

"You Give Me 12 Healthy Infants..."

... John Broadus Watson, 1930

J. B. Watson believed in "nurture" and accepted the proclamation of John Locke "which presented the mind as a blank slate upon which experience writes its message" In what many have said was his most widely quoted and longest sentence, Watson stated:

Give me a dozen healthy infants well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant-chief and yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors (Watson, 1930, p. 104, as cited in LeFrancois, 2000).

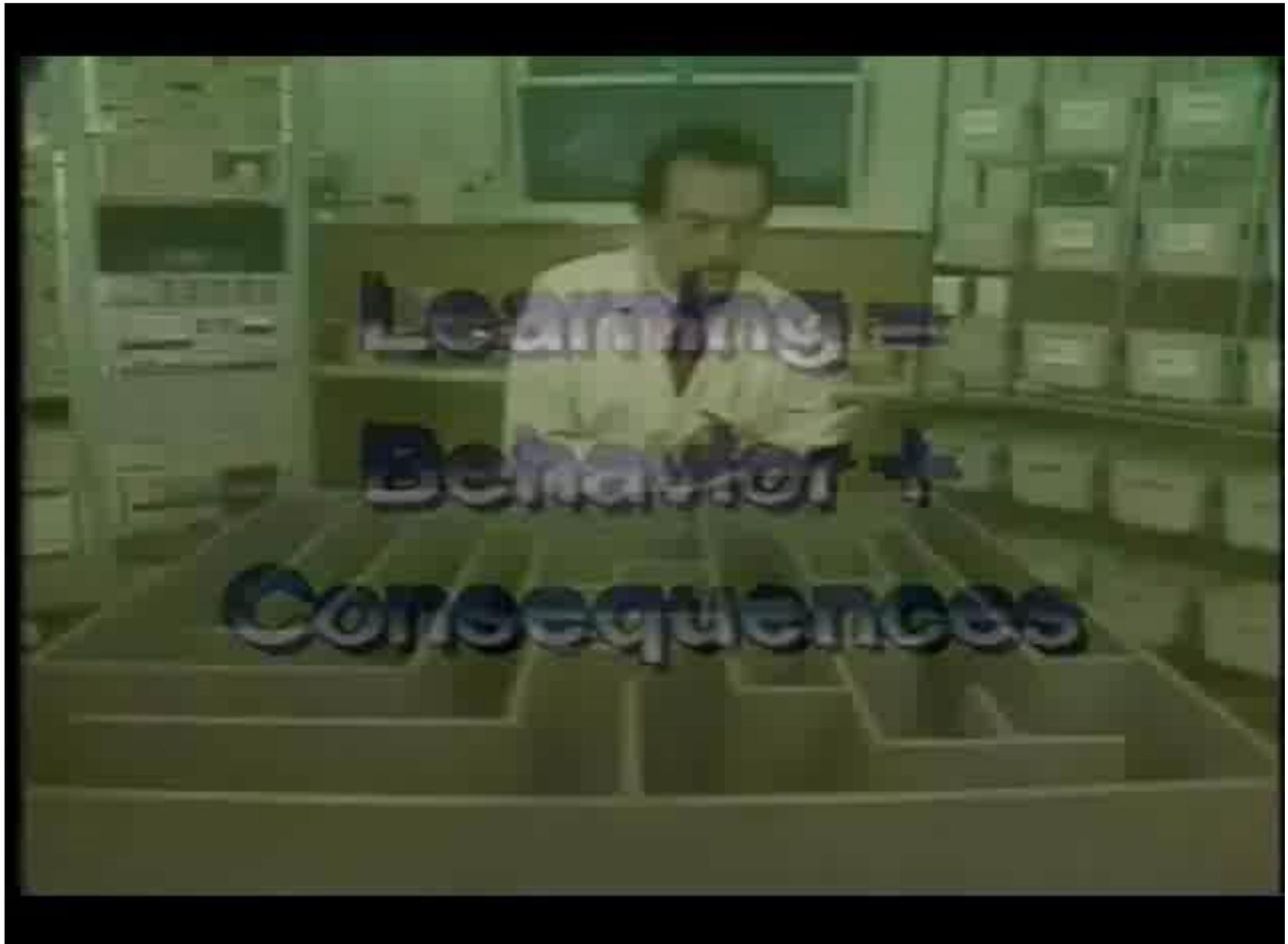
Who was “Little Albert”?

- ◆ “Albert B.” was the subject of John B. Watson’s famous study in which Watson wanted to show how fears could be conditioned.
- ◆ Instead of having to refer to unconscious forces to explain fears (i.e., psychoanalysis), Watson wanted to show that fears and phobias could be explained much more simply by applying the conditioning principles established by Pavlov to humans. *Psychology should measure what is observable and measurable. - behaviorist principle.*



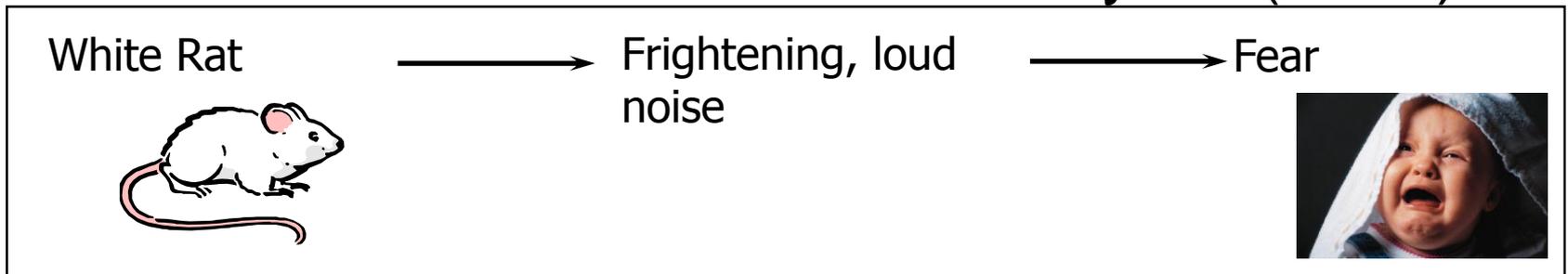
“...remains one of the most frequently cited articles in textbook psychology.” - Beck, Levinson, and Irons (2009)

