

Whatsapp : +919892507784 for psychology classes

E-mail : jyotika@excellingpsychology.com for other queries

Q. Discuss Schema Theory [22]

Schemas are cognitive frameworks, developed on past knowledge and experiences, that help process, organise and remember new information. An example of a schema is that of a restaurant, involving a framework of being seated, reading a menu card, being served by a waiter, etc. When an individual visits a new restaurant, they use this framework to guide their experience in it. Schema theory is an explanation of how schemas help in processing, organising and remembering new information.

This essay first discusses the role of schema in reconstruction of memory, as demonstrated by Bartlett in the Famous, 'War of the Ghosts' study. It then considers how schemas contribute to both the encoding and retrieval stages of memory-using the Brewers and Treynens' 'office study' as an example. Schema theory is evaluated in light of these researches throughout, followed by a critical analysis of the theory by itself. Finally, all arguments are summarised and directions are presented for improved research into the schema theory.

Reconstruction of memory refers to rebuilding of memories after events have occurred, through omission, addition and distortion of information initially encoded. The pioneer of schema theory, Bartlett, believed that the use of schema is at the heart of this process. He demonstrated this in his classic study, described as follows-

The aim of the study was to investigate whether British participants would use schemas to modify their recall of a Native American Folktale called, 'the War of the Ghosts'. Participants were made to read this tale and then recall it in either one of two conditions- (1) serial reproduction - in which they had to narrate the story to another participant who would narrate it to another, and so forth; (2) repeated reproduction - in which they had to repeat the story at varying time intervals. It was found that in both conditions, memory was strongly distorted. Participants showed omissions like not recalling at all that the characters in the story made use of arrows for war; distortions like remembering the characters were 'fishing' instead of 'hunting for seals'; and rationalisations like saying that one of the characters died at the end because of a disease since the cause of his death was not mentioned in the story.

Bartlett believed that all the errors made by participants were a result of attempting to align the story with their cultural schema. Participants were from modern Britain and hence, they tended to omit 'arrows' which are not found in mainstream culture, confuse 'hunting seals' with 'fishing' as that is more familiar to them and rationalise death with a reason like disease - because supernatural deaths are not acceptable in modern society. Thus, participants reconstructed the 'War of the Ghosts' story as a result of their cultural schema, in line with the schema theory.

Bartlett's study was quite realistic, given that it involved story-telling, which is much more relevant to everyday life than memorising lists of unrelated words or syllables. People do often narrate to each other incidents that they have read in the papers or stories that they have watched in documentaries, etc. Thus, they are likely to distort memory in the same way that participants did in this experiment. This shows that schema theory is ecologically valid. It has relevance to

Commented [1]: schema defined + precise example = key concept in question defined

Commented [2]: schema theory has also been defined = another key concept defined

Commented [3]: first argument identified

Commented [4]: study supporting the first argument is clearly identified

Commented [5]: argument 2 identified

Commented [6]: study supporting argument 2 is clearly outlined

Commented [7]: analysis of schema theory will be done - also specified = meets requirement of 'discuss' command term

Commented [8]: conclusion also outlined = problem in the question fully explained at this point (criterion A fully met)

Commented [9]: Criterion A = 2/2

Commented [10]: terminology used

Commented [11]: first argument briefly explained before introducing the study - meets criterion B for knowledge and understanding since the argument is explained independently of the study

Commented [12]: study summarised as aims-procedure-results-conclusion-meets criterion E for clarity and organisation

Commented [13]: good terminology has been used in several places - 'reconstruction of memory' 'cultural schema' 'omissions' etc. -meets top requirements for criterion B - use of good terminology

Commented [14]: argument has been further developed with the help of the study-meets top-markband for criterion C

Commented [15]: one prominent strength is given - beyond ethics and generalisability (since the question is about the theory and not studies)

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the daily lives of individuals. However, alternative interpretations of the results in this study are possible. For example, participants forgetting about arrows being carried might be a simple decay of memory for such specifically detailed information. Or their referring to 'seal hunting' as 'fishing' might be just an attempt to simplify information for another participant to understand or to show to the researcher that they could understand the nature of the activity. Given that schemas are not directly observable, there is no means of verifying the actual reason for the lack of exact reproduction of the story. This possibility casts doubt on the validity of schema theory.

While Bartlett Focused on only the retrieval of memory- how memory is reconstructed after an event is eroded - subsequent researchers have proposed that schemas influence both - the encoding and retrieval of memory. At the time of encoding, schemas can guide attention - selectively focusing on only those aspects of an event that align with the schema. This was showcased in the famous 'office study, as follows-

Brewers and Treyns aimed to investigate how schemas influence people's memory for an office scene. Participants were invited for an experiment and once in the laboratory, they were asked to wait outside in the researcher's office under some pretext. After about half a minute, they were called into the laboratory and given a surprise memory test for items in the office. Each participant first Freely recalled what they had seen, Followed by a drawing test for the items and finally, a verbal recognition test that involved marking off items seen in the office from a list of items presented. Results showed that participants most recalled items frequently found in offices such as a desk, coffee-pot, calendar, etc. They also recalled items not in the office but typically found in one-such as books. Finally, they did not recall items not typically found in an office - such as a skull or a piece of bark.

