Example of cognitive psychology article review

Psychology

Citation 7: Sternberg Search

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2. Goal of article: State the research questions and/or hypotheses being investigated (What are they trying to do?) (Four sentences to one paragraph)

The major purpose of the study is to determine how symbolic information gets retrieved from recent memory. The researcher is particularly interested in determining whether the number of elements presented to the subjects affects response latency. However, the researcher is not interested in the sequence of the stimulus, rather the identity of the symbols shown.

3. List three (3) cognitive psychology terms important for the topic of the article, find their definitions or descriptions in any CogPsy textbook (give reference) and provide them here:

- Retrieval: The recovery of information stored from the memory

2. Short-term memory: The memory mechanism involved in the storage and retrieval of recent experiences from the memory.

3. Judgment: The process of forming a conclusion, an opinion based on the material presented and mental activity.

4. Describe ALL the dependent variables for the designated experiment:

- Provide an operational definition

Mean response time: the period from the onset of the test stimulus to the period when the subject provides a response.

mSec

5. Describe ALL the independent variables for the designated experiment:

Size of positive set

- List its levels

Level1: The first test measured the mean response time after presenting the subjects with a series of symbols.

Level 2: The second test measured response latency in relation to the size of the positive set.

Simple linear regression

- If there are more than one independent variable, state the factorial design

21 (Two by one) factorial design. The experiment has two independent variables,

with each having one level.

6. Describe how the experiment was conducted, i. e., what was the procedure: (4-6 sentences)

The experiment involved placing a series of digits at a fixed location for 1. 2 seconds and then giving the subject 2. 0 seconds to memorize. After the 2. 0-second delay, the researchers would then place a warning signal and a test digit. The subject would then decide whether the test digit is one of the symbols in memory or not. Pulling one would indicate a positive response, while pulling the other lever would indicate a negative response. A feedback light would then be pulled to indicate whether the subject is right or wrong.

7. Identify all the main effects and interactions (if the design is factorial). Make sure you state the main effect for EACH independent variable you named in (5):

- Provide the statistical statement (t- or F-statement)

Form experiment two, T= 369. 4 + 38. 3 s

- Explain each statement in plain English

The response time for both positive and negative responses was 397. 2

mSec with the mean response latency being 37. 9 seconds.

In experiment two, the response time for the positive responses was 369. 4 mSec, with the mean response latency being 38. 3 seconds.

8. Steps or conclusions suggested by the article (One paragraph):

a. How is each research question listed in (4) answered?

The mean response time was calculated by getting the gradient of the slope. This was determined for both negative responses and for positive responses.

b. What do the data mean?

The results of the study show that short term human memory involves a scanning

process which primarily depends on the objects stored in memory. The time taken to retrieve the objects from memory will therefore depend on the number of objects in memory.

9. Do you think it is to our advantage that we use an exhaustive search of short-term memory as opposed to a self-terminating search? Why or why not?? (One-two paragraphs).

The use of exhaustive search of short-term memory is more advantageous than the use of self-terminating search in the sense that memorizing one item at a time gives the subject time to memorize the items, and thus provide an accurate memory. In addition, unlike the self-terminating search whereby the subject stops after identifying the target match, exhaustive search enables the subject to go through all the items presented before making a response. This gives the subject the time to give a more accurate response. Again, self-terminating search is prone to errors such as acoustic errors whereby some items a phonologically similar. As a result, the subject

is likely to give a wrong response for failing to go through all the items presented.

- Most people don’t have the experience of examining the memory set one item at a time for the probe until the whole set has been examined in their minds. So if Sternberg is right about exhaustive serial search taking place and we aren’t aware of it taking place, what conclusion should we draw about how the mind really works and the way it seems to work when we use it?(One-two paragraphs).

The exact mechanisms used in retrieval of objects from short-term memory occurs

without the knowledge of the subjects. This affirms Sternberg’s assertion that a high -speed scanning process takes place in the mind, and probably this is beyond the control

of the individual. As shown in the experiment, the length of the list scanned affected the scanning process, but in a systematic manner. The parallel curves shown in the study indicate that individuals use an exhaustive search for short term memory, something

which goes contrary to their intuition. Therefore, it is suffice to assume that the

mechanism that control short term memory involve a complex mechanisms, which is far

beyond the compression of individuals.

References

American Psychological Association . (2013). American Psychological Association . Retrieved

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org/research/action/glossary. aspx#i

Sternberg, S. (1966). High-Speed Scanning in Human Memory . Science , 153, 652-654.