

CHAPTER 7

Learning

Professor Fazakas-DeHoog

Natural Response

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Meat Powder



Unconditioned
Stimulus (UCS)



Salivation



Unconditioned
Response (UCR)

No Natural Response

Bell



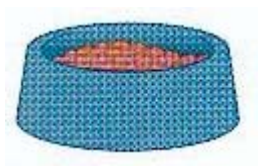
Neutral
Stimulus



No response



During Learning



Repeatedly pair
UCS and Neutral
Stimulus

After Learning

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Bell



Conditioned
Stimulus (CS)



Salivation

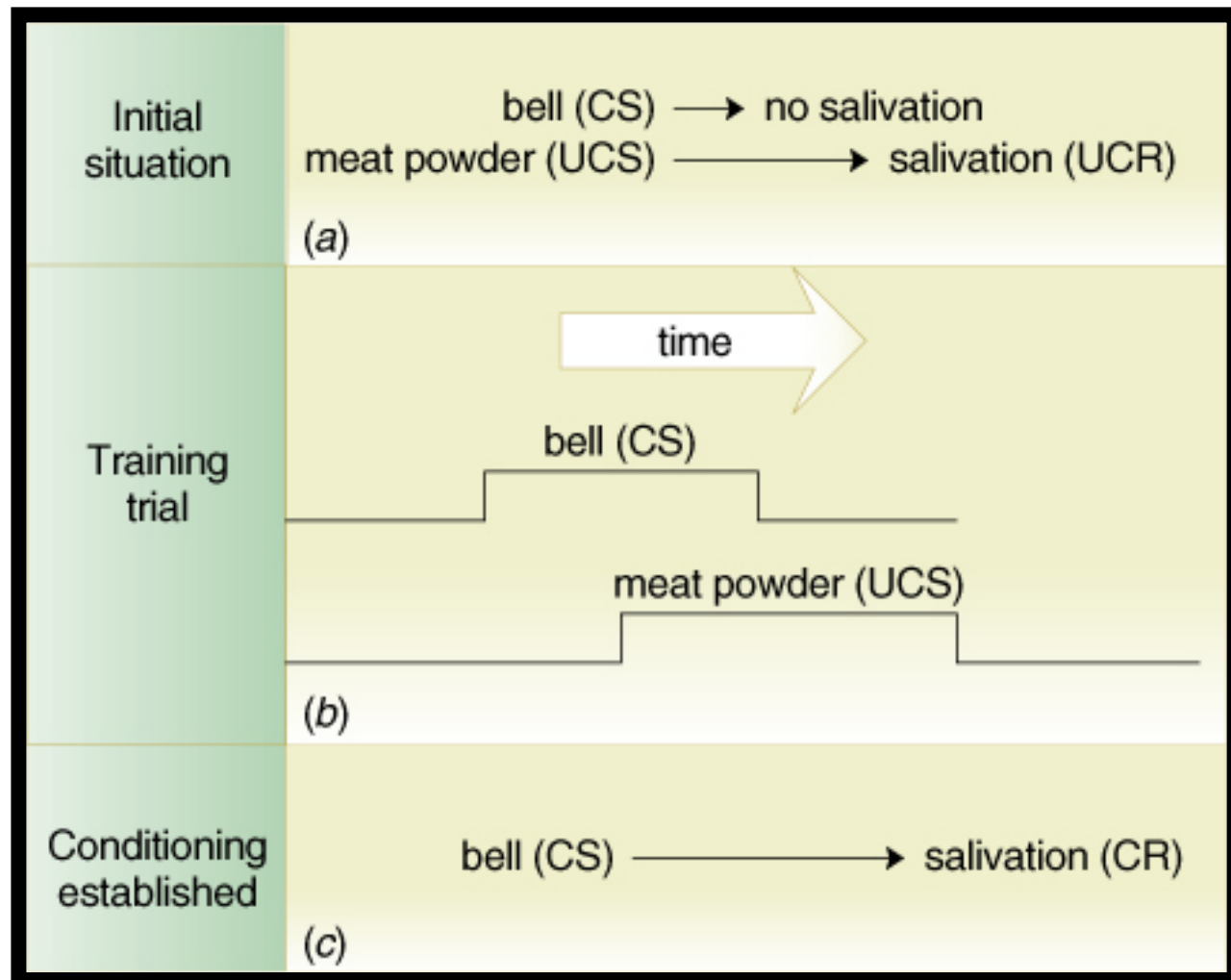


Conditioned
Response (CR)

