

Research on the Reliability of Eyewitness Testimony Based on an Online Study

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Abstract: This document describes the use of eyewitness testimony in court and factors that make it both reliable and unreliable. One case study is presented. Five subjects were tested over a period of three weeks after being shown a timed presentation of a series of events that they were to be witnesses to. Seven questions were asked each week in the same order and of the same content. The findings of the experiment showed that as time progressed, the subjects became less descriptive and more inaccurate in their responses to the questions. Over the entirety of the study, the eyewitness testimony became more unreliable as the online interviews were conducted and therefore reflect unreliability overall. This leads to the belief that in real-life situations, eyewitness testimony can become inaccurate in the case of court proceedings not occurring soon after the original crime.

Key words: eyewitness, testimony, memory, forensics

Eyewitness testimony has known to be unreliable. In the cases of Cornelius Dupree, Derrick Williams, Johnny Pinchback, Alvin Jardine, and more, eyewitness testimony has led to the wrongful conviction of men and women (Clare 2012). It begins with “an account given by people of an event they have witnessed” (McLeod 2009). The term’s legality spikes an interesting controversy about the accuracy of testimony in the court system. It can be altered by various factors including the witness’ feelings toward a particular subject matter or how close they were to the actual crime or victim (McLeod 2009). One particular reason why the legal system continues to allow eyewitness testimony to be presented as evidence is because of the jury’s reliance on having a witness there

(McLeod 2009). It can be a more personal experience to hear the testimony from someone that was a witness and therefore perhaps even sway a decision even with other, more scientific, evidence present concurrently.

The question as to how reliable eyewitness testimony is, is an important question in terms of how the legal system continues with witnesses. Whether or not the witness should be present in court to give their testimony as a piece of evidence is important in judging the guilt or innocence of a suspect. If eyewitness testimony is the only major evidence in a crime, the determination of guilt or innocence is skewed dramatically. A case may not appear in court until years after the commitment of a crime and eyewitness

testimony is time sensitive. A phenomenon called memory distortion has been studied, and it has been revealed that this can be the cause of unreliable information from an eyewitness (Paterson 2014). The misinformation effect is also an aspect of testimony that raises questions of the “fallibility and malleability” of eyewitness testimony and should be considered when determining reliability (Oeberst 2012).

In the case of the Innocence Project, 75% of wrongful convictions were found due to faulty eyewitness accounts (Epstein 2009). In these cases where the witness accounts are a large part in determining guilt, it is also a matter of being able to decide the accuracy of the account in the jury’s opinion, or interpersonal reality monitoring (Clark-Foos 2014). The situation of the witness prior to a court

proceeding is also to be taken into account for the accuracy of the testimony. If there are multiple witnesses, it could be a matter of sharing misinformation that skews the results of the testimony (Wright 2012).

Leading questions used during interviews and questioning of the witnesses can lead to false accusations as well (Valentine 2011). The eyewitness is questioned by so many people that having to repeat the same story may inflate filler memories that are not accurate pieces of information (Laney 2017). The witness’ ability to identify the suspect of a crime as a perpetrator is an example as to why this can become a problem if misinformation is represented in front of a jury (Laney 2017). Although witness believe they may be telling the truth, they are telling their truth, not necessarily what actually took place (Suchow 2017).

Materials and Methods:

The survey began by creating an online presentation tool outlining the original crime scene. Subjects were timed for five minutes to read and look at pictures detailing what actually happened. After the five minutes, subjects were unable to access the presentation again. Over the course of the three weeks following the presentation, a survey was sent out to each subject including seven questions.

The questions were the same each time and in the same order. The first and second set of questions were answered the day of the presentation and the day after the presentation. In subsequent weeks, the survey questions were answered seven days following the last set of questions, until the subjects had taken the survey four times.

Results:

The day of and the day after the presentation was originally shown, the subjects were able to recall detailed information from the crime scene. This information included the license plate number of the vehicle the perpetrator drove off in and specific details about

the house across the street from their own home as described in the presentation. The table below outlines key points in the presentation and what answers were given by the subjects immediately following their witness and in three weeks’ time.

