


Biological Constraints on Classical Conditioning: Not all fears are acquired equally

Phobia disorders—An anxiety disorder that is characterized by marked, persistent and excessive fear and avoidance of specific objects, activities or situations. The fear response is out of proportion to the stimulus and the fear and avoidance significantly interferes with daily life.

About 11% of people in the United States will develop a specific phobia in their lifetime. Generally, phobics realize their fears are irrational, but feel compelled to avoid the feared situation or objects.

Specific phobias fall into five categories:

(1) animals (dogs, cats, rats, snakes, spiders)	
(2) natural environments (heights, darkness, water, storms)	
(3) situations (bridges, elevators, tunnels, enclosed spaces)	
(4) blood injections and injury	
(5) other phobias including illness and death.	

Fears, Phobias, and the Evolutionary Perspective

We are much more acquire (develop) fears of these things,

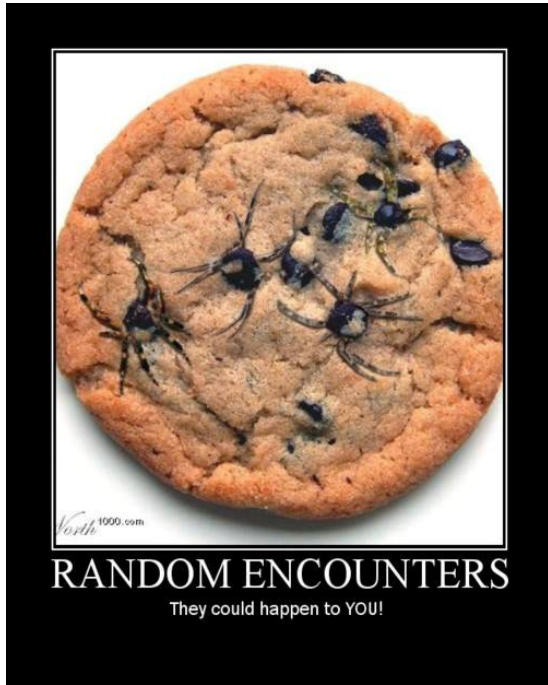


Than these things (and psychologists have tried)



The evolutionary perspective suggests that we are biologically more likely to become afraid of objects and situations that have posed a threat to previous generations (eg. snakes, spiders, heights, drowning, etc.). Those that avoided these objects and situations were more likely to survive and pass their genes to their offspring than those who didn't avoid these objects and situations and died. The term for this is biological preparedness.

