MONITORING VISUAL ATTENTION IN VIDEOTAPED INTERROGATIONS:
AN INVESTIGATION OF THE CAMERA PERSPECTIVE BIAS

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AN INVESTIGATION OF THE CAMERA PERSPECTIVE BIAS

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Abstract
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MONITORING VISUAL ATTENTION IN VIDEOTAPED INTERROGATIONS: AN INVESTIGATION OF THE CAMERA PERSPECTIVE BIAS (79 pp.)

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Illusory causation occurs when a more conspicuous target is incorrectly attributed greater causality. Two studies conducted within the context of videotaped police interrogations provide the first direct evidence that visually salient targets attract observers’ visual attention, recorded using eye tracking equipment, which leads to altered judgments of the targets. Study 1 demonstrated that a demand-characteristics interpretation of previous research was unsupported. Study 2 extended previous research shown to reduce the camera perspective bias by eliminating an alternative explanation for visual-channel competition, that hemispheric activation caused by a mental imagery task led participants to look away from the target in the video. Finally, regression analyses indicated that visual attention partially mediates the effect of target salience on observers’ judgments of confession voluntariness and the suspects’ likelihood of guilt, providing further evidence that the camera perspective bias takes hold early rather than later in the processing of visually salient information.

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Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>3</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>4</td>
</tr>
<tr>
<td>List of Tables</td>
<td>8</td>
</tr>
<tr>
<td>List of Figures</td>
<td>9</td>
</tr>
<tr>
<td>Overview</td>
<td>10</td>
</tr>
<tr>
<td>Negative Effects of a False Confession</td>
<td>12</td>
</tr>
<tr>
<td>Jury Simulation</td>
<td>13</td>
</tr>
<tr>
<td>Confession Research</td>
<td>14</td>
</tr>
<tr>
<td>Interrogation Tactics</td>
<td>14</td>
</tr>
<tr>
<td>Illusory Causation</td>
<td>16</td>
</tr>
<tr>
<td>Research on the Camera Perspective Bias</td>
<td>18</td>
</tr>
<tr>
<td>Stage 1</td>
<td>19</td>
</tr>
<tr>
<td>Stage 2</td>
<td>25</td>
</tr>
<tr>
<td>Stage 3</td>
<td>30</td>
</tr>
<tr>
<td>Hemispheric Dominance</td>
<td>36</td>
</tr>
<tr>
<td>Eye-Tracking Equipment</td>
<td>39</td>
</tr>
<tr>
<td>Overview of Study 1</td>
<td>39</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>40</td>
</tr>
<tr>
<td>Hypothesis One: Instructions Directing Gaze Will Influence Voluntariness and Guilt</td>
<td>40</td>
</tr>
<tr>
<td>Hypothesis Two: Instructions Directing Eye Gaze Will Affect Visual Attention</td>
<td>41</td>
</tr>
</tbody>
</table>
Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Influence of Instructions on Voluntariness and Guilt Judgments ................................................................. 41

Method .................................................................................................................................................................................. 41

Participants .............................................................................................................................................................................. 41

Design ..................................................................................................................................................................................... 41

Materials .................................................................................................................................................................................. 42

Simulated Confession ............................................................................................................................................................ 42

Response Questionnaire ......................................................................................................................................................... 42

Eye-Tracking Equipment ........................................................................................................................................................ 42

Calibration .............................................................................................................................................................................. 43

Instructions ........................................................................................................................................................................... 44

Focus-on-suspect instructions ........................................................................................................................................... 44

Focus-on-detective instructions ........................................................................................................................................ 44

Focus-on-both instructions ................................................................................................................................................... 44

Procedure ............................................................................................................................................................................... 44

Results ................................................................................................................................................................................... 45

Hypothesis One: Instructions Directing Gaze Will Influence Voluntariness and Guilt Judgments ......................................................... 45

Hypothesis Two: Instructions Directing Eye Gaze Will Affect Visual Attention .................................................................................. 46

Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Influence of Instructions on Voluntariness and Guilt Judgments ............................................................................. 46

Discussion .............................................................................................................................................................................. 47

Overview of Study 2 ............................................................................................................................................................... 48

Hypotheses ............................................................................................................................................................................. 49
Hypothesis One: Camera Perspective Will Influence Voluntariness and Guilt Judgments 49
Hypothesis Two: Camera Perspective Will Influence Visual Attention 49
Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Effect of Camera Perspective on Voluntariness and Guilt Judgments 49

Method 50
Participants 50
Design 50
Materials 50
Simulated Confession 50
Eye-Tracking Procedure 50
Victim Photo 51
Response Questionnaires 51
Procedure 51

Results 52
Hypothesis One: Camera Perspective Will Influence Voluntariness and Guilt Judgments 52
Hypothesis Two: Camera Perspective Will Influence Visual Attention 53
Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Effect of Camera Perspective on Voluntariness and Guilt Judgments 53

Discussion 54
General Discussion 56
Limitations 57
Future Research 58
References 60
Appendix A 73
List of Tables

| Table 1.1 Judgment Means (and Standard Deviations) | 67 |
| Table 1.2 Visual Attention Means (and Standard Deviations) | 68 |
| Table 2.1 Judgment Means (and Standard Deviations) | 70 |
| Table 2.2 Visual Attention Means (and Standard Deviations) | 71 |
List of Figures

<table>
<thead>
<tr>
<th>Figure Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1 Mediational Model for Study 1</td>
<td>69</td>
</tr>
<tr>
<td>Figure 2 Mediational Model for Study 2</td>
<td>72</td>
</tr>
</tbody>
</table>
Overview

“An electronic record made in the station interview room is law enforcement’s version of instant replay (National Association of Criminal Defense Lawyers [NACDL], 2004).”

Statements such as this abound in legal literature concerning videotaping suspect interrogations. Police officers who utilize videotaped confessions enthusiastically report, “...it marries them (suspects) to their stories,” and that videotapes prove to be “...the best evidence (NACDL, 2004).” However, research strongly suggests that videotaped interrogations do not always provide objective narrations. Videotaping interrogations may, instead, bind suspects to false confessions and bias important decisions such as those regarding the voluntariness of a confession or even the guilt of a suspect (Lassiter & Geers, 2004).

Examination of potentially biasing aspects of the criminal justice system has intensified (Bornstein, 1999; Diamond, 1997; Kassin, 1997; Kassin & Norwick, 2004; Wilson & Brekke, 1994). Currently under scrutiny is the growing trend to videotape suspects’ confessions (Bornstein, 1999; Geller, 1992; Lassiter, 2002). There are many advantages to videotaping confessions, such as preventing accusations of police misconduct, providing a more accurate account of interrogation procedures, decreasing the number of detective hours spent in court, as well as providing what is considered to be a reliable and unbiased account of interrogation proceedings (Geller, 1992). However, the most commonly used videotape presentation format, one in which the camera perspective predominantly excludes observation of the interrogator and focuses directly on the suspect, has been shown to bias voluntariness and guilt judgments (Geller, 1992; Kassin, 1997; Lassiter, 2002).
Mock jurors have been found to consistently rate confessions as being more voluntary with the camera focused predominantly on the suspect (Lassiter, 2002; Lassiter & Geers, 2004; Lassiter, Munhall, Geers, Weiland, & Handley, 2001). The importance of this finding continues to increase. Already, it is estimated that a third of law enforcement agencies have begun videotaping at least some custodial interrogations (Geller, 1992; Sullivan & Thomas, 2003). A few states—Alaska, Minnesota, and Illinois—have already passed legislation or mandated by judicial decree that all police interrogations be videotaped (Kassin, 1997; Lassiter, Geers, Handley, Weiland, & Munhall, 2002; Leo, 1996; NACDL, 2004; Sullivan & Thomas, 2003).

Lassiter and colleagues (2004) have put together a series of studies to determine the robustness of the camera perspective bias and the underlying mechanisms responsible for biased perceptions of videotaped police interrogations resulting in harsher judgments of the suspect. The current studies seek to extend previous research on the camera perspective bias using eye tracking. This widely used measure of visual attention will help determine whether illusory causation (McArthur, 1980), the foundation of the camera perspective bias, is an error embedded in online perceptual processing (Lassiter, Munhall, Geers, Weiland, & Handley, 2001) by permitting a direct evaluation of the hypothesis that visual attention mediates the effect of the camera perspective on participants’ judgments of confession voluntariness and the likelihood of suspect guilt.

Research does not discourage the videotaping of interrogations (Lassiter, Munhall, Geers, Weiland, & Munhall, 2001; Lassiter & Geers, 2004). Rather, research has found that presenting profiles of both the detective and suspect elicits judgments comparable to more traditional media formats, such as audio and transcript (Lassiter, Ratcliff, Ware, & Irvin, 2006). It is this format, relatively free of bias, that past and present researchers seek to persuade the legal system to institute (Lassiter, Geers, Munhall, et al., 2001; Lassiter & Geers, 2004; Lassiter et al., 2006).
Negative Effects of a False Confession

Police, prosecutors, judges and researchers agree that providing a confession is the most ruinous action a criminal suspect can execute (Kassin, 1997; Lassiter & Irvine, 1986; Leo, 1996). After suspects have made self-incriminating statements, they are treated more harshly at every stage of the legal process. They are more likely to be charged by the prosecution, are less likely to have their case dismissed, are more likely to be forced to plea bargain, to be found guilty, and to be punished more severely following their conviction (Leo, 1996). Determining the voluntariness and admissibility of a confession is a vital component of a criminal trial, as a confession has been found to be more detrimental to a defendant’s case than even eyewitness testimony (Kassin, 1997; Lassiter & Irvine, 1986; Lassiter, Geers, Munhall, et al., 2002).

In order for a confession to be admitted as trial evidence, it must first be judged as voluntary (Bornstein, 1999; Kassin, 1997; Lassiter, Geers, et al., 2001; Lassiter & Irvine, 1986). If the voluntariness of a confession is questioned, it is presented to either the judge or jury, depending on the jurisdiction, and evaluated for coercion (Bornstein, 1999; Kassin, 1997; Lassiter, Beers, Geers, Handley, Munhall, & Weiland, 2002). Confessions judged to be given involuntarily are withheld as evidence (Sommers & Kassin, 2001).

Due to the importance of confession evidence, and because the Constitution prohibits the use of confession evidence extracted by coercive tactics, it is essential to determine that trial decision makers (i.e. judges and jury members) can accurately identify involuntary confessions (Kassin, 1997; Kassin & Norwick, 2004). Using jury simulations and mock jurors allows for experimental manipulation and increased control necessary to identify problematic legal procedures (Bornstein, 1999, Diamond, 1997; MacCoun, 1989). However, it is the use of college participants, incomplete trial simulations, and continuous measures that cause the legal system to
question laboratory findings (Bornstein, 1999; Diamond, 1997; Kassin & Wrightsman, 1980; Lassiter, 2002; MacCoun, 1989).

Jury Simulation

By comparing decisions from trial simulations to those made within actual trials, it has been demonstrated that using mock jurors leads to a reliable examination of judgments made by actual jurors (MacCoun, 1989). However, the legal system has been reticent to change legal practices and procedures based on laboratory findings (Bornstein, 1999; Diamond, 1997). One lawyer was quoted as concluding, “In an era where academicians generalize from laboratory studies and use anecdotal accounts to support claims that police routinely elicit false confessions, electronic recordings may be the most effective means to dispel these unsupported notions, (NACDL, 2004).” This statement captures both the mistrust the legal system holds for experimentation, as well as the rigid conviction that videotaped interrogations are bias free.

