(Choice) Blind Justice: Legal Implications of the Choice Blindness Phenomenon

Kevin J. Cochran  
kjcochra@uci.edu

Rachel L. Greenspan  
greenspr@uci.edu

Daniel F. Bogart  
bogartd@uci.edu

Elizabeth F. Loftus  
eloftus@uci.edu

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(Choice) Blind Justice: Legal Implications of the Choice Blindness Phenomenon*

Kevin J. Cochran, Rachel L. Greenspan, Daniel F. Bogart, and Elizabeth F. Loftus**

Choice blindness is a relatively recent finding in psychology that demonstrates that people can often be misled about their own prior decisions. Originally studied in the context of preferences and decision-making, choice blindness has more recently been applied to new domains, including the law. Researchers have examined choice blindness in relation to eyewitness memory, suspect identification, and even false confessions. In the present Article, we review some of the history of choice blindness research, as well as this more recent literature in which choice blindness is specifically applied to legal contexts. We also review several real-life cases in which elements of the choice blindness phenomenon may have been at play. While the literature on choice blindness is still growing, the research described in the present review, as well as the cases we examine, suggest that legal professionals should be aware of this phenomenon.

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* Correspondence concerning this article should be addressed to Kevin J. Cochran, Psychology and Social Behavior, University of California, Irvine, CA 92697-7085. Phone: (612) 834-1755, E-mail: kjcochra@uci.edu.

** Department of Psychology and Social Behavior, University of California, Irvine.
INTRODUCTION

On December 11, 1990, criminal defense attorney David Sotomayor was in court, representing his client Christopher Simac.1 Simac had been charged with several violations in relation to a traffic accident.2 The state’s sole witness was a police officer who had investigated the accident. When the state called the officer to testify, he identified the man sitting next to Sotomayor at the counsel’s table as the one involved in the accident. As it turned out, the man sitting at the counsel’s table was not the defendant, Simac, but rather, a clerk from Sotomayor’s firm. Simac was sitting elsewhere in the courtroom. Apparently, as the clerk later testified, Sotomayor asked him to come to court that day to see if the state’s witness would mistakenly identify him as the defendant. After the clerk testified and Simac took the Fifth, the state again called on the police officer to testify, and he once again identified the clerk as the man involved in the accident. The court found Simac not guilty,3 but Sotomayor was found in contempt of court for intentionally misleading the court.4

In sum, Sotomayor led the officer to make a false identification by covertly suggesting that the clerk from his firm was actually the defendant. This type of ploy has been used in a number of investigations and legal proceedings (see below), not only by the defense, but also by the prosecution. Such tactics raise a question worth examining: to what might we attribute the witness’s misidentification? Did the officer make a simple memory error, because the clerk and Simac bore some resemblance?5 Had he made up his mind prior to testifying that he would simply identify the person sitting at the counsel’s table? Or was there a more complicated process, whereby he made an implicit assumption that the person sitting at the counsel’s table was the defendant, and failed to correct this assumption when the person sitting there was not the person from his memory? While it is difficult to determine exactly what happened in any individual case, psychological research on a phenomenon called choice blindness can help us to understand the psychological processes that may be occurring in this type of situation, and thus the contexts in which this type of misidentification can occur.

I. EARLY RESEARCH ON CHOICE BLINDNESS

Choice blindness refers to the finding that people often fail to notice a mismatch between something they previously chose and what they are later told they chose.6 In an early demonstration of this effect, researchers invited shoppers

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2. Id.
3. Id. at 418.
4. Id. at 419.
5. Id. at 418.
in a supermarket to taste test different flavors of jam. Subjects were asked to sample two varieties and choose which one they preferred. Then, they sampled their preferred option again and were asked to explain why they preferred that flavor over the other. However, on some trials, the researchers performed a sleight-of-hand manipulation, and the flavor the subjects tasted was not the option they had previously selected, but rather, the non-selected option. The researchers found that two-thirds of the shoppers did not detect this switch. That is, after sampling two similar products and choosing the one that they preferred, subjects did not notice when they were given their non-preferred option as if it were what they had chosen.

