order to do this, the reason to be suspicious must be compelling and must make jurors question the legitimacy of the evidence (Fein, et al, 1997).

Fein, McCloskey, and Tomlinson (1997) claimed that raising suspicion does not elicit the same psychological reactance that may occur after a judicial instruction. This is because jurors are not being asked to forget or ignore instructions; they are only being asked to think more seriously about the information they receive. The study stimulus was designed to arouse suspicion about the motives of the prosecutor who introduced inadmissible hearsay testimony. The study had four groups – a control group who did not hear the testimony, an admissible group in which testimony was not objected to, an

inadmissible group in which the testimony was objected to, but there was no attempt to arouse suspicion, and an inadmissible group in which suspicion was aroused. This was accomplished by having the defense attorney arouse suspicion within his objection by saying: “The prosecution has deliberately asked a question that was designed to elicit a response that he knew would be inadmissible, your honor. Why else would he ask such a question?” (Fein et al., 1997, p. 1222). The judge followed with an additional suspicion-arousing statement after instructing the jury to disregard: “You should also keep in mind that sometimes inadmissible evidence is introduced into a trial in a deliberate attempt to manipulate the jury's thinking, and you should therefore try not to let this information affect your thinking about this case” (Fein et al., 1997, p. 1222). Those in the inadmissible/suspicious condition rendered verdicts similar to the control group who had not heard the evidence at all. Those in the inadmissible suspicious condition also rated the truth of the hearsay evidence as significantly less than both the admissible and the inadmissible/no suspicion conditions.

With both the defense attorney and the judge arousing suspicion, the participant is being exposed to two people in a position of power telling them to be wary. It would have also been interesting to see a condition in which either the judge only or the defense attorney only raised suspicion. The results of the suspicious statements may also have been a result of demand characteristic. Because the suspicion-arousing statements occurred immediately following the inadmissible evidence, participants may have unconsciously changed their answers in order to comply with what they thought the experimenter was looking for in regards to that piece of evidence.

**Current study:
Judicial limiting instructions and the juror's ability to disregard inadmissible evidence.**

Kassin and Sommers (1997) have shown that jurors will disregard inadmissible evidence when the evidence is determined by the juror to be unreliable or irrelevant in order to make a just verdict. The encoding literature shows that discounting works best when pieces of information are attended to as separate items and not integrated until the end. Schul has shown that when an individual is warned ahead of time that certain information may need to be ignored later, the individual is better able to do so. Finally, Fein and colleagues have shown that arousing suspicion can increase the ability to discount information and minimize psychological reactance. These lines of research are combined in the current study by using both a generic pre-trial instruction that warns of possible inadmissible evidence, and a pre-trial instruction designed to arouse suspicion.

The current study tested and extended the just verdict hypothesis (Kassin & Sommers, 1997). The just verdict literature supports the idea that jurors are trying to do their job; yet, studies to date have not included a pre-trial instruction informing study participants what that job is. As such, the participants are not told to disregard information until after they have been exposed to it. In most cases, participants are also not told they are only allowed to consider only admissible evidence when making their decision until the closing instruction by the judge. This study introduced a judicial pre-trial instruction, including one designed to raise suspicion, to examine with more specificity when jurors might disregard unreliable inadmissible evidence and under what conditions they can ignore reliable inadmissible evidence. By placing the suspicion-arousing instruction at the beginning of the trial, the current study hoped to reduce any

specific demand characteristic by making the suspicion generalized and not focused on any one person or piece of evidence.

Both New York and California include a sentence on evidence that is to be ignored in their recommended pre-trial criminal law instructions. Recommended New York State Criminal Jury Instructions state: “Testimony which was stricken from the record or to which an objection was sustained must be disregarded by you” (CJI2d[NY] Charges of General Applicability). California Criminal Jury Instructions state: “If I order testimony stricken from the record, you must disregard it and must not consider that testimony for any purpose” (CALCRIM No. 104, 2009, p. 92).

A simple generic pre-instruction given at the beginning of a lengthy trial may be forgotten long before any controversial evidence is admitted into the trial. In order to bolster the pre-instruction, this study also examined a more comprehensive judicial pre-instruction with the purpose of raising juror suspicion regarding the reasons why a lawyer may try to introduce known to be inadmissible. For the purpose of this research, the term “suspicion” is used to refer to raising participants’ awareness and making them more critical of the evidence. Even though this type of judicial pre-instruction about suspicion may be less likely used in a courtroom, its purpose here was to examine whether jurors will disregard inadmissible evidence regardless of whether it is due process related or unreliable and may as a result give more thought to other, admissible, evidence.

Design

The design is a 3 (type of pre-trial instruction) x 5 (type of ruling) design – resulting in 15 experimental conditions. This is a complete factorial design. The judicial instructions factor included no instruction (*no instruction*), a generic pre-trial instruction

(*generic*), and a suspicious pre-trial instruction (*suspicious*). The type of ruling factor included no objection (*no objection*), an overruled objection with no further admonition from the judge (*admitted - no admonition*), an overruled objection with a further admonition (*admitted – admonition*), a sustained objection because the evidence is unreliable (*not admitted – unreliable*), and a sustained objection because the evidence was stricken prior to the trial with a motion, due process violation (*not admitted – DP*). See Table 1 for condition combinations and sample sizes.

Table 1. Condition combinations with sample sizes.

		Type of ruling				
		<i>No Objection</i>	Admitted		Not Admitted	
			<i>Admitted – no admonition</i>	<i>Admitted - admonition</i>	<i>Not admitted - unreliable</i>	<i>Not admitted - DP</i>
Type of instruction	<i>No Instruction</i>	1 (16)*	2 (16)	3 (16)	4 (16)	5 (16)
	<i>Generic</i>	6 (16)	7 (16)	8 (16)	9 (17)	10 (16)
	<i>Suspicious</i>	11 (16)	12 (16)	13 (16)	14 (16)	15 (16)

* Sample sizes in parentheses.

Hypotheses

Hypothesis 1. There will be a main effect for type of instruction. See Table 2.

- participants in the *suspicious* condition should return fewer guilty verdicts and be less confident that the defendant is guilty when compared to the other instruction conditions individually (Fein et al., 1997).

- participants in the *suspicious* condition should find everyone – attorneys and witnesses - less trustworthy and honest when compared to the other instruction conditions individually.
- participants in the *suspicious* condition will find the evidence less convincing compared to the other two instruction conditions individually.
- Participants in the *generic* condition will have fewer guilty verdicts compared to the *no instruction* condition.

Controlling for type of instruction:

Hypothesis 2. The “just verdict” hypothesis (Kassin & Sommers, 1997) suggests the *not admitted – unreliable* condition should be significantly different from each of the other type of ruling conditions such that participants in the *not admitted – unreliable* condition should:

- have fewer guilty verdicts
- think it less likely the defendant committed the crime
- find the State’s evidence to be weaker and less convincing
- be more convinced by the defense

Hypothesis 3. The *not admitted* conditions will be significantly different from the *admitted* conditions. When the evidence is *not admitted*, participants should:

- have fewer guilty verdicts
- think it less likely the defendant committed the crime
- find the State’s evidence to be weaker and less convincing

- be more convinced by the defense

Hypothesis 4. The *admitted – no admonition* conditions will be significantly different from the *admitted – admonition* conditions. Those in the *admitted – admonition* conditions will:

- view the witness presenting the critical evidence as less confident and less credible
- think it less likely the defendant committed the crime

To test hypotheses 3 and 4, the five-factor Type of Ruling variable will be contrast coded to test four contrasts:

- *no objection* vs. all others
- *admitted* vs. *not admitted*
- *admitted – no admonition* vs. *admitted – admonition*
- *not admitted – unreliable* vs. *not admitted – DP*

Hypothesis 5. Participants in the *no instruction* condition will demonstrate the “just verdict” effect. As such, the predictions for the *no instruction* condition are the same as set out in Hypothesis 2. Under the *no instruction* condition, the *not admitted – unreliable* condition should be significantly different from each of the other types of ruling conditions such that participants in the *not admitted – unreliable* condition should:

- have fewer guilty verdicts
- think it less likely the defendant committed the crime

- find the State's evidence to be weaker and less convincing
- be more convinced by the defense

Hypothesis 6. Participants in the *generic* condition will show a reduced “just verdict” effect such that:

- the *admitted* conditions will be significantly different from the *not admitted* conditions on ratings of guilt, likelihood, and strength of evidence
- The *not admitted – unreliable* and *not admitted – DP* conditions will no longer be different from one another

Hypothesis 7. Participants in the *suspicious* condition will have a further reduction of the “just verdict” effect. Under the *suspicious* condition, the *no objection* and *admitted - no admonition* conditions will be significantly different from the *admitted – admonition*, *not admitted – unreliable*, and *not admitted – DP* conditions.

If the *suspicious* condition does not reduce the “just verdict” effect as predicted, there will still be an effect. Those in the *suspicious/admitted – admonition* condition will view the evidence as unreliable. As such, under the *suspicious* condition, those in the *admitted – admonition* condition will respond as the *not admitted – unreliable* do and will be significantly different from the remaining three type of ruling conditions.

Chapter 2. Method

Pilot

A pilot was conducted in Manhattan civil and criminal courts during a one-week period between 12/07/09 - 12/09/09. In total, 20 people participated. See Appendix A for a complete discussion of changes to methodology and materials due to the pilot results. Based on the pilot a number of changes were made to the stimulus trial to maximize the distinctions between the conditions and the clarity of the trial summary. Additionally, due to problems that arose for the pilot participants with the audio technology and the logistics of the jury facilities available, the method of delivery was changed from an audio version to a written version.

Participants

Two hundred fifty one participants (89 men, 145 women, 17 sex missing, $M_{age} = 43$, age range: 19 – 75) were recruited with a verbal request for voluntary participants in the Staten Island Jury Assembly Room from 3/23/2010 to 6/2/2010. Ten participants' data were discarded due to missing data – most looked as though they had accidentally skipped an entire page of the questionnaire. 241 participants remained (86 men, 141 women, 14 sex missing, $M_{age} = 43$, age range: 19 – 75).

Participants were solicited only after it was known to the staff that the jurors were being dismissed from jury service. The participants either had not been questioned for a jury or may have been questioned for a jury, but were not selected. No jurors who were waiting for voir dire or who were serving on a case could be used. This rule was applied to avoid any possibility that the research might taint a real trial. Only completely dismissed jurors were invited to participate. Participants were not compensated

financially. They were welcome to keep the pen and a lollipop for their time.

Participation took approximately 30 minutes.

Materials

Trial summary. Individual participants were randomly assigned to one of the fifteen conditions and presented with a written trial summary. Ten conditions received a judicial pre-trial instruction prior to the summary. All fifteen conditions included opening statements, descriptions of witness testimony, closing statements, and closing judicial instructions. See Table 2 for the order of the trial summary and the content of the testimony.

The stimulus material was a modified version of a trial summary used by Kassin: *State of Arizona v. John Gardner*. In the trial summary, the defendant, John Gardner, was accused of murdering a young woman, Carrie Reese. The defendant had come through town with his girlfriend and decided to attend a party with some local kids. He was the last person seen with the victim. The defendant admitted that he was with her when questioned by the police. In total, there were six witnesses for the state and three witnesses for the defense, including the defendant. See Appendix B for the full trial summary.

Table 2. Order of trial summary and content of witness testimony.

Order of trial summary	Witness	Content		Cell numbers (n)	
Judge's pre-trial instructions		No instruction		1-5 (80)	
		Generic		6-10 (81)	
		Suspicious		11-15 (80)	
Opening Statements				All	
Two State witnesses:*	Detective Collins	D recognized photo of victim; admitted to fooling around with her		All	
	Pathologist, Dr. Mark Friedland	Cause of death was a severe blow to the head – no cross-exam			
Forensic expert	Dr. Jerome Michaels	Hair found under the victim's fingernail matched the D's; did not offer DNA evidence:	No objection		1,6,11 (48)
			Objection - no reason	Admitted – no admonition	2,7,12 (48)
			Objection - no reason	Admitted – admonition to give it the weight it deserves	3,8,13 (48)
			Objection - research claimed hair match unreliable	Not admitted	4,9,14 (49)
			Objection - pre-trial motion to exclude evidence	Not admitted	5,10,15 (48)
Three State witnesses:*	Store clerk, Joshua Campbell	Saw the D hug the victim upon leaving his store; could not tell whether they left together		All	
	Antonia Kirby	Saw the D's truck near crime scene with someone sleeping in the back; could			

		not positively ID the defendant		
	James Webster	Saw the D and victim arguing at the party; saw the D leave with victim		
Three Defense witnesses:*	Deborah Sloan	Described the D as “normal” the day after the murder – no cuts or bruises		All
	Lisa Marie Page	Confirmed D was in the apartment the morning after and does not have a violent temper; has never know him to black out		
	Defendant, John Gardner	Admits he fooled around with a girl, blacked out, and drove back to the apartment; showered when he got back		
Closing statements				All
Judge’s closing instructions				All

Critical evidence. The critical evidence was that of a hair found underneath the victim’s fingernails, which matched a sample from the defendant. When the forensic expert, Dr. Jerome Michaels, introduced the hair evidence in the trial summary, it was immediately followed by the lawyer’s objection to that evidence and the judge’s ruling.

When the critical evidence was introduced by the State, all participants read the following paragraph:

State: The next witness is Dr. Jerome Michaels, a forensics expert who tested the victim’s body and clothing for foreign hairs, fibers, and other trace evidence. Dr. Michaels reports his laboratory findings that a hair sample positively matched that of the defendant. He also testifies that the hair was recovered from underneath the victim’s fingernail and that there were no other foreign hairs on the body.

Following this paragraph, all conditions except *not admitted – due process* read the following paragraph from the defense:

Defense: On cross-examination, forensic expert Dr. Michaels testifies that he knew the hair was a match to the defendant because he compared a hair sample from the defendant to the hair found beneath the victim’s fingernail under a microscope.

See Table 3 and Table 4 for the wording of the remaining manipulation paragraphs and Table 5 for a summary of the objections and rulings.

Although it may seem unlikely that in a trial summary one would include the inadmissible evidence, the participants were told they were reading a summary of the entire trial proceedings.

Table 3. Wording of defense cross-examination of forensic expert Dr. Jerome Michaels.

	Condition				
	No objection	Admitted – no admon	Admitted – admon	Not admit – unreliable	Not admitt-DP
Defense:					
On cross-examination, forensic expert Dr. Michaels admits he is aware of a recent study by a major scientific organization stating that matching hair samples under a microscope is unreliable as a source of identification. He also testifies that hair matching is wrong around 12% of the time.				X	
On cross-examination, he admits that a “match” indicates that the hair likely belongs to the defendant, but cannot rule out the possibility of someone else	X	X	X	X	X
At this point, the defense objects to the forensic testimony of Dr. Michaels		X	X		
At this point, the defense objects to the forensic testimony of Dr. Michaels and asks that the hair evidence be stricken from the record due to the unreliable nature of this evidence				X	
At this point, the defense objects to the forensic testimony of Dr. Michaels and asks that the last part of the witness’s testimony be stricken from the record. A motion was granted prior to the start of the trial that this witness was not to mention where the hair was recovered from.					X

Table 4. Wording of Judge's ruling.

	Condition				
	No objection	Admitted – no admon	Admitted – admon	Not admit – unreliable	Not admitt-DP
Judge:					
The objection is overruled. The forensic testimony of Dr. Michaels will be allowed to remain on the record.		X			
The objection is overruled. The forensic testimony of Dr. Michaels will be allowed to remain on the record. However, the jury is to give the testimony only the weight they think it deserves when reaching a verdict.			X		
Objection is sustained. The jury is to disregard the forensic testimony of Dr. Michaels				X	X

Table 5. Summary of objections and rulings regarding the critical evidence.

Objection	Reason for objection	Ruling	Number of conditions
No	N/A	N/A	3
Yes	No reason given	Admitted without further admonition	3
Yes	No reason given	Admitted with further admonition	3
Yes	Evidence is unreliable based on research by a "major scientific organization"	Not admitted	3
Yes	Introduction of the evidence violated due process rights. The evidence had been ruled inadmissible prior to the trial.	Not admitted	3

Procedure

Participants were brought into a room next door to the main jury assembly room. They sat wherever they were comfortable. They were told to leave a chair in between each other for more space to maneuver. After they were seated, each participant was handed a manila envelope containing a pen, a consent form, the trial summary, and the questionnaire (see Appendix E for the questionnaire and Appendix F for the consent form). Participants were randomly assigned to a condition. Participants were told to first complete the consent form; at this point, participants were allowed to ask any questions. Signed consent forms were collected before the participants began to read the trial summary. Participants read the summary, then answered the questionnaire, and returned everything to the envelope. While answering the questionnaire, participants were able to go back and look through the trial summary. From start to finish, participation took an average of 29 minutes, with a range of 13 minutes to 57 minutes.

Chapter 3. Results

Descriptive statistics

All 241 participants were from Richmond County, NY. Participants included 86 men (36%), 141 women (59%), and 14 (5%) where sex data was missing. The average age was 43 with a range from 19 – 75. Of the 219 who responded to the demographic questions, 26% spoke another language in the home. The most common language was Russian, followed by Spanish. Only 17% had ever served on a jury before and only 6% were questioned for a jury on the day they participated. Participation took an average of 29 minutes, with a range of 13 minutes to 57 minutes. There were no significant differences on verdict or confidence between those who finished quickly compared to those who took longer.

