Is human memory for the details of past events reliably accurate?

Memory is an essential component of the intelligence of humans. Whether it be to determine the anomaly of an environment or remember the face of another person conversed with, memory is unrestricted in its uses. Although the human memory is discerning, not all information can be accurately recalled over time. Several factors such as similar encounters and emotion present can morph the accuracy of the recalled event. This essay will argue that human memory is not an accurate means for detailing past events. Evidence supporting the thesis examines how particular emotions and high-stress levels can provoke inaccurate and misleading memories. Levine's (1997) study investigated the effects of happiness, sadness, and anger for different types of information in a narrative. Results of the study found that positive emotions were superior in recall when compared to the negative emotion group. In comparison, Morgan's (2013) study investigated the effects of misinformation on memory for recent, high-stress situations. The study varying levels of misinformation exposure on human memory. Both articles suggest that accurate memory recall is unreliable through the exposure of stress and emotion.

C. A Morgan investigated whether human memory for high-stress situations recently experienced could be manipulated by exposure to misinformation. The study recruited 800 U. S Navy participants, consisting of 649 males and 192 females. The study used the exposure to misinformation as the independent variable. The dependent variable was the impact of misinformation on the memory of the U. S Navy participants. There were 4 conditions to test the independent variable. These consisted of no misinformation, misinformation questionnaire, photographic misinformation,

and video misinformation. The experimental outline tasked participants to be assigned a group, based on the previously stated categories. The participants were then interrogated by an unknown person and presented a questionnaire based on the transpired events. Prior to the investigation, participants attended a survival school experiment. The results presented showed that the groups who were exposed to misinformation, in all forms, had greater accounts of false eyewitness identification. This was compared to the no misinformation group who presented results of negligible false eyewitness identification. The study concluded the findings by suggesting that human memory is malleable when introduced to misinformation. This conclusion, stated by C. A Morgan, supports the thesis that human memory is not an accurate means for detailing past events.

L. J Levine investigated the effects of presenting students letter grades A or D on a previously completed quiz, and participating subjects in a separate hear and recall narrative activity. The study recruited 263 students from the University of California. These students consisted of 81 males and 182 females. Four groups were derived from the quiz results section. 22% received an A letter grade, 48% received a D letter grade, 27% did not receive a mark for not being present and 3% did not report their quiz grade. Immediately after receiving a grade, participants were asked to complete a separate and voluntary study. This study tasked participants to listen to an account of a student's first term in college. After the account was listened to, participants were tasked with answering questions about unrelated topics such as names of U. S states and world countries. After four minutes elapsed, the participants were asked to recall as much detailed information

as possible regarding the account of the college student. When this section of the study was completed, the participants were then asked a set of questions about the emotions they felt before the unrelated study and to choose an emotion that best described how they were feeling. The list consisted of emotions; happy, sad, angry, fearful, okay/neutral and other. This was coupled with how intensely they felt the emotion using a 5-point scale. At the end of the questioning, participants were asked to indicate the grade they received. The independent variable of the study was emotion felt after the quiz result was revealed to the participants. The dependent variable was the accuracy of the narrative recall. The results revealed happiness had a facilitative effect on recall, whilst anger and sadness were associated with the recall of information regarding outcomes and goals. L. J Levine concluded the study by suggesting that the findings indicate specific emotions differ in their effects on memory. Levine also suggests that memory can be unconsciously affected by these factors and therefore create inaccuracy upon recall. This conclusion supports the thesis that human memory is not an accurate means for detailing past events.

C. A Morgan's experimental design consisted of many strengths and limitations. One of the study's strengths is the number of independent variables. Through using four conditions to test the memory of the participants, accuracy and reliability were achieved. Another strength of the study is the selection criteria for participants to answer when asked about the interrogator. By using a set amount of answers relating to the way the participants characterized the interrogator, the accuracy of the study was improved. This is evident as participants could more accurately depict the

interrogator without being perplexed. The strengths listed provide legitimacy for C. A Morgan's conclusion, which establishes human memory is not an accurate means for detailing past events.

C. A Morgan's study is composed of several limitations. One of the major limitations of the study is how the participants were separated into their categories, this opens the possibility of bias in certain groups, which can hinder the reliability of the results. Another limitation is the lack of ability to register the impact of misinformation, for a given participant, across all categories. Therefore, if a participant responded greater to one form of misinformation compared to another, the study could not identify this. The limitations stated above incline a measure for inaccurate results, which in turn, affects the legitimacy of the study. By correlating to illegitimacy, these limitations do not support the essay's thesis that human memory is not an accurate means for detailing past events.

L. J Levine's experimental design consisted of many strengths and limitations. Being a single-blind study, the results of the experiment a fortified by the knowledge that any placebo effect cannot be achieved. The process of indicating that the quiz was apart of course grading, inflicted real emotion. Another strength within the study is the foundation through the use of an intermediate, unrelated questioning section. By incorporating a section where participants are questioned about common knowledge related topics, any short-term memory about the narrative in question would drastically lower. The most bearing strength of the study is L. J Levine's coordination of received grades for participants. By distributing 22% of marks as A's and 48% of marks as D's. The study allowed for a more diverse range of

responses for the negative emotion groups, which inheritably has more selectable options. These strengths support the accuracy of L. J Levine's conclusion, which implies human memory is not an accurate means for detailing past events.

L. J Levine's study also presents many limitations throughout. One of the limitations is the timeline of the study. The study enlisted each participant to receive a letter grade two days after participants completed the quiz. This opens the possibility for external variables to affects the accuracy of the results as each participant could have been influenced by different life factors. Another limitation is found through the method in which the study organized groups. The article does not present any information regarding the process in which participants are divided into groups. This opens the possibility for bias as there was one study member responsible for coordinating the organization of participants, Furthermore, the limitations stated do not support the thesis that human memory is not an accurate means for detailing past events.

The two-empirical study's analysed investigated whether human memory could be used as an accurate means for detailing past events. Each study focused on different factors that could affect the accuracy of recall. C. A Morgan's study discovered that being exposed to misinformation after a stressful event can impact on the accuracy of recall when compared to no misinformation. Whereas L. J Levine's study demonstrated that negative emotion, triggered by a grade received can induce category specific recall compared to happiness which saw greater, overall recall. These two studies cumulatively support the motion that human memory is influenced by the

environment that it is formed and that it is malleable to the exposure of misinformation and emotion. Therefore, it can be stated that these factors legitimize the essay's thesis that human memory is not an accurate means for detailing past events. To provide more meaningful and accurate results, both articles need to reduce the limitations present. Both articles could improve by providing information regarding how participants were separated into groups. L. J Levine's study could be improved by reducing the time taken between study sections. By removing these limitations, both studies would inherently become more legitimate, thereby strengthening the thesis that human memory is not an accurate means for detailing past events.

References:

Morgan, C., Southwick, S., Steffian, G., Hazlett, G., & Loftus, E. (2013). Misinformation can influence memory for recently experienced, highly stressful events. International Journal of Law and Psychiatry(36), 11-17.

Levine, L. J., Burgess, S. L. (1997). Beyond General Arousal: Effects of Specific Emotions on Memory. Social Cognition (15), 157-181