

**Warning: There are pictures of snakes and spiders**

## Fear and Classical Conditioning

The acquisition of fears can be explain and treated through classical conditioning.

### Fear and classical conditioning--Little Albert:

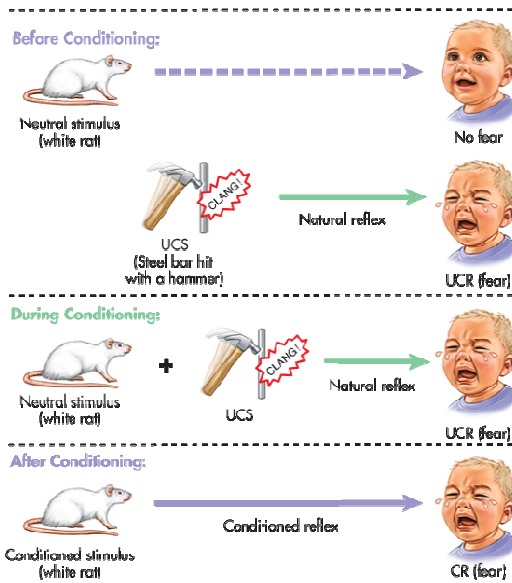


Figure 5.3  
Hackerhury/Nolan, *Psychology*, 8e, © 2018 Worth Publishers

People can develop a fear of Tuesdays, dentists, cars, dogs, haunted houses, school, flying, cruise ships, the postman, etc.

## Fear and the Evolutionary Perspective

Not all fears are created equal.

We are much more acquire (develop) fears of dogs, cats and snakes,



than rubber ducks, curtains and wooden blocks (and psychologists have tried)



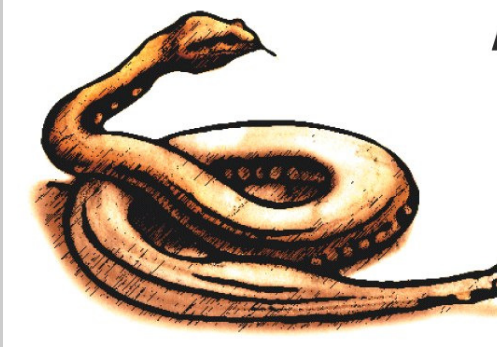
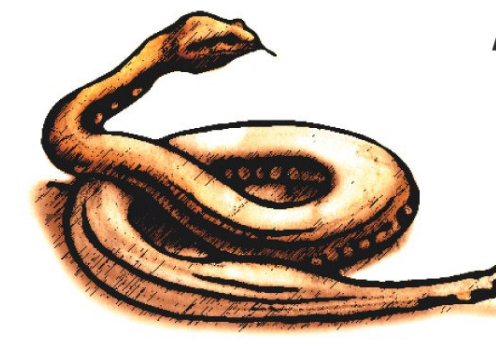



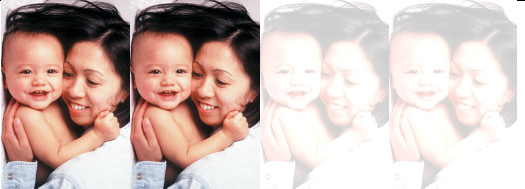
The evolutionary perspective suggests that we are biologically more likely to acquire a fear of objects and situations that have posed a threat to previous generations such as snakes, spiders, heights, drowning, etc.). People that avoided these objects and situations were more likely to survive and pass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

## **Evolutionary Perspective**

Evolutionary perspective helps explain behavior in terms of natural selection.

Traits that facilitate survival are more likely to allow that person (or group of people) to survive, live longer, reproduce and grow in numbers. Traits that don't facilitate survival are less likely to allow that person or group to survive, live longer, reproduce and grow in numbers.