Another examination of choice blindness investigated people’s preferences for different faces. First, subjects were shown photographs of two faces and were asked which one they found more attractive. Next, subjects were handed the photograph they chose and were asked to explain why they found that face more attractive. But unbeknownst to subjects, on a subset of trials, the experimenter performed another sleight-of-hand trick; on a manipulated trial, the photograph subjects were given was not the one they previously chose, but rather the other, unchosen option. Surprisingly, many subjects failed to notice this discrepancy—in fact, they detected it only 26% of the time. What’s more, subjects sometimes confabulated reasons why they chose an option that they never truly chose at all. Some subjects’ confabulations even included details that were present only in the non-chosen photograph. For instance, when asked why they chose a particular photograph, subjects might mention that they liked the woman’s earrings, when the photograph that they truly chose did not feature earrings, but the photograph they were given did. This procedure parallels that used by Simac’s defense counsel: the state’s witness, like the research subject, expected that the person he was shown would be the person he had previously encountered, and failed to notice when that person had been exchanged with someone else.

Spurred by these compelling early demonstrations of choice blindness, researchers have adapted the methodology of these studies to examine the effect in more diverse and consequential contexts. Researchers have demonstrated that people can be affected by choice blindness in financial decision-making and political reasoning. These experiments help to illustrate the pervasiveness of this phenomenon and to delineate the types of errors that people routinely make.

8. Id. at 57–58.
9. Id.
11. Id.
12. Id.
14. Lars Hall et al., How the Polls Can Be Both Spot On and Dead Wrong: Using Choice Blindness to Shift Political Attitudes and Voter Intentions, 8 PLOS ONE 1, 1 (2013).
Another compelling demonstration of the choice blindness phenomenon involved misleading subjects about their own political and moral attitudes. Passersby in a park were asked to complete a brief survey by rating their levels of agreement with a number of political and moral statements. For example, one question asked subjects how much they agreed that “governmental surveillance of e-mail and internet traffic ought to be forbidden.” After completing the survey, subjects were asked about a number of their responses. But unbeknownst to the subjects, the researchers had performed a subtle switch using a trick apparatus, and the original prompts had been exchanged for reversed versions of the prompts, while the subjects’ ratings had been retained. Thus, if a subject had originally reported that she completely agreed that governmental web surveillance should be forbidden, the survey now indicated that she completely agreed that web surveillance ought to be permitted. The researchers found that on more than half of their trials, subjects failed to notice this discrepancy. This experiment illustrates how the choice blindness phenomenon can be observed even for contentious decisions in which individuals are highly invested and potentially highly opinionated. Furthermore, similarly to previous research, the researchers observed subjects confabulating reasons why they held an opinion opposite of what they had originally reported.

II. LASTING INFLUENCE OF CHOICE BLINDNESS

Researchers have also explored whether such a manipulation would have any lasting effects. Subjects might confabulate reasons why they reported a political opinion that they never truly held, but it is possible that their opinion on that issue, when measured later, might not change. In fact, research has shown that choice blindness can have lasting effects. In one study, subjects were asked to complete an inventory of psychological symptoms. They were asked, for instance, to rate how often they felt symptoms like difficulty concentrating or excessive worrying. They were later asked to justify their ratings for several symptoms, while their ratings for some “target” symptoms had been increased. The findings indicated that over 60% of subjects were blind to (i.e., they did not notice) the discrepancy between their initially reported symptom level and the manipulated level. At a follow-up test one week later, subjects who had been blind to the discrepancies now rated those target symptoms higher than non-manipulated symptoms. Not only did subjects fail to

16. Id. at 2.
17. Id.
18. Id. at 5.
19. Id.
21. Id.
22. Id.
detect manipulations to their symptom ratings, but these manipulations caused changes in their later symptom ratings congruent with the manipulation.