From Crime Scene	Answer given after presentation	Answer given in three weeks
Time: 4:12 pm	4:12	4:20
Two-story house	Small/medium sized house	N/A
Man breaking into vehicle	Man breaking into car	N/A
Gold Nissan Altima	Nissan	Car

Table 1. [Add a description of this table.]

In the first row of data, the time at the crime scene was 4:12 pm. Immediately following the presentation, the subjects gave the time as 4:12 and, in three weeks, 4:20. The second row shows that the residence in the crime was a two-story home. Some subjects described it as much, but the majority described the other outward appearance of the house or described it as a small or medium size. After three weeks, the subjects did not reference the size of the house at all. In the third row, the crime committed was a robbery where a male perpetrator broke into a vehicle by using a screwdriver. In the days shadowing the first survey, the subjects were very accurate in their witness to the actual crime. In three weeks, however, they only referenced what the man stole, not

that he broke into the car or what he was using to do so. Finally, in the fourth row, the perpetrator drove off in a gold Nissan Altima. The subjects immediately recognized it as a Nissan, but no further specifics were given. In the third week, the subjects recognized the vehicle as a car with no further information.

In this representation of the data collected, there is an obvious trend in a lack of information over the longer period of time. Shortly after the presentation, specifics were relatively easily given. However, longer waiting periods between the crime and the surveys showed a lack in remembrance of vital information needed to present to a jury.

Discussion:

The significant pattern within this research is the lack of remembrance towards the three-week mark. At the beginning of the experiment, there was a significant ability to recall detail, but as the subjects were tested further into the study, there were changes in their memory. This demonstrates how responses change after periods of times. While it would be acceptable to not remember something, misremembering can evolve to problems when it involves the guilt or innocence of a suspect and their freedom in the rest of their lives.

This study demonstrates a small portion of what can happen within the United States' legal system with eyewitnesses and their testimony or evidence presented from their interviews with the police or crime scene investigators. However, because of the subjects' knowledge of the experiment, they knew to remember what they could, unlike real eyewitnesses. The fact that eyewitnesses that provide testimony may have been in a high-tension or emotional encounter could further distort their memory of the

situation that took place, hindering their testimony.

This work is important in determining how eyewitness testimony is weighed in comparison with other pieces of evidence. It could determine if eyewitness accounts should be used so regularly in the court system where jury

members may not always have the scientific background to know its unreliability in implicating a suspect. Other pieces of evidence could be much more reliable and accurate in incriminating or exonerating a suspect or potential perpetrator of a crime.

References

Clare, and A. P. 2012. Is Eyewitness Testimony Inherently Unreliable? *Trial Evidence*. 20: 36–39.

Clark-Foos, A., G. Brewer, and R. L. Marsh. 2014. Judging the reality of others memories. *Memory*. 23: 427–436.

Epstein, J. 2009. Expert Testimony: Legal Standards for Admissibility. *Expert Testimony on the Psychology of Eyewitness Identification*. 69–85.

Laney, C., and E. F. Loftus. 2017. Eyewitness Testimony and Memory Biases. Noba. (<http://nobaproject.com/modules/eyewitness-testimony-and-memory-biases>).

McLeod, S. 2009. Eyewitness Testimony | Simply Psychology. *Simply Psychology – Articles for Students*. (<https://www.simplypsychology.org/eyewitness-testimony.html>).

Oeberst, A., and H. Blank. 2012. Undoing suggestive influence on memory: The reversibility of the eyewitness misinformation effect. *Cognition*. 125: 141–159.

Paterson, H. M., H. Eijkemans, and R. I. Kemp. 2014. Investigating the Impact of Delayed Administration on the Efficacy of the Self-Administered Interview. *Psychiatry, Psychology and Law*. 22: 307–317.

Suchow, J. W., D. Fournie, and G. A. Alvarez. 2017. Looking inward and back: Real-time monitoring of visual working memories. *Journal of Experimental Psychology*. 43: 660–668.

Valentine, T., and K. Maras. 2011. The effect of cross-examination on the accuracy of adult eyewitness testimony. *Applied Cognitive Psychology*. 25: 554–561.

Wright, D. B., and D. K. Villalba. 2012. Memory conformity affects inaccurate memories more than accurate memories. *Memory*. 20: 254–265.