The Influence of Experimenter Status on Suggestibility

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Abstract

This study was designed to examine the effect of experimenter status on participants’ suggestibility. Suggestibility was measured by the presence of false memories about a video clip. Participants watched a video clip of a coffee mug being knocked off of a desk and were questioned about the details of the clip using a script of leading questions or neutral questions. These questions were either presented by an experimenter of high status or low status. In the study, the high status condition was an experimenter who was a college professor, and the low status experimenter was a senior undergraduate psychology major. After being questioned about the video clip, the participants sat through an intervening task, and then were questioned about the video clip again using neutral questions to see if any false memories had occurred. We expected that participants that were questioned with leading questions by the high status experimenter would be more suggestible than participants questioned with leading questions by the low status experimenter. We found significant main effects for question type ($p = 0.03$), status ($p = 0.03$), and openness to experience ($p = 0.02$). Participants reported higher damage to the coffee mug in the following scenarios: leading questions were presented, the experimenter was higher status, and the participants scored high on the personality variable of Openness to Experience.
The Influence of Experimenter Status on Suggestibility

In the court system, eyewitness testimonies can determine the fate of defendants in a case. Witnesses of crimes are often questioned multiple times by attorneys and other legal officials, but the questioning tends to occur in two major phases: the deposition phase and the trial phase. During the deposition phase, a witness is questioned before the trial by both of the attorneys from the prosecuting and defending sides. However, in this phase, the phrasing of questions and the language used by the attorneys can suggest certain false information about the event the person witnessed. Later, when the person is questioned during the trial phase, which occurs before the judge and the jury, this suggested false information can appear in their testimony. Thus, eyewitness testimonies can be manipulated by the types of questions that are asked in the deposition phase. Although we often believe we are in control of our own memories, our memories can be malleable and accepting of false suggested information. This can have detrimental consequences in a trial because, although the information was recorded during the deposition phase, the jury, who ultimately decides the fate of the defendant, only hears what is mentioned in the trial. Ergo, the testimony that the jury hears may contain suggested information from the deposition phase questioning. This phenomenon of the manipulation of memory by implanting false information in questioning is known as suggestibility.

Suggestibility is being influenced by or accepting the statements of others. In instances of suggestibility, these statements are accepted by an individual without the presentation of supporting evidence for the statement. Although suggestibility can occur through a variety of contexts, individuals are more suggestible when they are presented with leading questions. Leading questions, either by form or content, suggest to a person what answer is desired or leads
the person to the desired answer (Loftus & Palmer, 1974). When individuals are questioned with leading questions that imply some bit of information, individuals may then believe something false occurred just based on the suggested information. Loftus and Hoffman (1989) explained this by stating that misleading post-event information given to a person could drastically alter their memory of the event. In contrast, neutral questions are less likely to lead to false perceptions of what really occurred because no suggestion is offered. Leading questions can cause people to develop false memories of details and events. Therefore, one way to measure how suggestible individuals are during questioning is to measure the presence of false memories.

False memories are memories of events that never occurred or are distortions of an event (Roediger & McDermott, 1995). False memories can be elicited by the wording of the questions used to retrieve the memory. In the car crash study by Loftus and Palmer (1974), participants watched a clip of a car accident and were asked to estimate the speed of the cars. The independent variable was the word used in the basic question: “About how fast were the cars going when they X each other?” They found that the word ‘smashed’ elicited the highest estimated speeds (approximately 41 mph), while the word ‘contacted’ produced the lowest estimated speeds (approximately 32 mph). This demonstrates that the wording of the question changed the participants’ memory of the event, such that they estimated different speeds with different words. Another interesting finding was that when the word ‘smashed’ was used, participants remembered broken glass at the scene, which was never presented in the clip. This illustrates how richly false memories can occur with the manipulation of the wording in questions.

Status of the questioner can also influence suggestibility by the false memories. In many studies focusing on suggestibility, children have been labeled as being more suggestible than
adults because they have not yet developed certain cognitive skills. However, in a study by Ceci, Ross, and Toglia (1987), they examined whether or not children were more vulnerable to misleading post-event information than adults. They found that when children were asked by another child, rather than an adult, their susceptibility to misleading information was greatly reduced. Previous studies measuring differences in children and adults’ suggestibility neglected to mention the relationship between the interviewer and the interviewee. Children are often questioned by adults who have higher status over them. The children would then be intimidated by the interviewer’s status and be more suggestible to the leading questions presented. Therefore, when questioned by individuals of similar age and status, suggestibility of adults and children is virtually the same.

Additionally, in a study by Paddock and Terranova (2001) looking at the influence of perceived authority on the recall of autobiographical memories, the researchers had participants recall childhood events that were guided by other people telling the details of them. The participants watched a video clip of an expert or non-expert that guided them through recalling their memories. The expert introduced himself as an esteemed clinical psychologist that specialized in helping individuals recall their memories. The non-expert introduced himself as someone who had gone back to school to study communications. Individuals in the expert condition recalled more false events through the guided visualization than individuals in the non-expert condition. This shows that the experimenter’s status in regards to occupation and expertise in a field could influence the suggestibility of the participants.

Suggestibility is a complex process. Therefore, the status of the questioner is not the only variable that impacts it. Suggestibility could also be influenced by individual differences of the interviewee, particularly related to one’s personality. Children who are more emotional are
generally more suggestible than children who are less emotional (Chae & Ceci, 2005). This emotionality difference could correspond to individual differences in the Big Five model of personality. Neuroticism in the Big Five model is related to one’s emotional stability. Individuals scoring high in Neuroticism tend to be anxious, self-conscious, shy, and prone to mood fluctuations (Engler, 2006). Another study found that suggestibility was significantly correlated with high ratings of Neuroticism (Gudjonsson, 1983). An additional personality variable in the Big Five model that could correspond to suggestibility is Agreeableness. Individuals scoring high in Agreeableness are more compliant to the wishes of others (Engler, 2006). This compliance can be directly applied to suggestibility. Individuals that are more compliant are more vulnerable to leading questions (Richardson & Kelly, 2004).