On the dichotomous verdict question, 69% of participants decided the defendant was “not guilty.” Additionally, participants were asked to rate on a scale of 1-7 whether they thought the defendant was “definitely not guilty” to “definitely guilty.” Overall, this question returned $M = 4.102$ - a neutral verdict. Based on these results, most hypotheses regarding guilty verdict were not significant.

Five additional variables were created from the dependent variables. The dichotomous verdict was recoded with guilty as -1 and not guilty as +1. This variable was then multiplied by the question regarding verdict confidence to create a scale ranging from -10 to +10, with 10 indicating “very confident the defendant is guilty” and +10 indicating “very confident the defendant is not guilty.” Participants were asked to rate the trustworthiness and competence of both attorneys, how manipulative each attorney’s case was, and how convinced they were by each case. A difference variable was created

for each pair by subtracting the rating of the Defense Attorney from the rating of the State Attorney. See Table 6 for means and standard deviations for all dependent variables.

Two manipulation checks were included at the end of the questionnaire: participants were asked whether any evidence was objected to and whether they had read an instruction prior to the trial summary. Twenty-eight participants incorrectly said they had read an instruction when they had not. No participants said they had not read an instruction when they had. All participants read the following two sentences prior to the trial summary: “The purpose of this research is to understand the process of juror decision-making. Please imagine that you are a juror in this criminal case as you carefully read the trial summary.” It is possible that participants mistook this instruction as an instruction from the judge. Thirty-two participants incorrectly said that no evidence was objected to. No participant in the *no objection* conditions answered that evidence was objected to. Since these incorrect answers did not affect the analyses, these participants remained in the dataset.

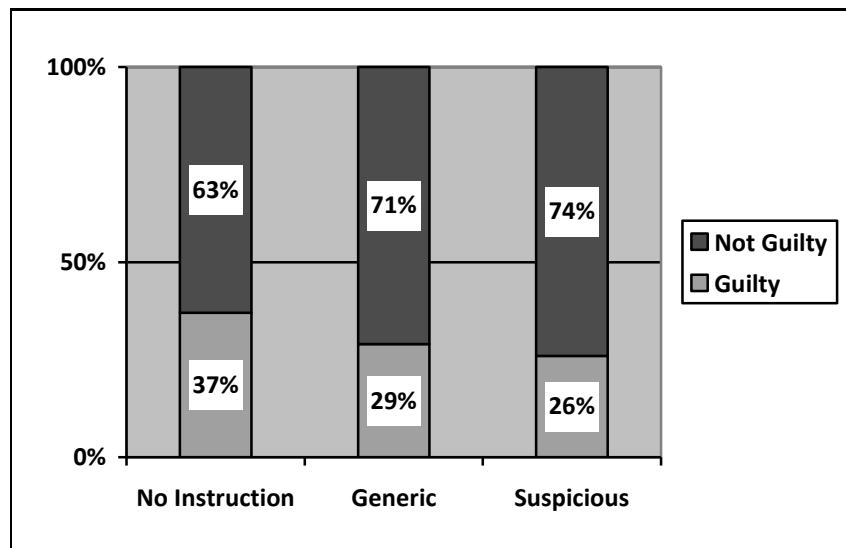
Table 6. Descriptive statistics for all dependent variables (numbers correspond to number on questionnaire).

Dependent measure	Mean	SD	Dependent measure	Mean	SD
1. Guilt scale	4.102	1.694	11. Rating of Deborah Sloan's honesty	7.24	1.940
2. Confidence	6.980	2.216	12. Rating of Josh Campbell's honesty	7.56	1.985
3. Likelihood D committed the crime	52.330	28.440	13. Rating of James Webster's honesty	6.65	2.190
5a. Impact of Antonia Kirby's testimony on guilt	4.430	1.401	14. Rating of John Gardner's honesty	5.71	2.230
5b. Impact of the hair evidence on guilt	5.100	1.287	15. Rating of the State Attorney's trustworthiness	6.97	2.072
5c. Impact of James Webster's testimony on guilt	4.56	1.414	16. Rating of the State Attorney's competence	6.69	2.247
5d. Impact of John Gardner's testimony on guilt	4.10	1.567	17. Rating of the Defense Attorney's trustworthiness	6.43	1.915
5e. Impact of Detective Collins' testimony on guilt	4.11	1.383	18. Rating of the Defense Attorney's competence	6.89	1.892
5f. Impact of Lisa Marie Page's testimony on guilt	4.181	1.427	19. Rating of the state's case as manipulative	5.60	2.508
5g. Impact of Josh Campbell's testimony on guilt	4.118	1.400	20. Rating of the defense's case as manipulative	5.00	2.278
5h. Impact of Deborah Sloan's testimony on guilt	3.93	1.333	21. Rating of the fairness of the state's evidence	3.95	2.599
6. Evidence strength	4.803	2.732	22. Convinced by the state's evidence	4.74	2.766
7a. Impact of Dr. Michaels' testimony on guilt	4.93	1.505	23. Convinced by the defense's evidence	4.90	2.295
7b. Rating of Dr. Michaels' credibility	6.78	2.447	Created variables:		
7c. Rating of Dr. Michaels' confidence	6.51	2.507	Verdict confidence scale	2.38	6.95
8. Rating of Antonia Kirby's honesty	7.40	2.190	State trustworthiness - Defense trustworthiness	.55	2.280
9. Rating of Detective Collins' honesty	7.21	2.278	State competence – Defense competence	-.17	2.63
10. Rating of Lisa Marie Page's honesty	6.93	2.185	State manipulation – Defense manipulation	.58	3.07
			Convinced by State – Convinced by Defense	-.15	4.14

Hypothesis tests

The first hypothesis was that there would be a main effect for instruction such that those in the *suspicious* condition would return fewer guilty verdicts and would be less confident in their verdict. This hypothesis had mixed supported. As predicted, those in the *no instruction* condition had the most guilty verdicts (n=29) followed by those who read the *generic* instruction (n=23). Those in the *suspicious* group had the fewest guilty verdicts (n=20), but the chi-square was not significant ($\chi^2 = 2.626$, $p = .269$, $\phi = .105$). See Figure 1.

Figure 1. Percent of participants voting guilty or not guilty by instruction type.

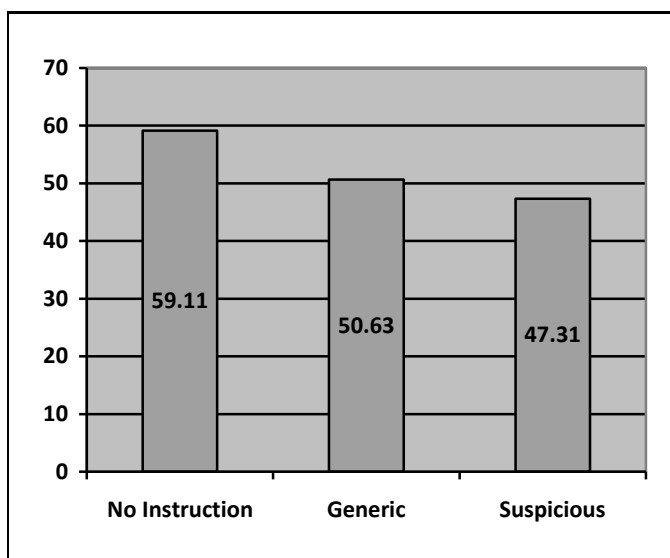


It was also hypothesized that participants in the *suspicious* condition would view everyone as less trustworthy when compared to the other instruction conditions. This trend appeared in the means of the rating of the State Attorney, but again, the results were not significant. This trend was not apparent in any of the ratings of witness honesty.

A one-way ANOVA did reveal a main effect for type of instruction on the

question regarding the likelihood that the defendant committed the crime, $F(2,223) = 3.565$, $p = .030$, partial $\eta^2 = .031$. Post hoc comparisons showed that the *suspicious* group ($M = 47.31$, $SD = 28.75$) was significantly lower than the *no instruction* group ($M = 59.11$, $SD = 26.50$) suggesting that those who had read the *suspicious* instruction thought it less likely that the defendant had committed the crime when compared to the control group. See Figure 2.

Figure 2. Average likelihood the defendant committed the crime by instruction type.



The second hypothesis was that, controlling for type of instruction, the “just verdict’ effect would be found. Based on the “just verdict” hypothesis, if participants in the *not admitted – DP* condition are unable to disregard the evidence, they should perform the same as all the conditions in which the evidence was admissible. Also based on this theory, participants in the *not admitted - unreliable* condition should be different from the other conditions. Although this main effect was found in few of the dependent variables, an examination of the means shows the trend that the *not admitted - unreliable*

condition is the lowest mean on questions regarding guilt and the critical evidence. See Table 7.

Table 7. Evidence of just verdict hypothesis in the means.

Ruling Type	Dependent Measures						
	Verdict scale ^a	Likely committed crime ^b	Strength of evidence ^c	Impact of forensic expert ^d	Rating of forensic expert's credibility ^e	Rating of forensic expert's confidence ^e	Convinced by the State ^e
No object	4.08	51.52	4.96	4.79	7.10	6.44	4.69
Admit – no admon	4.29	57.34	5.34	5.08	7.31	6.60	4.88
Admit-admon	4.41	55.63	5.46	4.92	7.02	6.72	5.26
Not admit-unrel	3.71	47.76	3.98	4.48*	5.57†	5.33†	4.19
Not admit - DP	4.02	49.58	4.29	5.40	6.94	7.49	4.70

^a 7-point Likert scale; 1 – “definitely not guilty,” 7 – “definitely guilty”

^b Scale from 0% - 100%

^c 10-point Likert scale

^d 7-point Likert scale; 1 – “definitely not guilty,” 4 – “no impact,” 7 – “definitely guilty”

* Only significantly different from *Not Admitted – DP*

† Significantly different from the other four conditions

The third hypothesis was that the *not admitted* conditions would be significantly different from the *admitted* conditions. This was tested using contrast coding in a regression analysis. The Ruling variable was contrast coded in order to test contrasts specified in hypotheses 3 and 4. These contrasts involved comparing all groups to the no

objection group, the *admitted* groups to the *not admitted* groups, the *admitted* groups to each other, and the *not admitted* groups to each other. See Table 8 for contrast coding for planned comparisons.

Table 8. *A priori* planned comparisons.

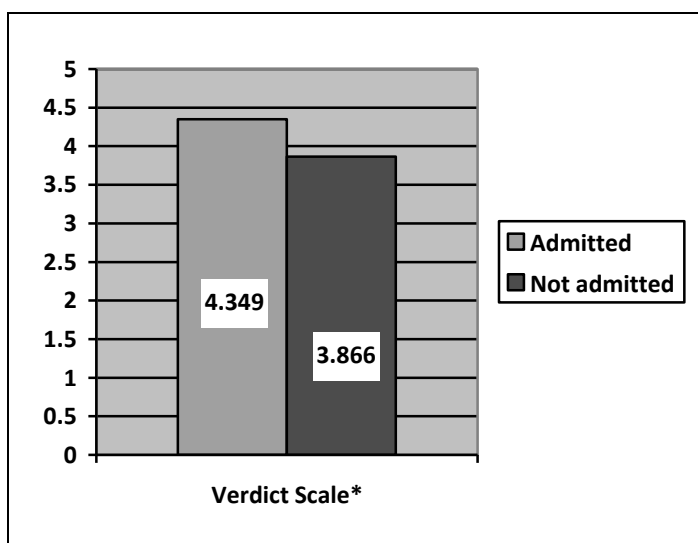
	No Objection v. all others	Admitted – no admonition v. Admitted - admonition	Not admitted – unreliable v. Not admitted - DP	Admitted v. Not admitted
No Objection	4	0	0	0
Admitted – no admonition	-1	1	0	1
Admitted - admonition	-1	-1	0	1
Not admitted - unreliable	-1	0	1	-1
Not admitted - DP	-1	0	-1	-1

Although the model was not significant, $F_{(4,236)} = 1.212$, $p = .306$, the contrast between conditions in which the evidence was not admitted compared to conditions where the evidence was admitted yielded a significant result on the verdict scale. When the evidence was ruled admissible, participants rated the defendant higher on the verdict scale – saw him as guiltier – than did those when the evidence was ruled inadmissible, $\beta = .127$, $p = .049$. See Figure 3.

A significant regression model was found when strength of the evidence was used as the dependent variable, $F_{(4,236)} = 2.814$, $p = .026$. The only contrast that was significant was the *admitted/not admitted* contrast, $\beta = .208$, $p = .001$. Those who were told the evidence was not admitted rated the evidence as weaker than those who heard the evidence was admitted. See Figure 4.

There were no significant findings regarding whether participants were convinced by the state. However, participants in the *not admitted* conditions responded that they were more convinced by the defense than did participants in the *admitted* conditions, $\beta = -.186$, $p = .004$. Although the contrast was significant, the regression model as a whole was not, $F_{(4,236)} = 2.170$, $p = .073$. See Figure 4.

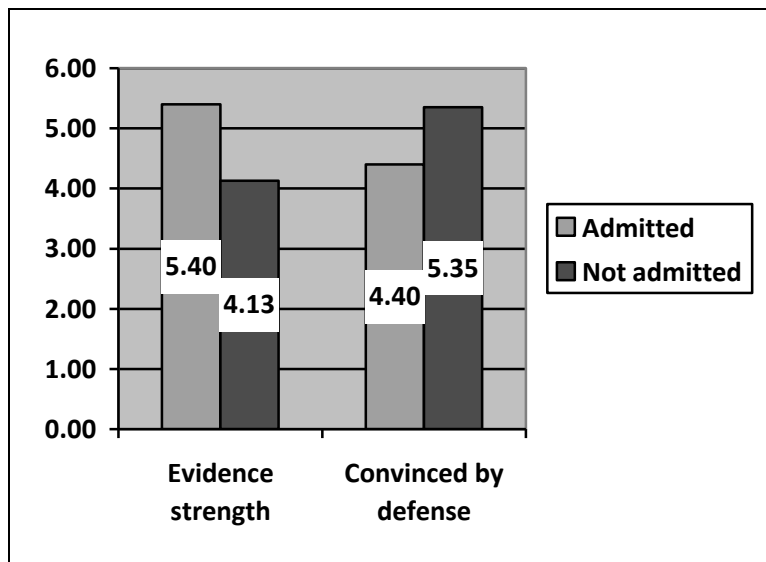
Figure 3. Average rating of verdict comparing *admitted* vs. *not admitted* conditions.



* 7-point Likert scale; 1 – “definitely not guilty,” 7 – “definitely guilty”

The fourth hypothesis predicted a difference between the *admitted – no admonition* conditions and the *admitted – admonition* conditions when controlling for type of pre-trial instruction. This hypothesis was unsupported.

Figure 4. Average rating of strength of the evidence and whether participants were convinced by the defense comparing *admitted* vs. *not admitted* conditions.



Hypotheses five through seven predicted an interaction between the instruction condition and the ruling conditions based on the work on suspicion such that the “just verdict” trend would disappear when participants’ suspicion was aroused. These hypotheses were unsupported. See Figures 5 and 6.

Figure 5. Evidence of no interaction between type of instruction and *not admitted* conditions on verdict.