Biological Preparedness



Classical Conditioning



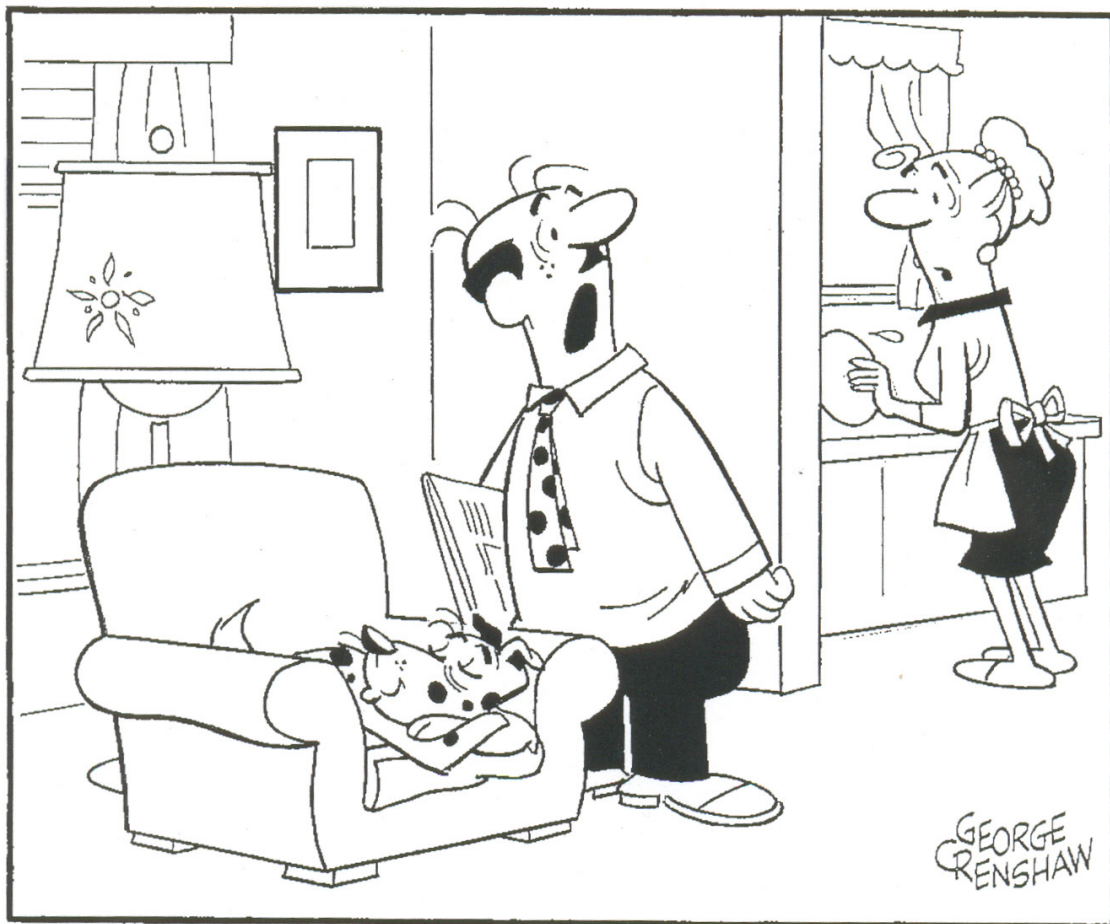
US →	UR	NS	CS →	CR

Classical Conditioning

FIGURE 5.7

Classical Conditioning: Useful for Practical Purposes

Classical conditioning has many practical applications.



" GO RUN THE ELECTRIC CAN OPENER SO HE'LL
GET OFF MY CHAIR. "

(Source: George Crenshaw / Post Dispatch Features.)

Classical Conditioning



In rapt contemplation

There is nothing inscrutable about this young tiger cat. Cognitive theorists explain her conditioned response on the basis of expectancy: The sound of the can being attached to the opener permits her to predict the arrival of food.

Classical Conditioning: One Trial Learning & Taste aversions



Lithium and coyotes

Identify the

1. unconditioned stimulus (US),
2. unconditioned response (UR),
3. neutral stimulus,
4. conditioned stimulus (CS),
5. conditioned response (CR).

How does the research on taste aversions violate two basic principles of classical conditioning?

- Learning of an association does not require repeated pairings of the stimulus and response.
- The time delay is in hours and not seconds.

Biological Constraints on Operant Conditioning

Animals can most easily learn and retain behaviors that draw on their biological predispositions, such as horses' inborn ability to move around obstacles with speed and agility ([page 303](#)), or a border collie tendency to retrieve items.



Raccoons tend to hold onto items rather than let them go.

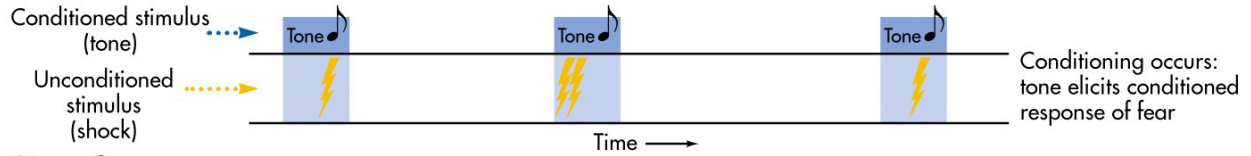


Training a raccoon to grab an item (a coin) and drop it into a bank is difficult. They tend to hold onto items. They tend to revert to their innate tendencies. This tendency is called instinctive drift.