For our study, we wish to examine if experimenter status and question type have an effect on a participant’s suggestibility as evidenced by false memories. We expect that participants will be more suggestible when asked leading questions than neutral questions because a suggestion will be presented in the leading question. In addition, we predict an interaction between experimenter status and question type in which participants will be more suggestible when asked leading questions by an experimenter of high status than when asked leading questions by an experimenter of lower status. We also want to observe if the personality variables of Agreeableness and Neuroticism may impact suggestibility. We predict that high scores of the personality variables of Agreeableness and Neuroticism will heighten the suggestibility of the participants when being asked leading questions by both experimenters.
Method

Participants

Our participants \((N=46)\) were all undergraduate students at a small, liberal arts college in the Midwest. They received extra credit for their participation in the study. 67.4\% \((n = 31)\) of our participants were female. 32.6\% \((n = 15)\) of our participants were male. Our participants’ age ranged from 18 to 22 years old with the mean age of the participants being 19.6 years old. The ethnicities of our participants were 91.3\% Caucasian \((n = 42)\), 4.3\% African American \((n = 2)\), 2.2\% Asian \((n = 1)\), and 2.2\% multi-racial \((n = 1)\).

Video Clip

The participants watched a 60 second video clip (See Appendix 1). The actors in the video clip were not enrolled students at the college, and therefore were less likely to be known by the participants. The video clip was shown on a multimedia projector with speakers. In the video clip, a woman sits at an office desk and types for a few seconds before a phone rings (See Image 1). As she picks up the phone, a man enters her office. He waits impatiently in front of her desk as the woman proceeds to talk on the phone. After a few moments, the man grabs a pen and notepad from the woman’s desk, writes a note, and extends his hand to give it to her. However, as the woman reaches forward to grab the note, her hand bumps into a coffee mug that sits on the corner of her desk. This causes the mug to fall off of the desk and onto the floor. At the action of the mug falling, the man apologizes and runs out of the room as the woman continues to talk on the phone. In the video clip, the mug is not seen or heard when it hits the floor.
Image 1. The man hands a message to the woman at the desk in the video clip.

Materials

Both of the experimenters used a script throughout the experiment (See Appendices 2 and 3). When the participants came into the experiment room, they signed an informed consent form. Then they watched the video clip and were asked questions about the clip using either the leading question or neutral question script (See Appendix 4). The leading questions suggested some bit of false information about the video clip, while the neutral questions did not. An example of a leading question is “How did the man react when the coffee mug smashed onto the floor?” This suggested that there was damage to the coffee mug. An example of a neutral question is “How did the man react when the coffee mug landed on the floor?” This question did not suggest any damage to the coffee mug. After that questioning phase, participants watched two episodes of the cartoon Doug.
After the cartoon concluded, the participants were questioned again using neutral questions to see if any false memories had been elicited by the previous suggested information in the first questioning phase (See Appendix 5). On the worksheet, there were open-ended questions and questions answered on an 8-point Likert scale. The question we focused on was “On a scale of 1 to 8, with 1 being no damage and 8 being severely damaged, how would you assess the state of the coffee mug at the end of the video clip?” Next, the participants were asked to complete a Big Five personality assessment, which was the abridged version of NEO-PI (Brody & Ehrlichman, 1998; See Appendix 6).

Procedure

Participants signed up for the study on separate sign-up sheets, one having the experimenter name being an undergraduate student and the other being a professor. The low status condition was called “Exploring differences in memory recall” and was posted as being conducted by senior psychology major Eric Sharp. The high status condition was called “Perception of events” and was posted as being conducted by Dr. John Krantz. Participants came into the experiment room and signed an informed consent form stating that the study was examining memory of events. The experimenters read aloud the informed consent form, which introduced the experimenter’s title. For example, in the high status condition, the first sentence of the informed consent form read: “This research is being conducted by Dr. John Krantz, a professor in the Department of Psychology…” In contrast, the first sentence of the informed consent form in the low status condition read: “This research is being conducted by Eric Sharp, a senior psychology major…”
After being set up with their experimenter, the participants were randomly assigned to the neutral question condition or leading question condition. Next, the participants viewed the video clip. After the video clip was shown, the experimenter asked questions pertaining to the details of the clip using either the script with the leading questions or the script with neutral questions (See Appendix 4). These questions were read aloud by the experimenter and the participants wrote their answers on a sheet of paper.

The participants then watched two episodes of the Nickelodeon cartoon *Doug*, which lasted approximately 23 minutes. This was the waiting period before the next set of questioning. This occupied the participants’ minds on something other than the initial video clip. Once they watched the two episodes of *Doug*, they were questioned once again. The participants were handed a worksheet that asked open-ended questions and questions on an 8-point Likert scale about the video clip to observe if false memories have been constructed since the first recall of the video (See Appendix 5). Next, the participants were asked to complete a Big Five personality assessment (Brody & Ehrlichman, 1998; See Appendix 6) and a demographic survey. Finally, the participants were debriefed and dismissed. In our debriefing, we specifically stated that participants may not sign up for the experiment with the other experimenter because they were actually the same study.

Results

To analyze our data, we ran a 2 (status: low versus high) x 2 (question type: neutral versus leading) between-subjects ANOVA for the perceived damage of the coffee mug in the second retrieval phase. We found a significant main effect for status, $F(1,45) = 4.34, p = 0.04$, such that participants in the high status conditions ($M = 3.65$) perceived more damage to the
coffee mug than the participants in the low status conditions ($M = 2.46$). We also found a marginally significant main effect for question type, $F(1, 45) = 3.01, p = 0.09$, such that participants in the leading question conditions ($M = 3.55$) perceived more damage to the coffee mug than participants in the neutral question conditions ($M = 2.56$). There was no significant interaction between status and question type, $F(1, 45) = 0.03, p = 0.86$. (See Figure 1)