In order to persuade courts of the external validity of laboratory research, Diamond (1997) has suggested jury simulation research be conducted in two stages. The first stage of research should focus on detecting and isolating biases using less complicated methodology (e.g. students as mock jurors, written trial summaries, etc.). The second stage of research should increase the verisimilitude of past studies to bring research more in line with actual legal processes. Diamond (1997) suggests including the use of more heterogeneous participants and more realistic trial simulations containing elements of court procedures (e.g. judicial instruction, defense statements, and witness testimony). Additionally, it is beneficial to investigate mechanisms underlying problematic procedures. Lassiter, Geers, Munhall, Handley, and Beers (2001) proposed a third stage of research that seeks to identify bias mediators. Meeting the criteria of these three stages of research within jury simulations should allow “empirical research
on jury functioning (to)...gradually replace the reliance on anecdotes and speculation in the legal policy domain (MacCoun, 1989, p. 1049).

Confession Research

Observational research, including 122 contemporaneous confessions in a California police department and 60 taped confessions from two other comparable departments, discovered two variables that significantly contribute to obtaining a confession (Leo, 1996). The likelihood of a suspect confessing increased with the interrogation duration and the number of interrogation tactics used. Two variables contributed to the interrogation duration: the severity of the crime and the gender of the victim—interrogation duration was greater if the victim was female and the crime was more severe. The number of interrogation tactics used in an interrogation increased with the seriousness of the crime. In addition to the seriousness of the crime, more interrogation tactics were used when there was little evidence against a suspect.

Interrogation Tactics

Though the precise definition of coercion differs slightly among jurisdictions, both explicit threats and promises of leniency are considered to be coercive tactics (Kassin, 1997; Lassiter et al., 2002; Leo, 1996; MacCoun, 1989). Kassin and Wrightsman (1980, 1981) presented participants with transcripts of a criminal case in which the suspect had made a confession in response to a threat of punishment, a promise of leniency, spontaneously, or no confession was made. A confession elicited with a threat was properly judged to be coercive and was not seen to bias mock jurors’ conviction rates, which were similar to rates based on the no-confession transcript. However, though mock jurors accurately judged a confession elicited by a promise of leniency as being coerced, it continued to influence judgments of guilt to the same degree as a spontaneous confession. Kassin and Wrightsman (1980, 1981) labeled this pattern of
The strategy of verbally reducing the magnitude of a crime, blaming the victim, and implying promises of judicial leniency has been labeled minimization (Kassin, 1997). Confessions elicited using this strategy affect mock juror verdicts even when jurors are explicitly instructed to disregard coerced confessions (Kassin & Wrightsman, 1980, 1981; Kassin & McNall, 1991). Recently, the Massachusetts Supreme Court issued the following statement concerning these tactics, “We do not suggest that an officer's use of the standard interrogation tactic of "minimization," by itself, compels the conclusion that a confession is involuntary (NACDL, 2004).”

Interrogation tactics that are more confrontational in nature, including lying about evidence, threats of harsher sentencing, and intimidation—termed maximization (Kassin 1997)—are also perceived as coercive but are less likely to bias jurors’ verdicts of guilt (Kassin & Wrightsman, 1980, 1981; Kassin, 1997). This finding becomes all the more serious when coupled with Leo’s (1996) observational research demonstrating that interrogators employ minimization strategies most often and that such strategies were more successful at eliciting a confession.

The use of maximization leads participants observing the interrogation to anticipate harsher sentencing, comparable to an explicit threat. Minimization tactics, in comparison, have been shown to lead participants to assume that the suspect will be treated more leniently. Minimization tactics produce sentencing expectations similar to explicit promises of leniency (Kassin & McNall, 1991). Yet, explicit threats and promises are considered to be coercive, whereas maximization and minimization tactics that elicit a confession are admissible as evidence (Kassin & McNall, 1991; Kassin, 1997).
Kassin and Sukel (1997) demonstrated that a confession given under highly coercive conditions still influenced mock juror’s verdicts. Participants were given one of three transcripts to read: a high-pressure confession, a low-pressure confession, and a no-confession transcript. In the high-pressure condition, the suspect was reported to have been handcuffed, verbally abused, and interrogated while the detective held a firearm. Though participants accurately judged the confession to be coerced, it still led to higher ratings of guilt than was found in the no-confession condition.

Judicial instruction has not been shown to be particularly effective at getting mock jurors to discount coerced confessions (Kassin & Wrightsman, 1981, Study 2). Of three types of judicial instruction examined by Kassin and Wrightsman, only stressing both the unreliability and unfairness of basing judgments on a coerced confession decreased voluntariness judgments. Emphasizing either the unreliability or the unfairness alone was not enough to alter judgments. Additionally, ratings of guilt remained unaffected by judicial instruction.

Together these findings strongly suggest jurors may be unable to accurately identify a voluntary from an involuntary confession (Kassin, 1997). Even when a confession has been accurately judged to be coerced, evidence suggests that it still may impact decisions of suspect guilt (Kassin & McNall, 1991; Kassin & Sukel, 1997). In addition to interrogation tactics, increasing the salience of the suspect via media presentation format has been found to further bias decisions of judicial players (Lassiter, Geers, Handley, Weiland, & Munhall, 2002).

Illusory Causation

Illusory causation, described as early as 1935 by Koffka, is the tendency for individuals to erroneously attribute causality to objects that capture visual attention or are most prominent in the visual field (McArthur, 1980; Taylor & Fiske, 1978; Lassiter, 2002). For instance, when placed into a dark room, participants attributed an increase in distance between two pinpoints of
light to the light at which they were looking, regardless of whether it was the light that actually moved (Koffka, 1935).

Taylor and Fiske (1975) demonstrated illusory causation affects more complex interpersonal attributions of causality and control. After determining participant’s visual focus by manipulating seating arrangements, Taylor and Fiske had participants in groups of six watch two actors during a casual conversation. The two participants whose vision was trained on the front of Actor A found this actor to be much more in control of the conversation in terms of setting the conversational tone, determining the type of information exchanged, and even influencing the conversation partner’s behavior. Two other participants sitting behind Actor A, their line of sight directed on Actor B, perceived Actor B to have significantly more control over the conversation. The remaining two participants, sitting to either side of the actors, perceived both actors as having similar influence during the five-minute conversation. Thus, participants attributed causality to the actor most prominent in their visual field.

Directing visual attention with explicit instruction has also successfully produced increased attributions of causality. Taylor and Fiske (1975, Study 2; Fiske, Kenny, & Taylor, 1982, Study 1) directed participants to look at one of two actors in a videotaped conversation. These instructions replicated illusory causation findings, suggesting that increased visual attention leads to increased attributions of causality. However, neither of these studies were able to eliminate the possibility that increased causality was a demand characteristic rather than created by differential attention to the actor to whom causality was attributed.

Briggs and Lassiter (1994) demonstrated biased attributions of causality endure even when the amount of participation in a conversation is manipulated by creating a scenario in which one actor contributes and directs the conversation to a significantly greater degree. A videotape of two actors engaging in a “getting-acquainted” conversation was shown to
participants in one of three formats: the more influential actor (who asked 7 of 10 questions) was made salient, the less influential actor was made salient, or profiles of both actors were shown. Participants also completed the shortened version of the Need for Cognition Scale (Cacioppo, Petty & Kao, 1984); this scale measures the degree to which an individual is likely to engage in elaborative thought on provided information (see Cacioppo, Petty, Feinstein, & Jarvis, 1996 for review). Participants, including those high in need for cognition who were likely to put forth more cognitive effort to process the video, were still affected by the illusory causation bias (Briggs & Lassiter, 1994, Study 1). A second study, increasing the influence of the most influential actor by asking 8 out of the 10 questions, replicated these findings (Briggs & Lassiter, 1994, Study 2).

Illusory causation has been repeatedly demonstrated to be a pervasive and persistent tendency for individuals to perceive the most salient actor as more causally influential (see McArthur, 1981, and Taylor & Fiske, 1978, for review). Illusory causation effects have been shown to be highly generalizable to both matters of personal import as well as trivial judgments, leading some to suggest that the bias may be automatic as long as visual attention is paid to the presented stimulus (Taylor, Crocker, Fiske, Sprinzen, & Winkler, 1979).

Research on the Camera Perspective Bias

Theoretically driven by illusory causation findings (Briggs & Lassiter, 1994; Taylor & Fiske, 1975) and the ever increasing tendency for police interrogations to be videotaped (Gellers, 1992), a series of studies has sought to discover how camera perspective influences perceptions of a suspect within a confession (Lassiter, 2002; Lassiter, Geers, et al., 2002). The illusory causation bias was hypothesized to lead those viewing a videotaped confession focused primarily on the suspect to make more causal attributions about the suspect (Lassiter & Irvine, 1986). Specifically, as the salience of the suspect in the video increased, it was believed that any
confession elicited within the interrogation would be judged to more voluntary (Lassiter et al., 2006).

Research on the camera perspective bias has proceeded in three stages (Lassiter, 2002). The first two stages, as outlined by Diamond (1997), identify a problematic procedure and then progress to methodology considered more representative of legal procedures. The third stage of research, proposed by Lassiter and colleagues (2001), has sought to identify mediators of the underlying bias.

*Stage 1*

The first stage of experiments utilized simulated interrogations in nine different studies. This stage of research explored the effects of camera perspective on mock jurors’ perceptions of voluntariness, sentence severity, and likelihood of guilt, as well as the robustness of the phenomenon (Lassiter, 2002; Lassiter, Geers, et al., 2001).

A 2-min simulated police interrogation concerning the crime shoplifting was simultaneously filmed from three different camera angles and shown to participants to determine the effect of camera perspective on perceived coercion (Lassiter & Irvine, 1986). The suspect-focus camera perspective allowed participants to see the front of the suspect and a limited portion of the back of the detective; the format typically presented to judges and jurors. The detective-focus format was filmed with the camera trained on the front of the detective, allowing viewers to see only the back of the suspect’s head and shoulders. An equal-focus camera perspective allowed participants to see profiles of both detective and suspect. After watching one of these three formats, participants rated the level of coercion used to elicit the confession. Additionally, participants made either dispositional or situational attributions about the suspect’s behavior.
Within the Lassiter and Irvine study (1986), suspect-focus participants perceived the lowest levels of coercion and ascribed significantly more dispositional attributions to the suspect. Participants presented with the other camera formats ascribed the suspect’s behavior to more situational causes. The detective-focus participants judged the confession to be the most coerced. Equal-focus participants’ judgments of coercion fell between these two groups.

Lassiter, Slaw, Briggs, and Scanlan (1992) performed an extension of the original Lassiter and Irvine (1986) study, demonstrating that the camera perspective bias occurs across three other types of crime (burglary, rape and drug trafficking). This study also investigated how camera perspective affected voluntariness ratings as well as the effect of voluntariness ratings on perceived guilt, as instances of these two judgments diverging have been reported (Kassin & Wrightman, 1980, 1981; Lassiter et al., 1992). Additionally, preliminary attempts to discover individual differences in susceptibility to the camera perspective bias were made by incorporating the shortened form of the Need for Cognition Scale (Cacioppo et al., 1984); however, individual differences in elaborative thought did not eliminate the effect of camera perspective (Lassiter et al., 1992).

After being instructed to assume the role of jurors, participants read a brief definition of coercion before being presented with one of three simulated interrogations either in video (both suspect-focus and equal-focus camera formats were employed), in audio, or in transcript form. Scrutiny of participants’ continuous-scale ratings of voluntariness produced the same pattern uncovered in the original study between the two camera perspectives. When exposed to the suspect-focus video, participants rated the confession as more voluntary than participants who had viewed the equal-focus format. No differences were found between traditional media formats (audio and transcript) and the equal-focus video format. No direct effects of confession-
presentation format were found for likelihood of guilt judgments; however, voluntariness judgments were found to be significantly related to guilt judgments (Lassiter et al., 1992).

