Differences in Interpersonal Memories for Real and Imagined Events

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Introduction

Sometimes it can be difficult to discern between a friends' honest remarks and their intentional or unintentional fabrications. Even our own memories can convolute facets of our everyday experiences, dreams, and external anecdotes. Reality monitoring is the process of attributing memories—either one's own or another person's—to internal or external origins (Johnson & Raye, 1981). This framework can help people distinguish between true memories and inventions of the mind. Previous research has demonstrated that memories for perceived and imagined events contain different qualitative characteristics (Johnson et al., 1998). For example, memories for perceived events generally include more sensory, spatial, and emotional information, while memories for imagined events tend to highlight cognitive processes. These differences were especially prominent when people who were asked to judge whether a memory was perceived or imagined were not suspicious of the information being presented to them, as high suspicion seemed to make more detailed accounts less believable (Johnson et al., 1998). There are important applications for these findings, including the potential to check the veracity of eye-witness testimonies in the courtroom.

In this study, we employed the Judgment of Memory Characteristics Questionnaire (JMCQ; Sporer & Kuepper, 1995) as a comprehensive framework for rating the descriptions of people's memories for perceived and imagined events. The original MCQ contains nine categories, including clarity/vividness, sensory information, spatial information, indications of time, emotions and feelings, story reconstructability, realism, and cognitive operations, which were later divided into over 40 subscales. The JMCQ has been used in the past to study the characteristics of participants' confirmed childhood memories compared to memories that were suggested to them in a series of cognitive interviews (Short & Bodner, 2010). In this study, we initially collected memories for real and imagined events, later transcribed by research assistants, which were then coded using the JMCQ. The events were directly manipulated by the experimenters by either showing the participants a video or having them envision a similar scene. The results reported herein discuss the obtained differences between real and imagined memories as well as possible effects these differences might have on people's reality monitoring judgment of the origin of their own (or another's) memories.

Methods

- The participants for this study consisted of forty undergraduate students at the University of Michigan-Dearborn who were enrolled in an introductory psychology course.
- There were eight possible events that participants were asked to witness or imagine. Each participant would imagine four events and watch videos depicting four different events. These events included everyday activities like watching a children's soccer game or re-potting a plant. Overall, twenty people imagined each event and twenty people observed each event.
- After a brief delay to explain the instructions, participants were asked to orally detail their memories for each event that they either saw or imagined. Although some memories were too short or too verbose to use in the experiment, there was an equal amount of deletion among the different memories and conditions.
- The recordings of the participants' memories were later coded using criteria from the Judgment of Memory Characteristics Questionnaire (JMCQ). The JMCQ has eight different dimensions: clarity/vividness, sensory information, spatial information, indications of time, emotions and feelings, story reconstructibility, realism, and cognitive operations. Each of these dimensions is further divided into three to seven different subscales (see results section for details).
- Assumptions have been made about the difference between the characteristics of real and imagined memories from other research. By coding the details of participants' controlled memories in this study, we were looking to confirm those assumptions.

Results

* indicates statistically significant comparison ($p < .05$)

Discussion

Our results generally reflected the trends suggested by previous studies in the field of reality monitoring. There were many differences between the content of our participants' real and imagined memories. For example, the real memories scored higher on numerous JMCQ dimensions including quantity of visual details, colors, sounds, spatial arrangement of persons, duration of the event, complexity, factual consequences, doubts, likelihood, extraordinariness, believability, and repeated thinking about the event. The imagined memories, on the other hand, contained more references to the time, year, season, day, and hour of the event, age of the storyteller, tone (evaluation) of the event, remembered feelings, type of feelings, intensity of the feelings at the time of the event, implications regarding personality, description of subsequent events, realism, incredible details, and thoughts.

Although most of our results were not surprising, there were a few categories that contradicted what has been suggested by previous research. The most glaring discrepancy was regarding the inclusion of significantly more emotional details in the imagined memories than in the real memories. In their 1998 study on deception in reality monitoring, Johnson et al. noted that real memories tended to have more emotional content than imagined memories. Because we purposefully chose emotionally neutral events, and correspondingly neutral videos, our participants who viewed the videos did not have many emotional details to include in their memories for those seen events. However, we did not ask the participants to imagine the events in a neutral way—therefore, they might have taken information from their past experiences and imaginations to create an emotionally charged memory. For example, while some people viewed a peaceful visit to a dentist's office, others may have imagined a painful experience complete with scraping, drilling, and pulling.

Other discrepancies were minor in comparison. In some of the JMCQ categories, certain subcategories were underrepresented in either type of memory or appeared in a way that contradicted the information discovered by other studies. However, these inconsistencies could also have been a result of our methods or the events/videos that we selected. To avoid these potential errors in the future, it would be preferable to incorporate our participants' actual memories into the experiment, instead of fabricating memories via videos in the lab. This method would produce the most externally valid results, but would likely lead to other problems regarding the accuracy of the participants' memories, how far in the past the events occurred, and the similarity of experiences between participants.

Despite all of this, our study should prove useful in future research related to reality monitoring. By knowing what details are present in real memories compared to those in imagined memories, researchers can analyze participants' ability to distinguish between real and imagined memories. The Human Learning and Creativity Lab at the University of Michigan – Dearborn has already used this information in another study to determine the effects that suspected deception can have on people's ability to accurately determine whether a memory was real or imagined (see Suspected Deception Impairs Interpersonal Reality Monitoring). This research has implications not only for distinguishing between real and imagined memories in people's everyday lives, but also for evaluating the veracity of eyewitness testimony and the jury's reaction to such testimony when they suspect the witness of lying to them.

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