Summary

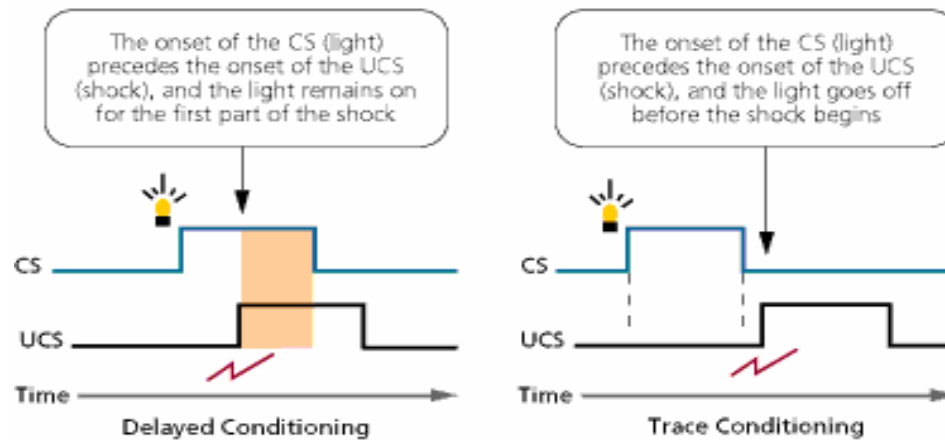
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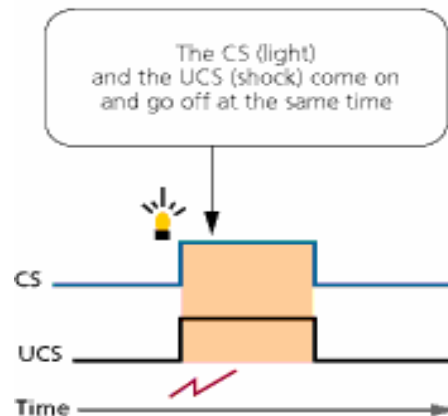