In an attempt to eliminate the camera perspective bias, four studies were conducted (Lassiter, Beers, Geers, Handley, Munhall, & Weiland, 2002). These four studies were also designed to address the possibility of a mediating relationship between voluntariness judgments and likelihood of guilt judgments. Additionally, the impact of voluntariness and likelihood of guilt judgments on recommended sentencing severity was explored.

The first study found that even when mock jurors were allowed to deliberate on the voluntariness of the confession before making individual judgments they were still affected by the camera perspective bias (Lassiter, Beers, et al., 2002, Study 1). Providing specific forewarning about the camera perspective bias, as well as providing transcripts of witness testimony for both the prosecution and the defense, did not allow participants to adequately correct for the camera bias (Lassiter, Beers, et al., 2002, Study 2). Manipulating the amount of attention paid to the interrogation by having participants press a button to designate important information in the interrogation, still produced biased judgments of voluntariness and likelihood of the suspect’s guilt (Lassiter, Beers, et al., 2002, Study 3). Finally, a lengthier, more realistic interrogation based on a real murder interrogation transcript, considered by experts to be an example of a coerced confession, again led participants to make biased judgments when exposed to the suspect-focus camera perspective (Lassiter, Beers, et al., 2002, Study 4). Within this fourth study, camera perspective was found to bias voluntariness judgments, as well as judgments of guilt and recommended severity of sentencing.

Across all four studies, a significant effect of camera perspective emerged in the same linear pattern discovered in previous research (Lassiter, Beers, et al., 2002). Participants viewing the suspect-focus videos had higher perceptions of confession voluntariness, viewed the suspect
as more likely to be guilty, and recommended stricter sentencing than participants viewing an equal-focus version of the interrogation. Again, when viewing an equal-focus video the judgments were similar to those obtained from audio and transcript conditions. Participants in the detective-focus condition had the lowest ratings of confession voluntariness, viewed the suspect as less likely to be guilty, and recommended the most lenient sentencing.

In all four studies, voluntariness judgments were found to mediate likelihood of guilt judgments, demonstrating that camera perspective had a direct effect on voluntariness judgments and an indirect effect on likelihood of guilt judgments (Lassiter, Beers, et al., 2002). Further, camera perspective both directly and indirectly affected, through voluntariness and likelihood of guilt judgments, the severity of sentencing recommendations (Lassiter, Beers, et al., 2002, Study 4). Thus, the effect of camera perspective pervades multiple mock-juror decisions both directly and indirectly.

Another failed attempt to eliminate the camera perspective bias dichotomized individuals on the dimension of attributional complexity (Lassiter, Munhall, Berger, Weiland, Handley, & Geers, 2005). Individuals categorized as high in attributional complexity have the ability to reason thoroughly and to identify complex causal relationships. Individual differences in attributional complexity have been demonstrated to influence judgments, decisions, and the ability to spontaneously generate complex explanations for social behavior. Though similar to need for cognition, attributional complexity accounts for distinct variance.

Both high and low attributionally complex participants were found to be susceptible to the camera perspective bias. Participants in the suspect-focus condition produced significantly higher judgments of voluntariness than participants in the equal-focus condition. Thus, high attributional complexity failed to moderate the effect of camera perspective (Lassiter et al., 2005).
Another attempt to eliminate the camera perspective bias manipulated perceptions of personal accountability (Lassiter, Munhall, Geers, Weiland, & Handley, 2001). Under the right circumstances, being held accountable for judgments increases the cognitive effort individuals will expend processing relevant information, which can lead to increased resistance to judgmental biases (Lerner & Tetlock, 1999; Tetlock, Lerner, & Boettger, 1996). Likewise, increasing accountability could increase the realism of mock jurors’ experiences, producing behavior more closely resembling jurors in an actual criminal case. To strengthen the realism of the accountability manipulation, participants watched a video in which a retired local judge delivered instructions on aspects of the law. Participants in the high-accountability condition were led to believe that they would meet with the judge and provide reasons for their verdict judgments. High-accountability participants individually scheduled a meeting time with the judge, for which they believed they would be monetarily compensated, before continuing with the experiment. Conversely, participants in the no-accountability condition were told all responses would be kept confidential. All participants then viewed a 30-min simulated videotaped confession created from the transcript of the Bradley Page interrogation in either suspect-focus or equal-focus format.

The Bradley Page trial is considered to be a text-book example of a coerced false confession (Lassiter, 2002; Lassiter, Beers, et al., 2002; Pratkanis & Aronson, 1991). In his interrogation, Bradley Page, a young male suspected of murdering his girlfriend, cooperated with interrogators and imagined a scenario in which he had killed his girlfriend. When later informed that this scenario was being considered a confession, Page immediately recanted.

Even though high-accountability participants reported expending marginally more effort, used significantly more information to reach their decision, and showed significantly more complex integration of information, an effect of camera perspective was still found. The same
pattern was seen for both continuous and dichotomous judgments of voluntariness. The camera perspective bias was not mediated by thought complexity—measured by open-ended responses about information in the interrogation that participants considered to be important. In fact, participants in the equal-focus condition were found to have more complex thought ratings overall, suggesting the camera perspective bias is a robust perceptual-based bias in processing not eliminated by careful consideration stemming from increased accountability (Lassiter, Munhall, Geers, Weiland, & Handley, 2001).

In a related study, both suspect-focus and equal-focus camera formats of the Bradley Page confession were employed. Participants then completed a voluntariness and credibility index to determine whether participants exposed to the suspect-focus format perceived the suspect’s confession as more credible (Lassiter, Munhall, Geers, Handley, & Weiland, 2001). Voluntariness was again found to be influenced by the camera perspective in the same manner as in past studies. However, credibility judgments did not vary as a function of camera perspective, eliminating the possibility that the bias is an artifact of increased perceptions of credibility.

The camera perspective bias has been seen to occur over five types of crime (shoplifting, burglary, rape, drug trafficking, and homicide) using both male and female suspects (Lassiter & Irvine, 1986; Lassiter et al., 1992). High levels of elaborative thought, as measured by the Need for Cognition Scale (Cacioppo & Petty, 1982; Cacioppo et al., 1984), failed to eliminate the camera perspective bias (Lassiter et al., 1992). Likewise, neither increased accountability nor attributional complexity moderated the bias (Lassiter et al., 2005; Lassiter, Munhall, Geers, Weiland, & Handley, 2001). Possible alternative explanations in which the camera perspective bias is an artifact of inattention or increased suspect credibility have also been falsified (Lassiter, Munhall, Geers, Handle, & Weiland, 2001; Lassiter, Geers, Handley, et al., 2002 Study 3). However, in order for research to be considered by the legal system, more representative
methods must be implemented, such as videotaped trial simulations and mock jurors from more heterogeneously diverse backgrounds (Bornstein, 1999; Diamond, 1997).

*Stage 2*

Stage One studies were short and methodologically simple, primarily using continuous measures (Lassiter, Geers, Munhall, Handley, & Beers, 2001). Stage Two experiments, requiring 3 to 5 hours of participant involvement, utilized realistic videotaped simulations of actual trials. Participants were presented with videotapes of direct testimony, several witness cross-examinations, physical evidence presentations, both prosecution and defense statements, and judicial rulings and instruction concerning aspects of the law and legal practices (Lassiter, Geers, Handley, et al., 2002).

Community members from southeastern Ohio either volunteered or were monetarily compensated for their participation (Lassiter, Geers, Munhall, Handley, & Weiland, 2001). Participants viewed an interrogation constructed from a transcript of an actual murder interrogation. The partial recreation of the interrogation was based off the Peter Reilly case and was filmed simultaneously from three camera perspectives.

Peter Reilly, an 18 year old boy accused of murdering his mother, was questioned for 16 hours by multiple officers before becoming convinced of his own guilt. Both minimization and maximization tactics were used, including falsely telling the boy that he had failed a polygraph and that police had discovered evidence connecting him to the crime. Over the course of his interrogation, Reilly became convinced of his guilt and eventually signed a statement confessing to the murder of his mother. Two years after being imprisoned, Reilly’s conviction was appealed and charges were dropped after it was determined that the prosecution had withheld exonerating evidence (Lassiter, Geers, Munhall, Handley, & Beers, 2001; Lassiter, Munhall, Geers, Handley, & Weiland, 2001).
In addition to viewing the 40-min interrogation, participants were presented with video testimony of both prosecution and defense witnesses, judicial rulings, introduction of evidence, and opening and closing arguments for the prosecution and the defense. All stimuli, with the exception of the interrogation, were filmed in a real courtroom from the perspective of the jury box. In its entirety, the trial simulation lasted 2.5 h. After viewing the simulation, half of the participants watched the confession a second time to determine whether viewing the interrogation after all evidence had been presented would affect participants’ judgments. Participants then rated the confession’s voluntariness and the suspect’s guilt on both continuous and dichotomous scales.

Though the dichotomous measures were not significantly affected by camera perspective, the continuous scale ratings revealed the same linear trend discovered in previous research. The more salient Reilly was made in the interrogation, the more voluntary his confession was judged to be and the more likely he was judged to be guilty. Again, camera perspective was seen to have a direct effect on voluntariness judgments and an indirect effect through voluntariness to likelihood of guilt ratings. Judgments did not seem to be affected by viewing the confession a second time, but the authors suggested that a larger sample size be used to decisively make this determination (Lassiter, Geers, Munhall, Handley, & Beers, 2001).

Another realistic trial simulation was developed and shown to community members, monetarily compensated for their time, from rural, suburban, and urban locations in Ohio. Ohio University students also participated and their responses were not found to vary from those of community members. Few mock juror studies have found differences between students and more heterogeneous populations; of the 26 studies examined by Bornstein (1999), only 5 found differences between community members and university students—students having been found to be somewhat more lenient.
Lassiter, Geers, Handley, Weiland, and Munhall (2002, Study 1) prepared a professionally filmed trial simulation, similar to the Peter Reilly simulation, of the Bradley Page case. The Bradley Page trial was used because it, like the Peter Reilly case, was considered to be a text-book example of a coerced false confession (Lassiter, 2002; Lassiter, Geers, Handley et al., 2002; Pratkanis & Aronson, 1991). Bradley Page, a suspect in the murder of his girlfriend, was asked by police to imagine a scenario in which he had committed this murder. Upon discovering police had submitted the scenario as a confession, Page recanted his statement, professing it was completely fictitious. In fact, forensic evidence existed in opposition to many of the events contained in Page’s “reconstruction.” It is important to note that these discrepancies were captured in the trial simulation (Lassiter, Geers, Handley, et al., 2002).

The trial simulation was filmed from the jury box of an actual courtroom. Judicial instruction was manipulated to determine if it could eliminate the camera perspective bias. Participants were placed in one of three instruction groups. One set of judicial instructions stressed to jurors the importance of considering reliability and fairness in their assessment of the confession—instructions previously found to be moderately effective at getting mock jurors to recognize coerced confessions (Kassin & Wrightsman, 1981)—while another set explicitly instructed participants about avoiding the camera perspective bias. Participants within the third condition received no additional instructions. Judicial instructions were given to jurors via video, manipulating time of delivery (directly before the interrogation presentation or just before rendering a verdict), and were delivered by a retired local judge (Lassiter, Geers, Handley, et al., 2002, Study 1). The trial simulation presented to participants lasted nearly 4 h. The reenactment of Bradley Page’s confession was shown to participants in either the suspect-focus or the equal-focus format.
After viewing the trial simulation, participants provided dichotomous judgments of voluntariness and guilt. The use of dichotomous responses increases the realism of jury simulations (Bornstein, 1999). Participants then indicated their confidence concerning these decisions on a 9-point scale (Lassiter, Geers, Handley, et al., 2002, Study 1).