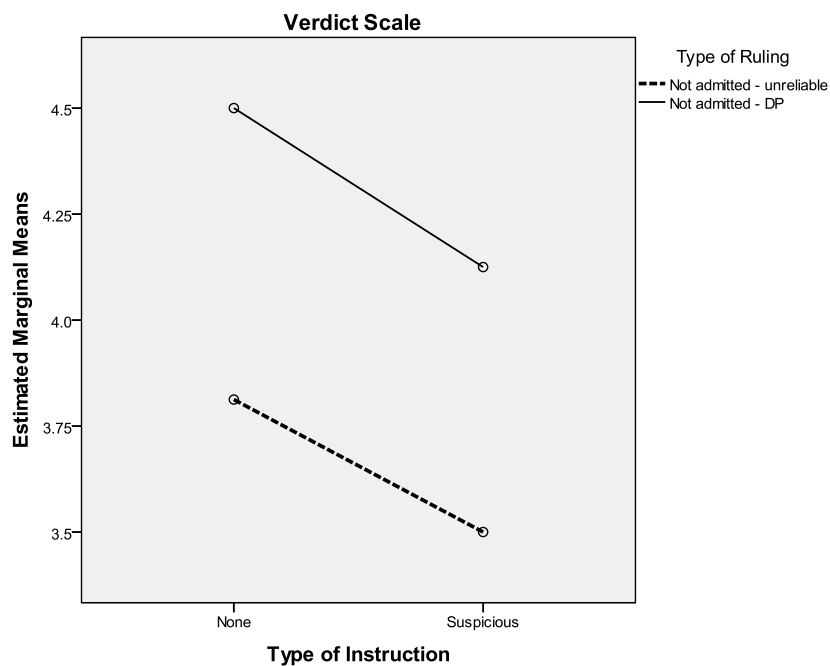
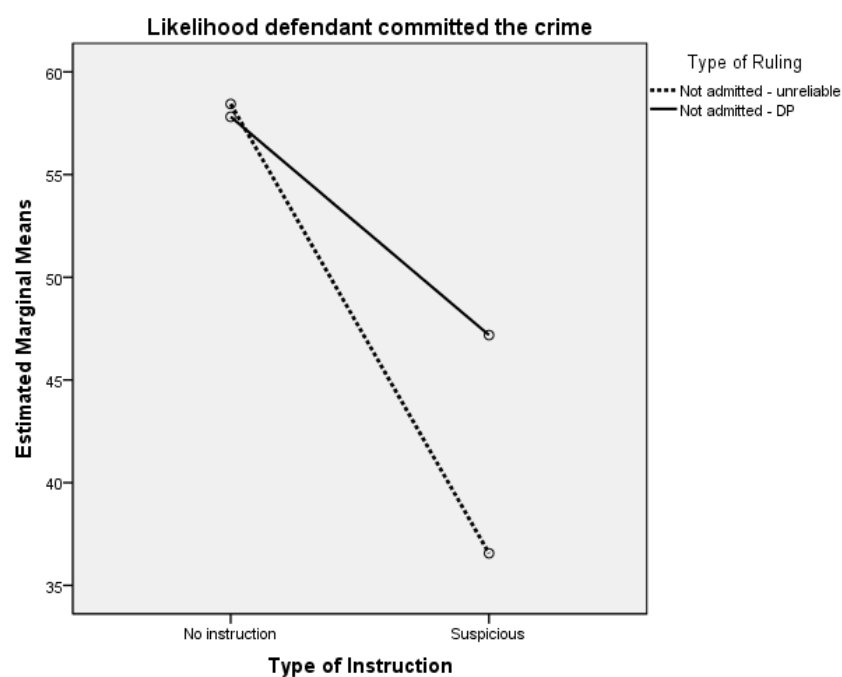
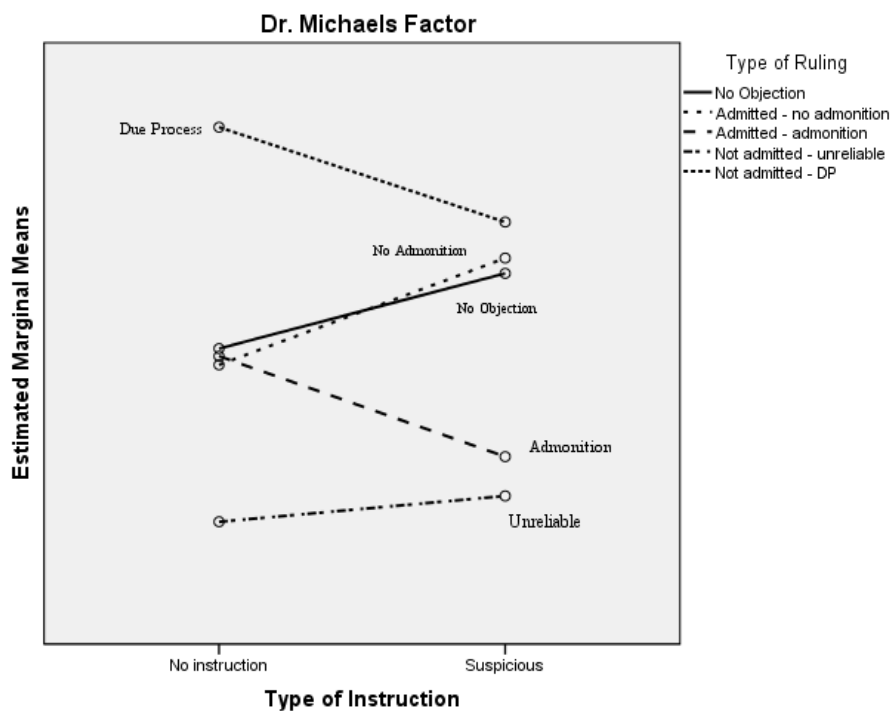


Figure 6. Evidence of no interaction between type of instruction and *not admitted* conditions on likelihood defendant committed the crime.



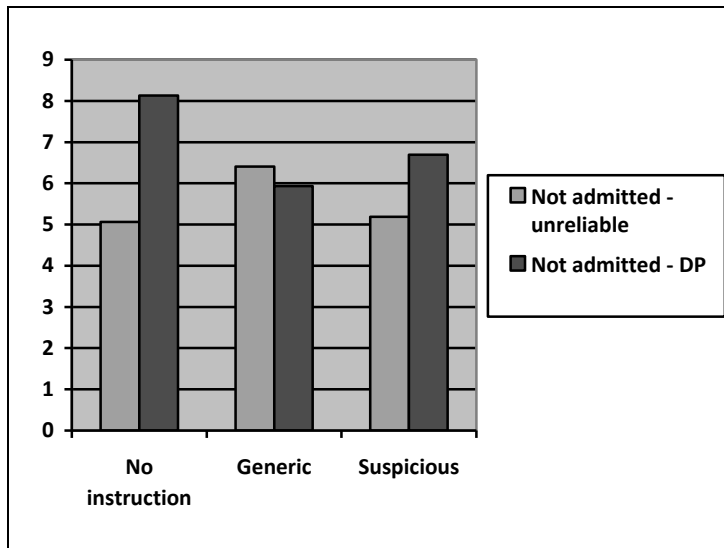
When the analysis focused solely on the critical evidence and not the evidence as a whole, an interaction, though non-significant, did emerge. In the *no instruction* condition, the *not admitted - DP* group was significantly different from all other groups in ratings of Dr. Michaels and the critical evidence, $F(4,64) = 4.620$, $p = .002$. However, under the *suspicious* condition, the *not admitted - DP* group was only significantly different from the *admitted - admonition* and *not admitted - unreliable* conditions. Additionally, *admitted - admonition* and *not admitted - unreliable* were significantly different from all other conditions except each other. See Figure 7 for a depiction of the ratings.

Figure 7. Potential interaction between type of instruction and type of ruling on the ratings of the forensic expert



A post hoc analysis to look for evidence of diminished “just verdict” effect on dependent variables other than on verdict revealed a significant difference between the *not admitted - unreliable* and the *not admitted - DP* groups on ratings of Dr. Michaels’ credibility, $F_{(4,75)} = 4.678$, $p = .002$. Participants in the *not admitted - DP* condition rated Dr. Michaels as significantly more credible when compared to the *not admitted - unreliable* condition when in the *no instruction* condition. However, neither participants who read a generic instruction nor the participants who read a suspicious instruction showed this significant difference. See Figure 8.

Figure 8. Average rating of forensic expert, Dr. Michaels’, credibility by type of instruction and *not admitted* conditions.



After conducting the specified *a priori* hypothesis tests, all continuous dependent variables were subjected to a two-way analysis of variance with the three levels of type of instruction and five levels of type of ruling. See Appendix G for the results of these two-way ANOVAs, though they were not used further in the analysis..

Factor analysis

In order to reduce the size of the data set, two principal factor analyses with varimax rotation were performed: one on the questions regarding the impact of the witness testimony and the witness honesty, and the second on the participants' ratings of the attorneys. Factors were extracted until the eigenvalues did not exceed one. A new set of scaled variables was created using the variables whose loadings on a factor were equal to or greater than .5. Tables 8 and 9 identify the factors and the variables found within those factors. There is one variable that loads on two factors.

Table 9 identifies the factors regarding the impact of the witness testimony and the witness honesty, and the second on the participants' ratings of the attorneys. Factor 1 focuses on the impact of the witnesses' testimony on the verdict. The second factor focuses on the perceived honesty of the state witnesses. Factor 3 focuses on the testimony of Dr. Michaels and how he was perceived by the participants. The final factor focuses on the perceived honesty of the defense witnesses. These four factors account for 64% of the variance.

Table 10 identifies the factors regarding the participants' ratings of the attorneys. Factor 1 focuses on the perceptions of the State Attorney. Factor 2 focuses on the perceptions of the Defense Attorney. Factor 3 focuses on the perception of manipulation by both attorneys.

Table 9. Results of a principal factor analysis on participants' reaction to the evidence and witnesses.

Dependent measures	Factors ^a			
	1	2	3	4
1. Impact of the testimony of Joshua Campbell	.791			
2. Impact of the testimony of Deborah Sloan	.765			
3. Strength of the evidence	.753			
4. Impact of the testimony of Lisa Marie Page	.720			
5. Impact of the testimony of John Gardner	.719			
6. Impact of the testimony of Detective Collins	.709			
7. Impact of the testimony of Antonia Kirby	.689			
8. Impact of the testimony of James Webster	.626			
9. Perceived honesty of Antonia Kirby		.762		
10. Perceived honesty of Detective Collins		.738		
11. Perceived honesty of Joshua Campbell		.698		
12. Fairness of the State's evidence		-.589		
13. Perceived honesty of James Webster		.567		
14. Dr. Michaels' confidence			.792	
15. Dr. Michaels' credibility			.761	
16. Impact of Dr. Michaels' testimony			.715	
17. Impact of the hair evidence	.517		.669	
18. Perceived honesty of Lisa Marie Page				.853
19. Perceived honesty of Deborah Sloan				.781
20. Perceived honesty of John Gardner				.603

^a Factor labels: 1, Impact of the evidence on the verdict (All Other Evidence Factor); 2, Perceived honesty of the State's witnesses; 3, Perceptions of Dr. Michaels and his evidence (Forensic Expert Factor); 4, Perceived honesty of the Defense witnesses.

Table 10. Results of a principal factor analysis on participants' reaction to the attorneys.

Dependent measures	Factors ^a		
	1	2	3
1. Competence of the State Attorney	.835		
2. Trustworthiness of the State Attorney	.819		
3. Convinced by the State Attorney	.707		
4. Competence of the Defense Attorney		.888	
5. Trustworthiness of the Defense Attorney		.863	
6. Convinced by the Defense Attorney		.500	
7. Defense manipulative			.805
8. State manipulative			.716

^a Factor labels: 1, Perception of the State Attorney (State Attorney Factor); 2, Perception of the Defense Attorney; 3, Perception of manipulation by the attorneys

Recoding of the independent variables

The independent variables were dummy coded in order to compute a regression analysis. The Instruction variable was recoded such that the *no instruction* condition was the baseline. The Ruling variable was recoded such that the *not admitted – unreliable* condition was the baseline. The reason for choosing the *not admitted – unreliable* condition as the baseline is that theoretically this group should be the most different from the others. If the “just verdict” hypothesis is correct, participants in this group should see the evidence as less influential when compared to all other groups. See Tables 11 and 12.

Table 11. Dummy coding of the instruction variable using *no instruction* as the reference group.

	D1	D2
No instruction	0	0
Generic instruction	1	0
Suspicious instruction	0	1

Table 12. Dummy coding of the ruling variable using *not admitted - unreliable* as the reference group.

	D1	D2	D3	D4
Not admitted - unreliable	0	0	0	0
No objection	1	0	0	0
Admitted – no admonition	0	1	0	0
Admitted - admonition	0	0	1	0
Not admitted - DP	0	0	0	1

Regression analysis using the created factor variables as the dependent variables

The factor variables were used as the dependent variables in a regression analysis. The contrast-coded independent variables were used as the predictors. The contrast-coded predictors yielded only one significant model on the Forensic Expert Factor, $F_{4,205} = 5.323$, $p = .000$, $\text{adj } r^2 = .076$. Only one contrast was significant – the comparison between participants in the *not admitted – unreliable* condition versus the participants in the *not admitted - DP* condition. Those in the *not admitted – unreliable* condition had a lower score on the combined Dr. Michaels factor variable showing that overall they found him less convincing than did those in the *not admitted - DP* condition.

The factor variables were then used as the dependent variables in a regression analysis with the instruction dummy-coded variables as the predictors using the no instruction group as the baseline. The dummy-coded instruction predictors yielded two significant models on the evidence impact factor, $F_{2,207} = 3.007$, $p = .05$, $\text{adj } r^2 = .019$, and on the State Attorney Factor, $F_{2,225} = 4.227$, $p = .016$, $\text{adj } r^2 = .028$. In both cases, the participants in the *suspicious* group were significantly different from the *no instruction* group. Those in the *suspicious* instruction group had a lower score on the combined All Other Evidence Impact Factor variable than did those in the *no instruction* group suggesting that those who had read a suspicious instruction regarded the evidence as weaker than the group who had not read an instruction. The *suspicious* group also had a lower score on the combined State Attorney Factor which suggests the suspicious instruction affected how participants viewed the State's Attorney, but not how they viewed the Defense Attorney.

Path Analysis

Based on the results of these regressions, a path analysis was constructed using the variable "likelihood the defendant committed the crime" as the outcome variable (see Figure 9). The reason this variable was selected instead of the "guilt scale" is due to the high correlation between the two variables. The correlation between "likelihood" and "guilt scale" resulted in $r = .814$, so these variables are essentially measuring the same thing. The greater the perceived likelihood that the defendant committed the crime, the higher the rating on the verdict scale, with higher ratings meaning greater likelihood of guilt.

The five mediating variables were selected based on significant results from

multiple regression analyses. Because the only contrast that was significant was the *not admitted - unreliable* versus the *not admitted – DP*, the path analysis uses the dummy coded IVs for Ruling with *not admitted – unreliable* as the reference group and the dummy coded IVs for Instruction with *no instruction* as the reference group.

Entering all the variables into a regression model with the IVs on Step 1 and the mediators on Step 2 resulted in a significant overall model, $F(12,187) = 34.848$, $p=.000$, adjusted $r^2 = .689$. Overall the model accounts for 69% of the variance. See Table 10 for standardized total, direct, and indirect effects.

The suspicious instruction had a significant total effect; however, it did not have a significant direct effect. The influence of the suspicious instruction on the likelihood the defendant committed the crime was mediated through the State Attorney Factor, the All Other Evidence Impact factor, and the difference in the manipulation ratings of the two attorneys. See Table 13.

Total effects. The only IV to have a total effect was the suspicious instruction when compared to those who had not heard an instruction. The total effect was negative. Compared to the *no instruction* group, those in the *suspicious* condition rated the defendant as less likely to have committed the crime.

Direct effects – IVs to mediators. The suspicious instruction had a significant direct effect on the State Attorney Factor, the All Other Evidence Impact Factor, and the manipulation difference score when compared to no instruction. The direction of the effect was negative for both the State Attorney Factor and the All Other Evidence Impact Factor. Compared to the *no instruction* condition, participants in the *suspicious* instruction condition saw the State Attorney as less trustworthy, competent, and

convincing; they also saw the evidence as a whole as having less of a guilty impact. The direction of the effect for the manipulation difference was positive suggesting that participants in the *suspicious* condition rated the State Attorney as more manipulative than the defense when compared to the *no instruction* condition.

The conditions *admitted – no admonition* and *admitted - admonition* were both significantly different from the *not admitted - unreliable* condition on the State Attorney Factor. The direction of the effect for both was positive suggesting that participants in these two conditions saw the State Attorney as more trustworthy, competent, and convincing when compared to those in the *not admitted - unreliable* condition.

The participants in the *admissible – no admonition* and *not admitted - DP* conditions saw the forensic expert, Dr. Michaels, as more credible, confident, and having a greater impact on guilt compared to the *not admitted - unreliable* condition.

All four ruling conditions were significant when compared to the *not admitted - unreliable* condition on the mediator called “mention of hair against defendant.” This is a variable created from an open-ended question. Participants were asked which two pieces of evidence they saw as being the strongest against the defendant. This question was recoded for mentions of the critical hair evidence. The results suggest that participants in all conditions mentioned the hair evidence at a greater rate when compared to the *not admitted - unreliable* condition.

Direct effects – mediators to DV. The State Attorney Factor was a significant predictor of the likelihood the defendant committed the crime. The direction of the effect was positive suggesting that those who saw the State Attorney as more trustworthy, competent, and convincing were also more likely to think the defendant had committed

the crime.

The All Other Evidence Impact Factor was also a significant predictor of likelihood rating. Again, the direction of the effect is positive. The greater the impact of the evidence on a guilty verdict, the greater the likelihood the defendant committed the crime.

Finally, the Forensic Expert Factor had a direct effect on likelihood rating also in a positive direction. The higher the rating of the forensic expert, Dr. Michaels', credibility, confidence, and impact on guilt, the greater the likelihood the defendant committed the crime.

Figure 9. Path analysis predicting likelihood defendant committed the crime – only significant paths are depicted.

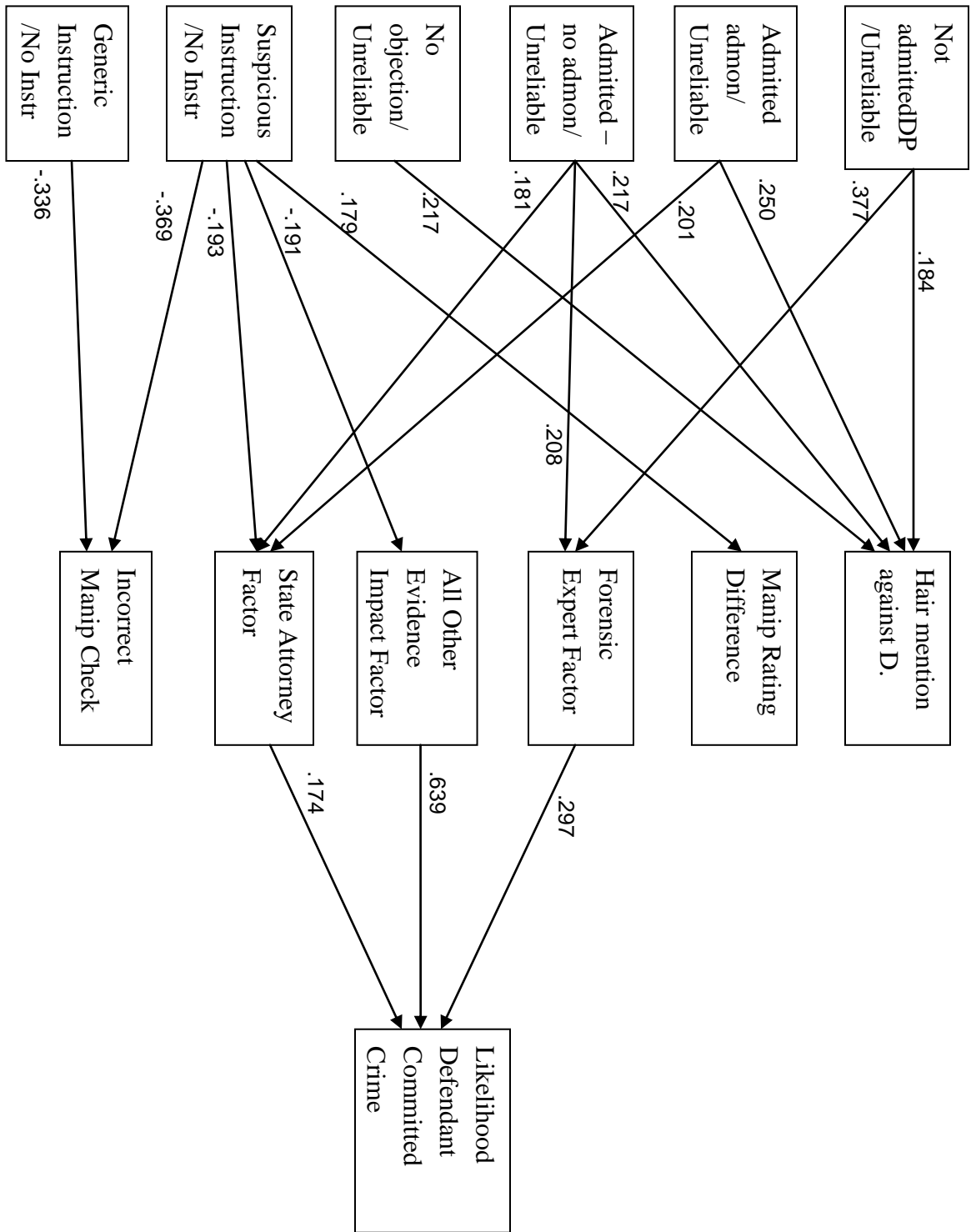


Table 13. Standardized total, direct, and indirect effects for dummy coded IVs and mediators on dependent variable “Likelihood defendant committed the crime.”