Watson and Little Albert

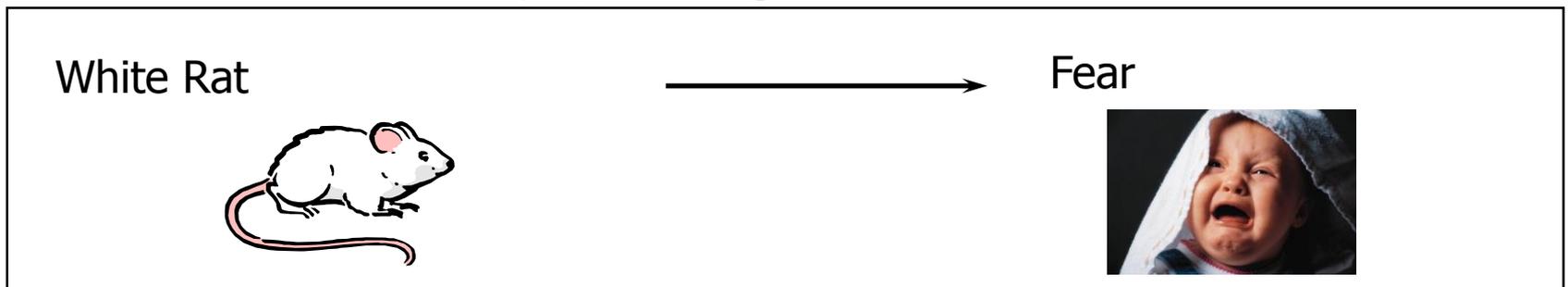


Classical Conditioning in Humans

- Little Albert
 - John Watson and Rosalie Raynor (1920)

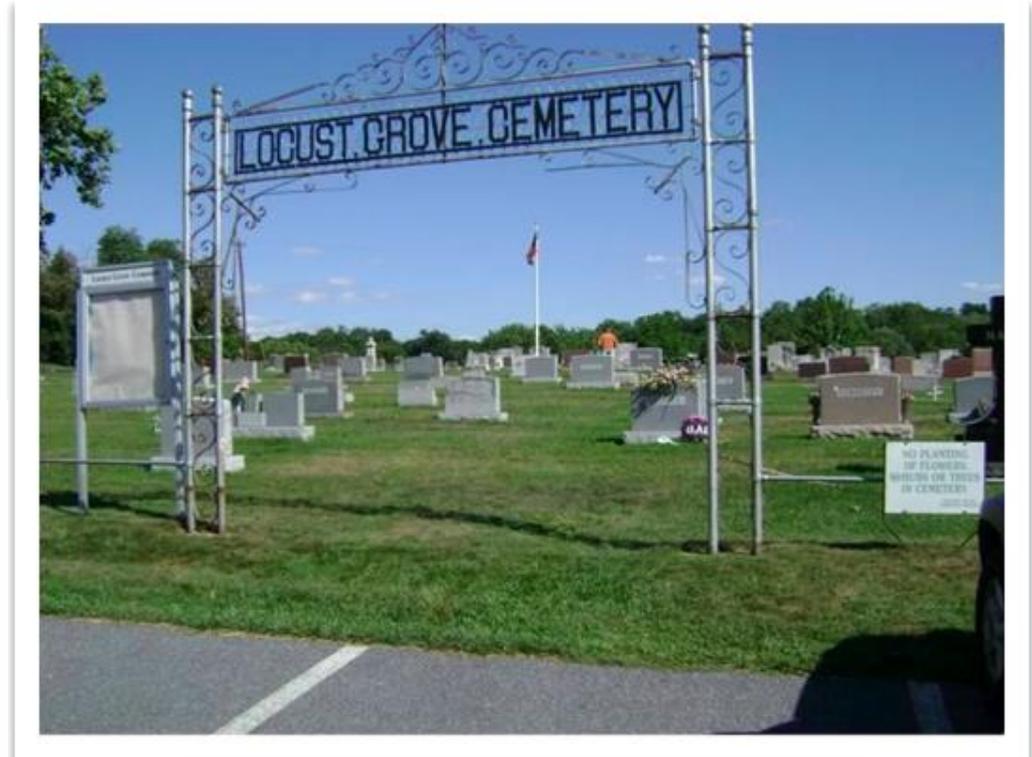
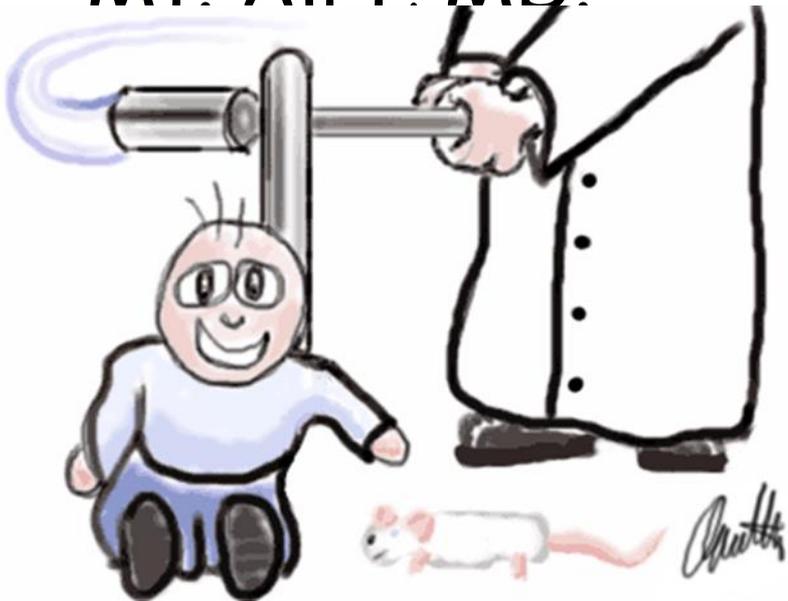


– After many pairings:



Whatever Became of Douglas Merritte?

- ◆ Douglas is buried in Locust Grove Cemetery, in Mt. Airt. MD.