Timing is Important

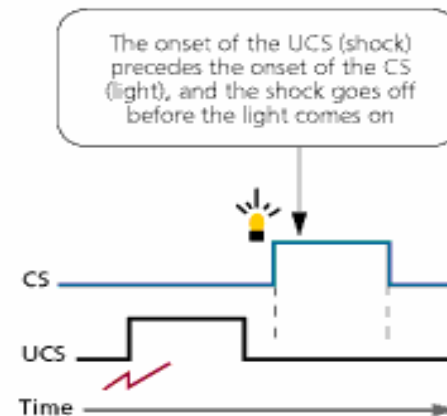
Forward Conditioning



Simultaneous Conditioning

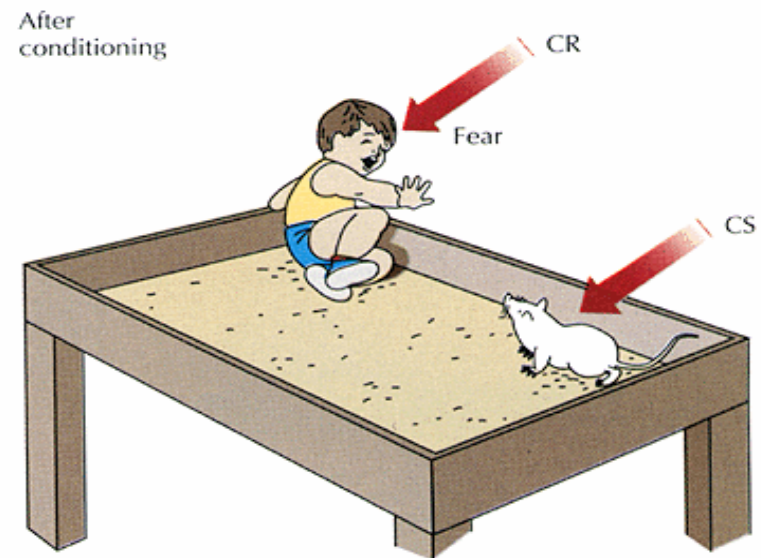
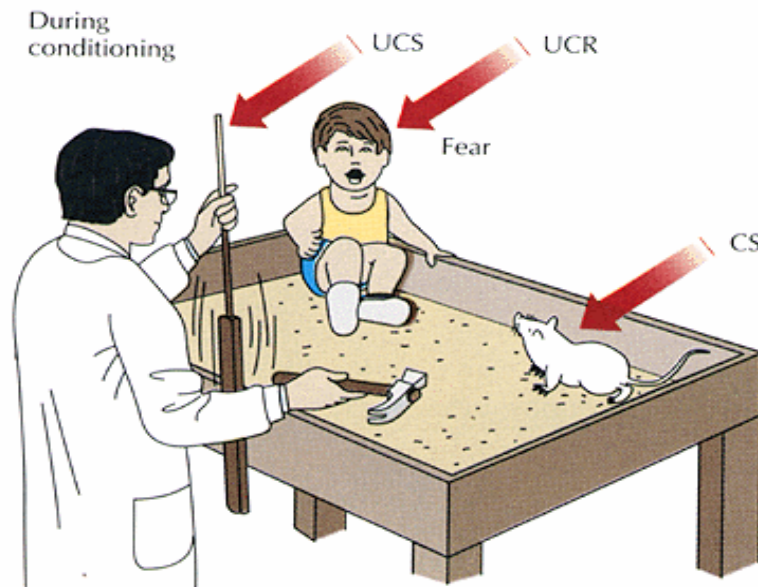