We then ran reliability analyses on our personality assessment. We found a Cronbach’s alpha of above 0.65 for each personality variables (See Table 1). To analyze the influence of personality variables on suggestibility, we did median splits on each of the personality variables for our sample. We then ran a 2 (status: low versus high) x 2 (question type: neutral versus leading) x 2 (personality variable: low versus high) between-subjects ANOVA for personality variables Agreeableness and Neuroticism for perceived damage to the coffee mug in the second retrieval phase. These personality variables did not yield any significant findings. However, we then ran Openness to Experience because we thought the openness to new ideas could be related to suggestibility. We did find significant results when Openness to Experience was in the analysis. There was a significant main effect for question type, $F(1,45) = 4.83, p = 0.03$, such that leading questions produced higher perceived damage to the mug ($M = 3.70$) than neutral questions ($M = 2.44$) (See Figure 2). There was also a significant main effect for status, $F(1, 45) = 5.20, p = 0.03$, such that individuals in the high status conditions perceived more damage to the coffee mug ($M = 3.72$) than individuals in the low status conditions ($M = 2.42$) (See Figure 3). There was a significant main effect for Openness to Experience, $F(1,45) = 5.99, p = 0.02$, such that individuals that scored higher than the median in Openness to Experience perceived more damage to the coffee mug ($M = 3.77$) than individuals that scored lower than the median in Openness to Experience ($M = 2.37$). The median split for Openness to Experience for our sample
was 3.8 on the 5-point scale (See Figure 4). We did not find any significant 2-way or 3-way interactions between status, question type, or openness to experience (See Table 2).

*Figure 1.* The perceived damage to the coffee mug across the 4 conditions. Error bars correspond to the 95% Confidence Interval.
Figure 2. The perceived damage to the coffee mug with the neutral and leading question conditions. Error bars correspond to 95% Confidence Interval.

Figure 3. The perceived damage to the coffee mug with the low and high status conditions. Error bars correspond to the 95% Confidence Interval.

Figure 4. The perceived damage to the coffee mug with low and high (based on the median split) openness to experience. Error bars correspond to the 95% Confidence Interval.

Table 1. Cronbach’s alpha for each of the personality variables.

<table>
<thead>
<tr>
<th>Personality Variable</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness to Experience</td>
<td>0.65</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.74</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.78</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>0.77</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.82</td>
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</tbody>
</table>
Table 2. Non-significant interactions between the independent variables in the 2 x 2 x 2 between-subjects ANOVA for the perceived damage to the coffee mug.

<table>
<thead>
<tr>
<th>Interaction</th>
<th>F(1, 45)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question Type x Status</td>
<td>0.02</td>
<td>0.88</td>
</tr>
<tr>
<td>Question Type x Openness to Experience</td>
<td>2.22</td>
<td>0.15</td>
</tr>
<tr>
<td>Status x Openness to Experience</td>
<td>0.02</td>
<td>0.88</td>
</tr>
<tr>
<td>Question Type x Status x Openness to Experience</td>
<td>0.05</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Discussion

In this study, we hypothesized that participants would be more suggestible when asked leading questions by the experimenter with high status. We expected that neutral questions would not be impacted by the status of the experimenter because there was no suggested information. Thus, we expected an interaction between status and question type. In addition, we expected that participants with higher scores for the personality traits of Agreeableness and Neuroticism would have overall higher suggestibility. In our study, we found statistically significant main effects for question type, status, and the Openness to Experience personality trait, but there was not a statistically significant interaction between question type and status, nor were there statistically significant main effects on the personality variables of Agreeableness and Neuroticism. Therefore, our hypotheses predicting an interaction between status and question type and a main effect for Agreeableness and Neuroticism were not supported.
However, we did find statistically significant main effects for question type, status, and the Openness to Experience personality trait. All of these variables were statistically significant, but without an interaction, we believe that they all were acting independently to affect the participants’ perception of damage to the coffee mug. The first main effect that we discovered was between question type and perceived damage to the coffee mug. Previous research has found that small changes in the wording of a question can impact people’s perception of an event. These studies have used a time delay between the retrieval phases ranging from one day to weeks. However, in our study, we used a time delay of 23 minutes, and yet we still observed false memories. This is interesting because our study found false memories much like the Loftus and Palmer (1974) car crash study because perhaps past researchers have underestimated the time needed for false memories to occur.

In the Loftus and Palmer (1974) car crash study, the researchers found that by merely manipulating the wording of a question from ‘contacted’ to ‘smashed’, participants’ estimations of the car crash speeds varied from an average of 31.8 mph to 40.8 mph, respectively. In their discussion section, Loftus and Palmer attempt to explain this change with the following:

“As a framework for discussing these results, we would like to propose that two kinds of information go into one’s memory for some complex occurrence. The first is information gleaned during the perception of the original event; the second is external information supplied after the fact. Over time, information from these two sources may be integrated in such a way that we are unable to tell from which source some specific detail is recalled. All we have is one ‘memory’” (pg. 588).
Although Loftus and Palmer do not specifically address the status of the source, it seems as though their explanation hints that the source of the memory is irrelevant; if information is presented, the information will be independently factored into a person’s memory of an event.

The second main effect that we observed was between experimenter status and perceived damage to the coffee mug. Previous research by Paddock and Terranova (2001) found that participants who were in the expert condition recalled more false events through the guided visualization than participants in the non-expert condition. Although we previously thought that this provided evidence for an interaction between suggestibility and status, after looking again at the study, it is possible that participants in the expert condition were taking the experiment more seriously because of the experimenter’s status, and thus, providing more false childhood memories.

We believe that this main effect toward status could also occur in other instances; consider a driver who is pulled over for going 62 mph in a 55 mph speed limit zone. Then consider two conditions for the police car pulling the driver over: a low status police car (such as a local/town policeman) and a high status police car (such as a state trooper). Although the excess speed remains the same in both conditions, simply by the presence of a higher authority of policeman, we believe the driver might predict more severe repercussions for his or her actions. In the same light, the higher status condition in our study could have produced higher perceived levels of importance and damage to the coffee mug.

The final main effect that we observed was Openness to Experience personality trait influencing the perceived damage to the coffee mug. In the abridged NEO Personality Inventory
that we used, the five traits that corresponded to Openness to Experience were *imaginative, intelligent, original, insightful,* and *clever.* Based on these five traits and the fact that there was no interaction between Openness to Experience and question type or status, we believe that these participants were simply producing more vivid and imaginative memories of the event. Individuals that scored high on Openness to Experience could interpret a dull event of a coffee mug falling off of a desk in a more interesting and exciting way. Therefore, they would perceive more damage to the mug to make the event more interesting.