	Total Effect	Direct Effect	Indirect Effect
Not admitted – DP/ Not admitted - unreliable	-.005	-.045	.040
Admitted – admonition/ Not admitted - unreliable	.105	-.002	.107
Admitted – no admonition/ Not admitted - unreliable	.109	-.003	.112
No Objection/Not admitted - unreliable	.061	.024	.037
Suspicious/No Instruction	-.250*	-.060	-.190
Generic/No Instruction	-.130	-.075	-.055
Mention of hair evidence against Defendant	---	-.007	---
Manipulation Rating Difference	---	.033	---
Forensic Expert, Dr. Michaels, Factor	---	.297*	---
All Other Evidence Impact Factor	---	.639*	---
State Attorney Factor	---	.174*	---
Incorrect answer to manipulation check	---	.062	---
Competence Rating Difference ^a	---	.021	---

* Significant at the .05 level

a – included in the model based on significance in a smaller model

Table 14. Standardized direct effects of dummy coded IVs on mediator variables.

	Mediator Variables						
	Mention of hair against D	Competence Rating Difference	Manip Rating Difference	Forensic Expert Factor	All Other Evid Factor	State Atty Factor	Incorrect answer to manip check
Dummy coded IVs							
Not admitted – DP/ Not admitted - unreliable	.184*	-.012	.005	.377*	-.068	.057	-.067
Admitted – admonition/ Not admitted - unreliable	.250*	.020	-.093	.138	.108	.201*	.038
Admitted – no admonition/ Not admitted - unreliable	.217*	.039	-.112	.208*	.074	.181*	.090
No Objection/Not admitted - unreliable	.217*	.043	-.042	.124	.051	.041	-.136
Suspicious/ No Instruction	.116	-.128	.179*	-.001	-.191*	-.193*	-.369*
Generic/No Instruction	.009	.068	.013	-.018	-.061	.002	-.336*

* Significant at the .05 level

Chapter 4. Discussion

Summary of results

The current study was designed to examine whether pre-trial instructions, including a suspicion-arousing instruction, could reduce the impact of all inadmissible evidence and not just that which was ruled unreliable. The study drew from work on instructions warning individuals about the potential of “to-be-ignored” information, work on the effect of arousing suspicion on juror decision-making, and the “just verdict” hypothesis of Kassin and Sommers (1997). The current study partially supported both the suspicion research and the just verdict research; however, the two lines of research did not interact in the predicted way.

Timing of instructions. Participants who are instructed, or warned, ahead of time that they may not be required to use all of the subsequent information are better able to ignore information when told to. The effect is strengthened when participants are instructed twice – before hearing the information and after. In the current study, these findings were used to hypothesize that a pre-trial instruction referring to the possibility of inadmissible evidence, followed by an in-trial admonition, and a judicial closing instruction, could diminish the “just verdict” effect. In essence, when warned ahead of time and reminded later, participants would disregard inadmissible evidence regardless of the reason for inadmissibility – unreliable or due process. This hypothesis was not supported as predicted.

In order for this hypothesis to be supported, the independent variables would have needed to show a significant interaction. When participants did not read a pre-trial instruction, the classic “just verdict” effect would have emerged with participants

choosing to disregard evidence that was not admitted because it was unreliable, but not evidence that was not admitted for legal reasons. This hypothesis would have been supported if the participants who read evidence that was not admitted for legal reasons had significantly more guilty ratings when compared to participants who read evidence that was not admitted because it was unreliable. When participants read a generic instruction and participants read a suspicion-arousing instruction, differences on guilt rating between the participants who read evidence that was not admitted because it was unreliable and the participants who read evidence that was not admitted for legal reasons should have been reduced. This did not happen. One possible reason for this is because the trial summary produced overwhelmingly “not guilty” verdicts across all conditions.

Content of instructions – raising suspicion. Fein and his colleagues have suggested that arousing suspicion is a way to encourage participants to examine evidence more carefully and to question the motives behind the evidence. In the current study, the literature on suspicion would predict that participants who read a suspicious pre-trial instruction would find everyone – attorneys and witnesses – as less honest and find the evidence less convincing when compared to other conditions. It was also hypothesized that those who read a suspicious pre-trial instruction would find it less likely that the defendant had committed the crime and vote not guilty more often. Although there were no significant differences between instruction conditions on verdict, the pre-trial instruction designed to arouse suspicion was a significant predictor of the likelihood that the defendant committed the crime but only when mediated through ratings of the evidence as a whole and ratings of the State Attorney in particular.

As predicted, participants who read a pre-trial instruction designed to arouse

suspicion viewed the evidence as less convincing of guilt. Combining the variables into factors, participants who read a pre-trial instruction designed to arouse suspicion had the lowest scores on the Evidence Impact Factor when compared to the participants who did not read a pre-trial instruction suggesting that those participants who read the suspicious pre-trial instruction viewed the evidence as supportive of not guilty rather than guilty. As Fein and his colleagues suggested, arousing suspicion may have encouraged participants to reserve judgment and not take the evidence at face value, thus holding the evidence to a higher standard than those who did not read a pre-trial instruction. The suspicious pre-trial instruction may also mimic the Kassin and Wrightsman (1979) instruction condition where they hypothesized that participants who read an instruction presumed the defendant was innocent while those who did not read an instruction presumed he was guilty. However, Kassin and Wrightsman (1979) found that participants thought it less likely that the defendant had committed the crime when given a general instruction. The current study found similar results, except only when the participants read a suspicious pre-trial instruction and compared to participants who did not read a pre-trial instruction. It seems the generic pre-trial instruction did not have an effect.

Additionally, participants who read a pre-trial instruction designed to arouse suspicion viewed the State Attorney as less trustworthy, competent, and convincing when compared to those who did not read a pre-trial instruction. This is contrary to the first hypothesis, which predicted that those who read a suspicious pre-trial instruction would view *everyone* as less honest and trustworthy. There was no effect on the honesty ratings of the witnesses or on the ratings of the defense attorney. Furthermore, participants who read a pre-trial instruction designed to arouse suspicion viewed the State Attorney as

more manipulative than the defense attorney when compared to participants who did not read a pre-trial instruction.

Based on these results, the question to be asked is, why did the suspicious pre-trial instruction only influence ratings of the State Attorney and not the defense attorney? One possible reason is that the suspicious pre-trial instruction referred specifically to the introduction of evidence. Participants may have seen this as pointing only to the State Attorney, as he is the only attorney who called a witness that introduced physical evidence. Although the defense attorney called three witnesses who provided verbal testimony, they did not provide any physical evidence. The finding may have been a function of the wording of the suspicious pre-trial instruction and may not replicate.

Another possibility is that participants hold the evidence to a higher standard once suspicion is aroused (Fein, et al., 1997). Since the burden of proof lies with the state, the suspicious pre-trial instruction aroused suspicion toward the attorney who had to prove his case. Participants held the State Attorney to a higher standard.

A third possibility is that people, in general, are suspicious of the defense attorney. When the judge warned against attorneys possibly introducing evidence to manipulate the jury's way of thinking, participants may have assumed this was referring to the State Attorney since everyone already knows to be wary of defense attorneys.

Another question to be answered is, why didn't the suspicious pre-trial instruction have an effect on the rating of the forensic expert and his testimony? Participants who read the pre-trial instruction designed to arouse suspicion rated all the other evidence as less convincing when compared to those who had not read a pre-trial instruction, yet there was no difference in the ratings of the forensic expert and his critical testimony.

Just verdict. The just verdict hypothesis predicts that jurors will choose to disregard inadmissible evidence if it is unreliable, but not if it is inadmissible for legal reasons (Kassin & Sommers, 1996). Based on this research, the current study predicted a main effect for ruling condition such that participants who read evidence that was not admitted because it was unreliable should have the fewest guilty verdicts and find the critical evidence less convincing. Although there were no differences on the verdict scales and no differences on the ratings of the likelihood the defendant committed the crime, there were differences in the ratings of Dr. Michaels who provided the critical testimony. The path analysis shows that when compared to the participants who read evidence that was not admitted because it was unreliable, those who read evidence that was admitted without a further admonition from the judge and participants who read evidence that was not admitted for legal reasons rated Dr. Michaels as more convincing, credible, and confident. This is consistent with the just verdict hypothesis which would predict that participants who read evidence that was not admitted for legal reasons would act as though the evidence was admissible.

Interestingly, when the evidence was admissible but the judge offered a further admonition to weigh the evidence, there was no difference on ratings of Dr. Michaels when compared to participants who read evidence that was not admitted because it was unreliable. Participants seemed to have taken that further admonition as an indication of unreliability and rated Dr. Michaels accordingly. The only questionable result is that participants who did not read any objection to the critical evidence did not have higher ratings of Dr. Michaels when compared to the participants who read evidence that was not admitted because it was unreliable.

Following the just verdict hypothesis, when the evidence was not admitted for being unreliable, fewer participants than expected mentioned the hair evidence when compared to all other conditions. The other conditions all mentioned the evidence at the same rate. As predicted, it seemed as though participants who read evidence that was not admitted because it was unreliable were better able to disregard the evidence.

A post hoc analysis was conducted comparing the admitted conditions to each other for mentions of the hair evidence in the specific instruction conditions. When participants did not read a pre-trial instruction or when participants read a generic pre-trial instruction, the chi-square was not significant ($\chi^2 = 3.319$, $p = .506$, $V = .204$, $\chi^2 = 10.926$, $p = .206$, $V = .367$, respectively). No matter whether the evidence was admitted or not admitted, participants mentioned the hair evidence at the expected rate.

However, when participants read the suspicious pre-trial instruction, both those who did not read an objection to the critical evidence and those who read evidence that was admitted without a further admonition from the judge mentioned the hair much more than would be expected. While participants who read evidence that was not admitted because it was unreliable mentioned the hair much less than would be expected ($\chi^2 = 17.847$, $p = .001$, $V = .472$). The suspicious pre-trial instruction appeared to exacerbate the just verdict effect such that it made the unreliable evidence seem even more unreliable and participants rarely mentioned the hair evidence which is support that they were disregarding it; it did not affect the participants who read evidence that was not admitted for legal reasons. See Table 15.

Table 15. Effect of the *suspicious* instruction on open-ended responses regarding critical evidence against the defendant.

		Hair evidence	
		No mention of hair evidence	Mention of hair evidence
No objection	Observed	2	14
	Expected	6.6	9.4
Admitted – no admonition	Observed	4	12
	Expected	6.6	9.4
Admitted - admonition	Observed	7	9
	Expected	6.6	9.4
Not admitted – unreliable	Observed	13	3
	Expected	6.6	9.4
Not admitted – due process	Observed	7	9
	Expected	6.6	9.4

Although there was some support of the “just verdict” hypothesis, the just verdict effect was not found in ratings of guilt or likelihood that the defendant committed the crime. One possible reason for this is the weakness of the manipulation – both the unreliable manipulation and the due process manipulation. In the condition in which the evidence was not admitted because it was unreliable, the judge should have stated his reason for sustaining the objection as unreliable. In addition, the 12% error rate mentioned in the critical testimony is not an extreme error rate and might not have been perceived as unreliable by participants. Additionally, the due process manipulation was weak, as the evidence was not admitted based on a pre-trial motion. This manipulation could have been made stronger if the evidence was unconstitutionally or illegally seized.

Because the current study is not an exact replication of Kassin and Sommers

(1997), it is difficult to determine how the effects found here match what was found in the original study. Kassin and Sommers (1997) and the studies discussed in Steblay (2006) compared the condition in which the evidence was not admitted because it was unreliable to a control group that did not hear the critical evidence. The current study did not have a control group – all conditions read the critical evidence – and as such, the findings cannot be matched to those in previous studies. Nevertheless, the results in the current study do lend further support to the just verdict hypothesis in that participants who read evidence that was not admitted because it was unreliable did disregard that evidence, even more so when suspicion was aroused.

Non-hypothesized findings. Without a pre-trial instruction, those in all three conditions in which the evidence was admitted were no different from the participants who read evidence that was not admitted because it was unreliable on ratings of Dr. Michaels' testimony - all four conditions treated Dr. Michaels' testimony statistically the same. However, when given a suspicious pre-trial instruction, the ratings of the participants who had not read an objection and participants who read that the evidence was admitted without a further admonition were no different from the ratings of participants who had read the evidence was not admitted for legal reasons. Those participant ratings of the testimony were all significantly different from the ratings of the participants who had read that the evidence was admitted with a further admonition and those who had read the evidence was not admitted because it was unreliable. The ratings of the participants who had read that the evidence was admitted with a further admonition and those who had read the evidence was not admitted because it was unreliable were not statistically different.

Why would a suspicious pre-trial instruction make participants who had not read an objection and participants who read that the evidence was admitted without a further admonition see Dr. Michaels' testimony as more credible and him as more confident when compared to participants who had read that the evidence was not admitted because it was unreliable? However, this result was not the case for those participants who had not read a pre-trial instruction. The objective of the suspicious pre-trial instruction was to make participants think more about the reasons why an attorney may enter evidence into a trial and to question motives, not to take evidence at face value. The objective of the judge's admonition was to allow participants to use the information, but warn them against taking it at face value.

Perhaps the suspicious pre-trial instruction put the focus on the State Attorney and away from Dr. Michaels. The findings support this theory – those who had read a suspicious pre-trial instruction rated the State Attorney as less convincing and competent when compared to those who had not read a pre-trial instruction, whereas the suspicious pre-trial instruction had no effect on the ratings of Dr. Michaels and his testimony. When it came to evaluating Dr. Michaels' testimony, the suspicious pre-trial instruction had the unintended effect of making participants think less critically about Dr. Michaels' testimony and more critically about the attorney introducing it. When Dr. Michaels' testimony was not objected to or it was admitted with no admonition, participants decided that the State Attorney must not be introducing this evidence to manipulate the jury's thinking, thus making Dr. Michaels seem more credible and confident. This finding is contrary to what the suspicion literature would predict – if Dr. Michaels was viewed as unreliable without a pre-trial instruction, the suspicion literature would predict he should

have continued to be viewed that way with a suspicious pre-trial instruction. The suspicious pre-trial instruction was meant to increase critical thinking and decrease taking the evidence at face value. With no objection or a further admonition, participants in this study who read the suspicious pre-trial instruction took Dr. Michaels' testimony at face value with no further evaluation because they were so focused on the State Attorney.

Meanwhile, the in-trial admonition following Dr. Michaels' testimony made him seem unreliable to participants, with or without a pre-trial instruction. The in-trial admonition served to draw attention to Dr. Michaels, which increased the critical evaluation of his testimony and made him appear less reliable to participants. The in-trial admonition became another way of raising suspicion. With a larger sample size, it is possible this interaction would have been significant and it is worth further exploration especially since it points to the power of judicial instructions in altering the way a juror views the evidence and the attorney introducing that evidence.

Another interesting finding from the path analysis is that when compared to the participants who read evidence that was not admitted because it was unreliable, the two conditions in which the judge ruled the evidence as admissible rated the State Attorney as more competent, trustworthy, and convincing. Participants may have viewed the judge's ruling as evidence that the attorney is competent; if the judge rules that the evidence can come in, then the attorney must know what he is doing. It is interesting that a judge's ruling can have an effect on the way an attorney is viewed.

A final finding from the path analysis is a reassuring one for the jury system. Although the direct effect from the ratings of the State Attorney to the likelihood the defendant committed the crime was significant, it was a small effect. The largest direct

effect was from the All Other Evidence Impact Factor. It is encouraging to see that strength of the evidence is the strongest predictor of the likelihood that the defendant committed the crime and not how the participants viewed the State Attorney.