Watson's Contributions

- One of the First American Psychologist to apply Pavlov's work to humans (emotions)
- Brought the study of behavior (Psych) into a more "scientific" and observable discipline
- Little Albert in every Psych Textbook
- Convinced other Psychologist that there was an alternative to Freudian Psychoanalysis
- Neurotic symptoms (Phobias could be controlled via CC)...Major applied significance

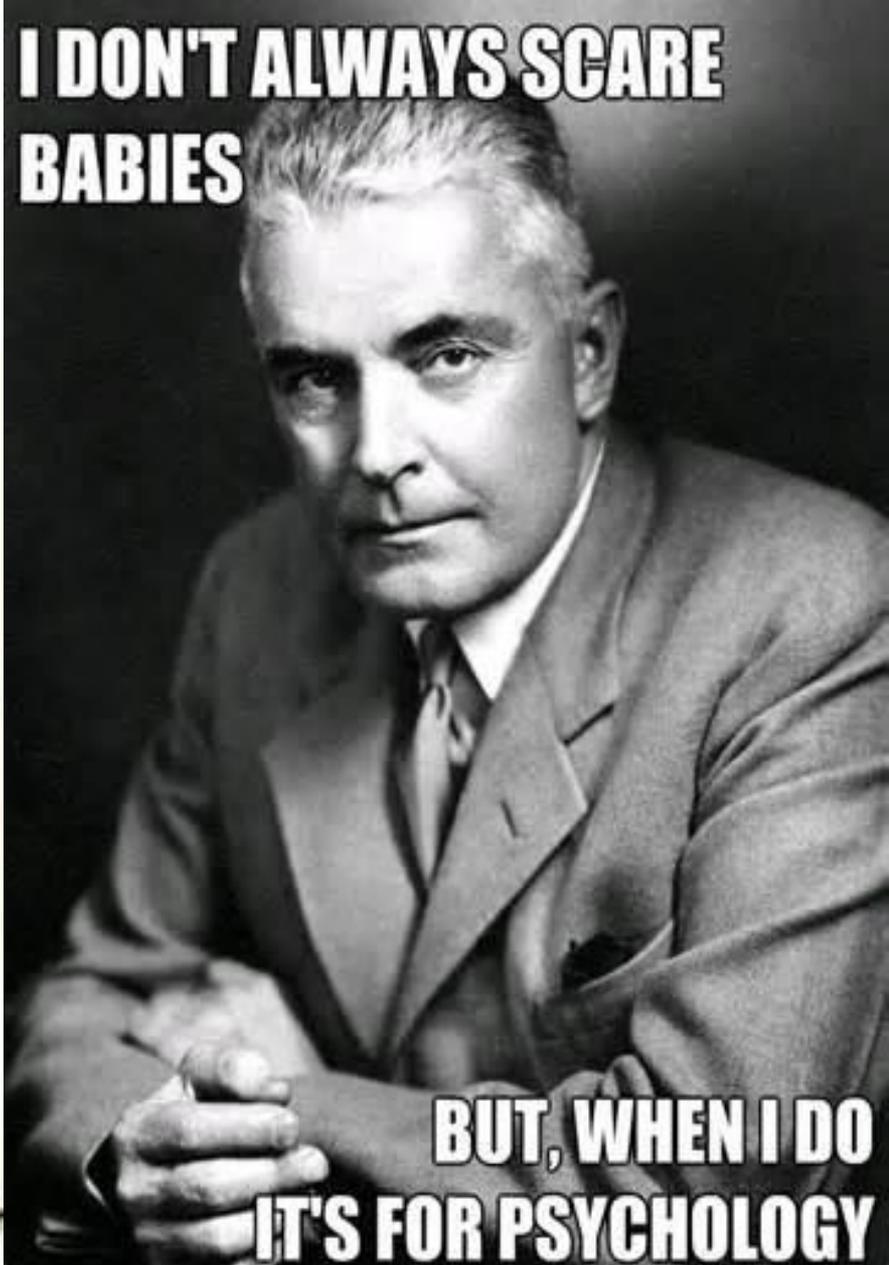


Applications of Classical Conditioning

Watson used classical conditioning procedures to develop advertising campaigns for a number of organizations, including Maxwell House, making the "coffee break" an American custom.



John B. Watson



Operant Conditioning



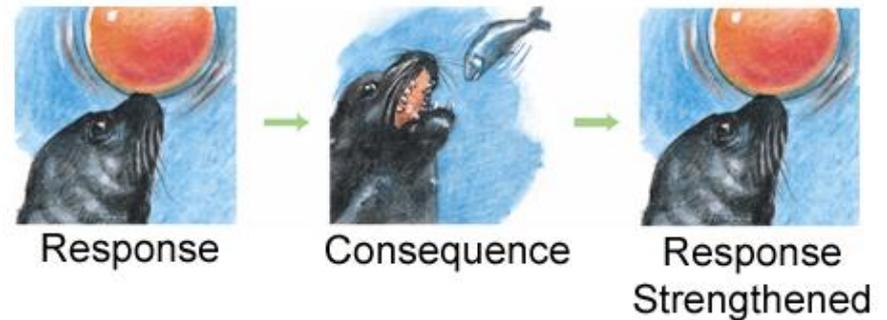
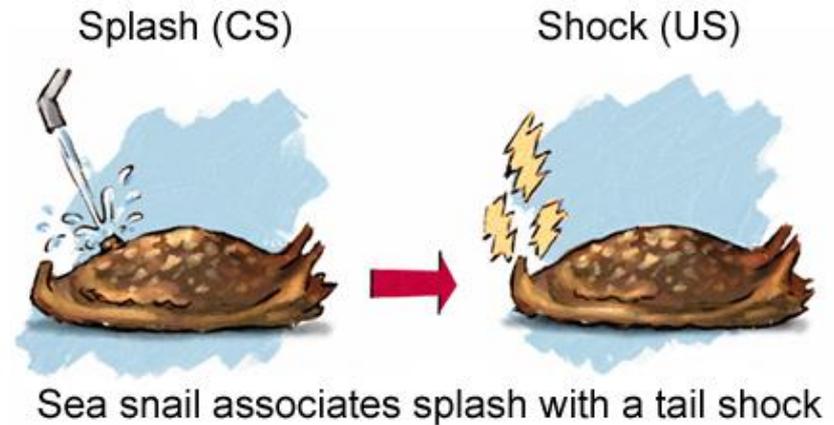
The Learner is NOT passive.

Learning based on consequence!!!

A type of learning in which behavior is strengthened if followed by a reinforcer or diminished if followed by a punisher

Operant & Classical Conditioning

1. Classical conditioning forms associations between stimuli (CS and US). **Operant conditioning, on the other hand, forms an association between behaviors and the resulting events.**



Classical v. Operant

- They both use acquisition, discrimination, SR, generalization and extinction.
- Classical Conditioning is automatic (**respondent behavior**). Dogs automatically salivate over meat, then bell- no thinking involved.
- Operant Conditioning involves behavior where one can influence their environment with behaviors which have consequences (**operant behavior**).