All of these significant main effects could have occurred because of the schematic nature of our memory. Schemas are organized concepts or patterns of thought. We form schemas because we like to organize the information we receive in the world. Barlett (1932) conducted a study to examine participants’ memories of a story after an extended period of time. As more time elapsed, participants reproduced the story more generally, shorter, and in a more informal style. Participants began to remember the story in a way that fit their pre-existing schema for what a story should be like. Therefore, they used more familiar words and wrote the story informally in a way that fit into their schemas. We can develop schemas of how events should occur and then activate those schemas at a later date. With our questioning, the word ‘smashed’ in the leading question could have activated a schema that produced higher perceived damage to the mug in the video clip. With status, the higher status individual could have activated a schema demanding more attention or importance of the event, which would have produced higher damage to the mug. With Openness to Experience, individuals could activate a schema of a more exciting interpretation of how an event should occur.

Based on our findings, we believe that question type, experimenter status, and Openness to Experience can all influence our perceptions of events – particularly in our assessment of
damage, in this case to the coffee mug. With eyewitness testimonies, we feel that this information can have implications in the realm of a courtroom. First of all, small changes in the wording of questions can alter a person’s memory of an event. With questioning in the deposition phase, word choice could alter the testimony then given in the trial phase. Secondly, the status of an interviewer or lawyer can manipulate a person’s perceived importance or damage in an event. Finally, the witness’ level of the Openness to Experience personality trait can manipulate how colorful or vivid he or she perceives the event to be. With all of these main effects, witnesses could have testimonies that contain false memories. If their testimony differed from the deposition to the trial phase, the witness’ testimony could then be seen as unreliable and invalid to the jury forming the decision. This could ultimately change the jury’s verdict and determine a defendant’s fate.

In addition, our study did contain some limitations. First of all, we had a small, homogeneous sample. This hinders our ability to generalize our results to other populations. Another limitation is that we had a broad manipulation of status that contains many variables. Our main manipulation for status was for occupation with the low status experimenter being a student and the high status experimenter being a professor. However, age could be a confounding variable. The high status experimenter was older than the low status experimenter. We do not know if age could indicate higher status with individuals with the same occupation. Also, both of the experimenters were male. Our results could differ with a female experimenter. Therefore, with these multiple variables within status, it is difficult to tease out which variable could have the most influence on suggestibility, or if the variables’ combined influence is needed to make participants more suggestible.
If we were to run the study in the future, we would like to explore the specific factors that influence status. Although we simply used a high status and a low status condition in our study, we believe that there are many factors that could play into perceived status: appearance/clothing, education, ethnicity, gender, occupation, and perceived authority/power. We would like to explore these factors further as related to suggestibility. In addition, we would also like to investigate the influence of time in our study. Most studies have used a time delay between the retrieval phases lasting a day to weeks. Our study only used a time delay of 23 minutes. Therefore, we are unsure if false memories could intensify if given more time. With status, we are unsure if there is a lasting effect or if status only has an immediate impact on suggestibility. When replicating this study, we will examine how the multiple factors within status and time between retrieval phases can influence suggestibility.
References


Appendix 1: Video Script

[A young woman in a dark sweater sits at a desk. Her hair is up in a tight bun, revealing one gold hoop earring. She types on a computer for a few moments. On her desk sit scattered papers and paperclips, picture frames turned away from the camera, a calendar/date-planner, a phone on the far left corner, a stress ball, and a coffee mug on the near left corner. The phone rings two and a half times before she answers.]

WOMAN: Hello? (pause) No he’s not. Can I take a message?

[A man enters the shot and stands in front of the desk, waiting. The man is wearing jeans, a polo shirt, and a watch.]

WOMAN: Let me check his calendar.

[Woman reaches to a calendar/date-planner on her right. She flips through the pages searching. (The dates are hidden from view.) The man shifts his stance, impatiently.]

WOMAN: Next week it looks like he has a few openings in the afternoon… well… hold on.

[The man checks his watch and looks behind him, as though he is in a hurry for something.]

WOMAN: Uh-huh... (pause) Uh-huh… (pause) Yes I understand. (pause) Mm-hmm…

[Finding a notepad and a pen, the man scribbles something down, returns the pen, and reaches across the desk to put the note on the near left corner (the same corner in which the coffee mug sits). The woman sees the gesture and holds out her left hand for the note.]

WOMAN: Yes I’m still here.
At this line and with both the man and the woman’s hands on the note, the woman twitches, causing both hands to move toward the mug, knocking the mug off of the desk. The woman reacts physically, but says nothing. The man puts his hands out as if to apologize, but then runs out of the room, presumably in search of paper towels.

FADE TO BLACK

Appendix 2: High Status Experiment Script

- **15 minutes PRIOR to posted Experiment Time**

  (Set up room 147. Turn on the projector and insert the DVD. Go ahead and cue up the video; after the video is up, minimize the screen. Make sure the tables and chairs are arranged into rows. On both of the doors entering the classroom, post the sign that informs people to wait until someone comes out to get them.)

- **3 minutes AFTER the posted Experiment Time**

  (Walk out of the classroom and into the Psych lounge.)

  EXPERIMENTER: May I have your attention. For those of you who are here for the (enter posted Experiment Time here) session of the study, “Perception of Events”; thank you so much for waiting. For this study, you will need either a pencil or a pen. At this time, you may go ahead and follow me into the classroom.

  (Open the door and hold it open for the first person, but as soon as the first person reaches the door, let it go and enter the classroom. By doing this, you will be the first person inside the classroom. Then, as people begin to enter, say the following… )

  EXPERIMENTER: Please go ahead and sit in an empty chair somewhere near the front of the classroom.

  (Wait until everyone is seated before continuing on.)

  EXPERIMENTER: Thank you once again for your participation in this study. However, before we begin, I’m going to pass out an informed consent form.

  (At this time, pass out an informed consent form to each participant. Once participants start receiving handouts, please be careful to make sure that each participant is receiving the same green number for each handout. This will help enable us to link memory responses to the demographic survey responses. Once every participant has an informed consent form, continue.)
EXPERIMENTER: Does anyone not have an informed consent form?

(Take a slight pause to make sure everyone has an informed consent form.)