Unique aspects of this study

Mock jury studies rely on college students as participants. This study used people who had been called for jury service, but were not needed for a trial. Only 6% of the sample had actually been questioned for a jury on the day of the study, the other 94% were people who had been called in for jury service, but the case for which they were called either did not need as many jurors as expected or did not go forward on that particular day. Thus, the majority of the sample was not participants who had been excluded from a jury making them different from other jurors in some way; they were just simply not needed. Peterson (2001) examined several meta-analyses in which effect sizes were reported for both college students and non-students. Peterson (2001) found that college students had less variability in responses. In 19% of the relationships examined, the effect size for the college student sample was in a direction opposite that of the non-student sample (Peterson, 2001). In addition, in 29% of relationships, the strength of the relationship differed between the students and the non-students although the direction of the effect was the same. The conclusion that Peterson (2001) drew was that college students are not always capable of producing generalizable results and that studies should be re-tested on non-students before being generalized.

Oakes (1972) looked at the effect of reinforcement on self-esteem. Conducting the study on college students made to participate for course credit, Oakes found that reinforcement made the college students participate in group discussion and take on a

leadership role, which led to higher self-esteem (1972). However, when Oakes (1972) used volunteers from the general population, he found that reinforcement had no effect on the participants. Although Oakes found differences between the results of college students when compared to the general population, he did not see this as a reason to doubt the external validity of studies using college students because “a behavioural phenomenon reliably exhibited is a genuine phenomenon” (p. 962).

By testing conditions not previously relied upon in the literature – a pre-trial instruction designed to arouse suspicion, an in-trial admonition in which the judge allowed the participants to attend to the evidence, and a warning to give it the appropriate weight when reaching a decision, the current study allowed for some exploratory analyses. This study showed that an instruction designed to raise suspicion provided by the judge at the beginning of a trial has an impact on how the evidence is viewed throughout the rest of the trial. In some instances, the “just verdict” effect was exacerbated by this suspicious pre-trial instruction, indicating that perhaps the reason jurors choose to disregard evidence that is considered unreliable is because they are suspicious of it and this suspicion may be one underlying factor of the “just verdict” effect.

Limitations

One of the main limitations of the study is that the conditions in which no reason was given for the objection were ultimately seen by the participants as being unreliable. The manipulation check verified this assumption. Participants correctly answered that evidence had been objected to, but when asked about the reason behind the objection, participants in the conditions where no reason was given for the objection selected “the

evidence was unreliable” more than 50% of the time. This is a failure of the manipulation. Rather than having a clear cut unreliable objection and a clear cut due process objection, the study ended up with multiple conditions in which the participant viewed the evidence as unreliable and only one due process condition.

In accord with the just verdict hypothesis, participants will disregard unreliable evidence, but not evidence that is disallowed for a legal reason. Although the evidence in these conditions was allowed, if the participant thought the evidence was unreliable and assumed reliability was the reason for the objection, she may have disregarded it anyway, which could account for the overwhelming not guilty verdicts. However, this finding suggests that attorneys should provide a reason for an objection because if they do not, the juror will read between the lines and assume the reason for the objection.

Another limitation of the current study is the use of a trial summary rather than a full trial transcript. With a short trial summary, it is difficult to generalize to jurors who sit on an actual jury that may last hours, days, or weeks.

Having participants watch a mock trial would have made the experience more realistic and given the study more external validity. Most people rely on visual cues, as well as verbal, to judge honesty and trustworthiness. With only a written trial summary from which to judge character, participants may have found answering those questions relating to honesty hard to answer.

A final limitation was the lack of diversity in the verdict ratings. Although the evidence in the trial was meant to be weak without the critical evidence, even in the conditions in which the critical evidence was allowed, the verdicts were overwhelming not guilty when asked on a dichotomous scale and neutral when asked on a Likert scale.

Future research

A future direction for this research is to determine whether the pre-trial instruction designed to arouse suspicion made participants more critical in their evaluation of the evidence or just made them more cynical of the evidence and testimony. The results might suggest that there was critical thinking at work since those who read the suspicious instruction found all the other evidence except the critical evidence unconvincing. If the instruction made the participants generally more cynical they should have rated all evidence as unconvincing and they should have had lower ratings of *both* the State Attorney and the Defense Attorney, not just the State Attorney. However, based on the dependent variables in the current study, it cannot be affirmed whether the results are a consequence of critical thinking or a general attitude of cynicism.

Jury deliberations. Jury deliberations may soften the blow of inadmissible evidence. Most jury simulation studies involve a group of participants in the same room, but the reported conviction rates are based on individual responses without deliberation. Kerwin and Shaffer (1994) sought to examine the role of deliberations in decision-making regarding inadmissible evidence. Three hundred twelve introductory psychology students participated as either individual, non-deliberating jurors or as members of deliberating juries all of which read a trial summary with illegal search evidence. These two groups were further split into two more groups in which the illegal search evidence was either admissible or inadmissible. The results indicated that juries instructed to ignore incriminating evidence were more inclined to acquit than individual jurors who had received the same instructions even though prior to deliberations, members of juries had expressed similar attitudes when compared to the individual jurors (Kerwin &

Shaffer, 1994). Kerwin and Shaffer also measured beliefs concerning the defendant's guilt. Although the members of the mock jury personally believed the defendant to be guilty, they still made the group decision to acquit when the incriminating evidence was ruled inadmissible.

London and Nunez (2000) sought to refute Kassin and Sommers' (1997) "just verdict" hypothesis by presenting mock juries with critical evidence that was deemed admissible or inadmissible with a due process rationale. A control group read the same written trial summary without the critical evidence. Prior to deliberations the individual jurors were prejudiced by the evidence such that jurors in the inadmissible condition voted guilty more often than those in the control condition (London & Nunez). This prejudice was reduced after deliberations with jurors in the inadmissible condition more apt to change their pre-deliberation verdict. The results tend to contradict the findings of Kassin and Sommers (1997) where individual jurors disregarded unreliable critical evidence, but would not disregard critical evidence that violated due process. However, this study did not include inadmissible evidence dismissed for reasons of reliability. The findings of London and Nunez (2000) further support the idea that juries, as opposed to individual jurors, are able to comply with limiting instructions.

Both Kerwin and Shaffer (1994) and London and Nunez (2000) discuss why juries as a group are more apt to ignore critical evidence than are individual jurors. The first reason postulated is accountability: when confronted with members of a jury, an individual must account for his opinions and beliefs (Kerwin and Shaffer). Kerwin and Shaffer suggest individuals may have a difficult time justifying verdicts based on inadmissible evidence to other group members.

Another reason proposed for the reduced impact of inadmissible evidence amongst juries is that jury deliberations may allow for proper interpretation of the evidence (London & Nunez). A third reason is that jury deliberations create alternative stories for the case at hand (London & Nunez). These viewpoints allow other members to view the situation in a way they may not have considered. Jury deliberations allow for an open forum where ideas and opinions can be discussed and justified.

Conclusions

To answer the question put forth at the beginning of this study, varying the timing and content of the instructions did influence the decision-making process, though not in the predicted way. While the instruction conditions did not interact with the ruling conditions to diminish the “just verdict” effect, the suspicious instruction condition provided interesting results. The suspicious pre-trial instruction not only focused the juror’s attention on the evidence, as predicted, but also highlighted the role of the State Attorney, which was not predicted. The suspicious instruction was the only independent variable that had a significant total effect on one of the outcome variables – likelihood the defendant committed the crime. Participants who read the suspicious pre-trial instruction were less convinced by the evidence and by the State Attorney. In turn, the lower the ratings of the evidence and of the State Attorney led participants to conclude that it was less likely that the defendant committed the crime. This is evidence of the potential power of judicial instructions to counteract jurors’ psychological tendencies. There is still room for further exploration to determine why the suspicious pre-trial instruction had such an impact on ratings of the State Attorney and not the defense attorney.

Appendix A. Pilot

Participants were solicited by the Principal Investigator from dismissed jurors in the Jury Assembly Room and asked to listen to a recorded trial summary, which lasted on average 15 minutes, and to answer some questions regarding what they had just heard.

For the pilot test, the trial summary was presented in an audio version. Since there were 15 conditions, the audio could not be played aloud as one large group would fill up almost an entire cell, minimizing random selection. In order to maintain the audio aspect, but still allow for individual randomization, 20 1GB MP3 players were purchased, along with 250 sets of ear bud headphones. Participants were allowed to keep the headphones after participation for sanitary reasons.

The trial summary was made up of numbered paragraphs with each paragraph being a separate audio clip. This enabled multiple clips to be strung together in order to create one fluid condition. It also allowed certain clips to be added or deleted depending on what the condition called for. Three male voices were used representing the State Attorney, the Defense Attorney, and the judge. The sound quality was not ideal with some voices louder than others, though this was the same across all conditions since the same clips were used for all.

The stimulus material was a modified version of a trial summary used by Kassin: *State of Arizona v. John Gardner*. In the trial summary, the defendant is accused of murdering a young woman after being seen with her at a party. All conditions included opening statements, descriptions of witness testimony, closing statements, and judicial closing instructions. Some conditions also received a judicial opening instruction prior to the summary.

For the pilot, the manipulated piece of evidence was the testimony of another party-attendant, James Webster. James Webster testified to seeing the defendant fighting with the woman and then both of them getting into the car together and leaving. In the reliability conditions, Webster's testimony was objected to because of his high level of intoxication at the party. In the due process conditions, Webster's testimony was objected to because of a prior motion that he was not allowed to mention the defendant and the woman getting in the car together. When introduced in the trial summary, the participants read the lawyers objection and were provided with the reason for the objection – no reason given, reliability, or due process – and the judge's ruling.

Participants were randomly assigned an MP3 player pre-loaded with 1 of 15 conditions. In theory this was an innovative idea; in practice, it was cumbersome. It was difficult to coordinate a number of people with the MP3 players – some people had trouble getting it started, others could not hear – and having to stop and help individual users took time and was a distraction for other participants. Additionally, outside noise from the court made it difficult for people to attend fully to what they were listening to. Using the audio version limited the numbers of participants at any given time as only 20 MP3 players were available due to cost constraints as they were purchased out-of-pocket.

At least one of every condition was included in the pilot; out of the original 20 participants, only one person voted guilty. The lack of variation led to several changes in both the trial summary and the questionnaire. The research format was changed from an audio trial summary to a written version to facilitate ease of making changes and also to allow more participants to take part in the study. Some major changes were made to the

content of the trial summary. The questionnaire was also altered to correspond to the new trial summary, but also to refine the questions being asked.

Changes to the trial summary:

- 1) Using the comments from the pilot participants, the trial summary was changed to a written version. One participant, who is a lawyer, mentioned afterward that he wished he had taken notes. He thought just 15 minutes he would remember, but he said he found the quick back-and-forth confusing.
- 2) Participants' open-ended responses suggested two compelling pieces of evidence:
 - 1) the fact that the defendant's hair was found on the victim's body; 2) the testimony of Mrs. Kirby who said she saw the defendant's car parked on her street near where the victim was found. Participants did not find the testimony of James Webster to have the impact that it was meant to have. This led to three major changes in the testimony of these witnesses.
 - a) Originally, Mrs. Kirby testified that she saw the defendant's car at night from the window, could not really tell the color with the street lamps, and that she had had a few glasses of wine. People wrote that they did not believe her because she had been drinking.

In the revised version, there was no mention of alcohol and her testimony was changed so that she was out walking her dog when she saw a car matching the defendant's with a Texas license plate. She also testified that she saw someone sleeping in the back seat of the car. Interestingly, people STILL did not fully trust Mrs. Kirby's testimony as she could not identify the defendant and she did not write down the license plate number. It was 11:30

at night and he was sleeping in the backseat, but participants still wanted her to have identified him.

Her testimony could be made stronger if she said she saw the man in the car was wearing a white sweatshirt and someone else confirms that the defendant had been wearing a white sweatshirt that night.

- b) The key piece of evidence in the pilot was the testimony of Mr. James Webster who testified to seeing the defendant and the victim arguing and then getting in the defendant's car. This was objected to, though honestly, it never really felt like a strong enough piece of evidence to be objected to and to really have an impact.

In the revision, Mr. Webster still testified to this argument, but his level of intoxication was reduced and his testimony was no longer objected to.

- c) In the version pilot-tested, an expert witness testified that he matched a hair on the victim's body to the defendant. On cross-examination, he testified that there was another hair found that did not belong to the victim or the defendant. This produced considerable reasonable doubt.

For the revised version, "other" hair on the body is omitted and the defendant's hair is found under the victim's fingernail instead of merely "on her body." In the "reliability" condition, this evidence is called into question on cross-examination by referencing a study by a major scientific organization that calls hair matching unreliable. The doctor admits there is a possibility the hair could belong to someone else and also that there is a 12% error rate in this type of hair identification. He mentions this error rate in all conditions,

except the “due process” condition. In the “due process” condition, the doctor testifies the defendant’s hair was found under the victim’s fingernail and the defense objects that this was not supposed to come in due to a motion granted before the trial. There is no further cross-examination in this condition.

- 3) The revised trial summary was amended such that words that could be seen as telling the participants what to think were removed to allow participants make their own decision regarding the evidence. For example, phrases such as “the State has no concrete evidence,” “as you might expect... Gardner now denies the charge,” and “the State has no credible evidence to prove its allegations” were removed.
- 4) After realizing that participants were pulling phrases directly from the defense closing to answer some of the open-ended questions, I changed the defense closing to be less dramatic. Three items were removed: 1) the phrase “circumstantial evidence;” 2) the mention of Mrs. Kirby’s failure to write down the license plate; and 3) a reference to the fact that the store clerk testified that John hugged Carrie, leading to a possibility that that is where the hair came from.
- 5) Deborah Sloan testified that she did not know whether John had showered before she saw him the next morning. In the revised version, John admits on cross-examination that he did indeed take a shower that morning.
- 6) During the pilot, while answering the questionnaire, participants often asked “who is so-and-so again?” It was clear that in a 15-minute audio trial summary it was difficult to remember the names and testimony of the various witnesses.

For the full study, descriptors for each witness were now included to make

them more memorable. Some examples are: “Avondale resident Antonia Kirby”; “partygoer James Webster”, “store clerk Joshua Campbell”, and “the defendant’s girlfriend Lisa Marie Page”. These descriptors are used in the trial summary whenever the witness is mentioned. They are also used in the questionnaire whenever the witness is mentioned. Open-ended answers show that the descriptors helped as participants included the descriptors in their answers. For example, participants wrote answers referring to “partygoer James Webster’s testimony.”

- 7) Added a front-page message to the participants that stated: The purpose of this research is to understand the process of juror decision-making. Please imagine that you are a juror in this criminal case as you carefully read the trial summary.

Changes to the questionnaire (See Appendices D and E for both the original and the final versions):

- 1) Changed the initial determination of guilty or not guilty from a dichotomous response to a 7-point Likert scale: “Do you think the defendant, John Gardner, is:” with 1 being “definitely not guilty” and 7 being “definitely guilty.” The dichotomous verdict was asked instead at the end of the questionnaire worded as “The defendant, John Gardner, is: guilty/not guilty”.
- 2) Questions about the evidence were changed from asking “how important” each piece of evidence was in the decision to how much impact each piece of evidence had on the participant’s verdict; thus participants are asked “how did the following pieces of evidence impact your verdict?” and then asked to rate the impact on a 7-point Likert scale, from 1 “it made me think the defendant was

definitely not guilty,” to 4 “no impact,” to 7 “it made me think the defendant was definitely guilty.” The “no impact” option was necessary as the theory is that people who are told to disregard should not be paying attention to that piece of information and should select “no impact,” even if they are just doing it because they think they should.

- 3) A set of three questions were added regarding the testimony of the forensic expert, whose testimony is objected to. Participants are asked to rate the impact on the verdict of his testimony: “The testimony of forensic expert, Dr. Michaels, made you think the defendant is:” rated on the same 7-point Likert scale described above. They are also asked to rate both his credibility and his confidence on a 10-point Likert scale (Lieberman, Krauss, Kyger, & Lehoux, 2007).
- 4) Three questions regarding perceptions of inadmissible evidence in general were added: “Do you believe jurors can disregard inadmissible evidence once it is introduced into a trial?” “Do you believe jurors are influenced by inadmissible evidence once it is introduced into a trial?” and “Do you believe lawyers introduce evidence they know to be inadmissible in order to influence a jury?” (Lee, Krauss, & Lieberman, 2005).
- 5) The questions regarding whether the participant had read an instruction prior to the trial summary were altered to emphasize the word “BEFORE” and to include the phrase “opening instructions” in the follow-up question. Additionally, the multiple choice options in the follow-up were changed from:
 - a. Inadmissible evidence is sometimes used by lawyers to create a strategic advantage.

- b. Inadmissible evidence is often part of the trial and not used in a strategic way.
 - c. Inadmissible evidence was not mentioned in the instructions.
 - d. There was not an instruction from the judge before the trial summary.
- To:

Which of the following statements about evidence was included in the judge's *opening* instruction?

Circle all that apply

- a. Sometimes a lawyer will object to evidence they believe is not in accordance with the law.
 - b. All evidence is allowed into a trial.
 - c. Certain evidence is introduced by lawyers to influence the jury in an unfair way.
 - d. Did not read an opening instruction from the judge.
- 6) In the pilot, a series of questions were asked about the honesty and trustworthiness of the witnesses. In the revised questionnaire, participants are only asked about the honesty of each witness. To measure "trustworthiness" seemed like too much of an abstract construct. Most people can answer a question regarding honesty, though some said they needed to see the witness and others simply just circled the same number all the way down without giving much thought to the actual witness.
- 7) In the original questionnaire, participants were asked first if they thought the case was manipulative for each side ("did you find the State's case manipulative?", "did you find the defense's case manipulative?"). Participants were then asked if

they thought the case was strategic for each side. There was some confusion as to the difference of these questions and if they were really measuring anything different. The “strategic” questions were removed; the “manipulative” questions remained to measure whether the “suspicious” instruction could affect the way the attorneys’ cases were viewed.