Backward Conditioning

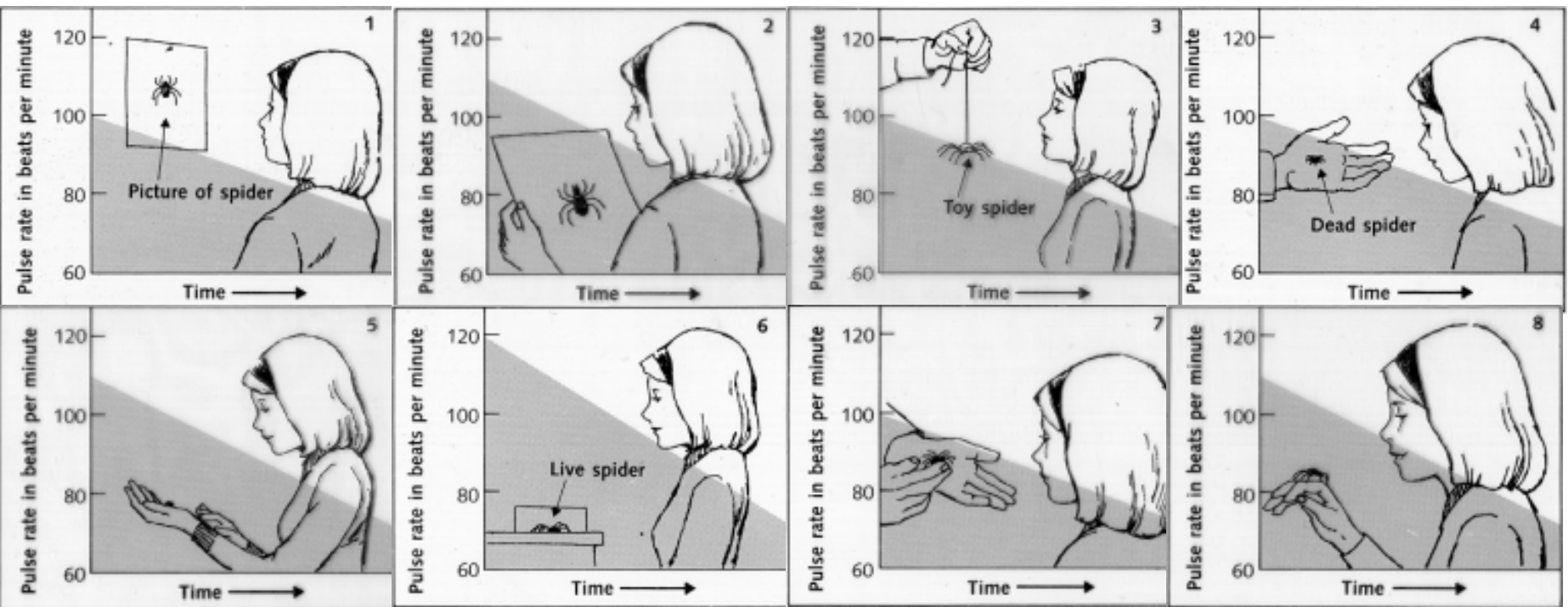


Little Albert

- Acquisition of Phobias
 - Classical Conditioning of Fear

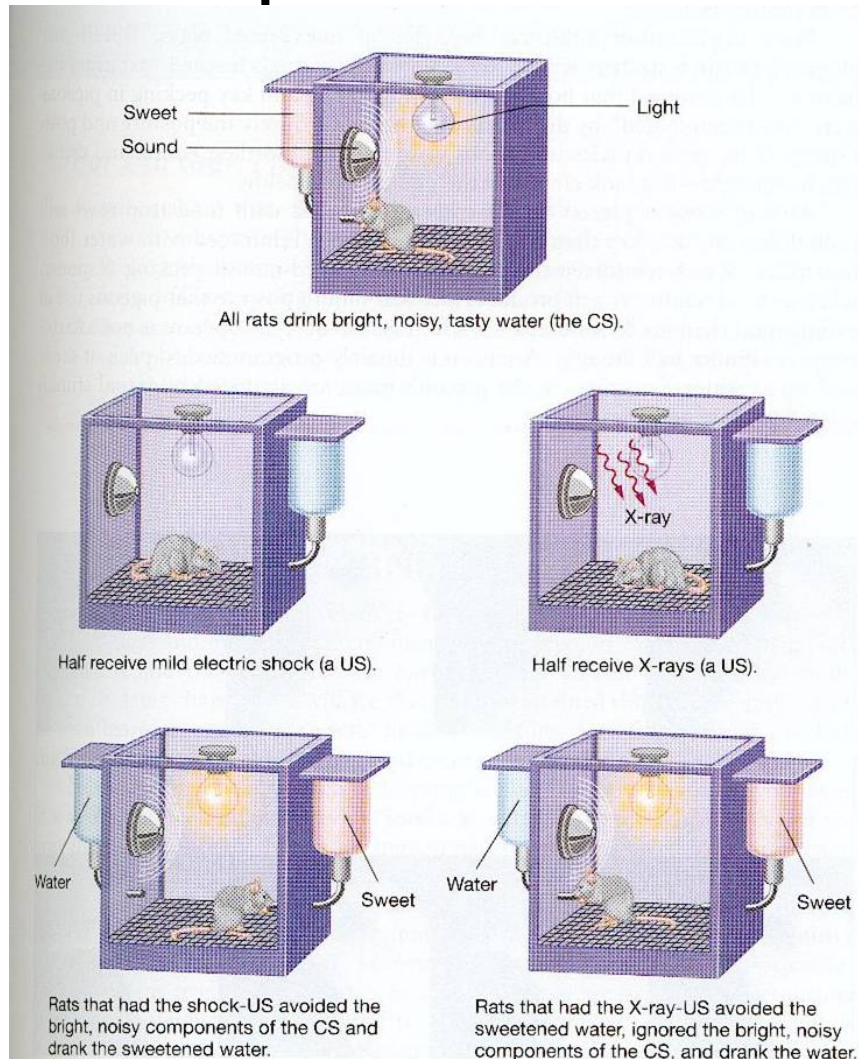


Systematic Desensitization



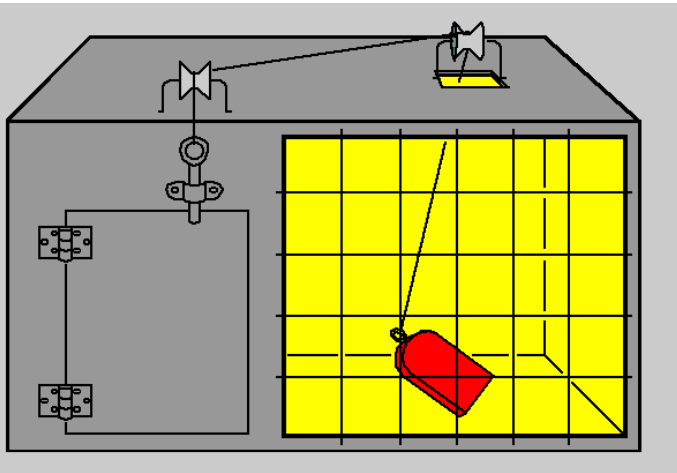
Treating a spider phobia with systematic desensitization