EXPERIMENTER: Good. I’m going to read over the informed consent form. Please read along quietly to yourself as I read aloud.

(Read through the informed consent form, which is typed on the next page.)
Informed Consent Form

This research is being conducted by Dr. John Krantz, a professor in the Department of Psychology at Hanover College. The experiment in which you are asked to participate is designed to measure memory and recall of events. You will watch a brief video clip and then be asked about what transpired. Then, after a short delay, you will be asked to recall this information again. After the second recall, you will be given a personality survey and a demographic survey. Finally, after you have answered all of the questions, you will be debriefed and dismissed.

The entire experiment should take approximately 50 minutes. There are no known risks involved in being in this study, beyond those of everyday life. The information you provide during the experiment is completely anonymous; at no time will your name be associated with the responses you give.

If you have any questions about what you will be doing in this study or about the study itself, please contact Dr. John Krantz at krantzj@hanover.edu or in room 151 of the Science Center.

I acknowledge that I am participating in this study of my own free will. I understand that I may refuse to participate or stop participating at any time. Incomplete participation will not result in credit for participating, but I may complete an alternative assignment of equal time commitment in order to receive credit. If I wish, I will be given a copy of this consent form.

EXPERIMENTER: If you agree to the terms and conditions of the informed consent form, please sign the informed consent form now.

(After a brief pause to let people sign, walk around the classroom and collect each of the informed consent forms. As you pick up each of the informed consent forms, drop off the 8 Question Response Sheet. IMPORTANT: As you drop off the 8 Question Responses Sheets, please make sure that each participant receives the same green number that they had for the previous sheet. Continue after all of the informed consent forms have been picked up.)

EXPERIMENTER: While I was picking up the informed consent forms, you should have received a question response sheet. Does anyone not have a question response sheet?

(Take a slight pause to make sure everyone has a question response sheet.)

EXPERIMENTER: Good. Please flip the question response sheet over. You won’t need it until later. Now, at this time, I am going to play a short video clip. Please watch the clip and then wait for further instructions.

(Cue up the video clip on the projector. Turn off all of the light switches except the switch closest to the door. (This should leave on only the back emergency light and a strip of lights along the wall.) Play the video clip on the projector. Once the video clip has completed, minimize the video once more and turn on all of the lights.)

EXPERIMENTER: At this time, I am going to read through a list of questions. After hearing each question, please write a few sentences of response on the Question Response Sheet that I handed out previously. When you are finished responding to each question, please put your pen or pencil down so that I know you are finished. As I read through the questions, if you need more time to respond, please raise your hand and I will pause to let you finish.
(This is the script for the LEADING questions condition. If this is the LEADING questions condition, please read through the questions on this page. If this is the NEUTRAL questions condition, please skip ahead to the next page.)

(Read each question once. When it appears that everyone has finished writing, continue on to the next question. If someone raises their hand for more time, pause until it appears that they are finished.)

Question Script – Leading

QUESTION 1. What was the woman doing at the beginning of the video?

QUESTION 2. What was the man doing at the beginning of the video?

QUESTION 3. How was the woman dressed?

QUESTION 4. How was the man dressed?

QUESTION 5. In the video clip, there were several items on the woman’s desk. Please list as many as you can remember.

QUESTION 6. What happened to the coffee mug when the woman hit it off of the desk?

QUESTION 7. How did the woman react when the coffee mug smashed onto the floor?

QUESTION 8. How did the man react when the coffee mug smashed onto the floor?

EXPERIMENTER: When you have completed all of the questions, please turn your question response sheet over so that I know that you are finished with this step.

(Once everyone has turned over their question response sheet, continue on.)

EXPERIMENTER: I am now going to collect your question response sheets. As I pick up your question response sheet, I will be dropping off another sheet of paper. Please leave this piece of paper face down and in front of you until you are asked to turn it over.

(As you pick up the Question Response Sheets, drop off a demographic survey face down to each participant. Make sure that they receive the same green number.)

(Once all of the Question Response Sheets are passed out and all of the demographic surveys have been picked up, insert the Doug DVD into the DVD player.)

EXPERIMENTER: At this time we are going to watch two episodes of the Nickelodeon Television Show “DOUG.” Please watch the episode quietly and wait for further instructions.

(Turn off all of the lights except for the switch closest to the door. Once the menu screen comes up, select “Play All.” Participants will watch the first 2 episodes (approximately 23 minutes).)
(This is the script for the NEUTRAL questions condition. If this is the NEUTRAL questions condition, please read through the questions on this page. If this is the LEADING questions condition, please skip ahead to the next page.)

(Read each question once. When it appears that everyone has finished writing, continue on to the next question. If someone raises their hand for more time, pause until it appears that they are finished.)

Question Script – Neutral

QUESTION 1. What was the woman doing at the beginning of the video?

QUESTION 2. What was the man doing at the beginning of the video?

QUESTION 3. How was the woman dressed?

QUESTION 4. How was the man dressed?

QUESTION 5. In the video clip, there were several items on the woman’s desk. Please list as many as you can remember.

QUESTION 6. What happened to the coffee mug when it was knocked off of the desk?

QUESTION 7. How did the woman react when the coffee mug landed on the floor?

QUESTION 8. How did the man react when the coffee mug landed on the floor?

EXPERIMENTER: When you have completed all of the questions, please turn your question response sheet over so that I know that you are finished with this step.

(Once everyone has turned over their question response sheet, continue on.)

EXPERIMENTER: I am now going to collect your question response sheets. As I pick up your question response sheet, I will be dropping off another sheet of paper. Please leave this piece of paper face down and in front of you until you are asked to turn it over.

(As you pick up the Question Response Sheets, drop off a demographic survey face down to each participant. Make sure that they receive the same green number.)

(Once all of the Question Response Sheets are passed out and all of the demographic surveys have been picked up, insert the Doug DVD into the DVD player.)

EXPERIMENTER: At this time we are going to watch two episodes of the Nickelodeon Television Show “DOUG.” Please watch the episode quietly and wait for further instructions.

(Turn off all of the lights except for the switch closest to the door. Once the menu screen comes up, select “Play All.” Participants will watch the first 2 episodes (approximately 23 minutes.))
(Once the credits for the second episode run (approximately 23 minutes into the DVD) go ahead and turn off the DVD and minimize the media player. Turn on all of the lights.)