The camera perspective bias persisted across all judicial instruction conditions and order was not seen to have an effect. Participants in the suspect-focus condition gave significantly more guilty verdicts and were more apt to find Page’s confession to be given voluntarily. The effect of camera perspective was so strong that the conviction rate doubled from .15 with the equal-focus camera perspective to .31 with the suspect-focus camera perspective. A strong association was found between voluntariness judgments and judgments of guilt. Further, confidence across all participants was reported to be high, demonstrating that the camera perspective bias persists even in highly realistic trial simulations, is not eliminated by judicial instruction, and is not moderated by high levels of judgment confidence (Lassiter, Geers, Handley, Weiland, & Munahll, 2002, Study 1).

Lassiter, Geers, Handley, Weiland, and Munhall (2002, Study 2) presented another sample of community members with either the equal-focus or the detective-focus version of Page’s confession to determine the effects of the detective-focus format in a more realistic trial simulation. A few modifications were made to the trial simulation, based on questions and concerns voiced in the previous study, such as specifying the year in which the case took place (to explain why DNA evidence was not included in the trial), clarifying the definition of voluntary and involuntary manslaughter, and specifying that a judge had allowed the confession to be admitted as evidence. Judicial instruction was given in only one form, as it had been shown to have no moderating effects on the camera perspective bias.
After watching the trial simulation, participants were allowed to deliberate in groups for up to 45 min before giving their verdicts and voluntariness judgments individually. Group deliberation failed to attenuate the effect of camera perspective. As with previous research (Lassiter & Irvine, 1986; Lassiter et al., 1992), those participants in the detective-focus condition found the confession to be more coerced and also judged the suspect to be less guilty. The simple change from equal-focus to detective-focus format dropped the conviction rate by 35%, suggesting that by placing themselves in the suspect’s position mock-jurors were better able to detect the coercive influences exerted by the interrogator (Lassiter, Geers, Handley, et al., 2002).

This line of research has progressed beyond simulated suspect confessions to the use of real police interrogations. Participants either listened to the audio, read a transcript, or watched one of two real police interrogations. Because both interrogations were actual suspect confessions, the type and severity of crime as well as the sex of the suspect were not controlled. The first interrogation was a suspect-focus video of a man accused of sexual assault. The second interrogation was an equal-focus video of a New Zealand woman who was suspected of starting a fire which caused her daughter’s death. Even though considerable differences existed between the two confessions, results replicated previous findings. No significant differences were found between ratings of the more traditional media presentations and the equal-focus video format. However, a significant difference was uncovered between the suspect-focus video format and traditional media formats. Those participants in the suspect-focus video condition had elevated ratings of confession voluntariness, lower levels of perceived coercion, and viewed the suspect as having more control over the interrogation (Ware, Irvin, Lassiter, Ratcliff, & Brickner, 2005).

To further extend the external validity of this line of research, Lassiter, Diamond, Schmidt, and Elek (in press) presented practicing judges and police interrogators with a simulated sexual assault interrogation. The interrogation, shown in one of three formats (a suspect, detective, or...
equal-focus video format), produced the same linear trend reported in previous studies. Therefore, the camera perspective bias has been demonstrated to affect the decisions of university students, community members, police, and judges; all of whom find a confession to be more voluntary when the camera perspective has been focused on the suspect.

Taken together, these studies demonstrate the robustness and external validity of the camera perspective bias. Stage Two studies provided realistic trial simulations based on actual murder interrogations resulting in coerced confessions. Heterogeneous mock jurors were exposed to extensive trial stimuli, judicial instruction, and in one instance were given the opportunity to deliberate. Actual felony interrogations were presented to mock jurors. Actual judges and police interrogators were presented with simulated confessions. However, the camera perspective bias has failed to be attenuated and the same linear trend has repeatedly emerged.

Stage 3

Current research has progressed to Stage Three, attempting to determine which of two possible mechanisms mediate illusory causation—memory or initial registration of information (Lassiter, 2002; Lassiter et al., 2002a). It has been suggested that the quantity of information is greater for salient targets and that this overrepresentation of the salient target in memory may mediate illusory causation (Taylor & Fiske, 1975). However, a number of studies report conflicting results concerning the amount of information recalled from salient stimuli (Taylor & Fiske, 1978).

Instead of finding supporting data for the overrepresentation of information in memory, Fiske and colleagues (1982) found evidence leading them to posit that observers construct beliefs—or schemas—that a salient target is more causal and then attend to and search for supporting information (McArthur, 1980, 1981). Schema-driven inferences were hypothesized to result from observers’ general knowledge of social interaction rules, leading them to search for
information relevant to causality (Fiske, Kenny, & Taylor, 1982). This expectation-driven information search is suggested to lead observers to search for information supporting the existing schema that the most salient actor is more causal.

When exploring this possible mechanism, Fiske and colleagues (1978) had participants complete questionnaires rating actors’ causality, as well as perceptions of dispositional and situational information. Then each participant indicated the extent to which each of the questionnaire items contributed to their causality ratings. Increased information, tested using recall, about salient stimuli was not demonstrated to be a plausible mediator of illusory causation. Schema-relevant recall enhancement for salient information (only that information considered by the observer to be relevant to causality) was supported by mediational analyses (Fiske et al., 1982).

A contrasting assumption proposes that the initial registration of information from the environment is a critical determinant of illusory causation (Newtson, Rindner, Miller, & LaCross, 1978). Newtson and colleagues (1978) demonstrated that participants are forced to process visual information more finely when situational milestones were not visible. Participants in this study segmented a fairly mundane action—the collating and stacking of questionnaires. Participants were either allowed to see the growing stack of papers or a box obstructed their view. Participants unable to track the progress of the task because of the position of the box failed to break the ongoing behavior into larger chunks, supporting the possibility that illusory causation is mediated by visual attention. That is, the information available in the environment appears to influence the initial registration or perceptual organization of such information, and this process may then directly influence judgments related to causal attributions.

Four studies conducted by Lassiter, Geers, Munhall, Ploutz-Snyder, and Breitenbecher (2002) strongly suggest that illusory causation is a perception-based processing error instead of a
memory-based bias. Using hand held-tally registers, participants were asked to unitize (break into meaningful events) a “getting-acquainted conversation” filmed from three different camera perspectives. Participants were instructed to press a button whenever they perceived a meaningful or important action to have occurred in the video. Study 1 revealed that camera perspective caused participants to unitize information differently, which in turn led them to different conclusions about interactants’ causality.

Using a simulated confession video from a previous study (Lassiter et al., 1992), participants in Study 2 either unitized or simply watched the suspect-focus or the detective-focus format (Lassiter, Geers, Munhall, et al., 2002, Study 2). The act of unitizing was not found to alter participants’ judgments; thereby showing that the unitizing task was non-reactive. Participants exposed to the suspect-focus format perceived the confession as more voluntary. Also, unitization was found to mediate the influence of the camera perspective on voluntariness judgments, reinforcing the hypothesis that illusory causation is influenced by initial registration of information.

A third study again used a “getting acquainted video,” omitting the equal-focus perspective. Participants either unitized the stimulus into meaningful actions or simply watched the video (Lassiter, Geers, Munhall, et al., 2002, Study 3). Participants were found to have better recall for the most salient target. Again, a significant effect of camera perspective was found. However, when segmenting and recall were partialled out, the camera perspective became non-significant. This finding demonstrated that the effect of camera perspective indirectly affects causality judgments, indicating that initial registration—represented by unitization—and recall account for variance in causality judgments.

A fourth study used two different “getting acquainted conversations” and placed half the participants under cognitive load. Camera perspective was significant across both stimuli. Recall,
but not the rate of segmentation or causality judgments, was affected by cognitive load. Medialional analyses determined that under cognitive load, segmentation rate, but not recall, mediated the effect of the camera perspective on causality judgments; suggesting that illusory causation is perceptually based and not the product of memory (Lassiter, Geers, Munhall, et al., 2002).

If illusory causation occurs during initial registration, this would help to explain why increased accountability, judicial instruction, and high need for cognition have failed to moderate the camera perspective bias. If the salience of a figure biases information processing during initial registration, further cognition would be unable to compensate for the initial bias (Lassiter, Munhall, Geers, Weiland, & Handley, 2001; Lassiter, Beers, Geers, Handley, Munhall, & Weiland, 2002). Due to the failure of experimental manipulation to alleviate the effect of camera perspective, it has been suggested that this bias may be a form of mental contamination (Lassiter, Beers, Geers, et al., 2002). Mental contamination is considered to be an unwelcome and unconscious bias in information processing adversely affecting judgment, behavior, and emotion (Wilson & Brekke, 1994).

To further demonstrate that illusory causation is a perceptually based phenomenon, Ratcliff, Lassiter, Schmidt, and Snyder (in press) attempted to interrupt the perceptual registration and thereby remove the illusory causation bias from participants’ judgments. While watching one of three camera formats of a simulated rape interrogation, participants were asked to either remember a eight-digit number or to keep a mental image of the (ostensible) victim in mind. Participants under cognitive load, those engaged in the digit-rehearsal task, were still affected by the camera perspective bias on both dichotomous and continuous measures of voluntariness, supporting past research. However, participants attempting to hold a mental image in mind during the video were unaffected by the camera perspective. Separate research suggests
that creating interference within a perceptual channel (such as holding in mind a mental image) can disrupt the registration of information within that channel (Segal and Fusella, 1970). This perceptually based manipulation has been the first to successfully eliminate the camera perspective bias, and further supports the possibility that illusory causation is an error related to initial information processing.

Eye Tracking

One of the goals of the current manuscript is to investigate the visual-channel competition hypothesis explored by Ratcliff and colleagues (in press). By utilizing eye tracking equipment to record the direction and duration of participants’ visual attention, it would be possible to explore what effect the mental imagery task has on visual attention while engaged in viewing a videotaped police interrogation.

Measures of eye gaze are employed in psychological studies as a measure of visual attention (Isaacowitz, 2005; Mogg, Millar, & Bradley, 2000; Pinel, 1990; Recarte & Nunes, 2000). Eye movement is accomplished by three antagonistic pairs of muscles, controlled by the third, fourth, and sixth cranial nerves, working together to achieve horizontal, vertical, and circular eye movement (Stern, Ray, & Quigley, 2001). Researchers can use a number of methods to record eye movement.

Early studies simply employed a video camera to record the direction of eye movements during tasks (Gur, 1975; Gur, Gur, & Harris, 1975; Kinsbourne, 1972). Later on, polygraphs were developed to measure electric potential changes to record the horizontal and vertical movements of the eye as well as eye blinks; this method has been labeled electrooculography (Andreassi, 2000; Stern, Ray, & Davis, 1980; Stern et al., 2001). Another method of recording visual attention is corneal reflection (Stern et al., 1980). This method reflects infrared light onto the cornea, which reflects the light, due to the convex lens, onto the surface of the presented
visual field (Recarte & Nunes, 2000; Stern et al., 1980). TV scanning methods take advantage of the space between the iris and the sclera, using photodetectors, to infer the position of the eye (Stern et al., 1980). Electrooculography was used in the current research.

