Free critical thinking on emotion drives attention

Design, Photography

Psychology

Phobias are common in people but why in a modern urban world would people be afraid of snakes or dangerous spiders? Öhman, Flyki, and Esteves (2001) have done several experiments to try to understand why and how people with phobias of snakes and/or spiders react to photographs of them. The experiments used photographs of snakes, spiders, flowers or mushrooms in order to time the difference in people's ability to identify the items that frightened them versus the items that did not have any fear-relevance for them.

The experiments were based on identifying the selective attention of the participants. That means that when photos were shown to a participant the researchers would measure how long it took them to see the objects that meant danger to them. The theory is that the identification of perceived danger happens so quickly that it may not even be conscious. The researchers explained that pre-attentive visual attention (which is the opposite of post-attentive visual attention) happens fast. It is a reaction that is " automatic" and " works on low-level stimulus features" (466). This is very interesting and it has something to say about the evolution of the survival skill in the human race. It could mean that while other parts of the psychology of humans have evolved there are still parts that signal danger based on dangers in the wilds not in cities. When a person has a fear of snakes then if there is a snake in the environment then the person will notice it right away. In the past when we were hunters and gatherers this would

have been a reaction we would need to survive. When it was a skill needed to survive it was not considered to be a phobia at all.

These types of experiments are very hard to design but the researchers studied what has and has not worked in previous studies. The researchers decided to prepare a large array of photos which had were present in a collage to the participants. This turned out to give results that seem to show we still have some reactions that protect us from danger if we need to go to gather food in a jungle or forest. That was demonstrated because for people who had phobias of snakes, spiders or both they would more quickly selectively identify photos depicting the things they feared.

Three different experiments were done using the same plan but with differences in the methodologies. The experiments were done in such a way that they tested the participants in different ways but the experiments were designed in a way that complemented each other. A different group of participants was used for each of the experiments but each of the groups were college students. The mean age for participants in Experiment 1 was 28 and it was 27 for the second and third experiments. If one or two of the experiments had not been statistically similar that would have meant an experiment redesign would have been needed.

The results were similar although the methodologies were different. Experiment 1 was conducted in “ a sound attenuating chamber” and three by three matrices were used for the viewings. Experiment 2 also used matrices (both 3 x 3 and 2x2); a total of 256 matrices were designed for Experiment 2. The first step of Experiment 3 required the participants to fill

out a questionnaire so that the people with the highest fear level would be identified. The level was assumed to be close to phobia but no diagnoses were made of the participants. Then they were shown the same matrices that had been used in Experiment 2. I learned quite a bit by studying how the three experiments were designed in order to test the same reactions but in different ways.

I learned that designing experiments for psychological experiments has to be done carefully and with a lot of thought and why a literature review is important. The most surprising result was the difference in time that it took for the participants to identify photos with objects of fear in them compared to the photos of the environment that the snakes or spiders might be hiding in. I had thought people would probably use some kind of methodical way to look at each of the matrices before they saw the snakes or spiders.

Reference

Ohman, A., Flykt, A., & Esteves, F. (2001). Emotion drive attention: Detecting the snake in the grass. Journal of Experimental Psychology, 130(3), 466-478.