EXPERIMENTER: At this time, go ahead and turn the piece of paper I handed out earlier face up, but please do not write anything on it yet. I am now going to pass out a questionnaire about the first video clip we watched at the beginning of this study. To the best of your ability, please answer the questions on the questionnaire. Once you are done with this step, please turn your paper over so that I know you are finished.

(Pass out a post-delay questionnaire to each participant. Please make sure that the number on the questionnaire matches the number on the demographic survey sitting in front of them. Once everyone appears to be finished with the post-delay recall questionnaire, continue.)

EXPERIMENTER: Does anyone need more time?

(If anyone raises his or her hand, allow more time. If not, continue.)

EXPERIMENTER: I am now going to pick up each of your completed questionnaires. As I pick up your responses, I am going to give you a 25-question survey. Please answer the questions about yourself to the best of your ability. Once you have completed this 25-question survey, you may go ahead and fill out the demographic survey sitting in front of you. When you have completed both the 25-question survey and the demographic survey, please turn both pieces of paper over so that I know you are finished.

(Pass out a 25-question personality survey to each participant. Please make sure that the number on the survey matches the number on the demographic survey sitting in front of them. Once everyone appears to be finished with the personality survey and the demographic survey, continue.)

EXPERIMENTER: Once you are finished, I will come around and collect your completed surveys. Please stay seated until you are given further instructions.

(Collect the surveys as they are completed. Once you have collected everyone’s surveys, pass out a debriefing form to each of the participants and continue.)

EXPERIMENTER: I have passed out a debriefing form to each of you. Please read along quietly to yourself as I read aloud.

(Read the Debriefing Form.)

Debriefing Form

The study in which you just participated was designed to measure the effect of experimenter status on suggestibility. In this study, suggestibility was measured by the presence of false memories in the responses of the second questioning period. You watched a video clip of two people in an office building in which a coffee mug fell off of a desk and onto the floor. You were then asked about that video clip by an experimenter who was using a script of questions. Although you were only subjected to one script, there were actually two scripts used in this study: a neutral questions condition and a leading questions condition. The leading questions were used to elicit the condition of suggestibility.
Because of the fact that our study was designed to study the effect of experimenter status on suggestibility, this study also had two conditions for the experimenter. You were either questioned by an experimenter of high status (a college professor) or an experimenter of low status (a senior psychology major). We expected to find that participants would be more suggestible when questioned by an experimenter of high status versus being questioned by an experimenter of lower status. Previous research has found that participants who were questioned by experimenters of higher status were more suggestible than those questioned by experimenters of lower status.

Although there were two signup sheets posted, one for the research of Eric Sharp and one for the research of Dr. John Krantz, these are both actually for the same study which is being conducted by senior psychology majors Lindsay Marsh and Eric Sharp. Thus, whether you participated in Eric Sharp’s or Dr. John Krantz’s study, we ask that you DO NOT sign up for the other study.

Please do not discuss this study with other potential participants until the semester is over. If people know what we’re testing before the study begins, they may respond differently, jeopardizing our results. If you have any questions or concerns, please feel free to contact the researchers at marshall1@hanover.edu, sharpe11@hanover.edu, or to contact our advisor John Krantz at kranttzj@hanover.edu. You may also contact Bill Altermatt, the chair of the Institutional Review Board at altermattw@hanover.edu. Thank you for your time.

EXPERIMENTER: On behalf of Lindsay and Eric, I want to thank you once again for your participation in this study. If you have signed up for Eric Sharp’s study, “Exploring differences in memory recall,” please do not show up for the time you have signed for. Although we ask that you do not show up for his study, we ask that you keep your name on the sign-up sheet. In addition, if you have any friends who signed up with you, please don’t let them know why you’re skipping the study. If they ask, please just make a comment to the effect that you are busy and can’t make it. Do any of you have any questions or concerns?

(Answer any questions asked to the best of your ability.)

EXPERIMENTER: Once again, thank you very much for your participation. If any of you have extra credit forms, please bring them to me and I will sign them. Other than that, you are all free to go.
Appendix 3: Low Status Experiment Script

• **15 minutes PRIOR to posted Experiment Time**

(Set up room 147. Turn on the projector and insert the DVD. Go ahead and cue up the video; after the video is up, minimize the screen. Make sure the tables and chairs are arranged into rows. On both of the doors entering the classroom, post the sign that informs people to wait until someone comes out to get them.)

• **3 minutes AFTER the posted Experiment Time**

(Walk out of the classroom and into the Psych lounge.)

EXPERIMENTER: May I have your attention. For those of you who are here for the (enter posted Experiment Time here) session of the study, “Exploring differences in memory recall”; thank you so much for waiting. For this study, you will need either a pencil or a pen. At this time, you may go ahead and follow me into the classroom.

(Open the door and hold it open for the first person, but as soon as the first person reaches the door, let it go and enter the classroom. By doing this, you will be the first person inside the classroom. Then, as people begin to enter, say the following…)  

EXPERIMENTER: Please go ahead and sit in an empty chair somewhere near the front of the classroom.

(Wait until everyone is seated before continuing on.)

EXPERIMENTER: Thank you once again for your participation in this study. However, before we begin, I’m going to pass out an informed consent form.

(At this time, pass out an informed consent form to each participant. Once participants start receiving handouts, please be careful to make sure that each participant is receiving the same green number for each handout. This will help enable us to link memory responses to the demographic survey responses. Once every participant has an informed consent form, continue.)

EXPERIMENTER: Does anyone not have an informed consent form?

(Take a slight pause to make sure everyone has an informed consent form.)

EXPERIMENTER: Good. I’m going to read over the informed consent form. Please read along quietly to yourself as I read aloud.

(Read through the informed consent form, which is typed on the next page.)
Informed Consent Form

This research is being conducted by Eric Sharp, a senior psychology major at Hanover College. The experiment in which you are asked to participate is designed to measure memory and recall of events. You will watch a brief video clip and then be asked about what transpired. Then, after a short delay, you will be asked to recall this information again. After the second recall, you will be given a personality survey and a demographic survey. Finally, after you have answered all of the questions, you will be debriefed and dismissed.