Electrooculography (EOG) records eye movements and eye-gaze fixations by recording electrical potential differences as the eyes move (Andreassi, 2000; Stern et al., 1980; Stern et al., 2001). This potential difference originates between the front and back of the eyeball. The front of the eye holds a positive charge and the back of the eye is negatively charged (Stern et al., 1980; Stern et al., 2001). As the eye moves, the electrical potential change can be measured using electrodes placed on adjacent tissue (Andreassi, 2000). The typical accuracy of this recording method is ±1.5—2.0 degrees (Stern et al., 1980). This recording method

The use of physiological measures has recently become very popular in other areas of psychological research. Eye-tracking equipment has been used to demonstrate that optimistic individuals avoid looking directly at emotionally arousing negative stimuli (Isaacowitz, 2005), where attention is directed within text and pictures in advertisements (Rayner, Rotello, Stewart, Keir, & Duffy, 2001), and differential eye fixations of depressed and anxious individuals on emotionally expressive faces (Mogg, Millar, & Bradley, 2000). Whereas eye tracking was previously limited by crude tracking equipment often consisting of a mere video camera, today’s technology allows for nearly continuous monitoring of eye gaze. Different eye-tracking equipment can even measure gaze direction and variability of eye gaze while the participant is driving (Recarte & Nunes, 2000). These measures prove to be directly observable and ecologically valid, allowing for analysis of both eye-gaze shifts and gaze duration (Andreassi, 2000; Mogg et al., 2000; Pinel, 1990; Recarte & Nunes, 2000).

Eye-gaze measurement is the recording of fixations, when eye gaze is held relatively still (Stern et al., 1980). Saccades are eye movements from one fixation point to another (Henderson
Saccadic eye movements occur very quickly and virtually no pattern information is taken in during these movements (Andreassi, 2000; Henderson & Ferreira, 2004). Therefore, only when a fixation is occurring is useful information being registered. Approximately ten percent of all potential incoming visual information is unavailable due to the occurrence of rapid saccadic movements (Stern et al., 2001). Based on the structure of the cornea, lens and retina, the highest quality visual information is obtained from the fovea region, which is the region composed of the fixation point and the immediate surrounding area.

Eye fixations are not randomly distributed within a scene. Upon presentation of a scene, a single eye fixation provides enough orienting information to the viewer that a visual search for a particular target can then commence (Henderson & Ferreira, 2004). A viewer will tend to have fixation clusters around an informative portion of a scene, which often includes objects relevant to scene identification and the faces of targets within a scene (Gullberg, 2003). The duration of these fixations allow the amount of visual attention paid to a specific area or target within a scene to be determined (Gullberg, 2003; Henderson & Ferreira, 2004; Isaacowitz, 2005).

Findings from a number of studies on illusory causation point to visual attention as the impetus of biased perceptions and judgments (Lassiter, Geers, Munhall, et al., 2002; Taylor & Fiske, 1975; Ratcliff et al., in press). Yet, without a measure of visual attention, memory-based explanations cannot be ruled out definitely. Through the use of EOG, the relationship between duration of eye gaze fixations and observers’ judgments can be directly investigated.

**Hemispheric Dominance**

Ratcliff and colleagues (in press) further indicated the perceptual basis of illusory causation by demonstrating that competition in the visual channel eliminated the effect of the camera perspective bias on judgments of voluntariness and guilt. Participants visualizing an image of the victim in their mind while watching a simulated interrogation from one of three
camera formats were unaffected by camera format unlike their counterparts under cognitive load. An alternative explanation for this finding may lie in hemispheric dominance.

Studies conducted to determine hemispheric activation by recording eye gaze have found that eye-gaze direction changes in largely predictable ways depending on the type of information being processed and recalled (Farah, 1989; Gur, 1975; Gur, Gur, & Harris, 1975; Kinsbourne, 1972). The right hemisphere assists functioning of visual-spatial and temporal tasks, whereas the left hemisphere serves language functioning, specifically that related to logic and analytical thought processes (Gur, 1975; Kinsbourne, 1972). Eye gaze moves in the opposite direction of the activated hemisphere, a finding supported in both human and primate studies (Gur, Gur, & Harris, 1975; for review see Posner & Petersen, 1990).

In these initial studies, eye gaze was covertly recorded using a video camera in a dimly lit room with cloth covered walls, to prevent visual distractions (Gur, 1975; Gur, Gur, & Harris, 1975). It was found that as long as the experimenter asking the questions sat behind the participant, right-handed participants tended to move their eyes right for verbal problems and left for spatial problems, in the direction opposite the activated hemisphere; left-handed participants do not seem to be as strongly or as predictably affected by hemispheric activation (Gur, 1975; Gur, Gur, & Harris, 1975; Kinsbourne, 1972). Overall, eye-gaze shifts were largely limited to horizontal rather than vertical saccades (Kinsbourne, 1972).

Spatial problems included visualization as well as identification of spatial relationships (Gur, 1975). Numerical problems were also asked and in all three studies participants’ eye gaze shifted either direction when processing numerical information, suggesting that this type of information is not strongly lateralized—specific to one hemisphere (Gur, 1975; Gur, Gur, & Harris, 1975; Kinsbourne, 1972). The potential for hemispheric activation in both the numeric
and visual-image tasks are relevant to the Ratcliff and colleagues (in press) study, as it provides an alternative explanation for their findings.

Hemispheric lateralization has also been found to occur during affective response tasks (Schwartz, 1986). Emotion-lateralization studies used lateral eye movements as an indicator of hemispheric activation (Schwartz, Davidson, & Maer, 1975). Similar to findings reported by Gur and colleagues (Gur, 1975; Gur et al., 1975) and Kinsbourne (1972), verbal questions led to more right horizontal eye shifts and spatial questions led participants to shift their gaze from right to left (Schwartz et al., 1975).

More recently, evidence has been presented using more sophisticated infrared corneal reflection to demonstrate that individuals engaged in verbal and spatial tasks experience eye-gaze shifts (Recarte & Nunes, 2000). While driving, participants were occupied by either verbal or spatial-imagery tasks. These two tasks produced qualitatively different eye gaze shifts, though specific direction was not reported. These eye-gaze shifts were explained by attention demands within similar types of resources (i.e. within the visual channel), congruent with the Ratcliff and colleagues (in press) research. Again, this raises the possibility that the Ratcliff et al. (in press) findings could be the result of visual inattention caused by eye shifts away from the interactants rather than perceptual competition.

If holding a mental image in mind activates the right hemisphere, participants in the Ratcliff and colleagues (in press) study may have been shifting eye gaze to one side or the other, depending on the handedness of participants (cf. Gur, 1975; Kinsbourne, 1972). This could influence participants’ judgments by preventing them from watching the presented interrogation, or could focus eye gaze nearly exclusively on either interrogator or suspect. Though the cognitive load manipulation may also be affected by hemispheric activation, the direction would be unpredictable as participants have been reported to randomly shift eye gaze to either direction
when asked a numeric question (Gur, Gur, & Harris, 1975; Kinsbourne, 1972). Finally, there is a possibility that the mental imagery task could have restricted the visual search patterns necessary for visual-information registration (cf. Recarte & Nunes, 2000).

Eye-Tracking Equipment

The current research employed electrooculography (EOG) to measure differential visual attention to the suspect and detective while viewing simulated videotaped police interrogations. The human eyeball is polarized, with the back of the eye having a negative charge (Andreassi, 2000; Stern, Ray, & Quigley, 2001). EOG requires the use of electrodes placed on tissue near the eye to record the electrical potential changes that occur as the eyes move. EOG records saccadic shifts as the eye is repositioned and the duration of gaze fixation during visual information processing (Andreassi, 2000; Mogg et al., 2000).

Participants watched an ongoing stimulus on a computer monitor to determine what captures visual attention, a technique gaining recent popularity by researchers studying non-verbal perception (Gullberg, 2003). As a video is displayed on the computer screen, EOG records eye gaze fixations on both the horizontal and vertical axis allowing visual attention to be reasonably pinpointed.

OVERVIEW OF STUDY 1

The camera perspective bias has been shown to be a pervasive and robust finding (Lassiter & Geers, 2004). Due to the increasing occurrence of videotaping interrogations, and the influence of camera perspective on judgments of voluntariness and coercion, it is increasingly important that interrogations are not videotaped with the camera exclusively focused on the suspect (Lassiter, Geers, Handley, et al., 2002; Lassiter et al., 2006). With the use of EOG, this study sought to provide further evidence that initial registration of information mediates participants’ judgments of confession voluntariness and guilt.
By manipulating instructions directing participants to pay special attention to either a) the suspect, b) the detective, c) both the detective and the suspect, d) or no instructions, it was hypothesized that the resulting voluntariness and guilt judgments would emerge in the same linear pattern as those produced by altering camera perspective. Explicit instructions directing eye gaze has previously been demonstrated to produce illusory causation biases; however, the lack of eye-tracking data made it impossible to eliminate the possibility that these biases emerged due to demand characteristics rather than actual eye-gaze fixation (Fiske et al., 1982, Study 1; Taylor & Fiske, 1975, Study 2). With the use of EOG, more definitive evidence can be obtained that visual attention drives the illusory causation bias. Through instructions directing eye gaze, which mimic the effect of camera perspective, analyses were performed to demonstrate that visual attention mediates the effect of instructions on participants’ judgments.

Hypotheses

*Hypothesis One: Instructions Directing Gaze Will Influence Voluntariness and Guilt Judgments*

Lassiter and colleagues have repeatedly demonstrated that camera perspective format influences mock jurors’ ratings of voluntariness and guilt (Lassiter & Geers, 2004; Lassiter et al., 2006). Participants viewing a suspect-focus videotaped interrogation rate the confession as more voluntary in comparison to equal-focus and detective-focus camera presentation formats. Based on illusory causation findings, it was postulated that the cause of this discrepancy in perceived voluntariness is the difference in visual attention on the suspect.

In Study 1, participants were shown an equal-focus camera format after receiving one of four types of instructions designed to direct their visual attention. It was hypothesized that a linear trend in voluntariness and guilt judgments would emerge, replicating the illusory causation effect. Thus, participants instructed to look at the suspect are expected to have the highest voluntariness and likelihood of guilt ratings, the no-instruction and equal-instruction
participants’ judgments are expected to be more moderate, and the detective-instruction participants are expected to have the lowest voluntariness and likelihood of guilt judgments.

_Hypothesis Two: Instructions Directing Eye Gaze Will Affect Visual Attention_

Consistent with the logic of the first hypothesis, it was anticipated that participants’ visual attention (measured using EOG) would be similarly affected by instructions to focus on a particular actor or both actors. Thus, participants instructed to pay special attention to the detective in the video should direct their visual attention significantly more toward the detective, or more toward the suspect when instructed to pay special attention to the suspect. Participants instructed to pay attention to both actors in the video should be seen to more equally distribute their visual attention between both the detective and the suspect.

_Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Influence of Instructions on Voluntariness and Guilt Judgments_

Visual attention, as measured by duration of eye-gaze fixation, was hypothesized to mediate the influence of instructions on participants’ judgments of confession voluntariness and the suspect’s likelihood of guilt.

Method

_Participants_

A total of 111 introductory psychology students from Ohio University individually participated in the study for partial course credit. From this total, 33 participants were dropped due to incomplete data caused by equipment and computer problems. This left 78 participants in the analyses.

_Design_

The Study 1 employed three sets of instructions (focus-on-suspect, focus-on-detective, and focus-on-both) to mimic camera perspective in a between-subject design. A fourth condition
was included in which participants receive no additional instruction. The dependent variables included the duration of eye-gaze fixations on each actor and measures of voluntariness and guilt.

**Materials**

**Simulated Confession**

A simulated rape confession previously used to investigate the camera perspective bias (Ratcliff et al., in press) was shown to participants in an equal-focus camera format. The confession video was 213 sec long and presented in full screen format on a 17-in Dell computer monitor.

**Response Questionnaire**

Both continuous and dichotomous measures of voluntariness and guilt were completed by participants (see Appendix A). These measures have been employed in previous camera perspective studies (Ware et al., 2005).