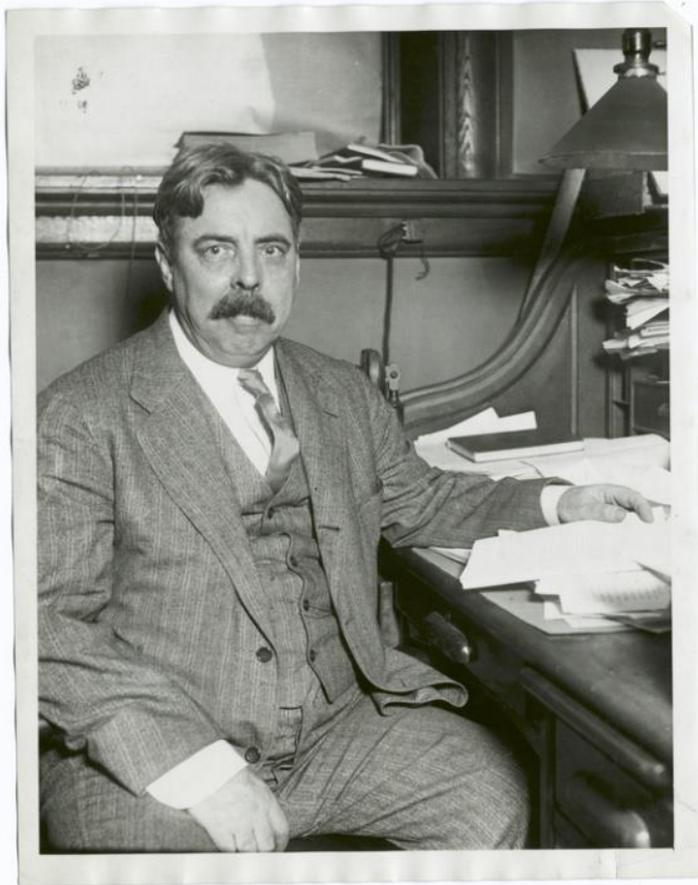
Is the organism learning associations between events that it doesn't control?

Classical Conditioning

Is the organism learning associations between its behavior and resulting events?

Operant Conditioning

The Law of Effect



- Edward Thorndike
- Locked cats in a cage
- Behavior changes because of its consequences.
- Rewards strengthen behavior.
- If consequences are unpleasant, the Stimulus-Reward connection will weaken.
- Called the whole process **instrumental learning**.

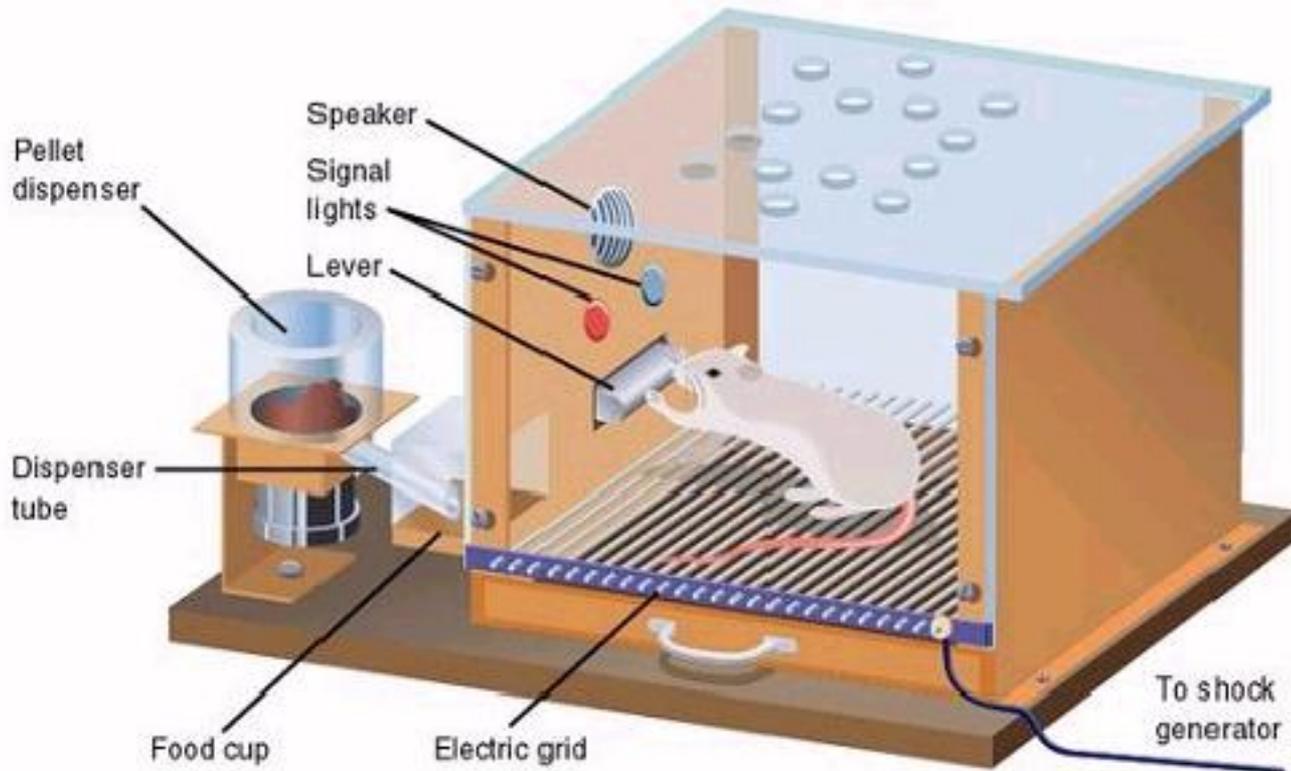
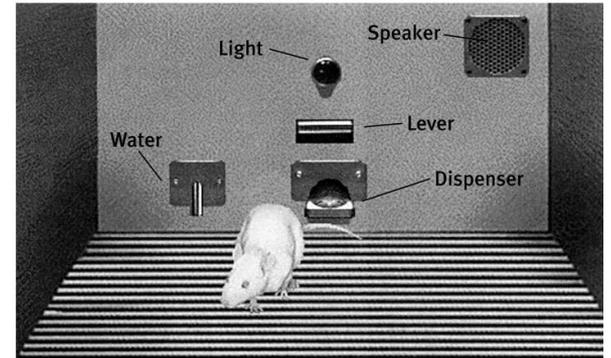
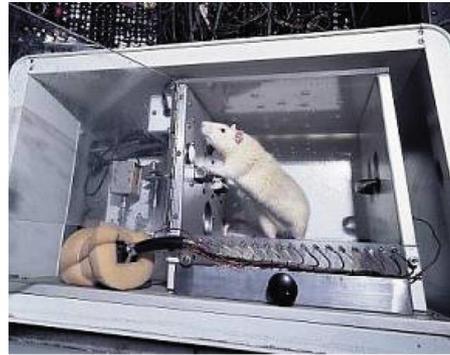


Learning = Behavior + Consequences

Thorndike - The Law of Effect



Skinner Box



Operant conditioning: a learning theory of attachments

B.F. Skinner

You can quote me!!
(In fact, you should.) "Behavior is a function of its consequences."

