Role of Schemata in Memory for Places

Aim: To investigate whether a stereotypical schema of an office would affect memory recall of an office

Hypothesis:
- That schemata determine what objective encoded in memory
- That schemata act as frameworks for episodic information
- That schemata-based information is integrated with episodic information
- That schemata facilitate retrieval
- That schemata influence what is communicated at recall

Experimental Design: Independent measure
Sampling Method: Opportunity subjects viewing the room
Independent Variable: Subjects schema theory of a graduate room
Dependent Variable: Subjects recall on the objects within the room
Research Method: Experiment

Study analysis:
Potential confounding variables
- Artificial setting
Extraneous variables
- Student's natural memory
- Controls
- Time the subject spent in the room
Blind Technique
- Single Blind

Strengths and Limitations
Strength:
- Strict control over variables, to determine
Cause and effect relationship
- Debriefed

Limitations
- Lacks ecological validity due to artificial environment
- Does not reflect daily activity
- Deception
- Sample bias
- Not generalized

Result: Students were more likely to remember schema objects. Students also mentioned items that would normally be seen in a graduate office but were not present. Many students recalled the skull, which was not part of the schema theory. The results from the written recall were a total of 88 different objects: 7 were frame objects, 62 were present objects and 19 were inferred objects. There was a clear relation of salience and schema. The drawn recalls results were similar to the written and verbal. Verbal recognition there is a strong effect of schema-based inference in the verbal recognition data, as there had been in the recall data.

Conclusion: Written and drawn recall created a strong positive correlation between schema expectancy and recall also shows the effect of schema information on place memory. The relationship between saliency and recall probably reflects the amount of attention devoted to the salient objects, but given the present findings, one could also hypothesize that saliency leads to stronger memory representation. The positive correlation between schema expectancy and verbal recognition should be due either to schema-based information operating as a framework in memory or to schema-based information becoming integrated with episodic memory.

Procedure: Created an artificial room that was (2.73 x 1.82 x 2.08m) which was designed to look like a graduate students room. This room included things that you would not normally see in a graduate room (e.g., a skull, toy top etc.) and it was missing items (e.g., books etc.) Also a rating of salience and schema-expectancy was determined. 14 salience subjects and 14 schema-expectancy subjects were given booklets containing the 131 objects to be rated. Salience was rated on how noticeable an object would be and schema-expectancy was given to rate on the likelihood it would be in a room.

For this experiment the following steps were mentioned to determine different memory task there were three different tests done.

1. Experimenter led students into the grad. Room
2. Subject spent 35 seconds in the room
3. Experimenter took them into a seminar room to do a memory test (Written recall and verbal recognition, drawing recall, or verbal recognition)
4. Questionnaire / debrief

Ethics: Experimenter used deception on the subjects, but no ethical boundaries were broken. No psychical or mental harm was done to the participants. Subject were told and debriefed after the experiment.

Further help psychologies understanding: This experiment proposed that schema theory includes that perception, language comprehension, and memory are processes which involves the interaction of new (episodic) information with old.

Studies that are similar:
Anderson and Pichert (1978)
- Aim: To determine if schema processing influences both encoding and retrieval
- Results: The Schema processing has some effect at the retrieval stages of memory as well as the encoding stage.
Loftus and Mackworth (1978)
- Aim: To determine the cognitive factor help determine what we look at in pictures
- Result: Informative information was found faster than unformatted information

Learning outcomes:
Outline principles that define the cognitive level of analysis (for example, mental representations guide behaviour, mental processes can be scientifically investigated)
Evaluate schema theory with reference to research studies.