Other Considerations



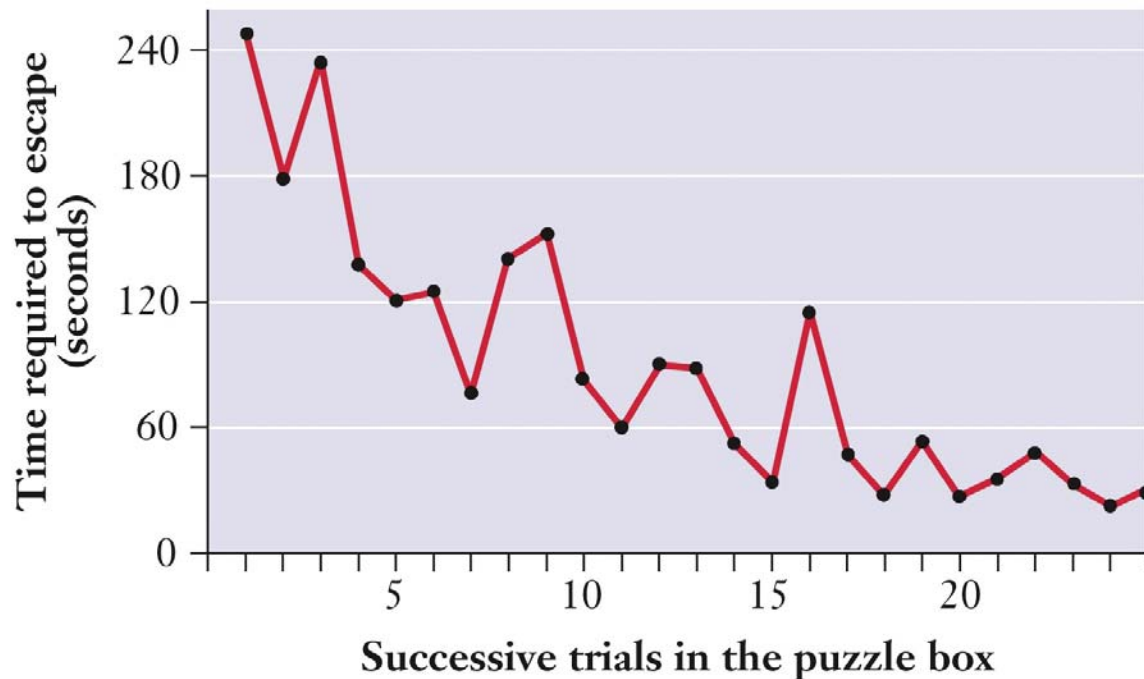
- Biological Constraints
 - degree of conditioning depends on stimulus and species
- Taste Aversions
 - strong CS-UCS association after only one trial
- Role of Cognition
 - expectations
 - forming representations
- Compensatory-Reaction Hypothesis
 - is classical conditioning the body's way of adapting?