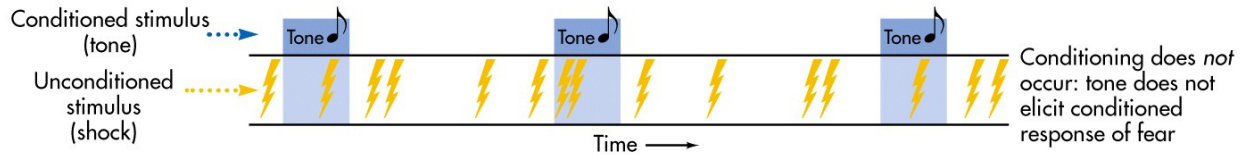
Cognition's Influence on Conditioning

Classical Conditioning

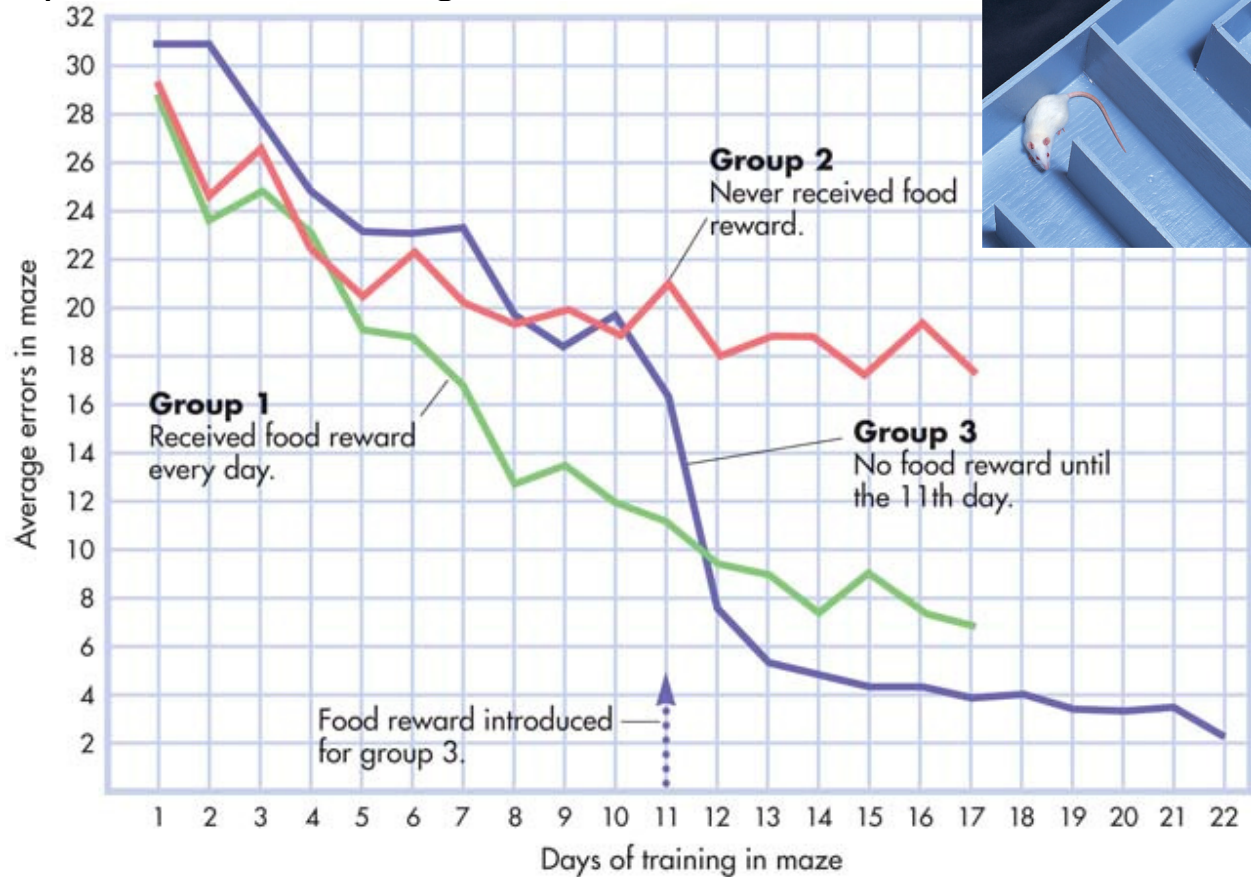
Group 1



Group 2



Operant Conditioning



Observational Learning

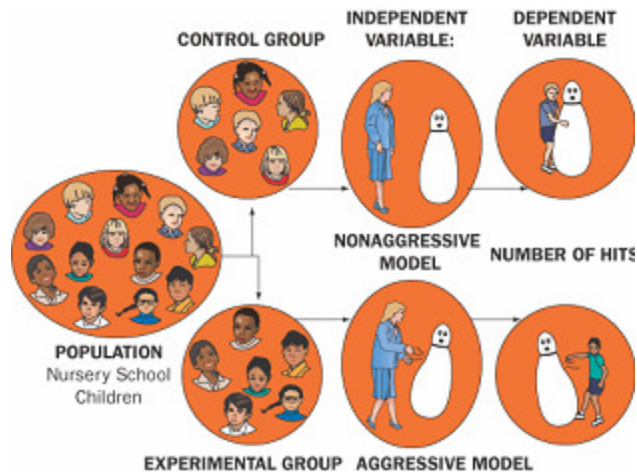
The acquisition or changing a behavior after exposure to another individual performing that behavior ([page 224](#)).



Observational learning

Many behaviors are not learned through classical conditioning or operant conditioning. Learning that occurs through observing the actions of others.

Albert Bandura wanted to illustrate that people learn by watching others and that expectations are relevant for performing a behavior. In his experiment, he had three different groups of children watch an adult aggressive play with a Bobo doll.



<u>Group 1:</u>	<u>Behavior</u> Adults hit the Bobo doll	<u>Consequence</u> The adults were <u>reinforced</u> for their aggressive behavior
<u>Group 2:</u>	Adults hit the Bobo doll	The adults were <u>punished</u> for their aggressive behavior
<u>Group 3:</u>	Adults hit the Bobo doll	There were <u>no consequences</u> for aggressive behavior.

Observational Learning

After watching the adult interact with the Bobo doll, the children were allowed to play with the Bobo doll.



	<u>Behavior</u>	<u>Consequence</u>	<u>Children's behavior</u>	<u>Learned to hit the Bobo doll?</u>
<u>Group 1:</u>	Adults hit the Bobo doll	The adults were <u>reinforced</u> for their aggressive behavior	Displayed aggression toward Bobo doll	Yes
<u>Group 2:</u>	Adults hit the Bobo doll	The adults were <u>punished</u> for their aggressive behavior		Yes
<u>Group 3:</u>	Adults hit the Bobo doll	There were <u>no consequences</u> for aggressive behavior.	Displayed aggression toward Bobo doll	Yes

Examples of observational learning

