CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s)
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Project Number
S0311

Project Title
Accuracy of Human Memory with Suggestive Input

Abstract

Objectives/Goals
By using misleading or suggestive statements and questions in this experiment, I have been able to demonstrate effects on human memory when participants try to recall events and images from a previously viewed video, narrative and photo.The purpose of this study was to determine the impact of leading questions and misleading narrative associated with a participants viewed images.

Methods/Materials
Intel Dual Core 3.2 GHz Pentium Computer, Microsoft Internet Information Server, Microsoft Access,Microsoft Excel. Experiments were conducted online. Experiment Video consisted of a brief introduction, a news video, a supportive or suggestive narrative and a 30 True/False statement questionnaire. There were three control groups. All answers were compiled into a data base for later analysis. Analysis was performed using the Microsoft Access and Excel programs. The second experiment was a photo and 20 questions.

Results
My analysis shows that memory is 5% to 10% less accurate when confronted with suggestive or misleading questions that are coupled with credible video and supportive or suggestive narrative text. Memory of video events was most accurate when there was no narrative text influence or retroactive interference. The overall accuracy rate of Experiment Video was: group A - 69.02%, group B - 67.53%, group C - 75.11%. In Experiment Photo the overall accuracy rate was 69.49%.All groups scored higher accuracy levels when answering suggestive questions!

Conclusions/Discussion
People had an ability to filter through the suggestive information so much as to more successfully answer the suggestive questions correctly than the non-suggestive questions. When confronted with suggestive input, human memory may be erroneously reconstructed. The credibility of a source affects accuracy levels. Suggestive narratives increase the misinformation effect. Recall of visual events may be less likely to be distorted than written stimulus. Eliminating misleading or suggestive information, credibility filtration, is more successful than accurately recalling non-suggestive credible information. Supportive narrative text accompanying a video image did not enhance the human memory to be more accurate as I expected. Human memory is most accurate with no other outside influences or retroactive interference.

Summary Statement
How accurate is human memory when confronted with suggestive input?

Help Received
Ethics advise Don Jones , BioMedical Ethics Professor, Drew University & Dr. Stan Bursten, Psychology Instructor at SBCC, computer programming advice from my father John Jones