- 8) The first open-ended question was changed from “briefly list the factors that led to your decision” to “please briefly explain how you arrived at your decision in this case.”
- 9) Four open-ended questions were added: “What were the two most important pieces of evidence against the defendant?” “What were the two most important pieces of evidence for the defendant?” “Who was the most important witness against the defendant?” and “Who was the most important witness for the defendant?” There may have been some confusion about what the word “for” means in this situation. For example, some people responded with the same witnesses in both the “against” question and the “for” question without any indication of how they thought a witness could be the most important in both instances. In future studies, I would change that to some other word making it more obvious that I am asking what witnesses/evidence supported the defense’s case.

Appendix B. Trial summary.

The purpose of this research is to understand the process of juror decision-making.
Please imagine that you are a juror in this criminal case as you carefully read the trial
summary.

Judicial opening instructions were inserted here:

Conditions 1 – 5: No instruction

Conditions 6 – 10: Generic Instruction:

Judge's Instructions to the Jury

Members of the jury, we are about to proceed with the trial of the case of the State of Arizona vs. John Gardner. You will read a summary of the testimony. You must decide what importance to give to the testimony you accept as truthful and accurate.

After carefully evaluating the evidence, you must decide whether that evidence convinces you beyond a reasonable doubt of the defendant's guilt. As judges of the facts, you alone determine the truthfulness and accuracy of the testimony of each witness.

If a lawyer believes a question or some other presentation of evidence is not in accord with a rule of law, that lawyer will object. If I *overrule* the objection, the answer stands as evidence. If I *sustain* the objection, the answer is not evidence, the question and answer are stricken from the record and you are to completely disregard the answer.

Conditions 11 – 15: Suspicious instruction:

Participants received the above instruction with the following paragraph added to the end:

You should also keep in mind that sometimes certain evidence is introduced into a trial by a lawyer in an attempt to create a strategic advantage and to influence the jury's thinking in an unfair way and you should therefore try not to let this information affect your thinking about the case.

State of Arizona vs. John Gardner

State's Opening Statement

Good morning, my name is Michael Kennedy and I represent the State of Arizona. This case is not an easy one to talk about—but we must. We must because the evidence will show that the defendant, John Gardner, brutally murdered Carrie Reese, a sweet and innocent 17-year-old girl. The evidence will show that on December 6, 2006, the defendant was arrested by Detective Gary Collins. The defendant, who was driving through Tucson, Arizona, admits that he was with Carrie the night she was killed, and that he may even have “fooled around” with her, despite travelling with his girlfriend. Then he conveniently said that he could not remember what happened next.

You will hear testimony from witnesses who place the defendant with Carrie Reese the night of December 4, just before she was murdered. You will also hear from a resident near the crime scene that she saw the defendant's car parked in the area that night between 10pm and midnight.

You will hear from a medical expert that the cause of her death was a vicious blow to the head. And you will hear from a forensics expert that a brown hair sample matched the defendant's hair. All of this evidence will show beyond a reasonable doubt that the defendant, John Gardner is guilty as charged of this horrible act: the brutal murder of a young girl who had so much to live for.

Defense's Opening Statement

Good morning, my name is Paul Richards and I represent John Gardner, the defendant.

State Attorney Kennedy was right about one point and one point alone: Detective Collins arrested the defendant John Gardner on December 6th. At the time of his arrest, John who is from Texas was driving through Arizona with Lisa Page, his girlfriend. His girlfriend will tell you that John left that afternoon to help someone jump-start his car, and then went out drinking, and she didn't see him until the next morning. Not realizing why he was being asked, John acknowledged to the police that he recognized Carrie from a photograph and said he may have been with her.

Members of the jury, after the evidence is presented, the judge will instruct you that John Gardner is presumed innocent and that the prosecution must prove his guilt beyond a reasonable doubt. Once you have examined the facts, I am confident that you will return a verdict of not guilty. Thank you.

State's Evidence

State: To prove the charges in this case, six witnesses will testify. The first witness is Detective Gary Collins, who questioned the defendant and made the arrest. Detective Collins is a homicide detective for the Arizona State Police and has investigated close to a hundred homicides in his twenty-three years on the force. He says that he picked up the defendant on a street corner two days after Carrie Reese's body was discovered. He showed the defendant a picture of the victim—and he recognized her as belonging to a group of kids he was with that night. In fact, the defendant said he “fooled around” with the girl. The defendant said he could not remember parts of the night and later woke up in the back seat of his car.

Defense: On cross-examination, Detective Collins states that when he first stopped the defendant, John Gardner on the street, John seemed puzzled about why he was being questioned. Detective Collins says that he took John to the police station for questioning in order to “create a situation that is more conducive to talking,” that no other officers were present at the time, and that the interview was not taped in any way. He also says that John denied any involvement in the murder.

State: The next witness is Dr. Mark Friedland, the pathologist who conducted the autopsy. The doctor states that bruising on the girl's neck indicated that the killer tried to strangle her, but that death was caused by a severe blow to the head, probably from a blunt object.

**THE OBJECTION/ADMISSIBILITY MANIPULATION IS INSERTED HERE.
SEE APPENDIX B FOR THE WORDING OF THE FIVE
OBJECTION/ADMISSIBILITY CONDITIONS.**

State: The fourth witness for the state is Joshua Campbell, a clerk at Jack's Place, where the victim, Carrie Reese was seen with friends the night she was killed. The store clerk Mr. Campbell testifies that the defendant was in the store the night of December 4 around 8:30pm, bought a six-pack of beer, and stopped to talk to some kids who were outside the store. He even recalls seeing the defendant hug Carrie at one point. That was the last time the store clerk, Mr. Campbell, saw her alive.

Defense: Joshua Campbell, the store clerk, testifies that he saw John leave his store that night with a group of kids—and that the defendant had hugged Carrie. He says that he was certain the people hugging were the defendant, John, and Carrie. But on cross-examination, the store clerk admits that he could not see whether John, Carrie, and the other kids actually left together or went their separate ways.

State: The State's next witness is Antonia Kirby, who lives in Avondale, half a block from where Carrie's body was found. Avondale resident, Antonia Kirby, saw the defendant's white Ford LTD while she was out walking her dog the night of December 4th at about 11:45pm. The car was parked on the dead end street where she lives. She is sure this was the car and could tell it had a Texas license plate. Mrs. Kirby says she saw a man asleep in the back seat.

Defense: On cross-examination, Avondale resident Antonia Kirby replies that she could not see clearly if the man in the backseat was the defendant. She testifies she did not write down the license plate number and she did not call the police. Finally, she testifies that the car was not on the street in the morning.

State: The last witness is park partygoer James Webster. He testifies that he was in the same group as the defendant that night in the park and that he saw the defendant with the victim, Carrie Reese. He says he saw them arguing loudly and saw Carrie get into a car with the defendant.

Defense: On cross-examination, partygoer James Webster admits he had never seen the defendant before that night and did not speak to him at the party. James Webster testifies that he had "about six beers that night."

State: At this point, the State rests.

Judge: Defense will call their first witness.

Defense: First, 18 year-old Deborah Sloan testifies. Deborah Sloan testifies that she met the defendant in the park on Friday December 3rd, the night before Carrie was murdered. She and her friends hung out with the defendant and his girlfriend, Lisa. She did not see the defendant that Saturday night, but she describes his behavior that Sunday morning as "normal" and said she did not notice any cuts or bruises or blood stains on his clothing.

State: When asked about the Sunday morning after the murder, apartment owner Deborah Sloan states she did not know whether the defendant had showered and changed before she saw him.

Defense: The defense also calls Lisa Marie Page, the defendant's girlfriend, to the stand. Lisa, who is 19 years old, has known the defendant for two years. She confirms that she was not with him that Saturday night because he said he was going to help some guy jump-start his car and then go out drinking. But she did confirm that the defendant was back in Deborah Sloan's apartment the next morning. When asked if the defendant has a violent temper, she replies no.

State: On cross-examination, the defendant's girlfriend, Lisa admits that while the defendant often drinks and smokes too much, she has never known him to black out.

When asked about the defendant's whereabouts the night of December 4th, she acknowledges that she expected him to be back that night and was surprised when he did not show up until the next morning.

Defense: Finally, the defendant, John Gardner, testifies. John confirms that he spent the early evening with a guy he had met named Ace. After he helped Ace jump-start his car, he then bought a six-pack of beer and met up with some local kids. The others also had beer, and some pot, and they all went into the park to get high. He says Carrie Reese may have been in the group but he wasn't sure. He admits he fooled around with one girl but that they did not have sex. As to where he was around midnight, the defendant testifies that he cannot recall – he passed out and woke up in the back seat of his car at sunrise the next morning. He saw that everyone was gone, so he drove back to Deborah Sloan's apartment and fell asleep on the couch.

State: On cross-examination, the defendant admits identifying the picture of Carrie Reese when stopped by Detective Collins. As to whether he was alone with Carrie Reese that night, he says he cannot recall. When asked about the next morning, the defendant admits he showered when he returned to the apartment.

State's Closing Argument

Ladies and gentlemen of the jury, the evidence has shown that the defendant, John Gardner murdered Carrie Reese. He is last seen with her, he admits to having some form of sexual interaction with her, his hair is found under her fingernail, and he does not show up as expected by his girlfriend until the next morning. To make matters worse, he says he was in the park late that night, yet his car is seen in Avondale, near the murder site. He claims he passed out, but according to his girlfriend, he has never done that before.

Ladies and gentlemen, you know that the defendant took Carrie to Avondale that night. Carrie is not here to tell you what happened, but we believe that he wanted to have sexual intercourse with her and when she refused, he got physical. When she fought back, he tried to strangle her and then killed her with a hard blow to the back of the head. Ladies and gentlemen, the defendant, John Gardner brutally murdered an innocent 17 year old girl. After you carefully weigh the evidence, a common sense evaluation of the opposing stories should convince you beyond a reasonable doubt that the defendant, John Gardner, is guilty of murder. We ask that you vote to convict.

Defense's Closing Argument

Members of the jury, the defendant, John Gardner is not a murderer. The murder of Carrie Reese is an awful tragedy. Personally, I hope that whoever is responsible gets caught, tried, and punished. But the defendant is not that person.

Consider the facts and you will see that the state has no case. The store clerk, Josh Campbell, says that he saw the defendant with Carrie and some other kids early in the evening, but that is consistent with John's own version of where he was and who he was with. Avondale resident, Antonia Kirby, says she saw the defendant's car parked on her street, but she can't be sure the man she saw sleeping in the back was the defendant. Both the defendant's girlfriend, Lisa Marie Page and Debbie Sloan—the girl they stayed with—said John seemed normal the next morning, and Detective Collins admitted that when he showed John a picture of Carrie Reese, John did not react defensively or deny being with her.

The fact that the defendant's hair was found under her fingernail also does not prove that he murdered her, only that he was with her. The truth is as John tells it. He was with a guy he met named Ace, then met up with some local students, then they left to drink and smoke. John passed out in his car and to this day, he cannot recall what happened to any of the local kids after that.

Ladies and gentlemen, murder is a horrible crime. John Gardner is an innocent young man who happened to be in Tucson at the wrong time. There are so many unanswered questions and so much reasonable doubt that we ask that you vote not guilty.

Judge's Closing Instructions to the Jury:

Members of the jury, you must now evaluate the evidence. The State must prove beyond a reasonable doubt that the defendant is the person who committed the crime. If the State did not prove beyond a reasonable doubt that the defendant committed the crime, you must find the defendant not guilty. If the State did prove beyond a reasonable doubt that the defendant committed the crime, you must find the defendant guilty. You are to consider only the evidence. You alone must determine the truthfulness and the accuracy of each witness. You must also determine what importance to give to the testimony of each witness. You must disregard any testimony that was objected to and stricken from the record. This concludes my instructions.

Appendix C. Wording of trial summary manipulations

Wording for the “no objection” condition:

State: The next witness is Dr. Jerome Michaels, a forensics expert who tested the victim’s body and clothing for foreign hairs, fibers, and other trace evidence. Dr. Michaels reports his laboratory findings that a hair sample positively matched that of the defendant. He also testifies that the hair was recovered from underneath the victim’s fingernail and that there were no other foreign hairs on the body.

Defense: On cross-examination, forensic expert Dr. Michaels testifies that he knew the hair was a match to the defendant because he compared a hair sample from the defendant to the hair found beneath the victim’s fingernail under a microscope.

Also on cross-examination, he admits that a “match” indicates that the hair likely belongs to the defendant, but cannot rule out the possibility of someone else.

Wording for the “objection/no admonition” condition:

State: The next witness is Dr. Jerome Michaels, a forensics expert who tested the victim’s body and clothing for foreign hairs, fibers, and other trace evidence. Dr. Michaels reports his laboratory findings that a hair sample positively matched that of the defendant. He also testifies that the hair was recovered from underneath the victim’s fingernail and that there were no other foreign hairs on the body.

Defense: On cross-examination, forensic expert Dr. Michaels testifies that he knew the hair was a match to the defendant because he compared a hair sample from the defendant to the hair found beneath the victim’s fingernail under a microscope.

Finally, on cross-examination he admits that a “match” indicates that the hair likely belongs to the defendant, but cannot rule out the possibility of someone else.

At this point, the defense objects to the forensic testimony of Dr. Michaels.

Judge: The objection is overruled. The forensic testimony of Dr. Michaels will be allowed to remain on the record.

Wording for the “objection/admonition” condition:

State: The next witness is Dr. Jerome Michaels, a forensics expert who tested the victim’s body and clothing for foreign hairs, fibers, and other trace evidence. Dr. Michaels reports his laboratory findings that a hair sample positively matched that of the

defendant. He also testifies that the hair was recovered from underneath the victim's fingernail and that there were no other foreign hairs on the body.

Defense: On cross-examination, forensic expert Dr. Michaels testifies that he knew the hair was a match to the defendant because he compared a hair sample from the defendant to the hair found beneath the victim's fingernail under a microscope.

Also on cross-examination, he admits that a "match" indicates that the hair likely belongs to the defendant, but cannot rule out the possibility of someone else.

At this point, the defense objects to the forensic testimony of Dr. Michaels.

Judge: The objection is overruled. The forensic testimony of Dr. Michaels will be allowed to remain on the record. However, the jury is to give the testimony only the weight they think it deserves when reaching a verdict.

Wording for the "objection/sustained for unreliability" condition:

State: The next witness is Dr. Jerome Michaels, a forensics expert who tested the victim's body and clothing for foreign hairs, fibers, and other trace evidence. Dr. Michaels reports his laboratory findings that a hair sample positively matched that of the defendant. He also testifies that the hair was recovered from underneath the victim's fingernail and that there were no other foreign hairs on the body.

Defense: On cross-examination, forensic expert Dr. Michaels testifies that he knew the hair was a match to the defendant because he compared a hair sample from the defendant to the hair found beneath the victim's fingernail under a microscope.

On cross-examination, forensic expert Dr. Michaels admits he is aware of a recent study by a major scientific organization stating that matching hair samples under a microscope is unreliable as a source of identification. He also testifies that hair matching is wrong around 12% of the time.

Finally, on cross-examination he admits that a "match" indicates that the hair likely belongs to the defendant, but cannot rule out the possibility of someone else.

At this point, the defense objects to the forensic testimony of Dr. Jerome Michaels and asks that the hair evidence be stricken from the record due to the unreliable nature of this evidence.

Judge: Objection is sustained. The jury is to disregard the forensic testimony of Dr. Michaels.

Wording for the “objection/sustained for due process” condition:

State: The next witness is Dr. Jerome Michaels, a forensics expert who tested the victim’s body and clothing for foreign hairs, fibers, and other trace evidence. Dr. Michaels reports his laboratory findings that a hair sample positively matched that of the defendant. He also testifies that the hair was recovered from underneath the victim’s fingernail and that there were no other foreign hairs on the body.

Defense: At this point, the defense objects to the forensic testimony of Dr. Michaels and asks that the last part of the witness’s testimony be stricken from the record. A motion was granted prior to the start of the trial that this witness was not to mention where the hair was recovered from.

Judge: Objection is sustained. The jury is to disregard the forensic testimony of Dr. Michaels.