Thorndike's Experiment



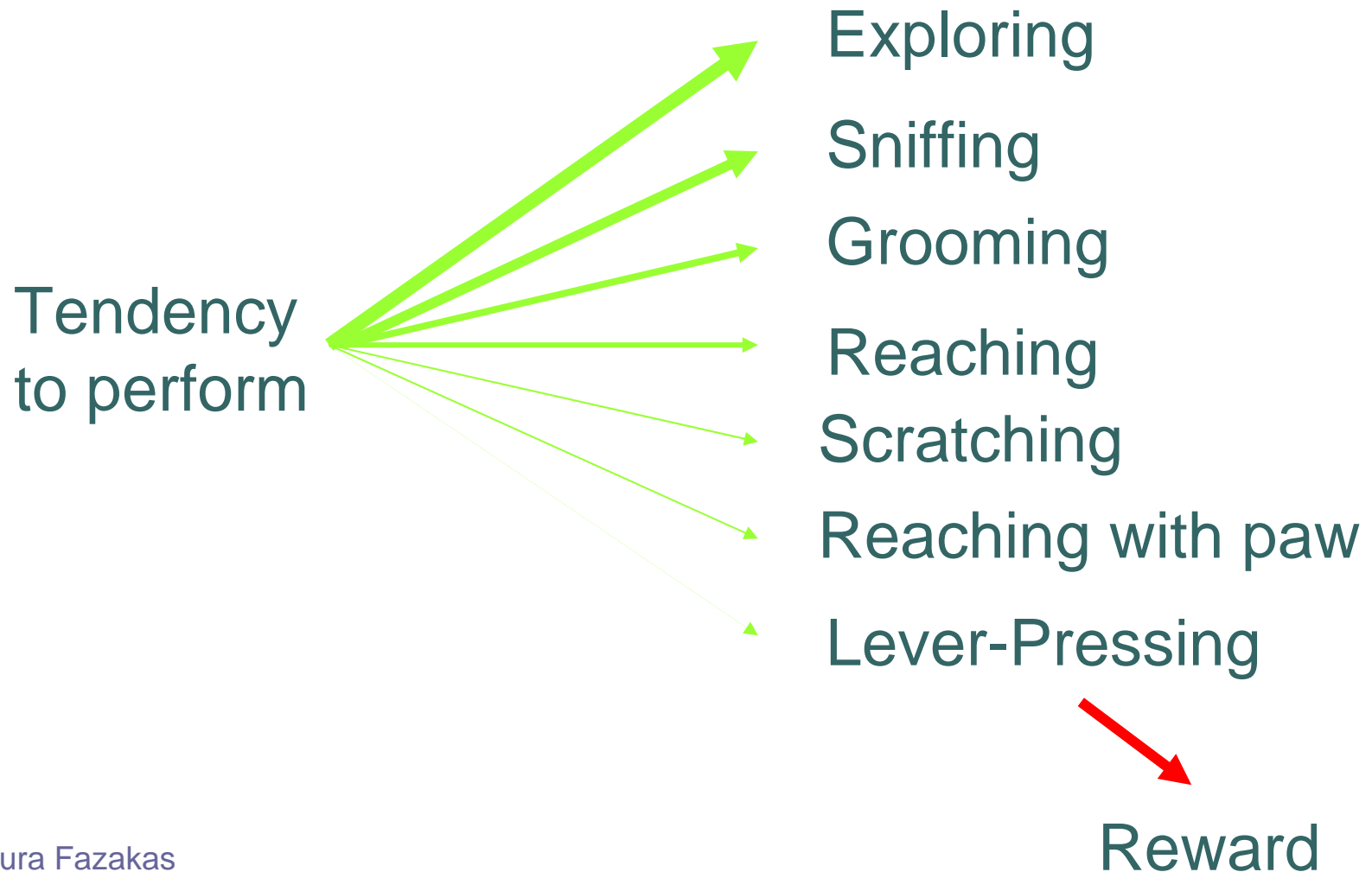
Puzzle Box

Learning Curve





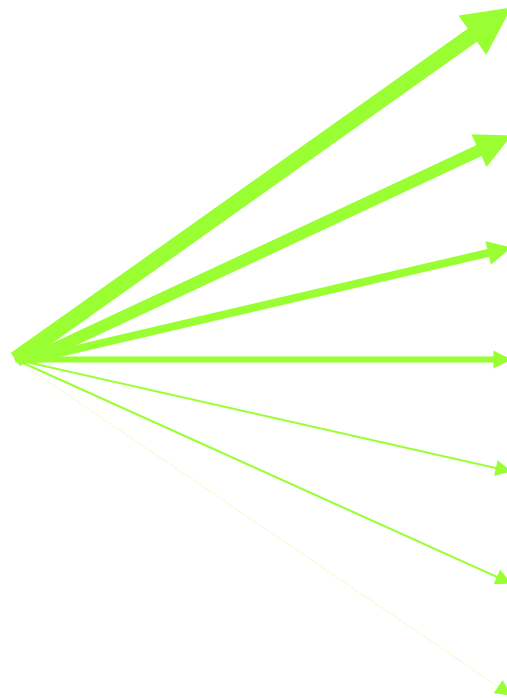
First Trial





Later Trial

Tendency
to perform



Lever-pressing

Exploring

Grooming

Reaching

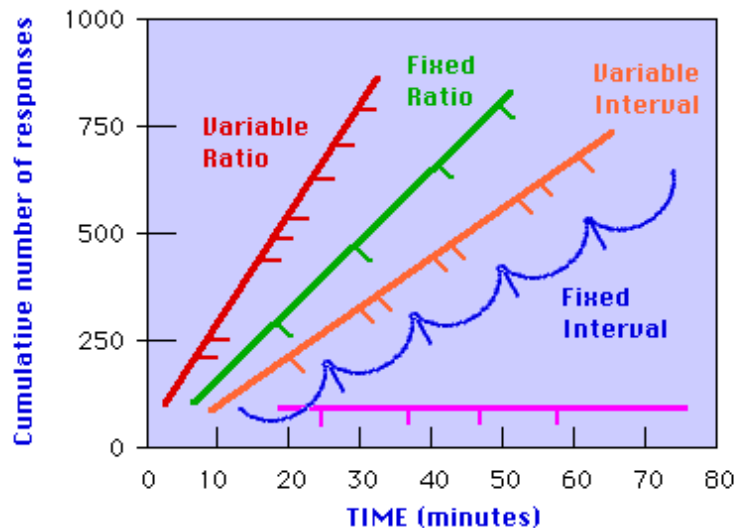
Scratching

Reaching with paw

Sniffing

Partial Reinforcement

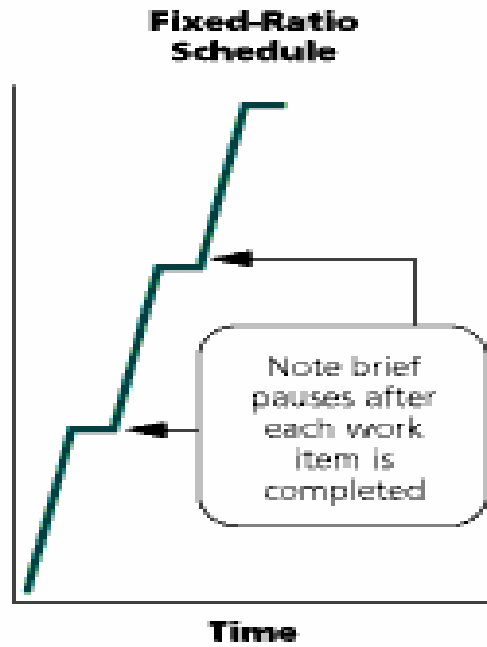
SCHEDULES OF REINFORCEMENT



