Name: Matthew Liu

SID: 915962152

Discussion Section Assignment 1

Instructions: These assignments will be graded 2 for good effort, 1 for marginal effort, or 0 for lack of effort. Assignments will not be graded for accuracy. For full credit, an assignment need only attempt to answer each question based on the course text and/or lecture material. Assignments that offer answers not adequately based on course material may receive a grade of less than 2. Try to answer each question in no more than a short paragraph.

1. What is the basic idea of behaviorism?

The basic idea of behaviorism is that mental state differences only exist if there is a difference in behavior associated with each of them. Behaviorists believe that the sources of behavior are external rather than internal and that behavior can be explained through non-psychological means. Because of this, behaviorism revolves around the idea of conditioned responses and stimuli. Attention, for example, is not viewed as a mental act, but is instead seen as a response to a specific outside stimulus.

1. What is the distinction between classical and operant conditioning?

Classical conditioning differs from operant conditioning in the sense that it revolves around successfully producing an involuntary response to a conditioned stimulus through the means of an unconditioned stimulus. For example, conditioning a dog to involuntarily salivate to the sound of a bell, a conditioned stimulus, is an example of classical conditioning. Operant conditioning, on the other hand, revolves around influencing voluntary behavior through reward and punishment. Subjects will be conditioned by seeking out ways to produce optimal consequences.

1. How do latent learning experiments challenge behaviorism?

Latent learning is the idea that information is collected and stored even without the presence of stimuli. In Tolman and Honzik’s maze experiment, the experimenters found that the group of rats that was not presented with a reward until after 10 days actually outperformed the rats that received a reward every day. This was significant and challenged behaviorism because it showed that they

passively stored information and utilized it at a later time. Rather than wandering aimlessly around the maze, they were collecting information about their environment without being stimulated to learn.

1. Ho do place learning experiments challenge behaviorism?

In Tolman, Ritchie & Kalish’s place learning experiment, the experimenters found that the rats placed in place-learning conditions learned faster than rats placed in response-learning conditions. This challenged behaviorism as it suggested that spatial information was easier to record than sequential information and that behavior. It pointed to the idea that organisms create cognitive maps of their surroundings and that their behaviors are likely not the simple products of stimulus chaining.

1. How do Turing machines provide a model for how information processing could be a physical mechanistic process?

Turing machines provide a model of information processing being a physical and mechanistic process as they can, in theory, solve any algorithmic problem using symbol manipulation given there is enough available tape. A Turing machine would run purely mathematically, and the cells contained on the tape could be manipulated and transformed mechanically in order to run the program. A computer is a great example of a finite Turing machine. It utilizes programs to solve algorithmic problems, and does not rely on abstract elements or a homunculus.