**Eye-Tracking Equipment**

The simulated interrogation was shown to participants on a stimulus computer, which was connected to a BioPac MP100 unit via a signal that ran through a cable connecting it to the computer recording physiological data. The signal was initiated by DirectRT (Jarvis, 2004) at the beginning of the calibration video. The simulated interrogation video began immediately after the presentation of the calibration video.

Throughout the presentation of the stimulus, continuous horizontal and vertical readings were taken from four 4mm shielded well electrodes. Each well electrode was filled with electrode paste before being placed in the appropriate location. Horizontal electrodes were placed near the left and right temple and the horizontal ground was placed on the forehead. Vertical readings were gathered from two electrodes placed above and below the right eye. The
vertical ground was also placed on the forehead. Horizontal and vertical electrodes were placed such that drawing a straight line between each set bisected the participants’ pupil. Ground electrodes were silver-silver chloride, unshielded electrodes, 4mm in diameter, which were filled with electrode paste after they were attached. The electrode locations were cleaned prior to placement with alcohol pads to remove excess oils which impair adhesion of the electrode collars. All electrodes were attached using double-sided adhesive electrode collars.

All physiological data was recorded using Acqknowledge 3.7.1 software. The BioPac MP100 was connected to MEC 100 amplifiers, one for horizontal eye movements and one for vertical eye movements. Eye gaze was sampled at a rate of 1000 per sec. and was collected in millivolts.

**Calibration**

The calibration procedure employed the presentation of a 120-s video of a black dot that moved at measured intervals around the edge of the screen. The dot began in the center of the screen, where it remained for 10 s. It then advanced to the center and top of the screen where it stayed for 5 s. The dot then moved around the outermost perimeter of the screen, starting at the upper right corner and ending in the upper left corner of the screen. It stopped at measured 5 s intervals at each of nine designated points returning to the center of the screen for an additional 30 s. Participants were instructed to look at the dot throughout the calibration procedure, which allowed for recording of the maximum Hz baseline for each location for each participant. These baseline measures are later used to identify location of eye-gaze fixations for each participant when they viewed the video.
Instructions

Unless assigned to the no-instruction condition, participants heard one of the following sets of instructions read by Experimenter A directly before being calibrated to the eye-tracking equipment.

*Focus-on-suspect instructions.* “We ask that you pay special attention to the suspect in the following video clip.”

*Focus-on-detective instructions.* “We ask that you pay special attention to the detective in the following video clip.”

*Focus-on-both instructions.* “We ask that you pay attention to both the detective and the suspect in the following video clip.”

Procedure

Prior to being led to the lab, participants were randomly assigned to one of the four instruction conditions. Participants were escorted to the lab by Experimenter A and given an informed consent statement to complete before preparation and placement of electrodes. Participants were then told that they would be assuming the role of jurors and read a brief definition of coercion. Participants were then read instructions corresponding to their assigned instruction condition.

At this point, Experimenter A left the room and the remainder of the study was completed by Experimenter B. Participants were then instructed to place their head upon a chin rest which reduced movement and kept participants approximately 33 cm from the screen of the stimulus computer to the bridge of their nose. Florescent lights were turned off to reduce electrical interference and a low-wattage lamp was turned on before participants were calibrated to the equipment. The interrogation began directly after calibration. Immediately following the video,
the electrodes were removed and participants were taken to a separate room to complete the questionnaire that contained the primary dependent variables (see Appendix A).

**Results**

*Hypothesis One: Instructions Directing Gaze Will Influence Voluntariness and Guilt Judgments*

It was hypothesized that directing participants’ attention to either one or both actors would affect judgments of voluntariness and guilt. Specifically, participants instructed to pay special attention to the suspect were predicted to have higher judgments of confession voluntariness and suspect guilt than participants instructed to pay attention to both the suspect and detective, and participants instructed to pay attention to the detective were predicted to have the lowest judgments of confession voluntariness and suspect guilt. Thus, the same linear trend in judgments was expected to emerge by employing three instruction conditions instead of manipulating camera perspective formats, which is how this linear trend has been obtained in past studies of the camera perspective bias.

To test for this linear effect of the instructions, conditions were assigned contrast weights with detective instruction assigned -1, suspect instruction assigned 1, and no-instruction and equal-instruction conditions were collapsed and assigned a value of 0. When applied to a voluntariness/coercion question frequently use in videotaped confession studies—“To what degree do you think the detective tricked the suspect into confessing?”—the linear contrast failed to reach significance, $F(1,75) = 2.42, p = .12$. Participants instructed to pay special attention to the suspect found the confession to be more voluntary than participants instructed to pay special attention to the detective. Counter to expectation, however, participants in the no-instruction and equal-instruction conditions did not fall into the predicted linear pattern of voluntariness judgments (see Table 1.1 for means). The linear contrast was also not significant for the other measures of voluntariness used in the current study.
Importantly, the predicted linear pattern was evident in assessments of the suspect’s likelihood of guilt, $F(1, 75) = 6.03, p = .016$. Participants in the suspect-instruction condition had the highest likelihood of guilt ratings, participants in the equal-instruction and the no-instruction conditions had somewhat lower likelihood of guilt ratings, and participants in the detective-instruction condition had the lowest ratings of likelihood of guilt (see Table 1.1 for means). Analysis of the dichotomous guilt measure yielded nonsignificant results.

**Hypothesis Two: Instructions Directing Eye Gaze Will Affect Visual Attention**

Duration of eye gaze was predicted to vary systematically with instructions. The plan was to obtain measures of both the duration of gaze directed at the suspect and the duration of gaze directed at the detective. Unfortunately, the suspect’s movements (several times he moves his head down to the table and up again, as well as makes many arm gestures) made it difficult to ascertain with certainty whether participants were truly attending to the suspect or some other aspect in the video. Because the detective did not make any such erratic movements, coding of duration of gaze on the detective was achieved with a high level of precision. All analyses of gaze duration, therefore, were performed only on total eye-gaze fixations directed at the detective.

As anticipated, participants in the suspect-instruction condition gazed the least at the detective, participants in the equal- and no-instruction conditions gazed more at the detective, and participants in the detective-instruction condition gazed the most at the detective, $F(1,75) = 13.60, p < .001$ (see Table 1.2 for means).

**Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Influence of Instructions on Voluntariness and Guilt Judgments**

It was hypothesized that visual attention would mediate the relationship between instruction condition and judgments. Because only the guilt measure produced the expected
pattern, a mediation analysis was performed only on this measure. Regression analyses were conducted following the guidelines outlined by Baron and Kenny (1986) to determine the magnitude and significance of the standardized beta weights. These coefficients are presented in Figure 1.1. Supporting the predicted influence of visual attention on judgments of likelihood of suspect guilt, the paths from instruction condition to visual attention and from visual attention to guilt judgments were both significant, ($p < .05$, one-tailed). With both instruction condition and visual attention in the model, the direct path from instruction condition to likelihood of guilt judgments was no longer significant ($p = .132$). A Sobel test demonstrated that the decrease in the direct relationship between instruction and guilt judgments is significant when eye gaze is taken into account, $Z = 2.27$, $p < .05$, one-tailed. Overall, this analysis provides evidence that duration of eye gaze on the detective at least partially mediated the effect of the instructions on participants’ judgments of the suspect’s likelihood of guilt.

Discussion

Study 1 found that directing participants' attention with specific instructions to the suspect, detective, or both actors within the interrogation had the predicted linear illusory causation effect on likelihood of guilt judgments made on a continuous 9-point scale. With voluntariness judgments, the predicted difference emerged between the suspect and the detective conditions. However, participants in the equal- and the no-instruction conditions perceived the suspect’s confession as less voluntary than participants within the detective-instruction condition.

Instructions directing gaze also had the predicted effect on visual attention as measured by EOG. Moreover, it was found that the total duration of time participants directed their eye gaze to the detective partly mediated judgments of the suspect’s likelihood of guilt.
This study provides the first direct evidence that visual attention plays an important role in the illusory causation bias. Further, the findings buttress past research on the illusory causation bias that has used instructions to produce biased perceptions of interactants within a videotaped interaction by ruling out a demand-characteristics interpretation. However, the findings within this study are limited by the use of a single camera format and the use of instructions.

**OVERVIEW OF STUDY 2**

Study 2 attempted to provide evidence for the visual basis of illusory causation by incorporating eye tracking with the presentation of two camera formats. This study manipulated the visual salience of the suspect via camera perspective to establish whether increased salience of the suspect leads to increased visual attention. Similar to Study 1, duration of eye-gaze fixation was used to determine whether visual attention mediates participants’ perceptions of confession voluntariness and suspect guilt.

The secondary purpose of this study was to further investigate the possibility of hemisphere activation affecting eye-gaze fixations during mental imagery and cognitive load tasks. Eliminating the camera perspective bias by creating visual channel interference may have an alternative explanation (Ratcliff et al., in press). It is possible that mentally visualizing an image while viewing an interrogation leads participants to shift their eye gaze away from the suspect and detective, providing another explanation for the reported findings (cf. Gur, 1975; Gur, Gur, & Harris, 1975; Kinsbourne, 1972). That is, Taylor et al. (1979) reported that some minimal degree of attention is required to achieve illusory causation—participants “must be paying enough attention for the salient information to actually be salient” (p. 363). Thus, if duration of eye-gaze fixation is not found to differ significantly when holding a mental image, it would enhance the plausibility of the visual-channel-competition hypothesis proposed by Ratcliff and colleagues (in press) by ruling out this competing interpretation.
A third reason to conduct the following study was to investigate the potential influence that each interactant talking may have on duration of eye-gaze fixations. It has been suggested that verbalizations may attract eye gaze even more than the perceptual salience of an interactant (Brooke Hollowell, personal communication, February 2006). Study 2 will examine this possibility.

Additionally, a different videotaped interrogation was used. The interrogation employed in the current study was an excerpt from the Bradley Page case, which is considered to be an exemplar of a coerced confession (Lassiter, 2002; Lassiter, Geers, Handley et al., 2002b; Pratkanis & Aronson, 1991). The video was made from the actual interrogation transcript. Also, the head position of the actors is relatively stable throughout the excerpt, which made interpretation of eye gaze location more straightforward.

Hypotheses

**Hypothesis One: Camera Perspective Will Influence Voluntariness and Guilt Judgments**

It was hypothesized that as the salience of the suspect increased due to camera format, judgments of voluntariness and likelihood of suspect guilt would increase.

**Hypothesis Two: Camera Perspective Will Influence Visual Attention**

It was posited that an increase in duration of eye gaze fixation on the suspect relative to the detective would correspond to an increase in suspect saliency, which was manipulated by which camera perspective format was presented to participants.

**Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Effect of Camera Perspective on Voluntariness and Guilt Judgments**

It was hypothesized that visual attention would mediate the effect of camera perspective on voluntariness and likelihood of guilt judgments.
Method

Participants

A total of 100 Ohio University students individually took part in this study for partial course credit in an introductory psychology course. However, due to computer and equipment complications, 23 participants were dropped from the current sample. An additional 2 participants were removed from analyses because they recognized the actor playing the detective in the video. This left 75 participants in the current study.

Design

The proposed study was a 2 (camera perspective—suspect/detective-focus) by 3 (instructions—imagine/no imagine/cognitive load) between-subjects design. The dependent variables were the same as in Study 1.

Materials

Simulated Confession

A simulated murder interrogation was presented to participants in either the suspect-focus or the detective-focus camera format. This simulation was cut from the Bradley Page trial simulation described earlier. The video was also coded for duration of speech for each interactant, so that both the total amount of time spent looking at the actors and the amount of time looking away from the speaker to the opposite interactant could be measured. The confession was 286 sec in length and presented in full screen format on a 17-in Dell computer monitor.

