

# Blindness in the interrogation room

A review article about the potential role of choice blindness during suspect interrogations

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*Research indicates that humans display a phenomenon called choice blindness. When we choose between alternatives, we are sometimes blind to the mismatch between our original choice and its outcome. Taking the initial findings about choice blindness as a starting point, this article explores whether choice blindness could also play a relevant role in interrogation situations. The explorations revolve around a hypothetical scenario: An innocent suspect is faced with an interrogation situation in which the investigator manipulates the testimony and thus introduces a mismatch between the original testimony and the manipulated one. Could this mismatch go unnoticed by the suspect due to choice blindness? Recent experimental evidence with a focus on this question is reviewed. It is generally concluded that the role of choice blindness in eliciting outright false confessions to extreme allegations is limited; however, it can still pose a threat to innocent suspects by leading them to give contradictory testimony in interrogations. Suggestions for future research are made and advice on the practice of law enforcement is given.*

**“I think we are blind. Blind people who can see, but do not see.”**

– José Saramago

## *Choice Blindness: We tend to be blind to our choices and preferences*

When living our daily lives, we usually assume that we are entirely aware of our decisions and their underlying motivations. For example, when we go to our favourite pizzeria to order a *Pizza Margherita*, we usually feel that we picked this particular pizza because it was the option most in line with our preferences. Furthermore, we assume that if the waiter brought us the wrong pizza, we would notice the mismatch and we would protest. A range of psychological research, however, shows that this is *not* how the human mind works. Instead, research suggests that we are often not fully aware of the choices we make and their underlying causes. For example, a team of Swedish researchers (Johansson, Hall, Sikström, & Olsson, 2005) presented more than one hundred students with several pairs of pictures showing female faces. In every trial, a researcher held two pictures side-by-side, and the student decided which one of the faces he or she found more attractive. Upon making the decision the student usually received the chosen picture and was asked to give reasons for his or her choice. Unbeknownst to the students, however, in some trials the researchers exchanged the two pictures using a sleight-of-hand so that students were actually handed the face they had judged less attractive. Although the women shown in

the picture pairs looked quite different from each other, most students did not notice the change. In fact, the sleight-of-hand was detected in only 13% of the trials while 87% of manipulations went unnoticed.

Interestingly, most of the students did not only fail to notice the mismatch but also went on justifying a choice they had never made. For example, one student when presented with the wrong picture explained his choice: “She’s radiant. I would rather have approached her at a bar than the other one. I like earrings.”, although the woman he had actually selected had no earrings (see Figure 1). The researchers termed this surprising failure of the human mind to detect a mismatch between the intention of a choice and its actual outcome *choice blindness*. It is as if we were blind to our original choices and their underlying preferences.

One might object that this finding of Johansson and colleagues (2005) came about within the restricted environment of a laboratory and that humans behave differently in real-life. Yet choice blindness has also been found to occur outside of the laboratory. Hall, Johansson, Tärning, Sikström, and Deutgen (2010) asked passer-by shoppers in a



Figure 1. Example of a picture pair shown to participants. Note that the woman on the left has no earrings, while the woman portrayed on the right does. (Source: Johansson, Hall, Sikström, & Olsson, 2005).

supermarket to test different varieties of tea and jam, and to decide which of the alternatives in each pair they liked most. On certain trials, the experimenters secretly switched the content of the sample container, leaving people again with an outcome opposite of the actually intended choice (see Figure 2). No more than a third of the manipulated trials were detected – providing further evidence for choice blindness as an enduring phenomenon of the human mind.

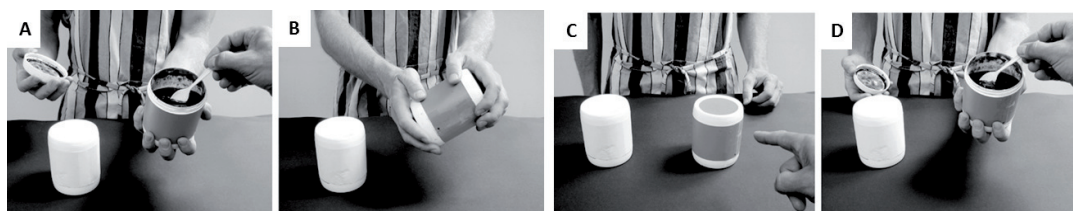


Figure 2. Illustration of a manipulated trial with jam samples. (A) The participant tries one of the two jam flavours. (B) Using a sleight-of-hand, the experimenter switches the content of the sample container. (C) The participant indicates his favourite jam flavour, but since the container has been switched before, in (D) the participant re-tries the opposite her actually intended choice (Source: Hall, Johansson, Tärning, Sikström, & Deutgen, 2010).