These findings expand on the choice blindness literature in two important ways. First, choice blindness was demonstrated to occur even for personal, internal phenomena, like aversive psychological symptoms. Choice blindness, then, is not limited to decision-making tasks, but is also applicable to a person’s own internal state. Second, choice blindness was shown to have lasting effects. Beyond subjects failing to detect the discrepancy between their original report and their manipulated report—a finding interesting in its own right—the choice blindness manipulation continued to influence subjects a full week later.²³ Thus, it is not the case that people influenced by choice blindness necessarily revert to their original pre-manipulation views or attitudes once the experiment or experience is over.

Other studies have examined the influence of choice blindness on future decision-making.²⁴ In a follow-up to a study described previously,²⁵ subjects were shown pairs of faces and asked to identify which face they found more attractive.²⁶ Then, they were presented with their choice and asked to justify their decision, but on some trials, the option they were given was actually the non-selected option. After the manipulation, subjects completed a second round of trials in which they were given the same pairs of faces a second time to again choose which they found more attractive. For control trials—those trials where subjects were given the face they had truly chosen—subjects remained remarkably consistent between the first and second rounds of trials, choosing the same face over 93% of the time.²⁷ If the choice blindness manipulation had no influence on subjects’ later decisions, we would expect a similar rate of consistency for manipulated trials—those trials where subjects were not given the face they had truly chosen. But this was not the case. The researchers found that for manipulated trials, subjects were consistent between the two rounds of trials only 57% of the time—²⁸ a substantially lower rate. When subjects were led to believe they identified a face as more attractive, they were more likely to choose that face in the future. This study provided additional evidence that choice blindness can have lasting influences for peoples’ attitudes, though in a new context: choosing the most attractive of a pair of faces.

III. (CHOICE) BLIND JUSTICE

The procedure for choice blindness studies can be remarkably similar to that of an eyewitness photo lineup. In both cases, the subject or witness is making an evaluative decision. Researchers have noticed this similarity and conducted

²³. Id.
²⁷. Id. at 284.
²⁸. Id.
experiments to examine whether choice blindness can occur during an eyewitness identification. In one study, passersby in a city center were approached by two confederates of the experiment who engaged them in conversation. Later, the subjects were asked to identify the confederates from separate six-person photo array lineups. Then, they were shown their choices in turn and asked to justify their decisions, but one of their choices had been switched for a foil target. The researchers found that over 40% of subjects failed to notice this manipulation. This is a particularly important demonstration of the choice blindness phenomenon because it was done in a naturalistic, legally-relevant setting. The subjects had real-world interaction with the people they were asked to identify. From a theoretical standpoint, this study expanded our understanding of choice blindness by showing that it could be present in memory tasks in addition to simple preference tasks, such as choosing the more attractive face. From a more practical viewpoint, this study demonstrated a real-life application for choice blindness research. After an eyewitness identifies a target from a lineup, if she is told she identified someone else—either due to a misunderstanding, a clerical error, or a deliberate manipulation—that eyewitness might fail to notice this error and confabulate an explanation for how or why she remembers that target.

This application for choice blindness research harkens back to the trial of Christopher Simac. The police officer can be thought of as a sort of subject in a choice blindness study, and Sotomayor can be thought of as the experimenter. At some point following a traffic incident, the officer identified, perhaps implicitly, Simac as the person involved in the incident. Roughly nine months after the incident, Sotomayor situationally influenced the officer into making a misidentification by having the clerk sit at the defense counsel's table at trial. The officer failed to detect this mismatch and identified, in two separate instances, the clerk as the person involved in the traffic incident. One interesting question that arises from this case example is what the police officer remembers now. If a new trial were ordered, would the police officer remember Simac as the person involved in the traffic incident? Would he remember the clerk? Would he be unable to decide? Put differently, can choice blindness have lasting effects on people's memories? Research can help to answer these questions as well. First, however, it is worth examining an example of how this might happen.