Eye-Tracking Procedure

All eye-tracking procedures and equipment were the same as those employed in Study 1.
**Victim Photo**

The same photograph used by Ratcliff and colleagues (in press) was shown to all participants prior to being calibrated to the eye tracking equipment. Participants were told that the picture was of the crime victim.

**Response Questionnaires**

Participants completed the same questionnaire used in Study 1.

**Procedure**

Participants were randomly assigned to one of two camera formats (suspect-focus or detective-focus). Within each camera format, participants were assigned to either an image condition, a cognitive-interference condition, or a control condition. Participants were escorted to the lab and given an informed consent statement to complete before being told that they would be assuming the role of jurors. Experimenter A prepped and placed electrodes before reading participants a brief definition of coercion. Experimenter A then left the room and the rest of the experiment was monitored by Experimenter B.

Participants were then properly positioned on the chin rest, approximately 33 cm from the center of the nose to the center of the stimulus computer. The chair in which participants were seated was adjusted for participant height and the fluorescent lights were turned off to reduce electrical interference with the electrodes. A desk lamp, positioned on the desk behind and to the right of the stimulus computer, was turned on to provide less disruptive lighting. Further instructions were then presented to participants on the stimulus computer.

All participants were briefly shown a picture of a young woman, the ostensible victim. Participants assigned to the control condition began the calibration video immediately after viewing the picture of the young woman. Participants within the image conditions were told that jurors in an actual crime were often able to see the victim during court proceedings. Participants
were told that in an attempt to simulate this experience they were to hold a visual image of the victim in mind while watching the interrogation video. Participants in the image condition were then presented with the same picture of the victim before continuing with the experiment. This procedure replicates previous mental image research on the camera perspective bias (Ratcliff et al., in press).

Participants in the cognitive-load conditions were told that real jurors had to hold a number of other facts in mind throughout court proceedings that were unavailable in the experiment. These participants were told that, in order to simulate the mental demand experienced by real jurors, they were to rehearse an eight-digit number throughout the interrogation video. Participants in the cognitive-load condition were informed that they would be asked for this eight-digit number directly after viewing the interrogation video.

Calibration was completed by all participants prior to watching the simulated murder confession. Immediately following the video, participants within the cognitive-load conditions were asked to write down the eight-digit number. Each participant was then taken to a separate room to complete the confession questionnaire, which was presented on MediaLab (Jarvis, 2004). Participants were met by an experimenter, who asked participants if there were any questions. Participants were then thanked for their participation.

Results

Hypothesis One: Camera Perspective Will Influence Voluntariness and Guilt Judgments

Based on Ratcliff et al.’s (in press) findings, participants presented with a suspect-focus camera format were predicted to have higher judgments of confession voluntariness and likelihood of suspect guilt in comparison to participants presented with a detective-focus format in the control and cognitive-load conditions. This difference was expected to be weakened for those engaged in the imagery task. A comparison of the suspect- and detective-focus conditions
for control and cognitive-load participants was significant, \( t(47) = 1.75, p < .05 \), one-tailed (see Table 2.1 for means). Replicating the findings of Ratcliff et al. (in press), this difference was not significant for participants who engaged in the imagery task, \( t < 1 \). A similar analysis of the guilt data did not produce any significant effects.

**Hypothesis Two: Camera Perspective Will Influence Visual Attention**

Duration of eye gaze on the detective and on the suspect were calculated from EOG data. A measure of differential visual attention was created by subtracting the former value from the latter, with larger numbers indicating relatively more visual attention on the suspect. A 2 (camera perspective – suspect/detective focus) by 3 (task – control, image, and cognitive load) analysis of variance (ANOVA) was then performed on this differential-attention measure. The only significant result was a main effect of camera perspective, \( F(1, 69) = 284.46, p < .001 \). As anticipated, participants attended relatively more to the suspect in the suspect-focus condition than in the detective-focus condition (see Table 2.1 for means). Importantly, the absence of a main effect of task or a two-way interaction suggests that the instruction to hold an image of the victim’s face did not eliminate the typical camera perspective bias (Ratcliff et al., in press) simply because such instructions led participants to pay insufficient attention to the videotaped confession (cf. Taylor et al., 1979). Further analyses on the other EOG data, including duration of eye fixations on an interactant while the other was speaking, revealed only the main effect of camera perspective (see Table 2.1 for means),

**Hypothesis Three: Visual Attention (Eye Gaze) Will Mediate the Effect of Camera Perspective on Voluntariness and Guilt Judgments**

It was hypothesized that differential visual attention would mediate the effect of camera perspective on judgments. Because only the voluntariness measure produced the expected pattern, a mediation analysis was performed only on this measure. Regression analyses were
conducted to determine the magnitude and significance of the standardized beta weights. These coefficients are represented in Figure 2. Supporting the predicted influence of differential visual attention on confession voluntariness judgments, the paths from camera perspective to differential visual attention and from differential visual attention to voluntariness judgments were both significant ($p$s < .001 and .05, respectively). With both condition and differential visual attention in the model, the direct path from condition to voluntariness judgments remained significant ($p < .05$). However, a Sobel test demonstrated that the decrease in the direct effect of camera perspective on voluntariness judgments was significant when differential eye-gaze was taken into account, $Z = -1.64$, $p = .05$, one-tailed. Overall, this analysis provides evidence that differential visual attention partially mediated the influence of camera perspective on participants’ judgments of the confession’s voluntariness.

Discussion

The goal of this study was to demonstrate that visual attention was altered by manipulating camera format, and that visual attention has a direct effect on participants’ judgments. The typical effect of camera perspective was found for voluntariness, but not likelihood of guilt judgments. Further, camera format had the hypothesized effect on duration of eye-gaze fixation. When taking differential visual attention into account in a mediational analysis, a significant decrease between the relationship of camera format and voluntariness judgments was observed, thus establishing for the first time that the effect of the camera perspective on judgments is in fact partly due to differences in visual attention.

Additionally, this study sought to support recent research demonstrating that competition within the visual system, manipulated by having participants maintain a visual image of the “victim,” interferes with the camera perspective bias without redirecting visual attention. Duration of eye-gaze fixations did not significantly differ as a function of task condition—i.e.,
image, cognitive load and control conditions. Yet, having participants maintain an image of the suspect in mind while viewing the simulated interrogation successfully moderated participants’ judgments of confession voluntariness. Voluntariness judgments made by participants in the image condition across both camera formats fell between those made by participants in both the suspect format and the detective format interrogation videos. Together, these findings support the visual-channel-competition argument proffered by Ratcliff and colleagues (in press).

Finally, interactants’ degree of talking was seen to have a limited effect on eye-gaze fixations. The significant effects found were driven by the camera format presented to participants, such that participants overwhelmingly looked at the most salient actor in the video, rather than the actor who was talking.

However, there are potential limitations to these findings. No direct measure of image maintenance was employed in this study. So, it is not possible to determine that participants continued to maintain the victim’s image throughout the police interrogation. Indeed, it is difficult to continuously maintain a visual image (Thompson & Kosslyn, 2000). However, the more moderate voluntariness judgments made by image task participants supports the possibility of perceptual-channel-competition (Ratcliff et al, in press). Task was not seen to influence the duration of eye-gaze fixations on interactants within the interrogation, eliminating the possibility that the image-task led to eye-gaze shifts away from the interactants. These findings seem to indicate that normal perceptual processing was disrupted for image-task participants, preventing illusory causation from altering judgments in the direction typically produced by camera format.

All cognitive load participants managed to reproduce the eight-digit number after viewing the video, suggesting that these participants were engaged in a cognitively demanding task throughout the presentation of the interrogation (cf. Gilbert & Hixon, 1991). However, it is possible that these participants may have visualized the number during its rehearsal or committed
it to long-term memory. Since no continuous measure of rehearsal was employed, the current study is unable to rule out this possibility.

General Discussion

The current studies investigated the mediational effect of visual attention (eye gaze) on voluntariness and guilt judgments in an attempt to elucidate the underlying mechanism of the illusory causation bias, specifically in the realm of videotaped police interrogations. In both studies, increasing the salience of an actor, through instruction or camera format, increased the visual attention oriented on that actor. This effect was strong enough to reorient participants visual attention to the more salient actor even when the other interactant was talking. Duration of visual attention was seen to have a direct effect on participants’ judgments across two types of crime, as demonstrated with mediational analyses. Thus, these studies provide the first direct evidence that illusory causation is seemingly affected by attention.

In the first study, it was found that directing participants’ attention to either the suspect, the detective, or both actors within an equal-focus camera format had the predicted results on guilt judgments made on a continuous 9-point scale. These instructions also had the predicted effect on visual attention as measured using EOG. It was found that the total length of time participants directed their eye gaze to the detective mediated their judgments of the suspect’s likelihood of guilt.

The second study employed two different camera formats (suspect-focus and detective-focus) and investigated the effect of visual-channel interruption and a cognitive-interference task on participants’ visual attention and judgments of confession voluntariness and guilt. Manipulating camera format was found to successfully and significantly direct participants’ visual attention to the more salient interactant. A cognitive-load and a mental-image task were not seen to redirect visual attention. Finally, it was found that differential visual attention to the
suspect significantly mediated voluntariness judgments. This finding also supports the possibility
that illusory causation affects judgments through differential attention, or when attention is
directed to a target to a greater degree than other stimuli in the environment (Taylor &
Thompson, 1982).

Taken together, the current studies provide the only direct evidence, to the author’s
knowledge, that illusory causation is mediated by attention. These studies further buttress past
research supporting the possibility that illusory causation is a perceptually based process rather
than an error embedded in memory. The second study also investigated the visual-channel-
competition hypothesis proposed by Ratcliff and colleagues (in press), and demonstrated that the
more moderate judgments of the confession obtained from the mental-image task cannot be
explained by saccadic eye shifts caused by hemispheric activation during the mental-image task.
Because this task was not seen to redirect participants’ visual attention away from the
interactants, it is presumed that participants engaged in the mental-image task, which disrupts
incoming visual information, are relying more heavily on verbal information. This explanation is
consistent with past findings, which demonstrate that a mental-image task leads to judgments
similar to those made from a transcript or an audio version of the interrogation (Ratcliff et al., in
press).

Limitations

This research has a few limitations that may have affected the overall results. First, the
findings may have been more compelling if a larger sample size had been available. However,
low participant recruitment combined with sensitive equipment made obtaining a larger sample
difficult. Second, there is a possibility that the employment of somewhat intrusive equipment,
such as electrodes and a chin rest, led to increased participant attention on the interrogation. This
heightened attentiveness, however, may have brought college participants more in line with the
experiences of actual, accountable jurors. This possibility may have altered participants’ judgments, as some research findings suggest that an increase in in-depth processing, rather than decreasing the magnitude of the bias, may in fact increase biases in judgments (Lassiter et al., 2001; Taylor & Fiske, 1978). The same is likely to be true of increased visual attention.

**Future Research**

Perception of causality seems to be substantially determined by where attention is directed, in the cognitive, attitudinal, and visual domains (Taylor & Fiske, 1978). The findings in the second study demonstrate that target salience, manipulated by camera format, can direct visual attention, altering these perceptions. The current studies have demonstrated that visual attention mediates participants’ attributionally relevant judgments. In the typical videotaped police interrogation, the suspect is made salient, leading to predictable biases in observers’ judgments (cf. Lassiter et al., 2006). However, a number of other factors, for instance the interrogation tactics employed within the interrogation, could additionally alter the salience of the suspect or detective. For instance, maximization tactics may draw attention to the detective, while minimization tactics may direct attention to the suspect. This possibility seems very likely, as it has been posited that an observer will regard an other as causal if that person’s behavior is made salient (Taylor & Fiske, 1978).