The entire experiment should take approximately 50 minutes. There are no known risks involved in being in this study, beyond those of everyday life. The information you provide during the experiment is completely anonymous; at no time will your name be associated with the responses you give.

If you have any questions about what you will be doing in this study or about the study itself, please contact Eric Sharp at sharpe11@hanover.edu or Dr. John Krantz at krantzj@hanover.edu or in room 151 of the Science Center.

I acknowledge that I am participating in this study of my own free will. I understand that I may refuse to participate or stop participating at any time. Incomplete participation will not result in credit for participating, but I may complete an alternative assignment of equal time commitment in order to receive credit. If I wish, I will be given a copy of this consent form.

EXPERIMENTER: If you agree to the terms and conditions of the informed consent form, please sign the informed consent form now.

(After a brief pause to let people sign, walk around the classroom and collect each of the informed consent forms. As you pick up each of the informed consent forms, drop off the 8 Question Response Sheet. IMPORTANT: As you drop off the 8 Question Responses Sheets, please make sure that each participant receives the same green number that they had for the previous sheet. Continue after all of the informed consent forms have been picked up.)

EXPERIMENTER: While I was picking up the informed consent forms, you should have received a question response sheet. Does anyone not have a question response sheet?

(Take a slight pause to make sure everyone has a question response sheet.)

EXPERIMENTER: Good. Please flip the question response sheet over. You won’t need it until later. Now, at this time, I am going to play a short video clip. Please watch the clip and then wait for further instructions.

(Cue up the video clip on the projector. Turn off all of the light switches except the switch closest to the door. (This should leave on only the back emergency light and a strip of lights along the wall.) Play the video clip on the projector. Once the video clip has completed, minimize the video once more and turn on all of the lights.)

EXPERIMENTER: At this time, I am going to read through a list of questions. After hearing each question, please write a few sentences of response on the Question Response Sheet that I handed out previously. When you are finished responding to each question, please put your pen or pencils down so that I know you are finished. As I read through the questions, if you need more time to respond, please raise your hand and I will pause to let you finish.
(This is the script for the LEADING questions condition. If this is the LEADING questions condition, please read through the questions on this page. If this is the NEUTRAL questions condition, please skip ahead to the next page.)

(Read each question once. When it appears that everyone has finished writing, continue on to the next question. If someone raises their hand for more time, pause until it appears that they are finished.)

Question Script – Leading

QUESTION 1. What was the woman doing at the beginning of the video?

QUESTION 2. What was the man doing at the beginning of the video?

QUESTION 3. How was the woman dressed?

QUESTION 4. How was the man dressed?

QUESTION 5. In the video clip, there were several items on the woman’s desk. Please list as many as you can remember.

QUESTION 6. What happened to the coffee mug when the woman hit it off of the desk?

QUESTION 7. How did the woman react when the coffee mug smashed onto the floor?

QUESTION 8. How did the man react when the coffee mug smashed onto the floor?

EXPERIMENTER: When you have completed all of the questions, please turn your question response sheet over so that I know that you are finished with this step.

(Once everyone has turned over their question response sheet, continue on.)

EXPERIMENTER: I am now going to collect your question response sheets. As I pick up your question response sheet, I will be dropping off another sheet of paper. Please leave this piece of paper face down and in front of you until you are asked to turn it over.

(As you pick up the Question Response Sheets, drop off a demographic survey face down to each participant. Make sure that they receive the same green number.)

(Once all of the Question Response Sheets are passed out and all of the demographic surveys have been picked up, insert the Doug DVD into the DVD player.)

EXPERIMENTER: At this time we are going to watch two episodes of the Nickelodeon Television Show “DOUG.” Please watch the episode quietly and wait for further instructions.

(Turn off all of the lights except for the switch closest to the door. Once the menu screen comes up, select “Play All.” Participants will watch the first 2 episodes (approximately 23 minutes.))
Question Script – Neutral

QUESTION 1. What was the woman doing at the beginning of the video?

QUESTION 2. What was the man doing at the beginning of the video?

QUESTION 3. How was the woman dressed?

QUESTION 4. How was the man dressed?

QUESTION 5. In the video clip, there were several items on the woman’s desk. Please list as many as you can remember.

QUESTION 6. What happened to the coffee mug when it was knocked off of the desk?

QUESTION 7. How did the woman react when the coffee mug landed on the floor?

QUESTION 8. How did the man react when the coffee mug landed on the floor?

EXPERIMENTER: When you have completed all of the questions, please turn your question response sheet over so that I know that you are finished with this step.

(Once everyone has turned over their question response sheet, continue on.)

EXPERIMENTER: I am now going to collect your question response sheets. As I pick up your question response sheet, I will be dropping off another sheet of paper. Please leave this piece of paper face down and in front of you until you are asked to turn it over.

(As you pick up the Question Response Sheets, drop off a demographic survey face down to each participant. Make sure that they receive the same green number.)

(Once all of the Question Response Sheets are passed out and all of the demographic surveys have been picked up, insert the Doug DVD into the DVD player.)

EXPERIMENTER: At this time we are going to watch two episodes of the Nickelodeon Television Show “DOUG.” Please watch the episode quietly and wait for further instructions.

(Turn off all of the lights except for the switch closest to the door. Once the menu screen comes up, select “Play All.” Participants will watch the first 2 episodes (approximately 23 minutes.).)
(Once the credits for the second episode run (approximately 23 minutes into the DVD) go ahead and turn off the DVD and minimize the media player. Turn on all of the lights.)

**EXPERIMENTER:** At this time, go ahead and turn the piece of paper I handed out earlier face up, but please do not write anything on it yet. I am now going to pass out a questionnaire about the first video clip we watched at the beginning of this study. To the best of your ability, please answer the questions on the questionnaire. Once you are done with this step, please turn your paper over so that I know you are finished.

(Pass out a post-delay questionnaire to each participant. Please make sure that the number on the questionnaire matches the number on the demographic survey sitting in front of them. Once everyone appears to be finished with the post-delay recall questionnaire, continue.)

**EXPERIMENTER:** Does anyone need more time?

(If anyone raises his or her hand, allow more time. If not, continue.)