Appendix D. Pilot Questionnaire

1. Do you think the defendant, Mr. John Gardner, is : Guilty Not Guilty
2. How confident are you in your decision:
- | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| (not at all) | | | | | | | | | (very confident) |
3. On a scale of 0% (not likely at all) to 100% (definitely committed the crime), how likely is it that the defendant, Mr. John Gardner, committed the crime? *Please circle one.*
- | | | | | | | | |
|-----|-----|-----|-----|------|-----|-----|-----|
| 0% | 5% | 10% | 15% | 20% | 25% | 30% | 35% |
| 40% | 45% | 50% | 55% | 60% | 65% | 70% | 75% |
| 80% | 85% | 90% | 95% | 100% | | | |
4. Please briefly list the factors that led to your decision:
5. Please rate how important the following pieces of evidence were in your decision on a scale of 1 to 10 with 1 being “not at all important” and 10 being “extremely important”.
- Antonia Kirby’s testimony regarding a white Ford in Avondale**
- | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| (not at all) | | | | | | | | | (extremely) |
- John Gardner’s hair on the victim’s body**
- | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| (not at all) | | | | | | | | | (extremely) |
- Unidentified hair on the victim’s body**
- | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| (not at all) | | | | | | | | | (extremely) |
- James Webster’s testimony regarding an argument**
- | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| (not at all) | | | | | | | | | (extremely) |

14. How trustworthy was Josh Campbell?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

15. How honest was James Webster?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

16. How trustworthy was James Webster?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

17. How honest was John Gardner?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

18. How trustworthy was John Gardner?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

19. How trustworthy was Michael Kennedy, the State's attorney?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

20. How trustworthy was Paul Richards, the Defense attorney?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

21. How competent was Michael Kennedy, the State's attorney?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

22. How competent was Paul Richards, the Defense attorney?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

23. Did you view the State's case as manipulative?

1 2 3 4 5 6 7 8 9 10
(not at all) (extremely)

What is your age? _____

What is your highest level of education? _____

Is a language other than English spoken in your home? Yes No

If yes, what language? _____

Have you ever served on a jury? Yes No

Were you questioned for a jury today? Yes No

The testimony of partygoer James Webster made you think the defendant is:

<i>Definitely not guilty</i>				<i>No impact</i>				<i>Definitely Guilty</i>
1	2	3	4	5	6	7		

The testimony of the defendant, John Gardner, made you think the defendant is:

<i>Definitely not guilty</i>				<i>No impact</i>				<i>Definitely Guilty</i>
1	2	3	4	5	6	7		

The testimony of Detective Collins made you think the defendant is:

<i>Definitely not guilty</i>				<i>No impact</i>				<i>Definitely Guilty</i>
1	2	3	4	5	6	7		

The testimony of the defendant's girlfriend, Lisa Marie Page, made you think the defendant is:

<i>Definitely not guilty</i>				<i>No impact</i>				<i>Definitely Guilty</i>
1	2	3	4	5	6	7		

The testimony of store clerk, Josh Campbell, made you think the defendant is:

<i>Definitely not guilty</i>				<i>No impact</i>				<i>Definitely Guilty</i>
1	2	3	4	5	6	7		

The testimony of apartment owner, Deborah Sloan, made you think the defendant is:

<i>Definitely not guilty</i>				<i>No impact</i>				<i>Definitely Guilty</i>
1	2	3	4	5	6	7		

6. How strong was the evidence against the defendant?

Not at all strong 1 2 3 4 5 6 7 8 9 10 *Extremely strong*

7. **You read testimony from a forensic expert, Dr. Jerome Michaels, regarding hair evidence.**

7a. The testimony of forensic expert, Dr. Michaels, made you think the defendant is:

<i>Definitely not guilty</i>	<i>No impact</i>					<i>Definitely Guilty</i>	
1	2	3	4	5	6	7	

7b. How credible was forensic expert, Dr. Michaels?

Not at all credible 1 2 3 4 5 6 7 8 9 10 *Extremely credible*

7c. How confident was forensic expert, Dr. Michaels?

Not at all confident 1 2 3 4 5 6 7 8 9 10 *Extremely confident*

8. **How honest was Avondale resident, Antonia Kirby?**

Not at all honest 1 2 3 4 5 6 7 8 9 10 *Extremely honest*

9. **How honest was Detective Collins?**

Not at all honest 1 2 3 4 5 6 7 8 9 10 *Extremely honest*

10. **How honest was the defendant's girlfriend, Lisa Marie Page?**

Not at all honest 1 2 3 4 5 6 7 8 9 10 *Extremely honest*

11. **How honest was apartment owner, Deborah Sloan?**

Not at all honest 1 2 3 4 5 6 7 8 9 10 *Extremely honest*

12. **How honest was store clerk, Josh Campbell?**

Not at all honest 1 2 3 4 5 6 7 8 9 10 *Extremely honest*

13. How honest was park partygoer James Webster?

Not at all honest 1 2 3 4 5 6 7 8 9 10 *Extremely honest*

14. How honest was the defendant, John Gardner?

Not at all honest 1 2 3 4 5 6 7 8 9 10 *Extremely honest*

15. How trustworthy was State Attorney Kennedy?

Not at all trustworthy 1 2 3 4 5 6 7 8 9 10 *Extremely trustworthy*

16. How competent was State Attorney Kennedy?

Not at all competent 1 2 3 4 5 6 7 8 9 10 *Extremely competent*

17. How trustworthy was Defense Attorney Richards?

Not at all trustworthy 1 2 3 4 5 6 7 8 9 10 *Extremely trustworthy*

18. How competent was Defense Attorney Richards?

Not at all competent 1 2 3 4 5 6 7 8 9 10 *Extremely competent*

19. Did you view the State Attorney's case as manipulative?

Not at all manipulative 1 2 3 4 5 6 7 8 9 10 *Extremely manipulative*

20. Did you view the Defense Attorney's case as manipulative?

Not at all manipulative 1 2 3 4 5 6 7 8 9 10 *Extremely manipulative*

21. Do you think the evidence introduced by the State Attorney was unfair to the defendant?

Not at all unfair 1 2 3 4 5 6 7 8 9 10 *Extremely unfair*

22. **Are you convinced by the evidence introduced by the State Attorney?**

Not at all convinced 1 2 3 4 5 6 7 8 9 10 *Extremely convinced*

23. **Are you convinced by the evidence introduced by the Defense Attorney?**

Not at all convinced 1 2 3 4 5 6 7 8 9 10 *Extremely convinced*

24. **Overall, what were the two most important pieces of evidence against the defendant?**

25. **Overall, what were the two most important pieces of evidence for the defendant?**

26. **Overall, which witness was the most important against the defendant?**

27. **Overall, which witness was the most important for the defendant?**

28. **The defendant, John Gardner, is:** Guilty Not guilty

29. **Was there any evidence presented that was objected to?** Yes No

If yes, please answer the following questions:

e. What was the evidence?

f. Who presented the evidence? State Defense

g. Who objected to it? State Defense

h. Why did the attorney object to the evidence?

a. The judge had granted a motion before the trial started.

b. The evidence was not reliable.

c. No reason was given.

e. How did the judge rule? Overruled (Admissible) Sustained (Inadmissible)

30. **Did you read an opening instruction from the judge BEFORE the trial summary?**

Yes No

31. **Which of the following statements about evidence was included in the judge's opening instruction? Circle all that apply**

a. Sometimes a lawyer will object to evidence they believe is not in accordance with the law.

- b. All evidence is allowed into a trial.
- c. Certain evidence is introduced by lawyers to influence the jury in an unfair way.
- d. Did not read an opening instruction from the judge.

In general:

32. Do you believe jurors can disregard inadmissible evidence once it is introduced into a trial?

Definitely can't disregard 1 2 3 4 5 6 7 8 9 10 *Definitely can disregard*

33. Do you believe jurors are influenced by inadmissible evidence once it is introduced into a trial?

Definitely not influenced 1 2 3 4 5 6 7 8 9 10 *Definitely influenced*

34. Do you believe lawyers introduce evidence they know is inadmissible in order to influence a jury?

Not at all 1 2 3 4 5 6 7 8 9 10 *Definitely*

What is your sex? M F

What is your age? _____

What is your highest level of education? _____

Is a language other than English spoken in your home? Yes No

If yes, what language? _____

Have you ever served on a jury? Yes No

If yes, was it civil or criminal: Civil Criminal

Were you questioned for a jury today? Yes No

Appendix F. Informed Consent

Research Participation Information Form

You are invited to participate in a research study. The purpose of this research is to examine how an individual juror processes information. We plan to enroll 250 participants into this study. If you decide to participate, you will be asked to read a short summary of a murder trial and answer a brief questionnaire based on what you read. Participation should take about 30 minutes for one day.

The risks of participation in this study are minimal. The potential benefit to society is a further understanding of the juror's ability to process information.

Your participation in this study is completely voluntary. You can refuse to participate without consequences. If you decide not to participate your decision will not affect your relationship with John Jay College or the New York State Court System. If you decide to participate, you may stop participation at any time. You may refuse to answer any questions at any time during the study. Withdrawal or refusing to answer specific questions will not result in any consequences to you and will not affect your relationship with John Jay College or the New York State Court System.

Information collected from you will be recorded for your responses only. Your name will not appear on the data in any way. This consent form is being collected as an acknowledgement that you are volunteering to participate and has no connection to your responses on the questionnaire. The consent forms and the questionnaires will be destroyed after the research is complete.

Your signature below means that you have read this consent form, that you fully understand the nature and consequences of participation and that you have had all questions regarding participation in this study answered satisfactorily. If you have further questions about this research please feel free to contact the Principal Investigator, Courtney Hougham at chougham@jjay.cuny.edu.

If you have any questions regarding your rights as a research participant please feel free to contact the John Jay Institutional Review Board office at jj-irb@jjay.cuny.edu or 212-237-8961.

Thank you for your participation.

Appendix G. Initial results of two-way ANOVAs and multiple regression for the continuous dependent variables.

ANOVA – type of instruction by type of objection/ruling

All continuous dependent variables were subjected to a two-way analysis of variance with three levels of type of instruction (none, generic, suspicious) and five levels of type of objection/ruling (none, no reason specified – overruled with no admonishment, no reason specified – overruled with admonishment, reliability reason – sustained, due process reason – sustained).

The type of instruction yielded a main effect on the question regarding the likelihood that the defendant committed the crime, $F(2,223) = 3.565$, $p = .030$, partial $\eta^2 = .031$. Post hoc comparisons showed that the suspicious group ($M = 47.31$, $SD = 28.75$) was significantly lower than the no instruction group ($M = 59.11$, $SD = 26.50$) suggesting that those who had read the suspicious instruction thought it less likely that the defendant had committed the crime when compared to the control group.

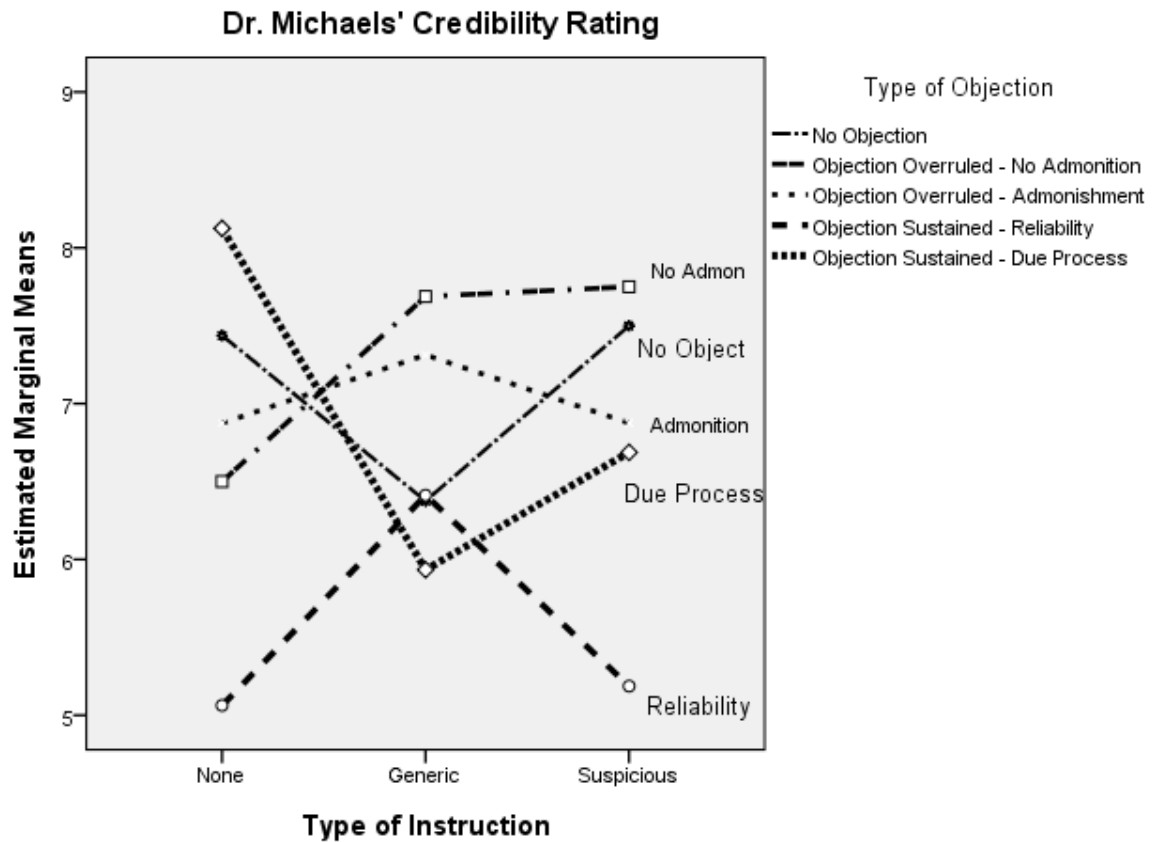
The type of instruction had a main effect on ratings of the impact of Detective Collins' testimony on the verdict, $F(2,223) = 3.495$, $p = .032$, partial $\eta^2 = .030$. Post hoc comparisons showed that the suspicious group ($M = 3.79$, $SD = 1.402$) was significantly lower than the no instruction group ($M = 4.33$, $SD = 1.316$); he had more of a not guilty impact in the suspicious group than he did in the no instruction group. However, this ANOVA did not pass Levene's test of equality of error variances, $F(14,223) = 1.841$, $p = .034$.

The type of objection/ruling had a main effect on ratings of the impact of Dr. Michaels' forensic testimony on verdict, $F(4,224) = 2.481$, $p = .045$, partial $\eta^2 = .042$.

Post hoc comparisons showed that the inadmissible reliability condition yielded lower guilt impact ratings ($M = 4.48$, $SD = 1.502$) when compared to both the admissible no admonishment group ($M = 5.08$, $SD = 1.514$) and the inadmissible due process group ($M = 5.40$, $SD = 1.233$). Additionally, the inadmissible due process group had significantly higher guilt impact ratings when compared to the no objection group ($M = 4.79$, $SD = 1.677$). Participants in the inadmissible due process group rated Dr. Michaels' testimony as having the highest average guilt impact.

The type of objection/ruling had a main effect on ratings of Dr. Michaels' credibility, $F(4,225) = 4.320$, $p = .002$, partial $\eta^2 = .071$. There was also a significant interaction between type of instruction and type of ruling/objection, $F(8,225) = 1.979$, $p = .050$, partial $\eta^2 = .066$. Post hoc comparisons show that Dr. Michaels was rated as significantly less credible by the participants in the inadmissible reliability group ($M = 5.57$, $SD = 2.677$) when compared to every other condition. The interaction shows that the effect of the type of instruction was much greater in the inadmissible due process group than all other conditions (see Figure G1). However, this ANOVA did not pass Levene's test of equality of error variances, $F(14,225) = 2.460$, $p = .003$.

Figure G1. Interaction effect on the rating of Dr. Michaels' credibility



The type of objection/ruling had a main effect on ratings of Dr. Michaels' confidence, $F(4,223) = 4.901$, $p = .001$, partial $\eta^2 = .081$. LSD post hoc comparisons show that Dr. Michaels was rated as significantly less confident by the participants in the inadmissible reliability condition ($M = 5.33$, $SD = 2.731$) when compared to every other condition. Tukey post hoc comparisons showed the participants in the inadmissible reliability condition rated him as less confident only when compared to the admissible admonishment ($M = 6.72$, $SD = 2.491$) and the inadmissible due process ($M = 7.49$, $SD = 2.321$) conditions. However, this ANOVA did not pass Levene's test of equality of error variances, $F(14,223) = 1.751$, $p = .048$.

The type of objection/ruling had a main effect on participants' rating of the strength of the evidence, $F(4,226) = 2.797$, $p = .027$, partial $\eta^2 = .047$. Post hoc comparisons show that participants in the inadmissible reliability group ($M = 3.980$, $SD = 2.537$) rated the evidence as significantly weaker when compared to the admissible no admonishment group ($M = 5.344$, $SD = 2.558$) and the admissible admonishment group ($M = 5.458$, $SD = 2.910$). Post hoc comparisons also reveal that participants in the inadmissible due process group ($M = 4.292$, $SD = 2.617$) rated the evidence as weaker when compared to the admissible admonishment group.

The type of objection/ruling had a main effect on participants' rating of the fairness of the evidence introduced by the state, $F(4,222) = 2.791$, $p = .027$, partial $\eta^2 = .048$. Post hoc comparisons show that participants in the inadmissible due process group ($M = 4.81$, $SD = 3.021$) rated the evidence as significantly more unfair when compared to the no objection group ($M = 3.62$, $SD = 2.623$), the admissible no admonishment group ($M = 3.40$, $SD = 2.386$), and the admissible admonishment group ($M = 3.51$, $SD = 2.135$). The inadmissible due process group was not different from the inadmissible reliability group ($M = 4.40$, $SD = 2.568$); nor was the latter group significantly different from any other group.

The type of instruction had a significant main effect on participants' ratings of the State's Attorney's competence, $F(2,223) = 4.746$, $p = .010$, partial $\eta^2 = .041$. Post hoc comparisons showed that the suspicious group ($M = 6.09$, $SD = 2.314$) rated the State Attorney as significantly less competent when compared to both the no instruction group ($M = 6.81$, $SD = 2.326$) and the generic group ($M = 7.16$, $SD = 1.984$). There was no significant difference on competence rating between the no instruction group and the

generic group.

