

Effects of Interviewer Word Choice on Eyewitness Testimony

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Abstract: This study examined the effect of the wording of interview questions on eyewitness testimony. By changing a single word in nearly identical sentences, the effect of wording in an eye witness testimony can be examined. Participants were male and female college students (Mean age = 19.1). Participants were presented with a short video of a vehicle accident. They were then given a questionnaire consisting of six items. To study the impact of question wording on testimony, the wording of one of the items was changed between two conditions. This item asked either how fast the vehicles were traveling when they “contacted” each other, or how fast the vehicles were traveling when they “smashed into” each other. On average, participants in the “smashed into” condition reported slightly higher speed estimations than participants in the “contacted” condition. However, the difference between the two groups was not large enough to be statistically significant. This study can be used to better assess the importance of word choice when questioning eye witnesses.

Key words: interview questions, wording, eye witness, memory, testimony

Eye witness testimonies are a commonly used and in many cases necessary part of criminal investigations. The purpose of this study was to examine the effects of the wording of questions on eyewitnesses' memory of an event. It assessed how using leading verbs versus non-leading verbs in questions affected eyewitnesses' ability to accurately recall and describe an event. Specifically, it aimed to show, when interviewing eyewitnesses about an automobile accident, if using a leading verb

versus a non-leading verb to describe the collision would increase their speed estimations of the vehicles.

There has been a considerable amount of research done about the manipulability of eyewitness memory. Morgan et al. studied the effects of stress on eyewitness memory (2004). This research showed that eyewitnesses were less likely to accurately identify the perpetrator of a crime when the events were personally relevant or highly stressful (Morgan III et al. 2004). In a similar

study, Clifford and Hollin examined how the level of violence involved in an event affected eyewitness memory (1981). The study found that the quality of testimonies was significantly poorer when the associated event was violent than when the event was not violent (Clifford and Hollin 1981). Both of these studies carry profound implications for the accuracy of eyewitness testimony for major crimes such as assault or murder (Morgan III et al. 2004, Clifford and Hollin 1981). Forgas et al. also found that a witness' mood can influence both their memory and testimony (2005). Their results indicated that a positive mood increased witnesses' tendency to incorporate misleading details into their testimony, and a negative mood decreased this tendency (Forgas et al. 2005). Their research also found that a happy mood decreases the accuracy of a witness' testimony, but increases their confidence in their memory (Forgas et al. 2005). This can be especially problematic in the court room, because juries tend to use witness confidence as a large factor in the decision as to whether or not to believe their testimony (Penrod and Cutler 1995). The age of the witness has also been found to have an effect on the reliability of their testimony. These findings have led to further research about other factors that could possibly negatively influence an eyewitness' ability to give an accurate testimony. Specifically, it has prompted an area of research about how the actions and procedures of law enforcement can affect eyewitness testimony. Valentine and Maras investigated the effects of co-witness discussion of events prior to giving testimonies (2011). This study found that, even if a participant had unknowingly

watched a video with slightly different details than another participant, discussing the video with that participant would manipulate their testimony of the events (Valentine and Maras 2011). While this data showed how certain law enforcement protocols can affect eyewitness testimony, other research has gone more in depth into how the actions of law enforcement officials themselves can have similar effects. Krähenbühl, et al. studied how repeated questioning can affect memory in children (2009). Over 25% of the participants' responses changed with repeated questions (Krähenbühl et al. 2009). Repeated questioning also negatively affected the consistency and accuracy of participants' testimonies (Krähenbühl et al. 2009). This data holds implications about how law enforcement officials interview witnesses (Krähenbühl et al. 2009). It shows that repeatedly asking similar questions (for example, to become more certain that the witness is not leaving out specific details) can actually cause young witnesses to alter their responses entirely (Krähenbühl et al. 2009). Another interview tactic that can have a significant effect on a witness' testimony is rapport building (Wright et al. 2015). A 2015 study found that rapport building with witnesses during interviews can exacerbate the suggestibility of their memory (Wright et al. 2015). This study indicated that rapport building coupled with the presentation of a false accusation can lead witnesses to give a false testimony (Wright et al. 2015). The results of this study showed that the percent of participants who signed off on a false witness statement drastically increased when the experimenter used rapport building tactics while giving the interview (Wright et

