Name(s)

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Project Number

S0402

Project Title

Retain to Recall: Which Types of Images Do You Remember in Real-Life Conditions?

Abstract

Objectives/Goals

The objective of this project was to determine which types (categories) of images, excluding those of personal significance, people remembered and the impact of real-life distraction, such as video, on this result. I hypothesized that as distractions increase, image memory shall deteriorate, however the types of images remembered shall remain consistent.

Methods/Materials

I wrote a software program in HTML and JavaScript to present an image stream (with precise exposure durations and gaps) and to capture the participant clicks.
1) 54 participants were given a Short-Term Memory test with changes to number of objects and features, for 2 exposure durations and instructed to detect repetitions. The Memory Score was plotted against the number of objects for each feature changed. 2) 53 participants took a Long-Term Memory test including 94 images with 24 Candidate images (Gap 48-53 images), 12 Observer images (Gap 3-5 images) to check attention, and Spacers; they were instructed to detect repetitions. The Memory Score was plotted against category (Indoor vs. Outdoor). 3) 56 participants took a test similar to experiment 2 with added video distraction. Finally, results from 2 & 3 were compared.

Results

1) Participant scores were near perfect for 1 to 3 objects; they declined at 4, followed by a rapid deterioration. This result did not change with exposure duration, nor with two features changed simultaneously, indicating that visual memory is of the entire object, not just a feature. This was corroborated with the literature and a gap of 3-5 objects was used as Short-Term Memory capacity 2) Memory Score for Indoor images was 23% higher than for Outdoor images. Participants mean score was 19 (SD = 3.15). 3) Memory Score with Video distraction for Indoor images was 36% higher than that for Outdoor images. Participants mean score was 17 (SD = 3.38).
Comparison of 2 & 3 showed that Memory Score for Indoor Images decreased by 5% due to distraction, while the corresponding score for Outdoor images decreased by 11%.

Conclusions/Discussion

My hypothesis was correct. Contrary to popular belief, the experimental results suggest that outdoor images, though aesthetically pleasing, are not remembered as well as indoor images. Further, the reduction of memory scores after distraction with video was more than 50% greater for the outdoor images.

Summary Statement

This project investigates which types (categories) of images people remember and the impact of real-life distraction, such as video, on this result.

Help Received

My teachers allowed me to administer the test in class.