

MODULE 29 BIOLOGY, COGNITION, AND LEARNING**BIOLOGICAL CONSTRAINTS ON CONDITIONING**

- You can only condition an organism to the capability it possesses. Animals showed that the notion for conditioning to occur, the US must immediately follow the CS was proven false. The sickened rats developed aversions to tastes but not to sights or sounds. This contradicted the idea that any stimuli can be the CS.
- **TASTE AVERSION** is where a taste that has made you sick in the past now no longer presents a craving for that food. Example: coyote tempted to eat sheep with poison begins to no longer hunt for sheep deeming it a survival hindrance. All of conditioning can be linked back to the ability to continue to survive.
- “Never try to teach a pig to sing. It wastes your time and annoys the pig.”
- Biological constraints predispose organisms to learn associations that are naturally adaptive.

COGNITION'S INFLUENCE ON CONDITIONING

- When conditioning is occurring, once the pairing is established, the predictability causes no new information for cognitions to form.
- For Skinner, thoughts and emotions were behaviors that follow the same laws as other behaviors.
- A **COGNITIVE MAP** is a mental representation of the maze, much like your mental map of your school.
- **LATENT LEARNING** is learning that occurs but is not apparent until there is an incentive to demonstrate it. Cognition does appear to come with associating a response.
- **INSIGHT** is a sudden realization of a problem's solution.
- **INTRINSIC MOTIVATION** is a desire to perform a behavior effectively for its own sake.
- **EXTRINSIC MOTIVATION** is a desire to perform a behavior to receive promised rewards or avoid threatened punishment.

LEARNING AND PERSONAL CONTROL

- We need to learn to **COPE** with the problems in our lives by alleviating the stress they cause with emotional, cognitive, or behavioral methods.
- **PROBLEM-FOCUSED COPING** is attempting to alleviate stress directly by changing the stressor or the way we interact with that stressor.
- **EMOTION-FOCUSED COPING** is attempting to alleviate stress by avoiding or ignoring a stressor and attending to emotional needs related to one's stress reaction.
- **LEARNED HELPLESSNESS** is the hopelessness and passive resignation an animal or human learns when unable to avoid repeated aversive events. When repeatedly faced with

traumatic events over which they have no control, people come to feel helplessness, hopeless, and depressed. Having control is a basic necessity to human functioning and primitive to surviving longer.

- **EXTERNAL LOCUS OF CONTROL** is the perception that chance or outside forces beyond our personal control determine our fate. **INTERNAL LOCUS OF CONTROL** is the perception that you control your own fate. Today, our generation experiences more of the ELoFC than ILoFC and this can be seen in the higher rates of depression and psychological disorders seen today.
- **SELF-CONTROL** is the ability to control impulses and delay short-term gratification for longer term rewards. Self-control requires attention and energy.

BE ABLE TO ANSWER: When faced with a situation over which you feel you have no sense of control, is it most effective to use emotion- or problem-focused coping? Why?

PRACTICE FRQ: Provide two specific examples of how biology can influence classical conditioning.