## Evolutionary Perspective

Afraid of Snakes	Not afraid of Snakes
	
More likely to avoid dangerous snakes	Less likely to avoid dangerous snakes
Live longer, have larger families	Live shorter lives, have smaller families
	
	

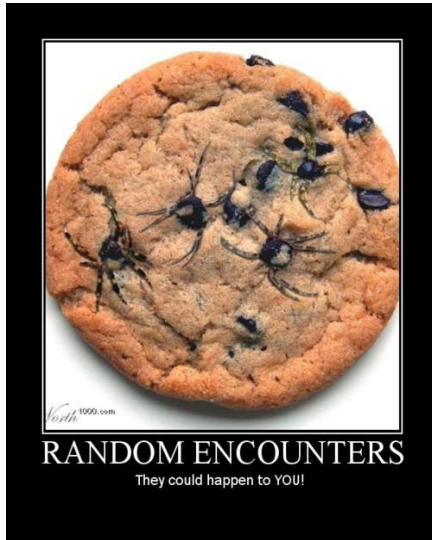
## Fear and Phobia

A phobia is an acquired fear that is exaggerated in comparison to the real threat of an object or of a situation ([page 231](#)).

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.	

## Adaptive Influences, Biological Preparedness and Fears



Even though these images are unlikely to directly harm us, it makes many of us uncomfortable.

## Adaptive Influences, Biological Preparedness and Fears

We are faster in identifying the snake among the flowers (left side) than identifying the flower among the snakes (right side). This suggests bias and likely biologically basis that has adaptive value of reducing the odds of being harmed.

(a) Target: snake



FIGURE 6.11

Hayakawa, S., Kawai, N. & Masataka, N. The influence of color on snake detection in visual search in human children. *Sci Rep* 1, 80 (2011).  
<https://doi.org/10.1038/srep00090>  
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(b) Target: flower

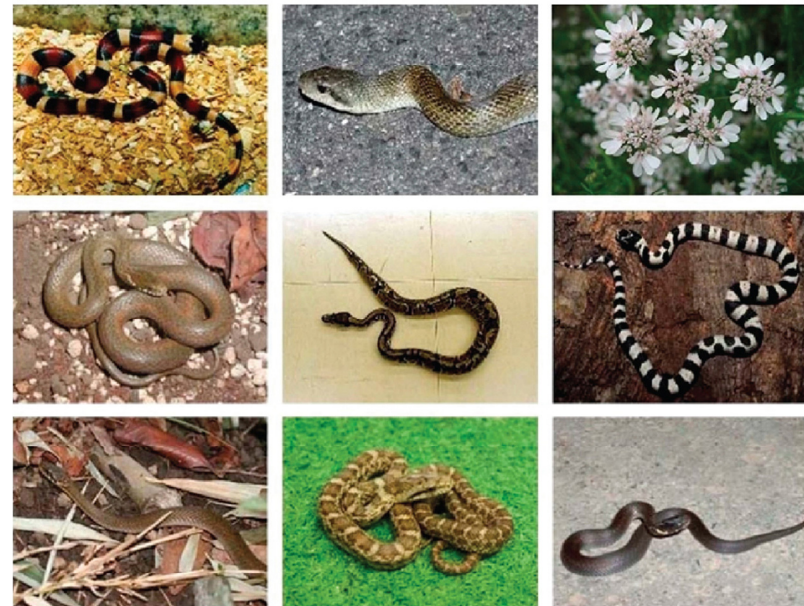


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People are relatively quick to find the lone snake among the flowers.

People are relatively slow to find the lone flower among the snakes.



## Classical Conditioning: One Trial Learning & Taste aversions

Taste aversions are adaptive. People and some animals quickly associate getting sick with what they ate. This can keep them from retrying poisonous foods.

To keep coyotes from attacking rancher's sheep, the carcass of a sheep was injected with lithium, and when ingested by the coyotes, the lithium would make the coyotes sick. The coyotes would quickly associate the sheep with getting sick.



### Lithium and coyotes

Identify the

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

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.