al. 2015). Rapport building is an extremely common law enforcement interview tactic, and this data gives important evidence about its possible consequences (Wright et al. 2015). Although not necessarily an interview tactic, post-testimony feedback can also have an effect on both the memory of a witness and their confidence in that memory (Neuschatz et al. 2005). A 2005 study indicated that witnesses who received positive feedback about their identification of a suspect from a lineup claimed to feel more confident in their memory than witnesses who did not receive post-identification feedback (Neuschatz et al. 2005). Those who received feedback also claimed they had paid more attention to the event, and were more willing to testify in court (Neuschatz et al. 2005). As stated earlier, juries find eyewitnesses who are confident in their testimony are much more believable than those who are not confident (Penrod and Cutler 1995). Because of this, post-testimony feedback from law enforcement can indirectly affect jury decision making (positive feedback leads to higher confidence, higher confidence leads to a higher chance a jury will believe the witness' testimony) (Neuschatz et al. 2005, Penrod and Cutler 1995).

A growing area of research has been how the questions asked of witnesses during interviews can influence their memories and testimonies of an event. A 1973 study became one of the first examinations of this effect (Harris 1973). In this study, participants were shown a picture of a basketball player, and asked either how "tall" he was or how "short" he was (Harris 1973). Participants in the "tall" condition reported significantly higher height estimates than

those in the "short" condition (Harris 1973). This shows the effects leading questions can have on witness testimony (Harris 1973). Asking how "short" someone is implies that they are short, while asking how "tall" someone is carries little implications of their height. This data prompted Elizabeth Loftus to begin studying this effect. Loftus' study examined the effect of using definite versus indefinite articles in interview questions (1975). After watching a video of a vehicle accident, participants were asked if they noticed certain objects using either a definite article (the) or an indefinite article (a) (Loftus 1975). Results showed that participants were more likely to give yes or no response, as opposed to response of "I don't know," when the questions contained a definite article than when the questions contained an indefinite article (Loftus 1975). Participants were also more likely to falsely remember an object or detail from the video when it was asked about with a definite article than with an indefinite article (Loftus 1975). This is most likely due to the fact that asking about an object with a definite article (e.g. did you see the stop sign) implies that the object was actually there, while an indefinite article (e.g. did you see a stop sign) does not (Loftus 1975).

This study examined how the implications of certain words within a question can influence how eyewitnesses recall details of an event. It attempted to integrate the study of this effect into the findings of past research on the suggestibility of eyewitness memory. The hypothesis of this study was that the use of a leading verb ("smashed into") in the interview question will result in higher speed estimates than the use of a non-leading verb ("contacted") to describe an automobile

accident. This hypothesis is based on the data of many past research studies, but primarily the Harris and Loftus studies (Harris 1973, Loftus 1975). Using the words “smashed into” to describe a collision implies that the vehicles were traveling at a higher speed than using the word “contacted.” This indicates that participants in Condition 2 (the “smashed into” condition) will report significantly higher speed estimates than participants in Condition 1 (the “contacted” condition) (Harris 1973, Loftus 1975).

Materials and Methods

Participants

This study included a sample of 20 participants (17 females, 3 males), with a mean age of 19.1. The participants were all students at Texas A&M University, and were recruited via email. All of the participants volunteered to be a part of the study.

Measures and Designs

This study was an independent groups design. The independent variable was the type of verb used in the question asked of the participants (leading versus non-leading). The dependent variable was the participants’ estimated speed of the vehicles.