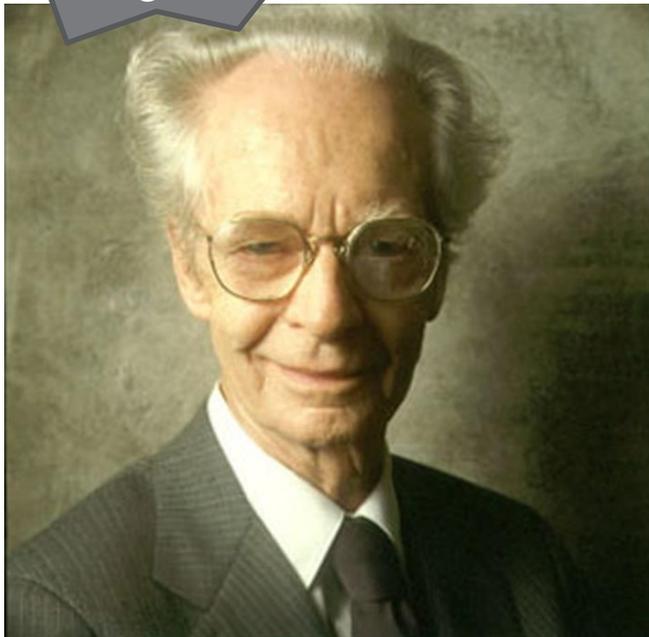
- The Mac Daddy of Operant Conditioning.
- Nurture guy through and through.
- Skinner's experiments extend **Thorndike's** thinking, especially his **law of effect**.

TERMS TO KNOW!

OPERANT = an action e.g. a rat pressing a lever in a Skinner box; a baby crying with hunger

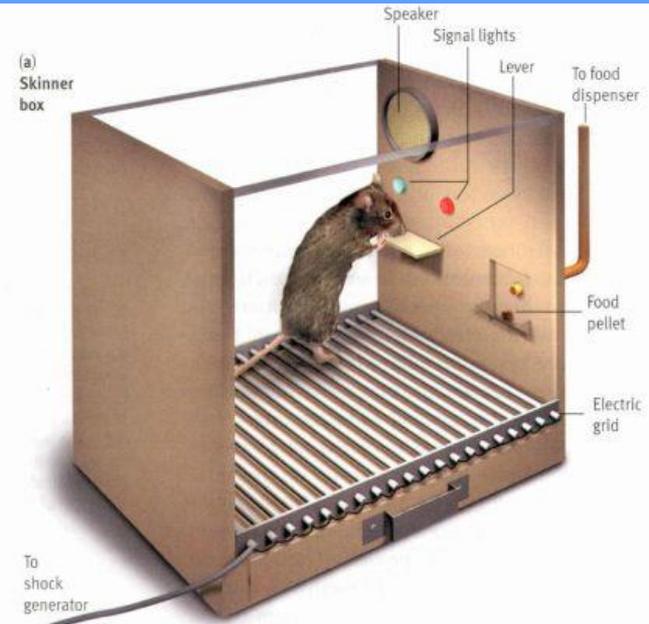
REWARD = the consequence of the action, e.g. the rat receiving food for pressing the lever; the baby being given food

This reward acts as a **REINFORCER**, because it causes the action to be repeated.



THE SKINNER BOX:

The piece of equipment designed by Skinner to demonstrate operant conditioning



Operant conditioning: a learning theory of attachments

There is a food container on top of the box...

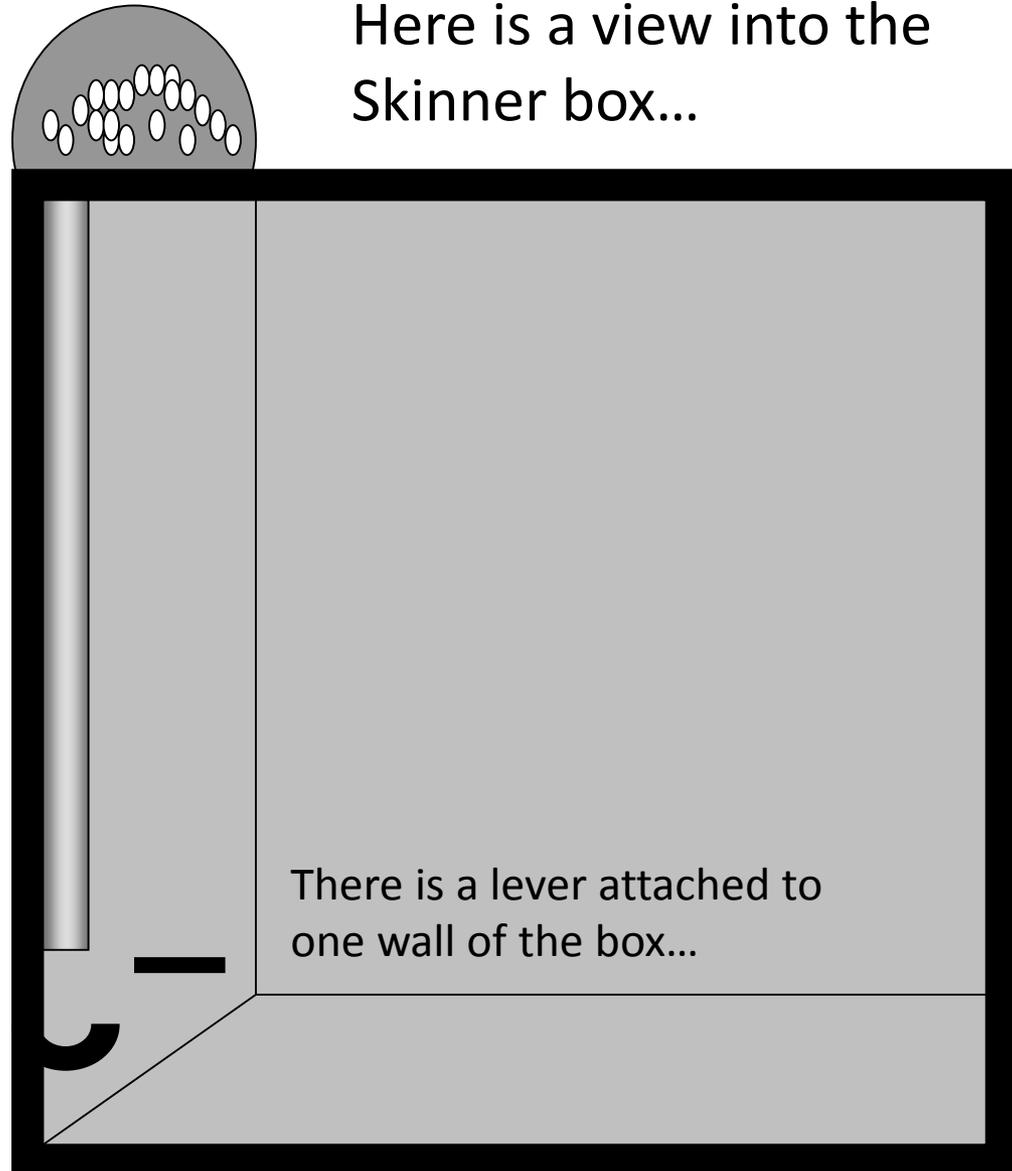
The food container is filled with sugar pellets...

