Associative learning

Associative learning occurs in animals through stimulus and response phenomenon.

Allergic reactions in human beings can be used as the basis for investigating associative learning in humans. In an experiment in which a patient was subjected to different types of food with the potential of triggering allergic reactions the results depicted that a small proportion of foods caused allergic reaction. In a blocking experiment with the same patient the computer results indicated that there was no more allergic reaction with continued exposure to the food types. The results revealed that associative learning had resulted to the decline in the response of the participant. In this case associative learning reduced the probability of an allergic reaction occurring in the patient. Associative learning refers to the process of acquiring knowledge, skills or attitudes by association with a pre-occurring element.

This type of learning is also referred to as classical conditioning. For classical conditioning to occur there must be the presence of unconditional stimulus and a conditioned stimulus. Exposure to both stimuli elicits responses of which a conditioned stimulus elicits a conditioned response. Some of the factors that determine associative learning include delay, trace, pairing and probability. Literature reviewVarious scientists and scholars have done research on stimuli and responses while testing learning.

Pavlov conducted his research on dogs with a bell. The bell was rung and the dogs were fed. After some time the bell was being rung and the dogs would just salivate. Stimulus response theory suggests that humans and other animals can learn to associated new stimulus with the unconditioned

stimulus and still elicit responses as if they are exposed to the unconditioned stimulus. The new stimulus in this case is the conditioned stimulus. Stimulus-stimulus theory suggests that there is a cognitive element in understanding associative learning.

The theory suggests that animals can learn by associating conditioned stimulus with unconditioned stimulus and elicit an observable behavior. In an experiment with the dog , salivation is a behavior that was observed because the dog associated the concept of food with the conditioned stimulus , the bell. Research findings have depicted that associative learning is affected by the specificity of the stimulus. In an experiment that was conducted to determine habitual learning in cuttle -fish, there was a decline in the responses of the fish in relation to the stimulus. The decline in the response to the stimulus was closely linked to associative processes in the animals. The results of the experiment was a prove that associative learning has the potential of resulting to response decline.

This experiment can be associated with allergic reactions in human beings in relation to exposure to different types of food. In another experiment in which monkeys were investigated, negative stimuli were closely related to associative learning. According to Beran et al, there were cognitive abilities that were noted in the monkeys upon exposure to negative stimuli in the experiment. The monkeys depicted associative learning when they were exposed to stimuli that had a negative effect on them. Blocking is a process in classical conditioning which is carried out in two phases to determine acquisition of two stimuli presented in combination.

Blocking predicts that the acquisition of the second Conditioned stimulus is blocked by the presentation of the first one. The patient suffers from allergic reaction after eating a very few proportion of the foods. The low probability of the patient suffering from allergic reaction after eating all the foods was as a result of associative learning. The experiment tries to determine the cause of allergic reactions in an individual using various types of food. The experiment makes use of the computer to display the food the patient has every meal.

In the first phase various foods were presented for the patient to have for the meals. After the presentation a Yes or No was clicked to predict if the food caused an allergic reaction. The computer revealed whether an allergic reaction occurred or not. In a scale of 0-8 the effects of food on the patient were re-rated. In the second phase the second set of meals were presented to the patient. A Yes or No was clicked to predict the effect of food on the patient.

Using the scale of 0-8 opinion on the presented food were rated with 0 representing no allergic reaction while 8 denoting very high probability of allergic reaction. In the first trials in phase 1, the results indicate that there was some learning that resulted in the responses that were observed in the patient. In this case the patient reacted with allergic reactions to some of the foods that were displayed on the computer screen. In the second phase, the probability of allergic reactions diminished because associative learning took place. The results depict a declining trend in the reaction to the foods that were exposed to the patient on the screen. Associative learning must have

taken place in the six trials and it was responsible for the diminished allergic reaction to the food substances.

According to the results of the experiment in phase one the probability of an allergic reaction occurring was high as the patient was exposed to most of the food substances. This was a demonstration that the patient elicited some conditioned response to the stimuli that were provided. The response in this case was the allergic reaction that was triggered by particular food substances that were presented. However continued display of the food substances blocked the appearance of the allergic reaction in the patient. This was demonstrated by virtue of the fact that continued exposure to the foods reduced the probability of the allergic reactions being elicited by the patient in the second phase. Inaccuracies might have occurred during the rating on the 0-8 scale.

The guess work that was created about the patient's allergic reaction might work against the validity of the results in the experiment. The response time for some foods might have been too long hence a conclusion was quickly arrived at indicating that they did not have allergic reactions. With more time they might have triggered allergic reactions in the patient. Conclusions and Recommendations. The experiment has so far managed to provide proof that associative learning occurs in human beings and other animals.

The responses that were elicited by the patient was as a result of exposure to the different types of food some of which resulted to allergic reactions. In the second phase of the experiment the probability of an allergy resulting was minimized with associative learning. Future studies should endeavor to

add more time for more food substances to be tested on the patient. A more elaborate experiment would add one or more patients to determine their reaction to different types of food. This would really work towards improving the validity of results hence more convincing arguments of associative learning.

The rate at which different food substances cause allergic reactions differ. This should be put into consideration in future studies. Therefore future studies should endeavor to add more time for the response to be elicited.