## *Choice Blindness in the interrogation room: A realistic scenario?*

We are thus frequently not fully aware of the true reasons behind the things we are doing. Yet our wish to make sense of what we are doing and why we are doing it is so strong that we often draw up a rationale on the fly, coming up with an arbitrary justification of our decision. In our regular daily lives we seem to cope well with this lack of awareness. However, in certain scenarios, different from dating and shopping, choice blindness might pose a serious problem to some of us.

Imagine the following scenario. Suppose you are an innocent suspect in an interrogation room – accused of having committed a crime. You try to give a truthful account of the past events that led you there. For example, you state that you have been at the market square of your city at 8pm. Imagine further that the investigator is not convinced of your innocence; by contrast, he or she uses coercive and deceptive interrogation methods and tries to feed you with misleading information. When pretending to summarize your statement, the interrogator twists your words, asking: “So, you said you have been at the market place at 7pm?” Imagine further, you were blind to this mismatch (7pm vs. 8pm), answer the investigator’s question in the affirmative, and, as a result, produce contradictory testimony. This, in turn, is interpreted to your disadvantage as incriminating evidence, and you are convicted – despite your innocence.

Admittedly, this scenario seems a far fetch from reality and rests on many, seemingly unrealistic assumptions: Not only does the investigator need to presume your guilt and try to lead you astray by help of false information. Furthermore, you, and later on the jury in court, need to be fooled. You, as a suspect, need to be blind to the mismatch. This blindness does not only occur once when the interrogator asks you to agree to his or her summary but repeatedly throughout the interrogation. How likely is it that any of those assumptions holds true in reality?

Research indicates that, at least, several of these assumptions might in fact hold true. For example, interrogations have shown to be guilt-presumptive processes (Snyder & Swann, 1978), and investigators tend to judge suspects as deceptive (Meissner & Kassin, 2002). Even though presenting a suspect with false evidence is not lawful in most European countries, in the United States a ruling of the US Supreme Court explicitly allows this use of false evidence in police interrogations (*Frazier v. Cupp*, 1969). Since then, deceptive techniques have been widely taught in the US as a technique for criminal interrogations (Inbau, Reid, Buckley, & Jayne, 2001; Kassin & Gudjonsson, 2004).

Thus, on the investigators’ side, biases and controversial techniques could make the interrogation process prone to producing contradictory evidence. What about the suspect?

Might choice blindness on the suspect's side lead him or her to agree to an unintended and untrue account of the events preceding the interrogation? This would require that humans are not only blind to their own preferences (for tea, jam, and faces) but also blind to changes of statements that rely on long-term episodic memory. Merckelbach, Jelicic, and Pieters (2011a, 2011b) investigated this last aspect in two experiments.

In a first study (2011b), the researchers asked participants to complete a symptom list of psychiatric complaints in which they had to indicate on a 5-point scale (ranging from *never* to *always*) how often they had recently been suffering from 90 different symptoms. Then, while participants were solving two Sudoku puzzles, the experimenters manipulated two items by increasing them by two full scale scores (for example from *never* to *occasionally*). In a subsequent interview, participants were asked to elaborate on 10 of their symptom ratings (2 of which were manipulated). Across all participants, 71% of manipulations went undetected. A total of 57% of participants were blind on both manipulated items to the mismatch between actual and manipulated symptom endorsement. In a second study, Merckelbach, Jelicic, and Pieters (2011a) could replicate these findings with 74% of participants being blind to both manipulations. This time, however, the researchers included two follow-up tests, again asking participants to rate the frequency of symptoms (one conducted 10 minutes after the first interview and the other one a week later). Interestingly, in these follow-ups, those participants who had been blind to both manipulations on the very first test now tended to score significantly higher on the manipulated symptoms than on the non-manipulated ones. Such an effect was not found for participants that had detected a manipulation on the first test.

Taken together, these two studies add important aspects to our understanding of the choice blindness phenomenon. Firstly, they suggest that choice blindness is not limited to preference ratings (how much we like something) but does also occur for frequency ratings (how often something has happened to us in the past). As frequency ratings of symptoms in the past, unlike preference ratings, necessarily require recall of long-term memory, this finding implies that choice blindness can indeed occur for statements relying on episodic memory. Secondly, the results of the follow-up tests in Merckelbach and colleagues (2011a) indicate that the manipulation of the answers does not only go unnoticed during the interview, but that it has a long-term effect on participants' future decisions.