31. Id.
On August 21, 2003, Norris and Sheryl Hilde were both shot while camping. Norris died from his injuries, but Sheryl managed to speak to a 911 operator and referred to the shooter or shooters as “they.” While being transported in an ambulance and critically injured, Hilde told a first responder that the shooter had been a person she had seen earlier at the campsite (i.e., Samuel Lawson). But she also identified the pilot of the helicopter as the shooter, and she also said she did not know who the shooters were and had never seen their faces. On August 23, Hilde, who was medicated, unable to speak due to a breathing tube, and recovering from her wounds, was unable to select Lawson out of a photo lineup. However, police led her through a series of leading questions, culminating in her identifying as the shooter the man she had seen earlier at the campsite. When interviewed a month later, Hilde again failed to identify Lawson from a lineup. When interviewed another week later, Hilde had no memory of the August 23 interview. But when she was asked to review her responses to the leading questions asked by the police, she came to believe, and later remembered, that the man from her campsite, Lawson, was the shooter. At trial, when Hilde was asked if she had any doubt that Lawson was the shooter, she responded that she did not, and added that she “always knew it was him.”

While we cannot know the precise details of any individual case, Sheryl Hilde’s experience can be interpreted as an example of the choice blindness phenomenon. During her recovery, she had no memory of the police interview in which she “identified” Lawson. However, when she was shown an account of what she had previously reported, an account that did not reflect her true memory, but instead reflected the misleading questions she was asked, her memory changed to be consistent with that report. Her confidence in her memory changed so substantially that at trial, she reported not only that she had no doubt that Lawson was the shooter, but that she “always knew it was him.”

Psychological researchers have long known that memory can be distorted by suggestive influences. After witnessing an event, like a car speed through a stop sign, if people are exposed to misleading information about that event, for instance, telling them that the sign at the intersection was a yield sign, many of them will later...
remember having seen a yield sign during the original event.\textsuperscript{41} This robust finding, replicated and expanded upon in numerous experiments, is known as the misinformation effect.\textsuperscript{42} In simple terms, exposing people to misinformation about a past event can impair people’s memory for the details of the event. Sheryl Hilde’s experience was a sort of amalgam of choice blindness and the misinformation effect. She received misleading information that influenced her memory, but that misleading information was in the form of a manipulated version of her own memory report.

Two experiments have investigated this precise phenomenon: to what extent can choice blindness influence subjects’ subsequent memory for a witnessed event.\textsuperscript{43} In the first experiment, subjects first watched a slideshow depicting a female character interacting with several other characters, one of whom steals her wallet.\textsuperscript{44} Next, the subjects answered questions about their memories for details of the slideshow, like the color of the thief’s jacket. Later, the subjects were shown their previous reports, but some of their answers had been manipulated; subjects who had initially reported that the thief wore a green jacket might be told they reported a blue jacket. Finally, the subjects answered the same memory questions a second time. The researchers were interested in the level of (in)consistency between subjects’ initial reports and their final reports in light of the misinformation. The results revealed that when subjects were shown manipulated versions of their own memory reports, their memories changed significantly more than when they were shown their true previous memory reports.\textsuperscript{45} Moreover, their memories changed to be consistent with the misleading information they received.\textsuperscript{46} This study’s major contribution was to show that people could be misled by fabricated versions of their own memory reports, and that these fabricated reports influenced people’s future memories.

A second study followed a similar procedure.\textsuperscript{47} Subjects first watched a depiction of a man stealing a stereo from a car, and then identified the suspect from a six-person photo lineup. Later, the subjects were shown the face they had selected and asked to describe how they had made that selection. But for some subjects, the face they were shown at this stage was not the one they had identified, but rather, another member of the lineup. Over half of the subjects failed to notice this manipulation.\textsuperscript{48} Later in the study, the subjects were shown the same lineup a