**EXPERIMENTER:** I am now going to pick up each of your completed questionnaires. As I pick up your responses, I am going to give you a 25-question survey. Please answer the questions about yourself to the best of your ability. Once you have completed this 25-question survey, you may go ahead and fill out the demographic survey sitting in front of you. When you have completed both the 25-question survey and the demographic survey, please turn both pieces of paper over so that I know you are finished.

(Pass out a 25-question personality survey to each participant. Please make sure that the number on the survey matches the number on the demographic survey sitting in front of them. Once everyone appears to be finished with the personality survey and the demographic survey, continue.)

**EXPERIMENTER:** Once you are finished, I will come around and collect your completed surveys. Please stay seated until you are given further instructions.

(Collect the surveys as they are completed. Once you have collected everyone’s surveys, pass out a debriefing form to each of the participants and continue.)

**EXPERIMENTER:** I have passed out a debriefing form to each of you. Please read along quietly to yourself as I read aloud.

(Read the Debriefing Form.)

**Debriefing Form**

The study in which you just participated was designed to measure the effect of experimenter status on suggestibility. In this study, suggestibility was measured by the presence of false memories in the responses of the second questioning period. You watched a video clip of two people in an office building in which a coffee mug fell off of a desk and onto the floor. You were then asked about that video clip by an experimenter who was using a script of questions. Although you were only subjected to one script, there were actually two scripts used in this study: a neutral questions condition and a leading questions condition. The leading questions were used to elicit the condition of suggestibility.
Because of the fact that our study was designed to study the effect of experimenter status on suggestibility, this study also had two conditions for the experimenter. You were either questioned by an experimenter of high status (a college professor) or an experimenter of low status (a senior psychology major). We expected to find that participants would be more suggestible when questioned by an experimenter of high status versus being questioned by an experimenter of lower status. Previous research has found that participants who were questioned by experimenters of higher status were more suggestible than those questioned by experimenters of lower status.

Although there were two signup sheets posted, one for the research of Eric Sharp and one for the research of Dr. John Krantz, these are both actually for the same study which is being conducted by senior psychology majors Lindsay Marsh and Eric Sharp. Thus, whether you participated in Eric Sharp’s or Dr. John Krantz’s study, we ask that you DO NOT sign up for the other study.

Please do not discuss this study with other potential participants until the semester is over. If people know what we’re testing before the study begins, they may respond differently, jeopardizing our results. If you have any questions or concerns, please feel free to contact the researchers at marshall1@hanover.edu, sharpe11@hanover.edu, or to contact our advisor John Krantz at krantzj@hanover.edu. You may also contact Bill Altermatt, the chair of the Institutional Review Board at altermattw@hanover.edu. Thank you for your time.

EXPERIMENTER: On behalf of Lindsay and Eric, I want to thank you once again for your participation in this study. If you have signed up for Eric Sharp’s study, “Exploring differences in memory recall,” please do not show up for the time you have signed for. Although we ask that you do not show up for his study, we ask that you keep your name on the sign-up sheet. In addition, if you have any friends who signed up with you, please don’t let them know why you’re skipping the study. If they ask, please just make a comment to the effect that you are busy and can’t make it. Do any of you have any questions or concerns?

(Answer any questions asked to the best of your ability.)

EXPERIMENTER: Once again, thank you very much for your participation. If any of you have extra credit forms, please bring them to me and I will sign them. Other than that, you are all free to go.
Appendix 4

**Question Script – Neutral**

What was the woman doing at the beginning of the video?

What was the man doing at the beginning of the video?

How was the woman dressed?

How was the man dressed?

In the video clip, there were several items on the woman’s desk. Please list as many as you can remember.

What happened to the mug when it was knocked off of the desk?

How did the woman react when the mug landed on the floor?

How did the man react when the mug landed on the floor?

**Question Script – Leading**

What was the woman doing at the beginning of the video?

What was the man doing at the beginning of the video?

How was the woman dressed?

How was the man dressed?

In the video clip, there were several items on the woman’s desk. Please list as many as you can remember.

What happened to the mug when the woman hit it off of the desk?

How did the woman react when the mug smashed onto the floor?

How did the man react when the mug smashed onto the floor?
Appendix 5

How many people were involved in the video clip?

How was the woman dressed?

How was the man dressed?

Briefly describe what happened in the video.

On a scale of 1 – 8, with 1 being no damage and 8 being severely damaged, how would you assess the state of the coffee mug at the end of the video clip?

1  2  3  4  5  6  7  8

On a scale of 1 – 8, with 1 being very happy and 8 being very angry, how did the woman seem to feel at the end of the video?

1  2  3  4  5  6  7  8

On a scale of 1 – 8, with 1 being very happy and 8 being very angry, how did the man seem to feel at the end of the video?

1  2  3  4  5  6  7  8

On a scale of 1 – 8, with 1 being not at all and 8 being completely, how responsible was the woman for what happened to the coffee mug?

1  2  3  4  5  6  7  8

On a scale of 1 – 8, with 1 being not at all and 8 being completely, how responsible was the man for what happened to the coffee mug?

1  2  3  4  5  6  7  8

On a scale of 1 – 8, with 1 being not at all and 8 being completely, how confident do you feel in your memory of the event?

1  2  3  4  5  6  7  8
Appendix 6

Big Five Test

Indicate how true each of the following terms is in describing you:

1 = Not at all true of me; I am almost never this way
2 = Mostly not true of me; I am rarely this way
3 = Neither true nor untrue of me, or I can’t decide
4 = Somewhat true of me; I am sometimes this way
5 = Very true of me; I am very often this way

1. ______ imaginative
2. ______ organized
3. ______ talkative
4. ______ sympathetic
5. ______ tense
6. ______ intelligent
7. ______ thorough
8. ______ assertive
9. ______ kind
10. ______ anxious
11. ______ original
12. ______ efficient
13. ______ active
14. ______ soft-hearted
15. ______ nervous
16. ______ insightful
17. ______ responsible
18. ______ energetic
19. ______ warm
20. _____ worrying
21. _____ clever
22. _____ practical
23. _____ outgoing
24. _____ generous
25. _____ self-pitying