In conclusion, the combined findings of these two studies support the possibility that biased judgments caused by the illusory causation bias are in part due to visual attention. In Study 2, visual attention was principally influenced by the salience of the actor. Salience of the actor was seen to direct attention to an even greater degree than which actor was speaking. These findings strongly suggest that videotaping a police interrogation with the camera focused predominantly on the suspect will direct viewers’ visual attention to the suspect. The
consequences of this particular camera perspective are likely to be biased perceptions of increased confession voluntariness and suspect guilt.
References


Gur, R. E., Gur, R. C., & Harris, L. J. (1975). Cerebral activation, as measured by subjects’ lateral eye movements, is influenced by experimenter location. *Neuropsychologia, 13*, 35 – 44.


Table 1.1

Study 1

Judgment Means (and Standard Deviations)

<table>
<thead>
<tr>
<th>Instruction Conditions</th>
<th>Suspect</th>
<th>Equal and No Instructions</th>
<th>Detective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntariness/Coercion</td>
<td>2.83(2.23)\textsuperscript{ab}</td>
<td>4.84(2.84)\textsuperscript{a}</td>
<td>4.11(2.48)\textsuperscript{b}</td>
</tr>
<tr>
<td>Guilt</td>
<td>8.30(.97)\textsuperscript{c}</td>
<td>8.05 (1.35)\textsuperscript{d}</td>
<td>7.28(1.64)\textsuperscript{cd}</td>
</tr>
</tbody>
</table>

Note: High numbers represent greater perceptions of coercion and guilt. Superscripted characters represent significant differences, $p < .05$. 
### Table 1.2

**Study 1**

**Visual Attention Means (and Standard Deviations)**

<table>
<thead>
<tr>
<th>Instruction Conditions</th>
<th>Suspect</th>
<th>Equal and No Instruction</th>
<th>Detective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>77.17(17.37)\textsuperscript{a}</td>
<td>83.45(13.53)\textsuperscript{b}</td>
<td>94.42(14.02)\textsuperscript{ab}</td>
</tr>
</tbody>
</table>

**Note:** Means represent the number of seconds of eye-gaze fixation on the detective. 

Superscripted characters represent significant differences, \( p < .05 \).
Figure 1 Mediation Model for Study 1

Path Analysis Diagram and Standardized Beta Weights for Study 1.

Note: The dotted arrow indicates a significant change in the relationship between instructions and likelihood of guilt judgments when instructions and eye gaze are simultaneously placed in the model, $Z = 2.27, p < .05$, one-tailed. Presented standardized beta weights occur when all variables are included in the model.
Table 2.1

Study 2

Judgment Means (and Standard Deviations)

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th></th>
<th>Cognitive Load</th>
<th></th>
<th>Image</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Suspect</td>
<td>Detective</td>
<td>Suspect</td>
<td>Detective</td>
<td>Suspect</td>
<td>Detective</td>
</tr>
<tr>
<td>Voluntariness/Coercion</td>
<td>5.27(2.24)\textsuperscript{a} 6.39(1.39)\textsuperscript{a}</td>
<td>5.00(2.73)\textsuperscript{b} 6.00(2.12)\textsuperscript{b}</td>
<td>5.85(1.91) 5.23(2.20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guilt</td>
<td>5.55(1.51) 6.31(1.55)</td>
<td>6.83(.58) 6.00(1.47)</td>
<td>5.77(2.24) 6.92(1.32)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: High numbers represent higher perceptions of coercion and guilt. Superscripted characters represent significant differences, $p < .05$. 
Table 2.2

Study 2

Visual Attention Means (and Standard Deviations)

<table>
<thead>
<tr>
<th></th>
<th>Suspect Focus Camera Format&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Detective Focus Camera Format&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Image</td>
<td>Control</td>
</tr>
<tr>
<td>Detective</td>
<td>64.48</td>
<td>51.73</td>
</tr>
<tr>
<td>Total</td>
<td>(42.18)</td>
<td>(21.66)</td>
</tr>
<tr>
<td>Suspect</td>
<td>185.85</td>
<td>193.87</td>
</tr>
<tr>
<td>Total</td>
<td>(42.46)</td>
<td>(26.01)</td>
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<tr>
<td>Suspect Minus</td>
<td>121.37</td>
<td>142.15</td>
</tr>
<tr>
<td>Detective</td>
<td>(84.45)</td>
<td>(46.40)</td>
</tr>
<tr>
<td>Detective</td>
<td>20.01</td>
<td>16.28</td>
</tr>
<tr>
<td>While Talking</td>
<td>(16.19)</td>
<td>(6.27)</td>
</tr>
<tr>
<td>Suspect</td>
<td>115.28</td>
<td>121.41</td>
</tr>
</tbody>
</table>

Note: Means represent the number of seconds of eye-gaze fixation. Superscripted characters represent significant differences, p < .05.
Figure 2 Mediatinal Model for Study 2

Path Analysis Diagram and Standardized Beta Weights for Study 2.

Note: The dotted arrow indicates a significant change in the relationship between camera perspective and voluntariness judgments when camera perspective and differential visual attention are simultaneously placed in the model, $Z = -1.64, p = .05$, one-tailed. Presented standardized beta weights occur when all variables are included in the model.
Appendix A

The following questions concern your impression of the videotaped confession.

1. The suspect’s confession was . . . .
   1 2 3 4 5 6 7 8 9
   Given freely
   by the
   suspect
   Forced out of
   the suspect by
   the detective

2. To what degree was the suspect coerced into confessing?
   Not at all 1 2 3 4 5 6 7 8 9 To a large degree

3. How confident are you in your response to the above question?
   Not at all 1 2 3 4 5 6 7 8 9 Completely

4. To what degree was the confession voluntary?
   Not at all 1 2 3 4 5 6 7 8 9 To a large degree

5. How much would you say you liked the suspect?
   Not at all 1 2 3 4 5 6 7 8 9 Very much

6. During the confession, how nervous did the suspect appear?
   Not at all 1 2 3 4 5 6 7 8 9 Extremely nervous

7. To what extent was the suspect’s degree of nervousness caused by the kind of person he is?
   Not at all 1 2 3 4 5 6 7 8 9 To a large extent

8. To what extent was the suspect’s degree of nervousness caused by the kind of person he is?
   Not at all 1 2 3 4 5 6 7 8 9 To a large extent

9. To what extent do you think the suspect was lying?
   Not at all 1 2 3 4 5 6 7 8 9 To a large extent

10. During the confession, how dominant did the suspect appear?
    Not at all dominant 1 2 3 4 5 6 7 8 9 Extremely dominant
11. To what extent was the suspect’s degree of dominance caused by the kind of person he is?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

12. To what extent was the suspect’s degree of dominance caused by the situation he was in?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

13. How talkative was the suspect?

Not at all 1 2 3 4 5 6 7 8 9 Extremely talkative

14. To what extent was the suspect’s degree of talkativeness caused by the kind of person he is?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

15. To what extent was the suspect’s degree of talkativeness caused by the situation he was in?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

16. Did you find the suspect’s statements to be credible?

Not at all 1 2 3 4 5 6 7 8 9 Very credible

17. To what degree did the suspect set the tone of the interrogation?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

18. To what degree did the suspect determine the kind of information exchanged?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

19. To what degree did the suspect cause the detective to behave as he did?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

20. To what degree would you say the suspect liked the detective?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

21. Did you find the suspect’s statements to be believable?

Not at all 1 2 3 4 5 6 7 8 9 Very believable
22. To what degree did the **suspect** resist giving a confession?

Not at all  1  2  3  4  5  6  7  8  9  To a large degree

23. How would you rate the **suspect**’s behavior on the following scale?

Passive  1  2  3  4  5  6  7  8  9  Aggressive

24. To what degree was the **suspect** intimidated by the **detective**?

Not at all  1  2  3  4  5  6  7  8  9  To a large degree

25. How was the **suspect**’s confession obtained?

1  2  3  4  5  6  7  8  9
The confession was given voluntarily

26. How much would you say you liked the **detective**?

Not at all  1  2  3  4  5  6  7  8  9  Very much

27. Do you think the **detective** was sensitive to the **suspect**’s feelings (that is, did he seem concerned about how the suspect felt?)

Not at all sensitive  1  2  3  4  5  6  7  8  9  Extremely sensitive

28. Do you think the **detective** was empathetic (that is, did he seem to understand how the suspect felt?)

Not at all empathic  1  2  3  4  5  6  7  8  9  Extremely empathic

29. How nervous did the **detective** appear?

Not at all nervous  1  2  3  4  5  6  7  8  9  Extremely nervous

30. To what extent was the **detective**’s degree of nervousness caused by the kind of person he is?

Not at all  1  2  3  4  5  6  7  8  9  To a large extent

31. To what extent was the **detective**’s degree of nervousness caused by the situation he was in?

Not at all  1  2  3  4  5  6  7  8  9  To a large
32. How dominant did the **detective** appear?

Not at all 1 2 3 4 5 6 7 8 9 Extremely dominant

33. To what extent was the **detective’s** degree of dominance caused by the kind of person he is?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

34. To what extent was the **detective’s** degree of dominance caused by the situation he was in?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

35. How talkative was the **detective**?

Not at all 1 2 3 4 5 6 7 8 9 Extremely talkative

36. To what extent was the **detective’s** degree of talkativeness caused by the kind of person he is?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

37. To what extent was the **detective’s** degree of talkativeness caused by the situation he was in?

Not at all 1 2 3 4 5 6 7 8 9 To a large extent

38. To what degree would you say the **detective** liked the **suspect**?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

39. To what degree was the **detective** intimidated by the **suspect**?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

40. To what degree did the **detective** set the tone of the interrogation?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

41. To what degree did the **detective** determine the kind of information exchanged?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree

42. To what degree did the **detective** cause the **suspect** to behave as he did?

Not at all 1 2 3 4 5 6 7 8 9 To a large degree
43. How would you rate the **detective’s** behavior on the following scale?

| Passive | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Aggressive |

44. To what degree do you believe the **detective** tricked the **suspect** into confessing?

| Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | To a large degree |

45. Do you think the **suspect** was being completely truthful?

| Not at all truthful | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Very truthful |

46. Who would you say was most in control of the situation?

| **Detective** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **Suspect** |

47. How likely is it that the **suspect** is guilty?

| Not at all likely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Extremely likely |

48. How much stress did the **suspect** seem to be experiencing?

| No stress | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A great deal of stress |
We would like to know what aspects of the confession you think are the most important and why. On the following lines, please describe which aspects of the confession were most important to you.
Please respond to the following questions by circling the appropriate answer.

49. Do you believe the defendant’s confession presented in this case was given freely and intentionally? (circle one)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

50. How confident are you in your judgment above?

Not confident 1 2 3 4 5 6 7 8 9 Extremely confident

51. As a juror watching this confession, do you believe the suspect is guilty or not guilty? (circle one)

<table>
<thead>
<tr>
<th>Not Guilty</th>
<th>Guilty</th>
</tr>
</thead>
</table>

52. How confident are you in your judgment above?

Not confident 1 2 3 4 5 6 7 8 9 Extremely confident

53. Do you think the suspect is basically a good or a bad person?

<table>
<thead>
<tr>
<th>Bad person</th>
<th>Good person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Good person</td>
</tr>
</tbody>
</table>

54. If the suspect were convicted, how severe should his sentence be?

Minimum sentence 1 2 3 4 5 6 7 8 9 Maximum sentence

Do you believe you behaved as an impartial (unbiased) juror in arriving at your judgments concerning this confession (circle one)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Please explain your response to the above question in a few sentences.