A tube leads from the food container to the tray...

There's a feeding tray attached to the wall, to catch food pellets...

Here is a view into the Skinner box...

There is a lever attached to one wall of the box...



Operant conditioning: a learning theory of attachments

THE MOUSE!

A mouse is placed in the Skinner box. It has been fasted for 24 hours so it is hungry.

The mouse has never been in a Skinner box before.

It is allowed to explore the box.

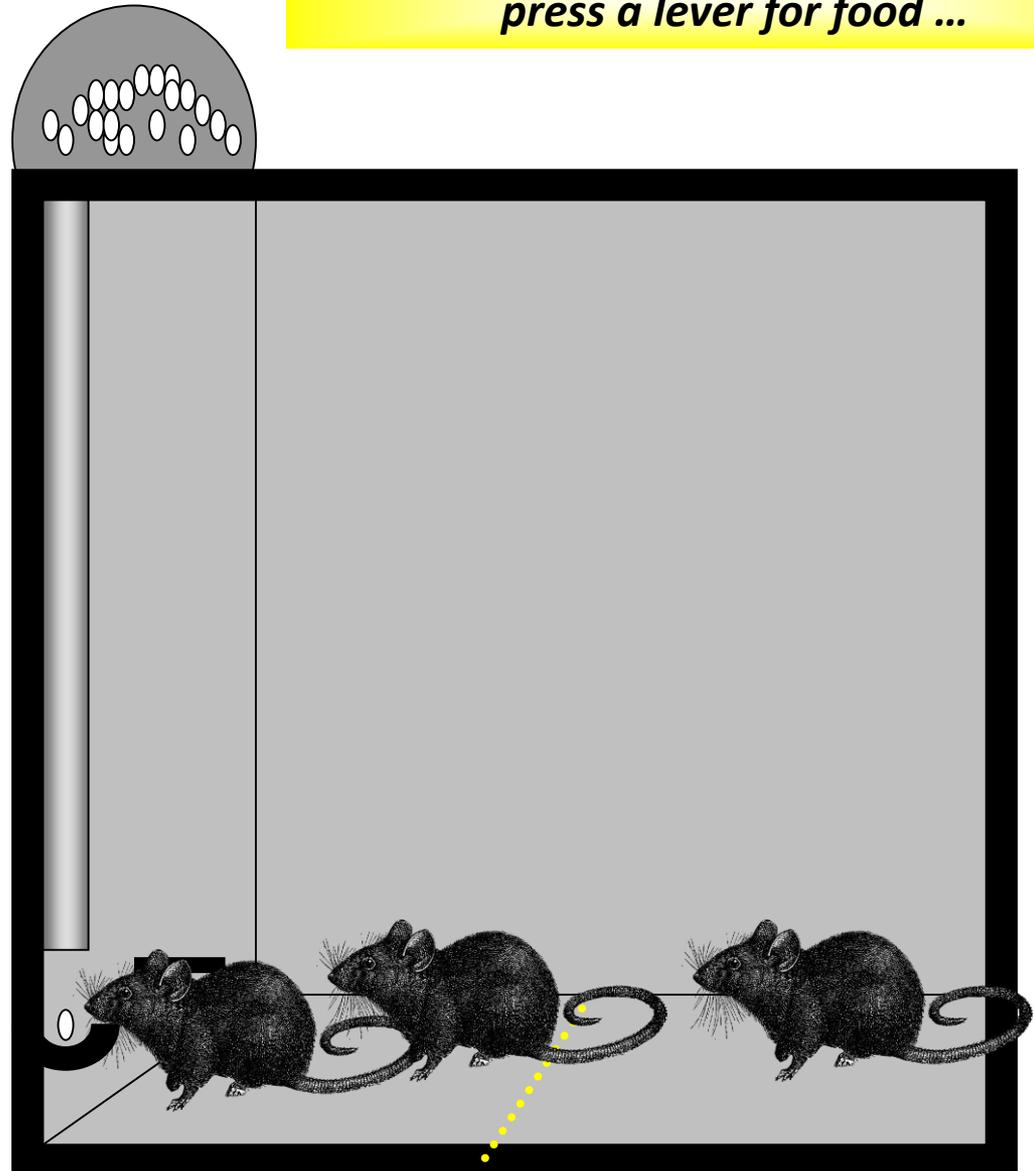
CONDITIONING BEGINS!

The researcher imagines a line dividing the floor of the box in half.

Each time the mouse moves into the half of the floor nearest the lever, the researcher releases a sugar pellet into the feeding tray.

The mouse is attracted to the tray by the sugar pellet, and feeds.

How to operantly condition a mouse to press a lever for food ...



The Skinner box...