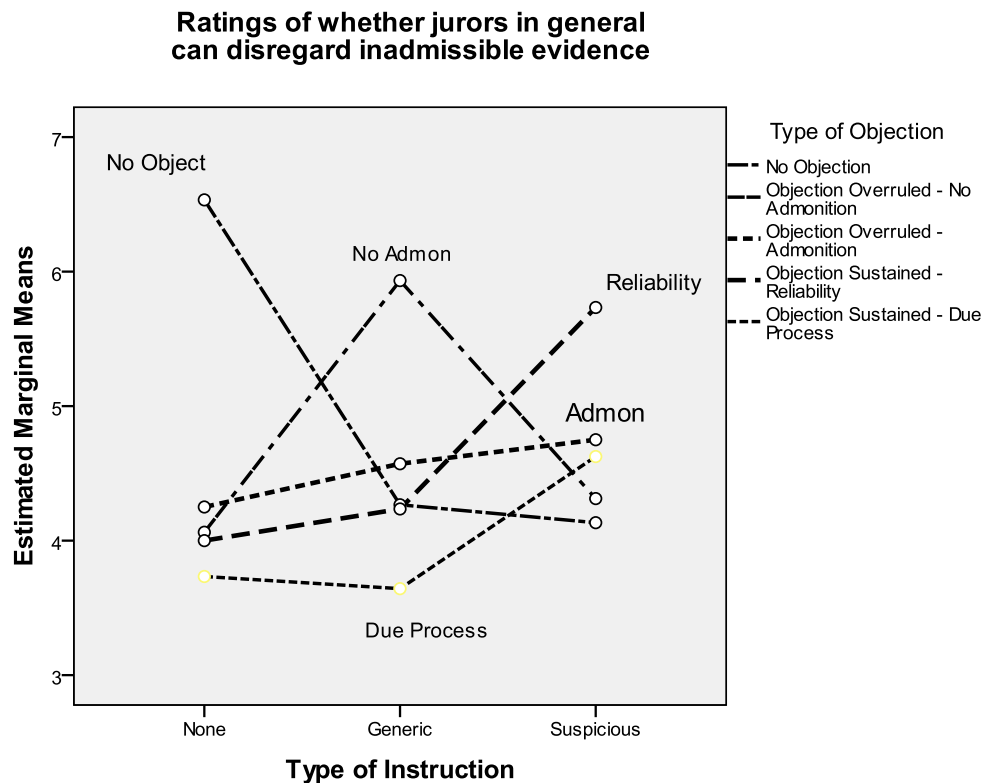
Participants were asked to rate both attorneys on level of manipulateness. There was no significant main effect for type of instruction when the attorneys were looked at separately, i.e. an attorney was not considered more or less manipulative individually across conditions. A difference variable was created by subtracting the manipulative rating of the Defense Attorney from the manipulative rating of the State Attorney to see if one attorney was viewed as more manipulative than the other depending on condition. A significant main effect for instruction *was* found for the manipulation difference variable, $F(2,223) = 3.597$, $p = .029$, partial $\eta^2 = .031$.

Post hoc comparisons showed that the suspicious group ($M_D = 1.33$, $SD = 2.962$) rated the State Attorney as significantly more manipulative than the Defense Attorney when compared to both the no instruction group ($M_D = .18$, $SD = 3.253$) and the generic group ($M_D = .26$, $SD = 2.927$). There was no significant difference on the manipulation difference variable between the no instruction group and the generic group.

A similar difference variable was created for attorney competence. There was also a main effect for type of instruction on this difference variable, $F(2,222) = 3.463$, $p = .033$, partial $\eta^2 = .030$. Post hoc comparisons showed that the suspicious group ($M_D = -.78$, $SD = 2.693$) rated the State Attorney as significantly less competent than the Defense Attorney when compared to the generic group ($M_D = .31$, $SD = 2.630$). There was no significant difference on the manipulation difference variable between the no instruction group and the generic group or between the suspicious group and the no instruction group. However, this ANOVA did not pass Levene's test of equality of error variances, $F(14,222) = 1.975$, $p = .021$.

Participants were asked to rate whether they thought people in general can disregard inadmissible evidence. Neither type of instruction nor type of objection/ruling yielded a main effect on this question, but there was a significant interaction, $F(8,215) = 2.093$, $p = .038$, partial $\eta^2 = .072$. The interaction shows that the effect of the type of instruction was greater in the no objection condition and in the inadmissible reliability condition. In the no objection condition, participants thought people could disregard inadmissible evidence when they were not given a pre-instruction; however, when they did receive an instruction prior to the trial summary, the rating decreased. Conversely, participants in the inadmissible reliability conditions gave a low rating when they did not receive an instruction and a much higher rating when they did, especially the suspicious instruction (see figure G2).

Figure G2. Interaction effect.



ANOVA – type of instruction by type of ruling

Due to the small number of significant main effects by objection/ruling, variables were combined to examine whether there were significant differences among participants depending on whether the objection was overruled vs. sustained. An ANOVA was run on all variables for type of instruction by type of ruling. The ANOVA excluded conditions where no objection was made. There should be significant differences regarding ratings of guilt and strength of evidence depending on whether the evidence was allowed or disallowed if jurors are treating inadmissible evidence as separate and ignoring it. Because the main effects for type of instruction were already discussed previously, they will not be discussed here. This section will look at significant main

effects for type of ruling and significant interactions.

There was a significant main effect for type of ruling guilt, $F(1,187) = 4.231$, $p = .041$, partial $\eta^2 = .022$. Participants in the sustained conditions ($M = 3.866$, $SD = 1.585$) thought the defendant was significantly less guilty than those in the overruled conditions ($M = 4.349$, $SD = 1.656$).

The type of ruling had a main effect on participants' rating of the likelihood that the defendant committed the crime, $F(1,186) = 3.812$, $p = .05$, partial $\eta^2 = .020$. Participants in the sustained conditions believed the defendant was less likely to have committed the crime ($M = 48.66$, $SD = 26.882$) than participants in the overruled conditions ($M = 56.47$, $SD = 29.062$).

The type of ruling had a main effect on the rating of the strength of the evidence, $F(1,187) = 11.121$, $p = .001$, partial $\eta^2 = .056$. Participants in the sustained conditions rated the overall evidence against the defendant as significantly weaker ($M = 4.134$, $SD = 2.568$) than the participants in the overruled conditions ($M = 5.401$, $SD = 2.726$).

Type of ruling yielded a main effect on ratings of Dr. Michaels' credibility, $F(1,186) = 6.730$, $p = .010$, partial $\eta^2 = .033$. Participants in the sustained conditions rated him as significantly less credible ($M = 6.24$, $SD = 2.756$) than participants in the overruled conditions ($M = 7.17$, $SD = 2.146$).

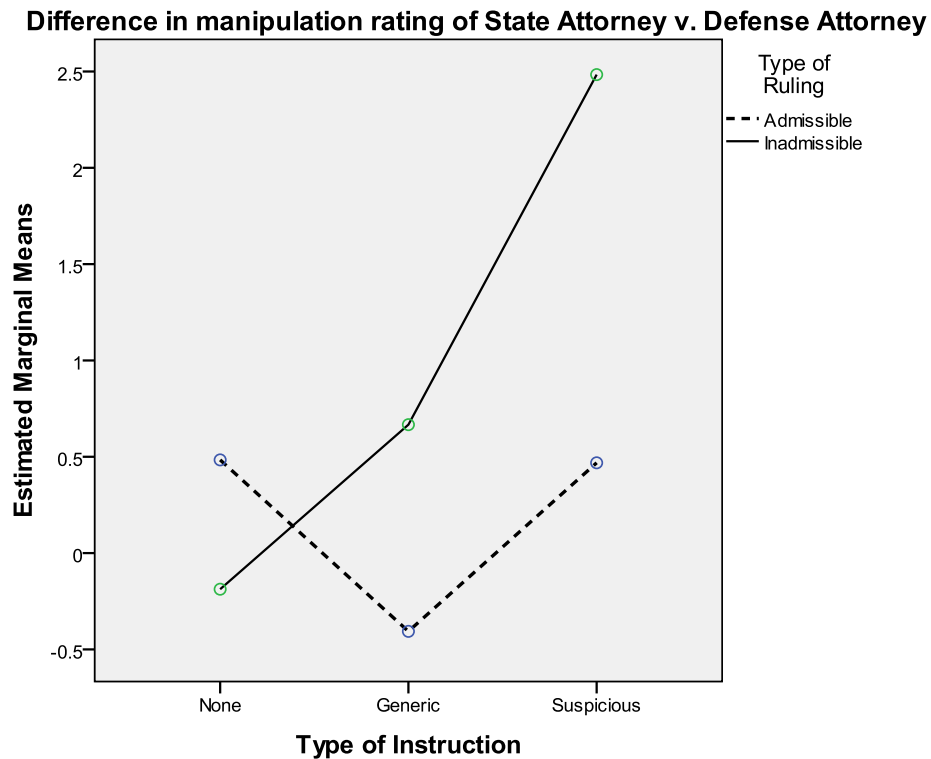
Participants rated the evidence introduced by the state as significantly more unfair ($M = 4.61$, $SD = 2.791$) in the sustained conditions than they did in the overruled conditions ($M = 3.45$, $SD = 2.254$). The main effect was significant, $F(1, 183) = 9.696$, $p = .002$, partial $\eta^2 = .050$.

While there was no significant main effect by type of ruling on the created

manipulation difference variable (State Attorney manipulation rating – Defense Attorney manipulation rating), there was a significant interaction between type of instruction and type of ruling, $F(2, 185) = 3.412$, $p = .035$, partial $\eta^2 = .036$. See Figure G3 for a depiction of the interaction.

Closer examination of the mean differences showed that the effect of the type of instruction was much larger in the sustained conditions than in the overruled conditions. Participants in the suspicious instruction and sustained conditions rated the State Attorney an average of 2.5 points more manipulative than they rated the defense attorney. This is compared to the suspicious instruction/overruled conditions where participants rated the State Attorney as only .47 points more manipulative than they rated the defense.

Figure G3. Interaction effect between instruction and type of ruling on difference in manipulation rating of the State Attorney v. the Defense Attorney



Regression Analysis using “No Instruction” as the reference group. Using the enter method, significant models were found with the following dependent variables: likelihood the defendant committed the crime ($F_{2,235}=3.715$, $p = .026$, adjusted $r^2 = .031$), the impact of Detective Collins testimony ($F_{2,235} = 3.484$, $p = .032$, adjusted $r^2 = .021$), the competence of the State Attorney ($F_{2,235} = 4.822$, $p = .009$, adjusted $r^2 = .031$), difference on manipulation ratings between the state and the defense ($F_{2,235} = 3.541$, $p = .031$, adjusted $r^2 = .021$), difference on competence ratings between the state and the defense ($F_{2,234} = 3.559$, $p = .030$, adjusted $r^2 = .021$). See Table G1 for a summary of B and beta weights.

Two manipulation checks were included at the end of the questionnaire: participants were asked whether any evidence was objected to and whether they had read

an instruction prior to the trial summary. Twenty-eight participants incorrectly said they had read an instruction when they had not. No participant said they had not read an instruction when they had. Thirty-two participants incorrectly said that no evidence was objected to. No participant in the no objection conditions answered that evidence was objected to.

The dummy coded variables were re-run using a stepwise method putting the error check variable on the second step to check whether the error increased the predictive power of the model. For the instruction independent variable, participants answering the manipulation checks in error did not affect the model; therefore, those results are not reported here. Because the error check variable did not increase predictive power of the model, it was decided that those participants who had answered the question incorrectly would remain in the dataset.

Table G1. Summary of B weights and Beta weights for significant regression models using the “No Instruction” group as the baseline.

DV	Predictor	B	SE B	Beta	Sig	95% Confidence Interval	
						Lower bound	Upper Bound
Likelihood	Constant	59.114	3.164			52.880	65.348
	Generic Instruction	-8.481	4.475	-.141	.059	-17.298	.336
	Suspicious Instruction	-11.801	4.461	-.196	.009	-20.590	-3.012
Collins Testimony	Constant	4.333	.155			4.028	4.639
	Generic Instruction	-.121	.218	-.041	.579	-.550	.308
	Suspicious Instruction	-.546	.218	-.187	.013	-.975	-.117
State Competence	Constant	6.810	.249			6.320	7.300
	Generic Instruction	.350	.350	.074	.317	-.339	1.039
	Suspicious Instruction	-.720	.353	-.151	.042	-1.416	-.025
Manipulation Diff.	Constant	.177	.342			-.496	.851
	Generic Instruction	.082	.481	.013	.865	-.865	1.029
	Suspicious Instruction	1.156	.485	.177	.018	.200	2.112

Regression analysis using “Inadmissible Reliability” as the reference group.

Using the enter method, significant models were found with the following dependent variables: impact of Dr. Michaels testimony on verdict ($F_{4,234} = 2.521$, $p = .042$, adjusted $r^2 = .025$), rating of Dr. Michaels credibility ($F_{4,235} = 4.139$, $p = .003$, adjusted $r^2 = .050$), rating of Dr. Michaels confidence ($F_{4,233} = 4.844$, $p = .001$, adjusted $r^2 = .061$), strength of

the evidence ($F_{4,234} = 2.814$, $p = .026$, adjusted $r^2 = .029$), and fairness of the evidence ($F_{4,232} = 2.792$, $p = .027$, adjusted $r^2 = .029$). Although using “fairness of the evidence” as the dependent variable produced a significant regression model, using “Inadmissible Reliability” as the reference group resulted in non-significant comparisons to the other conditions.

Again, a stepwise regression was used to test whether the error variable added predictive power to the model. The model increased in predictive power when the person answered a manipulation check incorrectly in the question regarding the strength of the evidence ($F_{5,235} = 4.338$, $p = .001$, adjusted $r^2 = .065$). When the participant incorrectly responded that she had *not* heard an objection when she had, she was more likely to act like those who really had not heard an objection or those in which an objection was overruled. See Table G2 for a summary of B and beta weights. Due to the large number of independent variables, only the constants and the significant beta weights will be reported.

Regression analysis using the contrast coded variables. Using the enter method, a multiple regression was run using the created contrast coded variables. Significant models were found for five dependent variables. Only the constants and the significant B and beta weights will be reported. See Table 3G for a summary of significant results. All the questions regarding Dr. Michaels yielded significant regression models when the four contrast coded variables were used as the predictors: the impact of Dr. Michaels testimony ($F_{4,234}=2.521$, $p = .042$, adjusted $r^2 = .025$), Dr. Michaels’ credibility ($F_{4,235} = 4.139$, $p = .003$, adjusted $r^2 = .050$), and Dr. Michaels’ confidence ($F_{4,233} = 4.844$, $p = .001$, adjusted $r^2 = .061$). Additionally, the dependent

variables evidence strength ($F_{4,236} = 2.814$, $p = .026$, adjusted $r^2 = .029$) and evidence fairness ($F_{4,232} = 2.792$, $p = .027$, adjusted $r^2 = .029$) regressed by the contrast coded independent variables yielded significant results.

Table G2. Summary of significant B weights and Beta weights for significant regression models using the “Inadmissible Reliability” group as the baseline.

DV	Predictor	B	SE B	Beta	Sig	95% Confidence Interval B	
						Lower bound	Upper Bound
Impact of Dr. Michaels' testimony	Constant	4.479	2.14			4.057	4.902
	Adm No Admon	.604	.303	.161	.048	.007	1.202
	Inadmissible DP	.917	.303	.245	.003	.319	1.514
Dr. Michaels Credibility	Constant	5.571	.341			4.900	6.243
	No object	1.533	.484	.251	.002	.579	2.487
	Adm No Admon	1.741	.484	.285	.000	.787	2.695
	AdmAdmon	1.449	.484	.237	.003	.495	2.404
	Inadmissible DP	1.365	.487	.222	.005	.405	2.324
Dr. Michaels Confidence	Constant	5.333	.351			4.642	6.024
	No object	1.104	.496	.177	.027	.127	2.081
	Adm No Admon	1.271	.496	.204	.011	.294	2.248
	Adm Admon	1.390	.499	.221	.006	.408	2.372
	Inadmissible DP	2.156	.499	.343	.000	1.174	3.138
Evidence Strength – Step 1	Constant	3.980	.385			3.222	4.737
	Adm No Admon	1.364	.547	.200	.013	.287	2.441
	Adm Admon	1.479	.547	.217	.007	.402	2.556
Step 2	Constant	3.675	.390			2.907	4.442
	No object	1.164	.540	.170	.032	.101	2.227
	Adm No Admon	1.238	.538	.181	.022	.178	2.298
	Adm Admon	1.425	.537	.209	.009	.367	2.482
	Inadm DP	.401	.537	.059	.456	-.657	1.460
	Error	1.149	.363	.201	.002	.433	1.865

Table G3. Summary of significant B weights and Beta weights for significant regression models using the contrast-coded independent variables.

DV	Predictor	B	SE B	Beta	Sig	95% Confidence Interval B	
						Lower bound	Upper Bound
Impact of Dr. Michaels' Testimony	Constant	4.932	.096			4.743	5.122
	Inadm Rel v. Inadm DP	-.458	.152	-.193	.003	-.757	-.160
Dr. Michaels' Credibility	Constant	6.789	.154			6.486	7.092
	Inadm Rel v. Inadm DP	-.682	.243	-.177	.005	-1.162	-.203
	Admis v. Inadmis	.456	.172	.167	.009	.117	.796
Dr. Michaels' confidence	Constant	6.518	.157			6.207	6.828
	Inadm Rel v. Inadm DP	-1.078	.249	-.272	.000	-1.569	-.587
Evidence strength	Constant	4.806	.173			4.465	5.148
	Admis v. Inadm	.633	.194	.208	.001	.251	1.014
Evidence fairness	Constant	3.949	.166			3.621	4.277
	Admis v. Inadm	-.577	.186	-.199	.002	-.944	-.210

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