Newton is very aggressive and greedy when it comes to food. Another one of our dogs, Tuffy is a very good and obedient dog (of course he is mine). My sister taught Tuffy to give us a hug. He understood this as a gesture of love and friendship (if the word applies to dogs). One day, Newton saw Tuffy give a hug and received a treat. Newton quickly learned this trick because food was involved. However, it was unclear that he learned that that this was a gesture of love and friendship. Newton imitated the behavior, but didn't understand the reasons for this behavior.



Likewise, Kris's German shepherd (Xena, Warrior Princess) learned how to open doors by moving her paws up and down next to the doorknob. I joke that we need to quarantine his dog or else she will teach other dogs how to open doors by watching her.

Observational Learning

If you observe your parents, friends or coworker lie, what factors influence whether or not you are going to imitate their behavior?

Table 5.6: Factors that increase the likelihood of imitation

1. People who are rewarded for their behavior.
 2. Warm, nurturing people.
 3. People who have control over you or have the power to influence your life (such as supervisors and parents).
 4. People who are similar to you in terms of age, gender, and interests.
 5. People you perceive as having higher social status.
 6. When the task to be imitated is not extremely difficult or easy.
 7. If you lack the confidence in your own abilities in a particular situation.
 8. If the situation is ambiguous or unfamiliar.
 9. If you've been reinforced for imitating the same behavior in the past.
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Observational Learning

Prosocial Effects	Anti-Social Effects
<ol style="list-style-type: none">1. Teach employees learn communication, sales and customer services skills2. Non-violent, helpful behavior3. Morality	<ol style="list-style-type: none">1. Abusive parenting2. Aggression3. Bullying

Models are more effective if their actions and words are consistent. The models who say act good, but don't teach hypocrisy.

What are other prosocial and/or antisocial behaviors that are learned by observation?