Operant conditioning: a learning theory of attachments

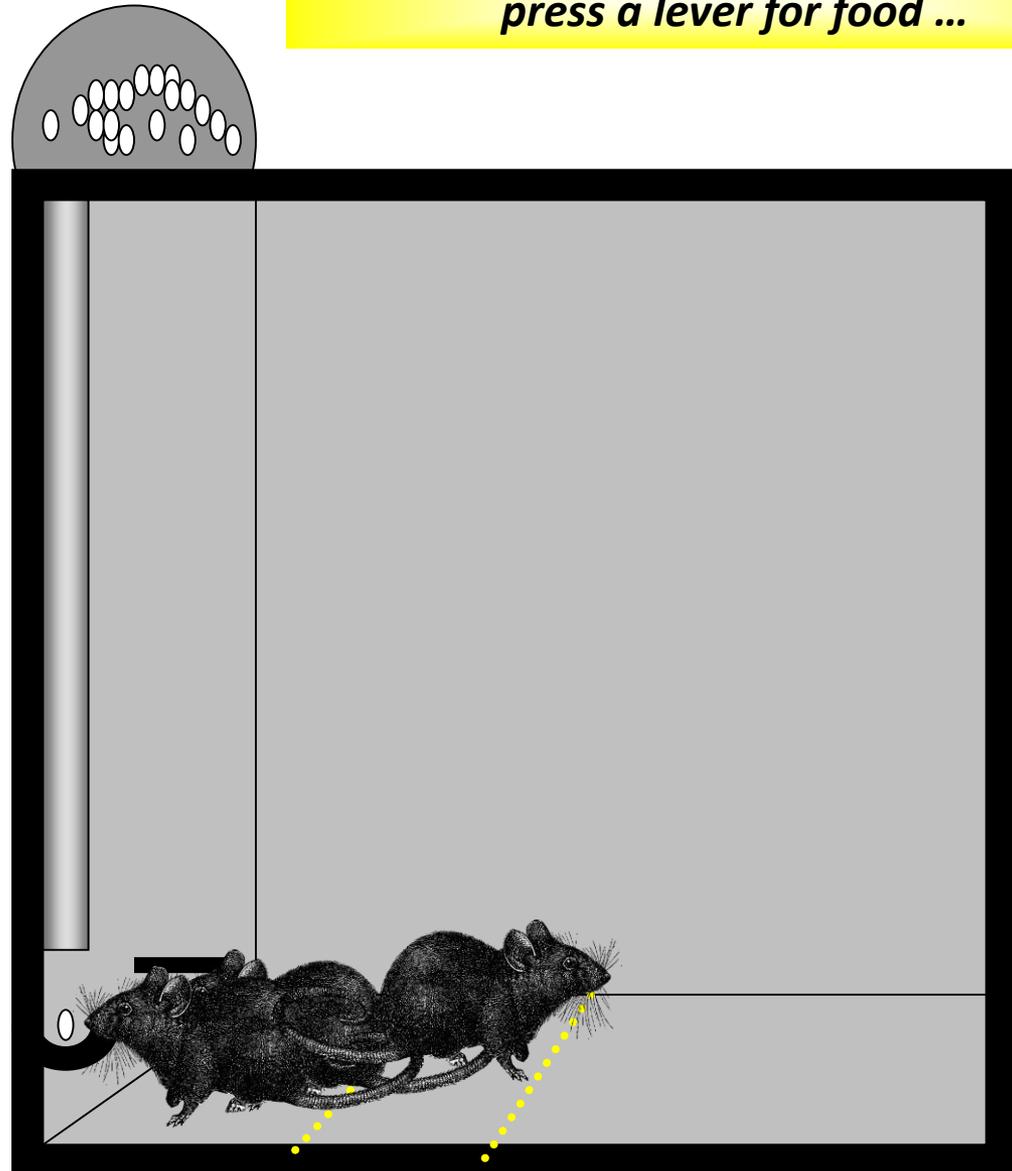
CONDITIONING CONTINUES!

This process is repeated several times. At first the mouse continues exploring the whole box.

But before long, the mouse is staying in the half of the box nearest the feeding tray.

Now the researcher becomes more demanding, and imagines a line even nearer the lever - he stops giving the mouse food pellets, unless the mouse stays in this area.

How to operantly condition a mouse to press a lever for food ...



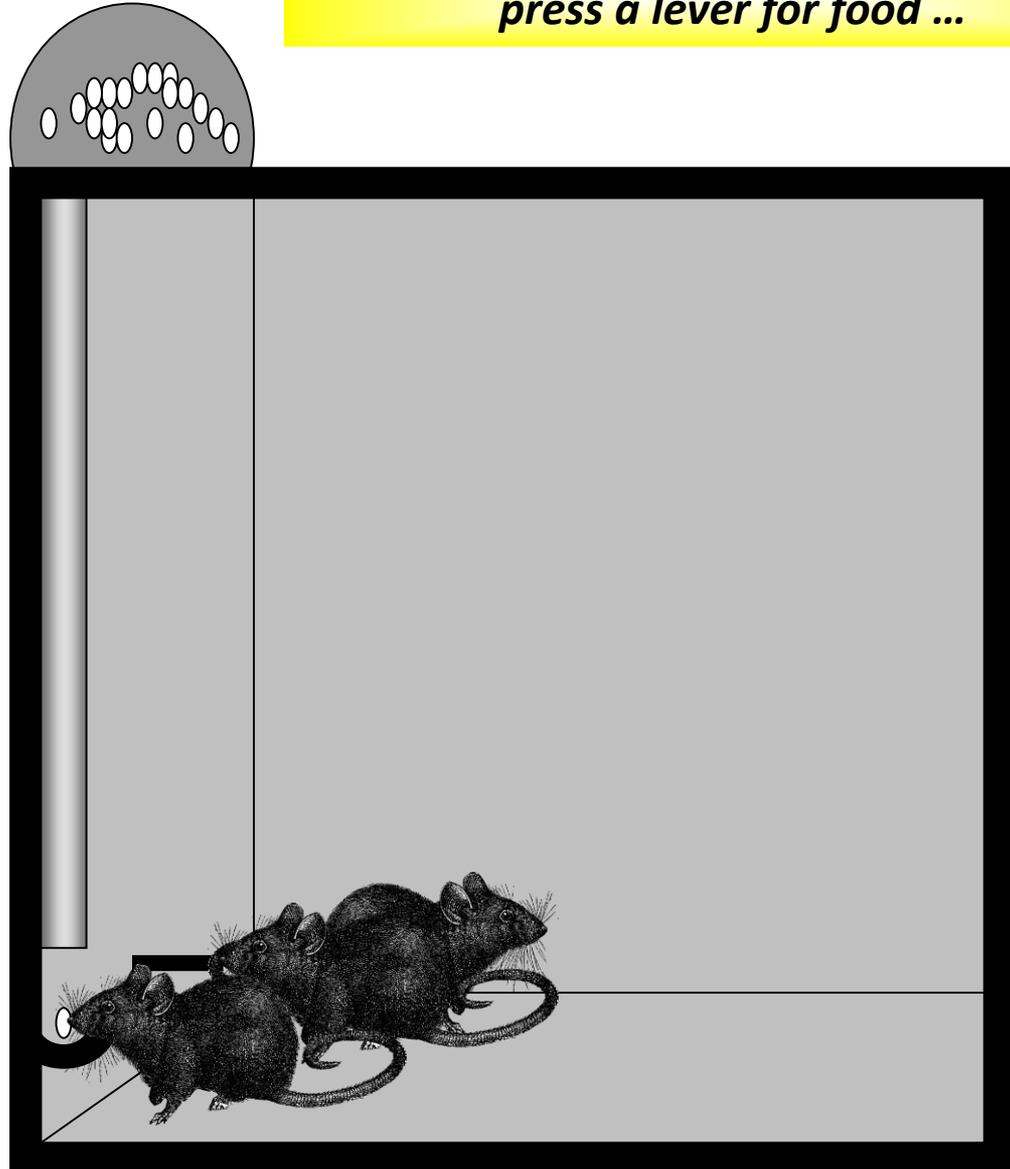
The Skinner box...

