DRIVE REDUCTION THEORY OF HULL

By

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INTRODUCTION

- Drive reduction theory is a learning theory that states that all motivation is ultimately derived from the need to reduce biological or physiological needs. The theory was proposed by Clark Hull, a behaviorist psychologist, in the early 1940s.
- Hull defined a drive as a state of tension or arousal that is caused by a biological need. **Examples** of drives include hunger, thirst, pain, and sex. When a drive is activated, it motivates the organism to engage in behavior that will reduce the drive and restore homeostasis.
- **For example**, when a person is hungry, they will be motivated to eat food. Once the person has eaten, the hunger drive will be reduced and the person will no longer feel hungry.

ORIGIN

- Clark L. Hull first mentioned drive reduction theory in his 1943 book Principles of Behavior. In this book, Hull outlined the basic principles of drive reduction theory, including the concepts of drives, reinforcement, and homeostasis.
- Hull's theory was influenced by the work of several other psychologists, including Ivan Pavlov, Edward Thorndike, and John B. Watson. Pavlov's research on classical conditioning showed that animals could learn to associate a neutral stimulus with a rewarding or punishing stimulus. Thorndike's law of effect showed that behaviors that are followed by a satisfying outcome are more likely to be repeated in the future. And Watson's behaviorism argued that all behavior can be explained by conditioning and learning.

BACKGROUND OF THE THEORY

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- Hull's theory was influenced by the work of several other psychologists, including Ivan Pavlov, Edward Thorndike, and John B. Watson. Pavlov's research on classical conditioning showed that animals could learn to associate a neutral stimulus with a rewarding or punishing stimulus. Thorndike's law of effect showed that behaviors that are followed by a satisfying outcome are more likely to be repeated in the future. And Watson's behaviorism argued that all behavior can be explained by conditioning and learning.
- Hull combined these ideas with his own research on motivation to create drive reduction theory. He proposed that drives are states of tension or arousal that are caused by biological needs. When a drive is activated, it motivates the organism to engage in behavior that will reduce the drive and restore homeostasis.

TIMELINE OF HISTORY

- Here is a timeline of the history of drive reduction theory:

- **1943:** Clark Hull publishes Drive Reduction Theory, which outlines the basic principles of the theory.
- **1950s:** Drive reduction theory becomes a dominant theory in psychology.
- **1960s:** Drive reduction theory begins to be criticized for being too simplistic.
- **1970s:** Other theories of motivation, such as incentive theory and arousal theory, become more popular.
- **1980s:** Drive reduction theory is still used by some psychologists, but it is no longer the dominant theory of motivation.

MATHEMATICAL DEDUCTIVE THEORY OF BEHAVIOR

- sEr = V x D x K x J x sHr - sIr - Ir - sOr - sLr

- **sEr:** Excitatory potential, or the likelihood that an organism will produce a response (r) to a stimulus (s).

- **V:** Stimulus intensity dynamism, meaning some stimuli will have greater influences than others.

- **D:** Drive strength, determined by the amount of biological deprivation.

- **K:** Incentive motivation, or the size or magnitude of the goal.

MATHEMATICAL DEDUCTIVE THEORY OF BEHAVIOR

- **J:** The delay before the organism is allowed to seek reinforcement.
- **sHr:** Habit strength, established by the amount of previous conditioning.
- **slr:** Conditioned inhibition, caused by previous lack of reinforcement.
- **lr:** Reactive inhibition, or fatigue.
- **sOr:** Random error.
- **sLr:** Reaction threshold, or the smallest amount of reinforcement that will produce learning.

TERMS USED

- Here are some of the key terms used in drive reduction theory:

- Drive.
- Reinforcement.
- Homeostasis.
- Primary drive.
- Secondary drive.
- Drive strength.
- Drive reduction gradient.

DRIVE

- A state of tension or arousal that is caused by a biological need.
- **Examples** of drives include hunger, thirst, pain, and sex.
- When a drive is activated, it motivates the organism to engage in behavior that will reduce the drive and restore homeostasis.

REINFORCEMENT

- The process by which a behavior is strengthened or made more likely to occur in the future. In drive reduction theory, reinforcement is achieved by the reduction of a drive.
- Reinforcement is the process by which a behavior is strengthened or made more likely to occur in the future.
- In drive reduction theory, reinforcement is achieved by the reduction of a drive.
- **For example,** when a person eats food, their hunger drive is reduced and the behavior of eating is reinforced.

HOMEOSTASIS

- The maintenance of a stable internal environment. Drive reduction theory proposes that organisms are motivated to maintain homeostasis by reducing drives.
- Homeostasis is the maintenance of a stable internal environment.
- Drive reduction theory proposes that organisms are motivated to maintain homeostasis by reducing drives.
- **For example**, when a person is thirsty, they will drink water to reduce their thirst drive and maintain homeostasis.

PRIMARY DRIVE

- Primary drives are innate drives that are essential for survival.
- **Examples** of primary drives include hunger, thirst, pain, and sex.
- Primary drives are activated when there is a need for a particular resource or experience.
- Primary drives motivate behavior that is directed towards reducing the drive and restoring homeostasis.
- The strength of a primary drive is determined by the degree to which the need is present.
- The reduction of a primary drive is reinforcing, which means that it makes the behavior more likely to occur in the future.

SECONDARY DRIVE

- Secondary drives are learned drives that are not essential for survival.
- **Examples** of secondary drives include the drive for money, social status, and power.
- Secondary drives are acquired through association with primary drives.
- **For example**, a child may learn to associate the sight of money with the reduction of the hunger drive.
- Once the association is formed, the sight of money will become a secondary drive that motivates the child to acquire money.
- The strength of a secondary drive is determined by the amount of reinforcement it has received.
- The more reinforcement a secondary drive has received, the stronger it will be.

DRIVE STRENGTH

- Drive strength is an important concept in Hull's theory of drive reduction.
- It helps to explain why people are more motivated to engage in behaviors that are likely to reduce a strong drive than behaviors that are likely to reduce a weak drive.
- **For example**, a person who is very hungry is more likely to eat food than a person who is only slightly hungry.

DRIVE REDUCTION GRADIENT

- Drive reduction gradient is the principle that the strength of a drive decreases as it is reduced.
- This means that the motivation to engage in a behavior that is reducing a drive will decrease as the drive is reduced.
- **For example**, a person who is very hungry will be more motivated to eat food than a person who is only slightly hungry.
- The drive reduction gradient is a bell-shaped curve, with the highest motivation at the beginning of the drive reduction process and the lowest motivation at the end.

EXAMPLES OF THE CYCLES OF DRIVE REDUCTION

- Here are some of the examples of the cycles of drive reduction theory:
- A person is thirsty. They feel the drive to drink water. They drink water. The thirst drive is reduced. They are less likely to feel thirsty in the future.
- A person is tired. They feel the drive to sleep. They go to sleep. The tiredness drive is reduced. They are less likely to feel tired in the future.
- A person is bored. They feel the drive to do something stimulating. They read a book. The boredom drive is reduced. They are less likely to feel bored in the future.

CONCLUSION

- The drive reduction model is a useful way to understand how motivation works. It helps us to understand why we are motivated to engage in certain behaviors, and how these behaviors can be reinforced. However, it is important to remember that the theory is not without its critics.

THANK YOU