Applied to our hypothetical interrogation situation, these two additional aspects of choice blindness suggest that our innocent suspect could indeed be blind to manipulations of his or her statement, even in those cases where statements rely on long-term episodic memory. Furthermore, they suggest that if the suspect has internalised the manipulation, he or she could not only be blind to it once, but repeatedly throughout the process.

## *How blind we are depends on the level of severity of the concerned choice*

Yet a different question is whether the events asked about in an interrogation are not too relevant to the suspect for choice blindness to occur. After all, confusing the flavour of tea you originally chose is quite different in importance from failing to detect a manipulation of how your past actions are presented in a (criminal) investigation. Given the higher degree of severity, could choice blindness also play a role in interrogation situations and false confessions?

In a first attempt to shed light on this question, we (Sauerland, Schell, Collaris, Reimer, Schneider, & Merckelbach, 2013) conducted two related experiments. In our first experiment, we asked participants to fill out a questionnaire containing 18 questions on their history of *norm-violating behaviours*. The questions varied in severity of the norm-violating behaviour asked about, as established by means of a pilot study. For example, a question scoring rather low in severity was whether participants had ever cheated on a high-school exam, while a question referring to the theft of a bike scored on the upper end of the scale. Participants indicated for each question whether they had *never*, *seldom*, *sometimes*, or *often* engaged in the described behaviour. While participants were distracted by solving two Sudoku puzzles, we manipulated two answers of each participant. We either increased or decreased the answers by two full scale points (e.g., from *never* to *sometimes*). In a subsequent interview, participants were then requested to elaborate on four of the answers they had given - among them the two manipulated ones. Overall, out of 134 manipulations more than 85% were detected. Thus blindness to one's history of norm-violating behaviour seems to be weaker than choice blindness for scores of facial attractiveness, smell of tea, and symptom frequency. Does that mean that choice blindness is not relevant to suspect interrogations? Considering that 15% of suspects going along with investigator-induced manipulations would still constitute an undesirably high rate in real interrogations, this question should be answered in the negative.

One limitation of this first experiment was that there were only a few minutes between the moment participants gave answers on the questionnaire and the subsequent interview in which they were confronted with manipulations. This experimental set-up does not very well approximate a real interrogation situation in which it is common to interrogate suspects on different days (Johnson & Drucker, 2009; Kassin et al., 2007; Wagenaar, 2002). Therefore, in a second experiment, we modified the experimental procedure. We inserted a time interval of one week between the first and the second session. We predicted that inserting this time interval would increase the level of choice blindness. This prediction was based on the hypothesis that choice blindness crucially relies on *ambiguity* regarding

the original choice. The more ambiguous the original choice is to the participant, the less likely he or she should be to detect a mismatch between this original choice and the new, manipulated alternative. We also conjectured that the original choice becomes more ambiguous as more time passes since it first has been made. Furthermore, similar to Merckelbach and colleagues (2011a), we conducted a follow-up five to six weeks after the interview, asking participants to once again fill out the norm-violation behaviours questionnaire.

Implementing these changes, we found a considerable increase of blindness compared to the first study. Out of all manipulations, only 64% were detected. It is interesting that introducing a one-week time delay increased choice blindness by that level. Essentially, it would be equally reasonable to expect that participants give a consistent account of how often they committed certain norm-violating behaviours, regardless of whether only a few minutes or seven days have passed since the first statement. However, the experimental results supported our hypothesis that choice blindness depends on ambiguity. This ambiguity probably was increased by introducing the one-week time interval, leading to an increase in choice blindness.

Another relevant finding is that the more severe the norm-violated behaviour was, the lower the rate of choice blindness tended to be. This relationship, however, was found only for the second manipulated item (see Figure 3). Thus, choice blindness to one's own norm-violating behaviour can be limited by the severity of the reported act. There seems to be a threshold when the concerned behaviour reaches a level of personal relevance that choice blindness is less likely to occur.

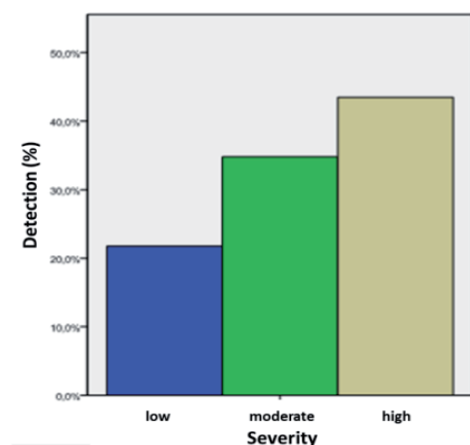


Figure 3. Detection rates in the second manipulated question by severity of the concerned behaviour. Note the progressive increase in detection rates (corresponding to decrease in choice blindness) from low to moderate to high severity.