Operant conditioning: a learning theory of attachments

CONDITIONING CONTINUES!

Next, the researcher will only give food if some part of the mouse's body is touching the lever - at this stage, it doesn't matter which part.

How to operantly condition a mouse to press a lever for food ...



The Skinner box...

Operant conditioning: a learning theory of attachments

CONDITIONING CONTINUES!

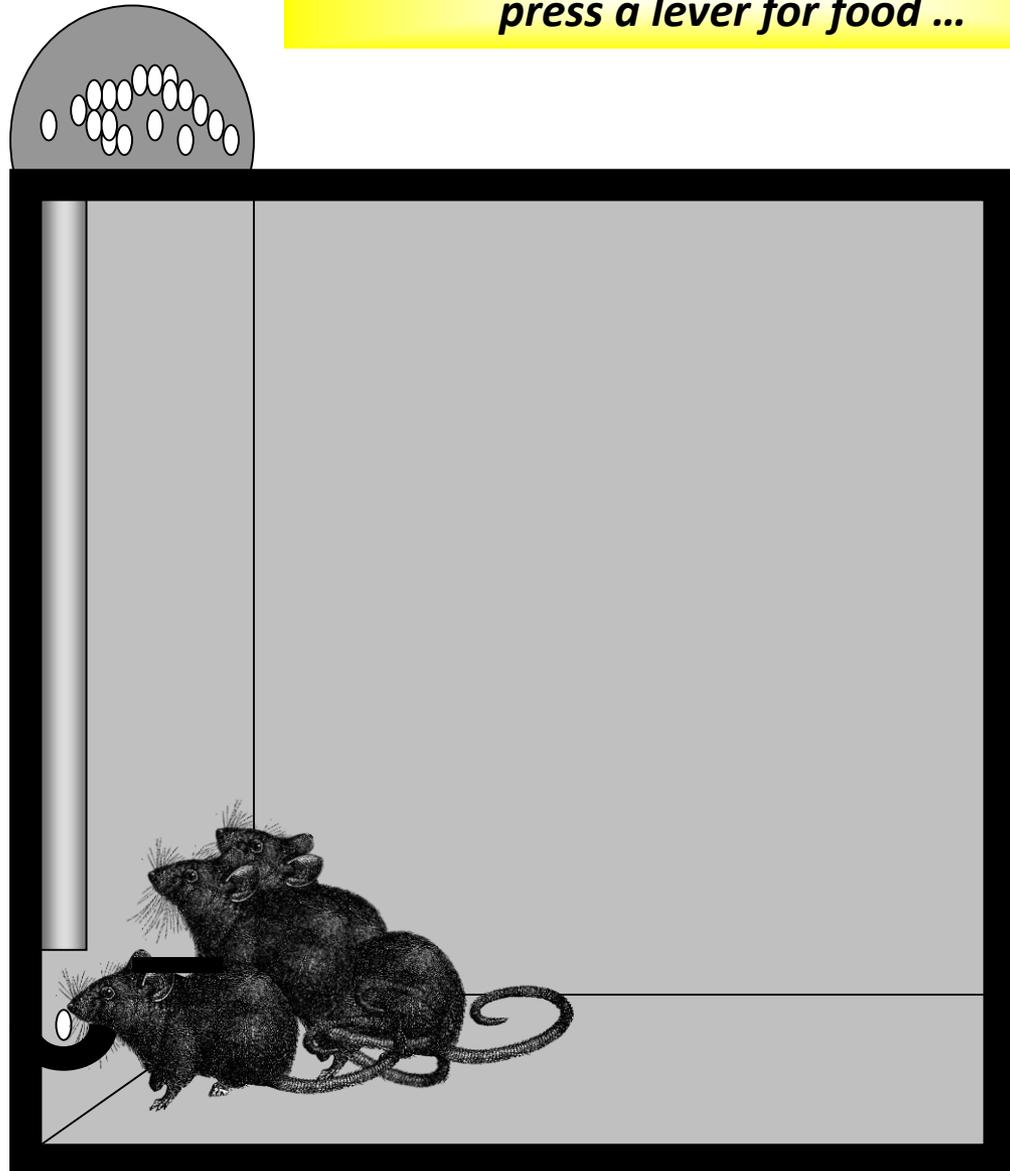
When the mouse is spending all its time touching the lever with the front part of its body, the researcher stops giving food.

It isn't long before the mouse accidentally touches the lever with his feet, and presses it.

When the lever is pressed, food is automatically delivered.

The mouse will continue pressing the lever whenever he wants food.

How to operantly condition a mouse to press a lever for food ...



The Skinner box...

Operant conditioning: a learning theory of attachments

Summary of operant conditioning of the mouse ...



Mouse performs action:
presses lever



Mouse receives reward:
food relieves hunger



The reward REINFORCES the action, so
the mouse REPEATS it

FACT!

- A reward which makes a good situation even better is called a **POSITIVE REINFORCER**.
- A reward which takes away an unpleasant situation is called a **NEGATIVE REINFORCER**.

THINK!

- For the mouse in the example above:
- Say whether food is a positive or a negative reinforcer.
 - Be able to explain your decision.

Skinner Box

