

UNIT 3 - LEARNING AND DEVELOPMENT



DAY 1 -



CONDITIONING

BECAUSE SOMETIMES IT TAKES
YEARS TO BE THIS UNSTABLE

OBJECTIVES



- **Identify two types of Conditioning, and their Inventors**
- **Understand the Four Elements to Classical Conditioning**
- **Compare Reinforcement to Punishment**
- ***Terms* →**
 - **Learning**
 - **Classical Conditioning**
 - **Operant Conditioning**
 - **Behavior Modification**
 - **Reinforcement**
 - **Punishment**
 - **Learned Helplessness**

REMINDE ME...



- **What is Psychology?**
- **What is Biology?**
 - **How does it relate to Psychology?**
- **How much are we a “product of our Biology”?**
- **What does that phrase “Nature Vs. Nurture” mean?**
- ***Today we look at the non-biological source of “who we are”... The Nurture...***

AN EXAMPLE.....



- **Suppose I give you a list of terms and phrases...**
- **How do you know which ones to write down?**
- **How did you gain that knowledge?**
- **What happens if I break that pattern?**
- **As an experiment, this unit, the important things will be in WHITE not BLACK**
- **How long would it take you to adjust?**

KNOWLEDGE UPLOAD



- **What we just began, and will have to practice for this unit at least, is an example of Learning**
 - **Process by which we adapt to changing conditions of our environment**
 - *Stimulus has an effect on us*
 - **Not merely the “acquiring of knowledge”, but the retention of that knowledge**
 - **Can be thru EXPERIENCE or PRACTICE**
 - *After all, have you memorized things before that you didn't really “learn”?*

TO RUSSIA WITH PAVLOV



- **In 1901 a Russian Psychologist by the name of Ivan Pavlov (*Иван Петрович Павлов*) conducted an experiment with dogs.**
- **Ivan observed that dogs like meat.**
- **When presented with meat, dogs salivate (drool)**
- **Pavlov played a ticking metronome every day when he fed his dogs meat.**
- **Over time, if he merely played the metronome, but had no meat, his dogs still salivated.**

One of Pavlov's Dogs, Preserved at the Pavlovian Museum,



TO RUSSIA WITH PAVLOV



- **What Pavlov found is that certain responses can be “conditioned” in animals *(including humans)***
- ***This is called* Classical Conditioning**
 - **A learning process where a new response to a previously neutral stimulus is created**
 - ***Sometimes called “Pavlovian Response”***
 - ***i.e. The Dogs now drool when a metronome clicks***
 - ***...don't take THEM to your Piano Lesson!***

WATCH WHAT I
CAN MAKE PAVLOV DO.
AS SOON AS I **DROOL**,
HE'LL SMILE AND WRITE
IN HIS **LITTLE BOOK.**



CLASSICAL CONDITIONING 10



- **In Order to be Pavlovian, it requires:**
 - *1) Unconditioned Stimulus*
 - *2) Unconditioned Response*
 - *3) Neutral Stimulus*
- *Those, if used correctly, will create a:*
 - *4) Conditioned Response*
- **Let's take another example...**

CLASSICAL CONDITIONING 10



- **4 Volunteers for the Electric Game**
- **1) The Electric Game Shocks You**
- **2) How do you feel?**
- **3) I play a sound when we shock you.**
- **... Now, even without the shock,**
- **4) How does the sound make you feel?**

IT'S A CLASSIC....



- **Classical Conditioning can explain why certain people have certain phobias, or like certain smells or foods, or even prefer certain teachers, do certain things, or helps us develop something called “Muscle Memory.”**
 - *It's also a great way to train dogs 😊*
 - *...and Cadets...*
- **BUT... it doesn't explain ALL learning, so let's look at one other important theory...**

SKINNERS AND LOSER



A Psychologist we WON'T study, named Edward Thorndike worked for the U.S. Government during WWI

- *Sidenote, he developed what would become the ASVAB*
- *Thorndike developed a Theory he called the “Law of Effect” which basically said, “If a response is followed by a pleasurable consequence, it will tend to be repeated, if followed by an unpleasant one, it will tend to not be.”*
- *DUH, right?*

SKINNERS AND LOSERS

- **Following the War, in 1931, another Psychologist, named B.F. Skinner built on that work and coined the term Operant Conditioning**
 - **Learning Process where Behavior is controlled by Consequences**
 - **Using this process is what we call Behavior Modification**
 - **Using Operant Conditioning to change Behavior**

PHANTOM OF THE OPERAM

- **Operant Conditioning is divided into**
 - * **TWO Types of Consequences** *
 - **REINFORCEMENT**
 - **PUNISHMENT**
- ***However, there are POSITIVE and NEGATIVE forms of each***
- ***Thus = Positive Reinforcement, Negative Reinforcement, Positive Punishment, and Negative Punishment***

CRIME & PUNISHMENT



- **What do these terms actually mean?**

- *Hint: They are NOT how they sound!*

- **REINFORCEMENT**

- **A consequence that is pleasurable and strengthens the response that came before it**
- *Leads to likely repeated behavior*
- *i.e. Giving Candy to Cadets who Respond*

- **PUNISHMENT**

- **A consequence that is unpleasant and weakens the response that came before it**
- *Leads to behavior likely NOT repeated*
- *i.e. EPT Curtis squirts you with the water gun*