\textsuperscript{41} Elizabeth F. Loftus et al., \textit{Semantic Integration of Verbal Information into a Visual Memory}, 4 J. EXPERIMENTAL PSYCHOL. 19 (1978).
\textsuperscript{42} Michael S. Ayers & Lynne M. Reder, \textit{A Theoretical Review of the Misinformation Effect: Predictions from an Activation-Based Memory Model}, 5 PSYCHONOMIC BULL. & REV. 1, 1 (1998).
\textsuperscript{43} Kevin J. Cochran et al., \textit{Memory Blindness: Altered Memory Reports Lead to Distortion in Eyewitness Memory}, 44 MEMORY & COGNITION 717, 719–21 (2016).
\textsuperscript{44} Id.
\textsuperscript{45} Id.
\textsuperscript{46} Id.
\textsuperscript{47} Id. at 721–23.
\textsuperscript{48} Id.
second time and were asked again to select the person they remembered seeing from the slideshow. Of the subjects who had received the choice blindness manipulation, 35% changed their responses for the second lineup, and this was significantly greater than the rate of memory change for the control subjects. However, this 35% figure collapses across all subjects, including both those who detected the manipulation and those who were blind to it. Detection significantly influenced the rate of memory change. When confining the analysis to only those subjects who were blind to the manipulation, 54% changed their responses between the two lineups, compared to only 13% of those who noticed the manipulation. It is also worth noting that when subjects changed their responses between the two lineups, the majority of them identified the person implicated by the misinformation rather than one of the foil targets. This study demonstrated that subjects’ memories can be influenced by misleading versions of their own memory reports, not only for their memories of episodic details, but also for their memories of a crime perpetrator’s face.

Telling someone they made a particular choice can be a powerful manipulation. Research on choice blindness has shown that people often fail to scrutinize information if they are told that that information represents their own decisions or preferences. This blindness can have lasting effects in diverse contexts, influencing subjects’ later medical symptom reporting, preferences and attitudes, and eyewitness memory.

V. BLINDLY CONFESSIONING

Choice blindness can have implications for the legal field beyond the study of eyewitness memory. One study explored how choice blindness might apply to the issue of interrogations and confessions. This context may be one in which suspects are especially vulnerable to the effects of choice blindness, as police in the United States can legally lie to suspects during interrogations. For instance, police can falsely inform a suspect that their co-conspirator confessed in order to elicit a confession. Not only is this legally permitted, research indicates that officers frequently receive training in this practice. In a survey of students at the FBI National Academy, 73.2% reported receiving training in providing false evidence to adult suspects, and 84.7% received training in using deceit. These numbers are
also high for interrogations involving juvenile suspects (56.5% and 69.7% respectively).\textsuperscript{57} In an environment in which deception is permitted and even encouraged, choice blindness might be particularly likely to occur.

In one choice blindness study, researchers asked subjects to complete a questionnaire probing their history of norm-violating behaviors.\textsuperscript{58} These behaviors included both legal activities like cheating on a high-school exam, and illegal activities like shoplifting. Subjects responded to each item on a four-point scale, anchored at “never” and “always.”\textsuperscript{59} Unbeknownst to the subject, the experimenter had manipulated two of the responses by two scale points. Thus, if a subject reported that they had “never” shoplifted, their report would later read that they had “sometimes” shoplifted. Later, subjects were asked to elaborate on their responses. The researchers found that the subjects failed to detect about 15% of the manipulations.\textsuperscript{60} While this blindness rate is somewhat lower than the rate in some other choice blindness studies, it still represents an incredible effect; roughly 15% of the time, subjects failed to notice a manipulation that incriminated them. The researchers also conducted a follow-up study in which they employed a longer retention interval. In this experiment, subjects completed the questionnaire about norm-violating behaviors in one session and were given misinformation about their responses a week later. When subjects followed this modified procedure, 36% failed to notice the incriminating manipulation.\textsuperscript{61} This study also included a follow-up five to six weeks after the initial testing. As was the case in some of the studies already discussed, the researchers found evidence that the choice blindness manipulation had a lasting effect on subjects’ memories.\textsuperscript{62}

But could real-life suspects actually be induced to confess through the use of choice blindness? The murder of Martha Moxley provides some evidence that they could.\textsuperscript{63} In 1991, after newspaper reports of a cover-up in the case, State Inspector John Solomon was assigned to reinvestigate the murder.\textsuperscript{64} Solomon soon began to suspect Ken Littleton and eventually created a plan to elicit a confession from him.\textsuperscript{65} He befriended Mary Baker, Littleton’s ex-wife, with whom Littleton was hoping to reconcile. Solomon convinced Baker to assist him in eliciting a confession from Littleton. Baker arranged a meeting with her ex-husband under the premise that she must know the truth about what happened to Moxley before they could reconcile. She then went on to falsely inform him that, during a car trip several years earlier, he confessed to the murder. Littleton denied the accusation. However, several

