Research Proposal for PSYCH 301W

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*Working Title of Proposed Research*

Out of place, in the mind: False memory made by schema.

*Objectives of the Research*

A few days ago, in March, researchers (Lew & Howe, 2017) published a journal article about false memory effects for object-location bindings. In this research, participants are shown pictures of certain places (e.g., a kitchen) with schema-expected objects (e.g., a toaster) and schema-unexpected objects (e.g., a teapot). The result shows that participants are more likely to correctly remember individual schema-relevant objects originally viewed in unexpected places, but are then more likely to misplace these items in the original room scene to expected places, relative to control schema-irrelevant objects. Yamada and Itsukushima (Yamada & Itsukushima, 2013) also examined how the schema affects recognition memories and subjective experiences for objects. In the study, they found out that for objects, the discrimination between targets and distracters was more accurate for schema-inconsistent items than for schema-consistent items, owing to perceptual, thought, and emotional recollections for schema-inconsistent object targets. In other words, people pay more attention to schema-unexpected objects than to schema-expected objects.

Bartlett (1932) introduced the concept of “schema” as an active organization of past experiences. In other words, a schema is the generic knowledge of particular scenes. We have our own images in our mind when we mention a specific thing, such as school. Because of schema, we make false memory sometimes.

False memory (Brainerd & Reyna, 2005) refers to circumstances in which we are possessed of positive, definite memories of events— although the degree of definiteness may vary— that did not actually happen to us. “You were there at that time.” would be a good example for false memory that a thing happened and we thought our best friends were there with us, but actually we were with other people.

Speaking of false memory, I always think that, “are people actually seeing things in some situations or are they just using their schema?”. Sometimes, we think a certain thing appears in a certain place because it ought to; however, this is just our schema. There is a joke: a man comes into the room, sitting at the same chair in the same position every day. The chair is moved this day, but the man still comes in and sit at the same spot, and then he falls onto the floor. The man is not stupid, he makes this mistake because in his schema, as usual, the chair must be there for him. Just like our classroom, we suppose that every time we walk into the class, the seat we sit last time is our seat and is waiting for us. If there is someone else in our seat, we will feel bad because that seat is supposed, in our mind, to be empty until we are there. I wonder if certain thing, such as a pillow, in a certain place (e.g. bedroom) is missing, will people find out the missing, or will they find no difference. Thus, I wished to explore schema of a regular hotel room. I choose a hotel room because every one’s own room is different and has different stuff. There would be no confounding variables if we use a hotel room because every hotel room is similar to each other. Here, I am going to operationalize false memory by counting the correct number of answers participants give. Also, I will operationalize schemas by giving the pictures of hotel room to them. Because usually, people will think there must be pillows on the beds in a hotel room.

A combination of lower levels of processing of schema-relevant stimuli (Schank, 1982, 1999), Things that “exist” because of they are schema-relevant objects actually not exgist (Gallo, 2010; Johnson, Hashtroudi, & Lindsay, 1993; Mitchell & Johnson, 2009), together with expectations that such items would have been present in the to-be-remembered material

(Schacter, Israel, & Racine, 1999), all potentially lead to inaccurate memories.

*Hypotheses and Predictions*

I hypothesize that students will still say there are pillows in the hotel room no matter the pillow is shown in the picture or not.

*Proposed Method*

Fifteen (15) male and fifteen (15) female Penn State New Kensington undergraduate students will participate in the study. Students will be enrolled at the Campus will serve as participants. There is no difference between male and female because this applies to all genders. The experiment will use between subject design, which is an experimental research strategy in which each research participant provides data for only one level of independent variable or variables.

Two pictures will be taken, in the same angle and direction. The only difference will be that one is the origin room in the hotel without anything moved, while in the other picture, pillows on the bed will be moved away. To avoid order effect, I choose to separate the experiment group into two part, each part has one picture. Every time for the experiment, I will randomly give a number to the participants (1 or 2). For those who get number 1, they will have the picture of hotel room with pillows on the beds; for those who get number 2, they will have the picture of hotel room without pillows on the beds. Participants have 12 seconds to see the picture and after that, there will be a 20 seconds’ distraction for them. In Lew’s experiment (Lew, A. R., & Howe, M. L. 2017), he gave each group 12 seconds to check the pictures and 30 seconds’ distraction. However, there are differences between my experiment and his. For example, he showed the different pictures in one time to participants instead of separate it into two part. Therefore, I decided to let the participants have the same remember time and less distraction time.

There will be only a blank paper for participants and they will be asked to write as many things as they can remember in the picture in one minute. Because there is no other experiment found that asked participants to write down the things in a specific time, I decided to make the time 1 minute myself. For this, participants have enough time to recall all the things them have seen, or they can remember since some participants may write slowly or thing slowly.

There is one independent variable in my study: Pictures of the room (With pillows or not). There is also only one dependent variable in the study: the number of correct answer the participants give. The correct answer is defined as when they are shown the picture with pillows, they should write pillow on the paper. Contrarily, if they are shown the picture with pillows removed, they are not supposed to write pillow on the paper. If one do so, his answer will be counted as a correct answer.

The study involves no deception except for normal, daily feelings, such as anxious, nervous, etc. However, participants will not be told why they are being asked to watch the picture and write all stuff they have seen. If the purpose is told to them, the result will be useless. Upon completion of the study, participants will be told more about the study. There is no risk in this experiment because it is just an experiment that requires participants to write what they see in the pictures. Therefore, there is not any benefit, neither.

*Preliminary List of References*

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