ACCENTUATE THE POSITIVE



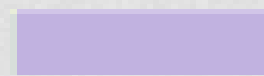
- **How does that relate to Positive+ and Negative- ?**
 - *Doesn't that just mean "good" and "bad"?*
 - *NO!*
- **POSITIVE (reinforcement OR punishment)**
means **ADDING** a consequence
 - *Giving candy, or Squirting with water*
- **NEGATIVE (reinforcement OR punishment)**
means **REMOVING** a consequence
 - *Taking away the pain, OR the PS4*
- *SO we put it together...*

Something is



**GIVEN TO
Dog**

Something is



**TAKEN FROM
Dog**

**INCREASES
likelihood of
behavior
being
repeated**




**POSITIVE
REINFORCEMENT**

(+R)

**NEGATIVE
REINFORCEMENT**

(-R)

**DECREASES
likelihood of
behavior
being
repeated**



**POSITIVE
PUNISHMENT**

(+P)

**NEGATIVE
PUNISHMENT**

(-P)

4 Consequences of Behaviour

Positive Reinforcement: Consequence *adds* something; future likelihood of behaviour increases



Behaviour: Studied for test
Consequence: Got an A+
Impact: Will study for the next test

Positive Punishment: Consequence *adds* something; future likelihood of behaviour decreases



Behaviour: Attempted the half-pipe
Consequence: Sustained a head injury
Impact: Realized you're too old for this! Won't try again.

Negative Reinforcement: Consequence *removes* something; future likelihood of behaviour increases



Behaviour: Took out the trash
Consequence: Foul smell in house went away
Impact: Will continue to discard smelly trash

Negative Punishment: Consequence *removes* something; future likelihood of behaviour decreases

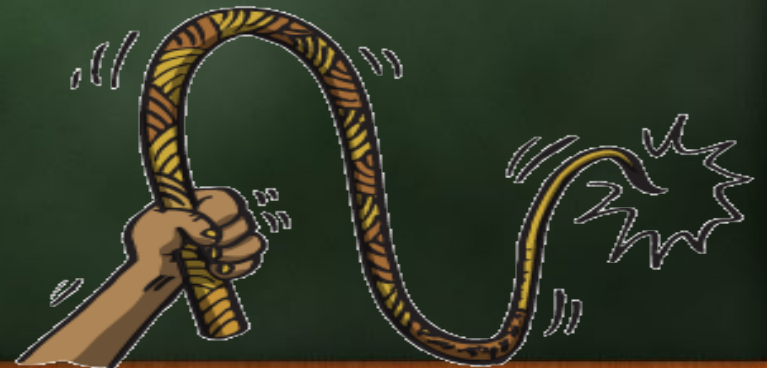
Behaviour: Driving recklessly
Consequence: License taken away
Impact: Less likely to drive recklessly in future



A WARNING:



- **Do Reinforcements or Punishments always work?**
 - **WHY might they not?**
 - **ALWAYS** remember, that just because **YOU** think something is a Reinforcement or a Punishment, or even Positive or Negative, you might need to look closer...



EXAMPLE



- **Pretend we have a Cadet, let's call him, Pake Jatino...**
- **Pake is acting out in Class**
- **The teacher thinks "Oh, I'll send him out into the hall. That'll teach him!"**
 - **Teacher is thinking this is what type of consequence?**
 - **Negative Punishment**
 - **I take away class to deter behavior**
 - **BUT the next day... Pake acts up again, WHY?**

HELP ME MARTIN!



- **For many years people held pretty solidly to Skinner's theory, but in the 1980s Martin Seligman observed a sad outcome with Dogs**
 - *Fido gets NO breaks in Psychology*
- **Seligman took two different groups of Dogs**
- **For ONE group he paired a tone with a harmless but painful electric shock (*and repeated it*)**
- **There was no way the dogs could escape the shock**
- **THEN he brought both this "conditioned group" and the other group that had NOT been conditioned and put them in a room where half the floor lit up, had the tone, and shocked the dogs...**



Shock

No shock

Actual Photo of one of Seligman's Dogs



bertolucci 04

HELP ME MARTIN!



- **While the unconditioned dogs quickly ran to the other side of the room, what do you think happened with the conditioned dogs?**
 - **Surprisingly, they stood still, whimpered, and got shocked**

This behavior was termed Learned Helplessness

- **When repeated unpleasant consequences cause the subject to stop trying to avoid the unpleasant**
- **Subject feels “helpless” to affect change**
- **Behavior CAN NOT be modified**
- ***Can we see this in people?***



Five people cut in front of Barry! He wanted to say something but felt so helpless."

AND SO...



- **Unlike Biological Psychology, which can not be easily changed (and sometimes not at all) behavior that is learned CAN be changed, modified, and molded**
 - *“Raise your children well....”*
- **NEXT TIME:**
 - *Learning Styles*
- *And then:*
 - *A Quiz*
- **AND THEN:**
 - *You will prepare to “teach” a skill, and help us “Learn” something 😊*

ANOTHER EXPERIMENT IN CONDITIONING: LYRICS



- **Have you ever had song lyrics you weren't quite sure of? BUT you come up with some and they seem to fit, and THAT'S what you hear?**
- ***Take this next example...***
- ***And please, don't say any guesses or lyrics out loud!***

OBJECTIVES



- **Define “Learning” Psychologically**
- **Identify two types of Conditioning, and their Inventors**
- **Compare Reinforcement to Punishment**
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