The researchers proposed that participants encoded only schema-congruent information during their wait in the office. They indeed ignore schema-incongruent information. This resulted in later memory distortion, supporting schema theory's proposal that schemas influence how information is remembered.

This study was highly controlled. Researchers ensured that each participant had exactly the same vantage point for viewing the office. They kept only one chair vacant for participants to sit on. Further, each participant was given only 35 seconds to view the office. This ensured that factors other than schema alignment-such as view of the office or time exposure, etc. would not influence participants' recall of information. This gives reliability to the role of schemas in memory. However, it was found that schema-congruent information was remembered mainly on the free recall test. On the recognition test, most participants remembered even schema incongruent information such as the skull and piece of bark. This raises the question of whether schemas influence all of retrieval or specifically, only free recall. The same is the case with influence on encoding as it appears that even schema- incongruent information is encoded by participants which enables later recognition. Thus, schema theory may be a limited explanation of distortion of memory.

Commented [16]: Every evaluation point has been linked back to the larger argument
-meets top markband criterion D for critical thinking

Commented [17]: a prominent weakness is given

Commented [18]: argument 2 is defined and is related with the first argument
-meets top markband requirement for criterion B = shows knowledge and understanding

Commented [19]: again- aims-procedure-results-conclusion

Commented [20]: use of good terminology

Commented [21]: futher development of argument through the study

Commented [22]: again, linked back to argument 2 with use of good terminology

Commented [23]: again, well-developed critical thinking

this essay includes in critical thinking some of the less frequently touched areas - alternative explanations and areas of uncertainty

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As seen through the studies above, schema theory does have relevance to daily life and some reliability, although its validity and scope is also questionable. Schema theory has been appreciated for its practical relevance. For example, it has enabled an understanding of prejudice and discrimination in society by accounting for stereotypes. Stereotypes are essentially schemas of how certain people are expected to behave. For example, the stereotype, 'girls are terrible at math' is a schema for how girls would perform in academics. This has created a prejudice against girls- that they are inferior in some way as a gender. Understanding that schemas are perpetuating such ideas can help educate people about the schemas they hold and to assess them - for the greater good of society.

However, schema theory has been criticised for being unable to rule out alternative explanations for memory, what are considered to be 'omissions' of information from memory in schema theory have been long explained as simple decay or interference in memory, leading to loss of information. In fact, schema theory stands very weakly against cue- dependent retrieval theory of memory, as what is assumed to be forgotten by use of schemas is often readily remembered when ample cues are present- as was the case with the recognition test in Brewer and Treynens' study.

To summarise, schema theory serves as a plausible explanation for how information is remembered. Future research can lend it more credibility by designing studies that can show how schemas influence memory over and above what is explained by other memory theories. This will also strengthen the findings of classic studies like those by Bartlett and Brewer and Treynens.

Commented [24]: throughout the answer, all critical evaluation points are contextualised to the relevant study or made relevant by giving concrete examples -this helps meet the top markband for criterion D as it shows well-developed rather than generic critical thinking

Commented [25]: solid critical thinking about schema theory as a whole - balanced perspective - furthers critical thinking beyond studies about schema theory

meets top markband requirements for criterion D critical thinking as the question is about discussing schema theory as a whole and not just research in the area

Commented [26]: conclusion includes both - a very precise summary of what is learnt about schema theory from the essay; and directions for future research

- shows good organisation and clarity of thinking, meeting criterion E requirements in the top markband

Commented [27]: Markings for all criteria
criterion A = 2/2

-problem in the question is thoroughly explained in the introduction

criterion B = 6/6

-shows relevant and detailed understanding; uses good terminology throughout

criterion C = 6/6

-research is relevant, thoroughly explained and used to further develop the argument

--every research study supports a different argument

criterion D = 6/6

-critical thinking is well developed = contextualised and linked back throughout, both studies and the theory are thoroughly evaluated

--areas of critical thinking are applied holistically

criterion E = 2/2

-clarity and systematic organisation are seen throughout
--no re-reading is required to understand any section of the answer

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Lesson prepared by:

Jyotika Varmani

CIE A Levels Psychology School Teacher, Modern College, Mauritius

CIE A Levels Psychology Subject Expert, Podar International, Mumbai

AQA A Levels Psychology Tutor, Higher OTS Academy, UAE

AQA A Levels Psychology Tutor, Gritty Tech, India

AQA A Levels Psychology Tutor, Aurora ELearning, UAE

Edexcel Psychology Tutor, ETutor Home, India

Youtuber with 4k+ Global Psychology Student and Teacher Subscribers

Psychology Website Author with 10M+ Global Views

9+ Years Experience in International GCSE and A-Levels Psychology Tutoring for CIE,

AQA, Edexcel and IBDP

M.A. (Psychology Honours), UGC-SET and NET (first attempt, first ranker),

PGDHE (Post-Graduate Diploma in Higher Education)

Visit Jyotika Varmani's complete profile at -

<https://www.teacheron.com/tutor-profile/1KH>