Given the results of our study, one might object that choice blindness increased in the second experiment simply because participants could not remember anymore what they had answered one week before. However, this objection is invalidated by results from the follow-up. We found that even five to six weeks later participants gave exactly the same answers on those questions that were not manipulated. On questions for which the answers had been manipulated earlier in the study, however, the participants tended to shift their post-test answer in the direction of the manipulation— indicating long-term effects of the manipulation.

## Conclusion

For our imaginary interrogation scenario thus the following, bigger picture evolves: Based on the results presented above, it seems improbable that choice blindness would be sufficient in eliciting outright false confession to severe allegations. It is unlikely that, exclusively due to choice blindness, an innocent suspect confesses to murder because he or she has been blind towards the mismatch between the original statement that he or she never committed murder and the new investigator-induced statement that he or she had murdered. As shown by Sauerland and colleagues (2013), these statements seem to be personally too important such that manipulations usually should be noticed.

Yet this does not mean that choice blindness is irrelevant in the interrogation process. On the contrary, it can be argued that the interrogation process is prone to choice blindness-related false statements. On the interrogator side, biases and controversial interrogation techniques can be used to manipulate and misrepresent original statements. On the suspect side, choice blindness could lead an undesirably high proportion of neglected manipulations, causing contradictory testimony. So far, based on the experimental evidence we have good reason to assume that choice blindness can occur with regard to norm-violating histories.

This assumption is further supported by a real case of choice blindness in an interrogation situation, which was recently documented in the Netherlands (Merckelbach, 2012). In the respective case, a woman was suspected to have committed welfare fraud. The woman was registered as a single parent at the municipality but investigators suspected her to live together with her former husband again. She was arrested and interrogated. During the interrogation interview, the woman originally stated that the father was visiting occasionally to see the child. However, the interrogators manipulated her statement, changing it from *visiting occasionally* to *visiting very often*, and pressurized her by insisting that she ought to have officially declared that she was living together again. In turn, the woman displayed choice blindness, not correcting the manipulations of her statements but accepting them and internalizing them. Eventually, the woman was made to fully confess to welfare fraud (Merckelbach, 2012). This case, exhibiting several manipulations on the interrogators' side and repeated choice blindness of the suspect, strongly confirms the experimental finding that choice blindness indeed plays a role in interrogation situations.

The question whether the suspect in our imaginary interrogation scenario could be blind to the mismatch between 7 and 8pm warrants further research. Specifically, future research should investigate whether participants show choice blindness also with regard to alibi-related statements. Research could thus not only investigate frequency-



related statements, but also statements related to the details of certain locations and times. Another question is whether the so-produced contradictory testimony would be interpreted as incriminating evidence. In this regard, future research should investigate whether there is a level of severity at which manipulated statements fall short of the personal importance that makes them noticeable to suspects, but where these statements still have the potential to serve as incriminating evidence in interrogations.

The research results presented above have important implications for the practice of law enforcement. They corroborate several warnings that have been issued by many scholars in the field of law and psychology (Kassin, 2008; Kassin & Kiechel, 1996). Investigators should beware of deceiving the suspect and confronting him or her with misinformed statements. As demonstrated, some innocent suspects can easily fail to detect the misinformation and stay blind to the mismatch between their original and their new, induced testimony. Furthermore, investigators should refrain from conducting overly long interrogations. As seen, a lot of time between the interviews/interrogations introduces ambiguity about what has been said and what not, rendering suspects more vulnerable to display choice blindness. Likewise, our findings reemphasize the need of camera recording during interrogations. These concerted efforts would make it possible to discern original testimony from investigator-induced statements.

## *Glossary*

**Choice blindness:** surprising failure of the human mind to detect a mismatch between the intention of a choice and its actual outcome

**Norm-violating behaviour:** action that contravenes commonly accepted rules and regulations. In the respective study, norm-violating behaviours were, for example, bike theft, cheating on a school exam, or torturing a bug

**Ambiguity** (regarding the original choice): state of unclarity that allows for more than one interpretation – here for more than one original choice. Ambiguity is believed to underlie choice blindness and to interact with time passed since the original choice has been made

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