Each participant completed the study online on their own computer. They were randomly

assigned to one of two groups: Condition 1 and Condition 2. They were then sent instructions to watch (only once) a video clip of an accident involving a two-car head-on collision, and then to complete a questionnaire about the video. The questionnaire consisted of six items asking about different aspects of the video. One of the items asked the participants to estimate how fast the two vehicles were traveling. The responses to this item were the only responses analyzed in this study; the rest of the items were added only to lengthen the questionnaire. This question was altered between the two groups. Participants in Condition 1 were asked “About how fast were the vehicles traveling when they contacted each other?” Participants in Condition 2 were asked “About how fast were the vehicles traveling when they smashed into each other?” Because the verb “smashed into” implies that the vehicles were travelling at high speeds, it is considered a leading verb. The verb “contacted,” however, is fairly neutral in regards to speed, which makes it a non-leading verb. When a participant responded with two different speed estimates (one for each vehicle instead of one for both vehicles), the average of their two scores was used as their overall speed estimate. This data was recorded and then analyzed.

Results

The results showed that the wording of questions had some effect on participants' speed estimations. Participants in the "contacted" condition reported lower speed estimates ($M=39.63$, $SD=10.14$) than the "smashed into" condition ($M=47.75$, $SD=18.58$) (Table 4). An independent groups t-test was conducted, however, and it showed that there was not a significant difference between the two groups ($t=-1.21$, $df=18$, $p>.05$). These results are depicted in Table 5.

Table 1

Statistics

Age

N	Valid	20
	Missing	0
Mean		19.1000
Median		19.0000
Mode		18.00

Table 2

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	3	15.0	15.0	15.0
Female	17	85.0	85.0	100.0
Total	20	100.0	100.0	

Table 3

Ethnicity

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Caucasian	13	65.0	65.0	65.0
Hispanic/Latino	6	30.0	30.0	95.0
African American	1	5.0	5.0	100.0
Total	20	100.0	100.0	

Table 5

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Speed	Equal variances assumed	1.613	.220	-1.214	18	.240	-8.12500	6.69227	-22.18493	5.93493
	Equal variances not assumed			-1.214	13.925	.245	-8.12500	6.69227	-22.48574	6.23574

Table 4

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
Speed	"contacted" condition	10	39.6250	10.13879	3.20617
	"smashed into" condition	10	47.7500	18.57604	5.87426

Discussion

The hypothesis of this study was that the use of a leading verb (“smashed into”) in the interview question would result in higher speed estimates than the use of a non-leading verb (“contacted”) to describe an automobile accident. This would be indicated by participants in Condition 2 reporting significantly higher speed estimates on average than participants in Condition 1. The results did not support this prediction. While the use of a leading verb did produce slightly higher speed estimates than the use of a non-leading verb, the difference between the two groups was not large enough to be statistically significant. This contradicts the findings of research conducted by both Harris and Loftus (Harris 1973, Loftus 1975). Both of these researchers’ studies found that the wording of interview questions had a significant effect on eyewitnesses’ perceptions and testimonies of an event (Harris 1973, Loftus 1975).

These results have potential implications about the validity of past research. The lack of a significant effect could mean that eyewitness’ memories aren’t as suggestible as previously thought. However, due to the large amount of research suggesting that

eyewitnesses’ memories can be easily manipulated, it is more likely that this study indicates a possible inability to generalize the findings of past research studies to all populations. The results of this study may shed some light on the possible limitations of theories about the suggestibility of eyewitness testimony. For example, theories such as Harris’ theory of language affecting perceptions of events may not be true across all populations.

This study did, however, have limitations that also limit the implications that can be made from its results. There was a small sample size of only 20 participants, which reduces the study’s ability to produce statistically significant results. This means it is possible that the studied effect is truly significant, but the sample size prevented from being shown statistically. The sample was also fairly homogenous, consisting of mostly females and all students at Texas A&M University. The participants were sampled through a convenience sample method, and completed the study on their own in an uncontrolled setting. All of these factors may have affected the results.

These limitations raise questions about the level of implications one can draw from this study. The limitations can, and should, be addressed through further research. Replication studies without the same sample limitations should be conducted to provide more data about the effects of question wording on eyewitness testimony. For example, is this study an exception to a generally accurate theory that question wording has a significant effect on eyewitness testimony? If so, how large is this

effect? Can factors other than question wording, such as the tone of voice an interviewer uses, also significantly affect an eyewitness' testimony of an event? These are all questions that require further, more in

depth research to answer. Exploring the validity and the limits of the effect of question wording on eyewitness testimony is important to the ability to generalize this study's results

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