\textsuperscript{57} Id.
\textsuperscript{58} Cleary & Warner, supra note 55.
\textsuperscript{59} Id.
\textsuperscript{60} Id.
\textsuperscript{61} Id.
\textsuperscript{62} Id.
\textsuperscript{63} Timothy Dumas, Greentown: Murder and Mystery in Greenwich, America’s Wealthiest Community (2d ed. 2013).
\textsuperscript{64} Id.
\textsuperscript{65} Id.
months later, Littleton agreed to a polygraph test in order to exonerate himself. Despite having previously denied that he confessed when it was suggested by Baker, Littleton conceded during the polygraph that he had confessed to the crime. And, in court, when directly asked “did you ever tell Mary [Baker] that you stabbed Martha Moxley through the neck,” he claimed that he had. However, he added that he had no memory of his confession. Thus, this type of choice blindness manipulation led Littleton to “admit” that he confessed to the murder, despite him initially having no memory of the confession.

VI. DISCUSSION

Choice blindness is the finding that people often fail to notice if they are told they made a decision different from the decision they actually made. In fact, people often come to endorse the choice they initially rejected, and even confabulate reasons why they made a decision that they never actually made in the first place. Choice blindness can leave lasting influences: people led to believe that they chose a particular option are more likely to choose that option again in the future. This is true when asked about their preferences between two faces, their internal psychological state, and their memories for events that they witnessed. Choice blindness is also distinct from other psychological findings in relation to eyewitness memory. For instance, the misinformation effect is the finding that if people are exposed to misleading information in the wake of witnessing an event (like a crime or accident), they often incorporate this misleading information into their memories for the event. Research on the choice blindness phenomenon, by contrast, focuses primarily on whether people detect that the misleading information is in fact false, and involves misleading subjects about their own previously stated preferences, beliefs, and memories.

CONCLUSION

In this review, we have discussed a number of studies in which researchers have directly investigated choice blindness for legally-relevant decisions and discussed some examples of what happens when these procedures are used in real life. A field study demonstrated that after making an eyewitness identification, people often fail to notice when they are told they identified someone different from who they actually did. Other researchers took this one step further by showing that choice blindness can having lasting influences on peoples’ memories.

66. Id. at 302.
67. Id.
68. Hall et al., supra note 7; Johansson et al., supra note 6.
70. Merckelbach et al., supra note 20.
71. Cochran et al., supra note 43.
72. Loftus et al., supra note 41.
73. Sagana et al., Witnesses’ Blindness, supra note 29.
When witnesses are told they reported different details from what they actually reported, or identified someone different from whom they truly identified, their memories can be influenced by this misinformation.\textsuperscript{74} They may then recall the events in ways consistent with the misinformation they received, rather than how the events truly unfolded.\textsuperscript{75} Another study misled subjects about their own responses to a survey querying their history of criminal and norm-violating behavior, demonstrating that choice blindness can induce people to incriminate themselves.\textsuperscript{76} This is not an effect that exists merely in the laboratory. The cases of Christopher Simac,\textsuperscript{77} Samuel Lawson,\textsuperscript{78} and Martha Moxley\textsuperscript{79} all included elements of choice blindness, and all three cases panned out as the literature would have predicted. When people are told that they made a report that they never truly made—whether that decision is an eyewitness identification, details in witness statement, or a confession to a crime—they are often blind to this discrepancy, and this blindness can have important, lasting consequences.

\begin{itemize}
\item \textsuperscript{74} Cochran et al., \textit{supra} note 43.
\item \textsuperscript{75} \textit{Id}.
\item \textsuperscript{76} Sauerland et al., \textit{supra} note 53.
\item \textsuperscript{77} People v. Simac, 641 N.E.2d 416, 417 (Ill. 1994).
\item \textsuperscript{78} State v. Lawson, 291 P.3d 673, 678 (Or. 2012).
\item \textsuperscript{79} \textit{DUMAS}, \textit{supra} note 63.
\end{itemize}