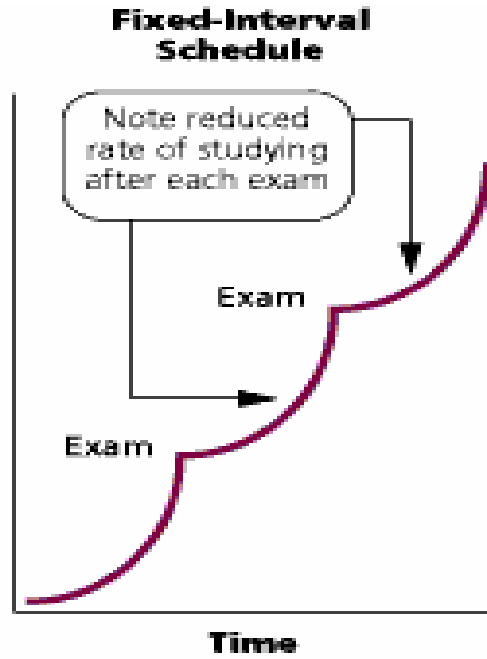
- Fixed Ratio
 - reinforced after a fixed number of responses
- Variable Ratio
 - reinforced after a variable number of responses
- Fixed Interval
 - reinforced after a given amount of time has elapsed
- Variable Interval
 - reinforced after a variable interval of time has elapsed

Cumulative Frequency of Responses

Work Output on a Piece-Rate
Reward System



Studying by Students

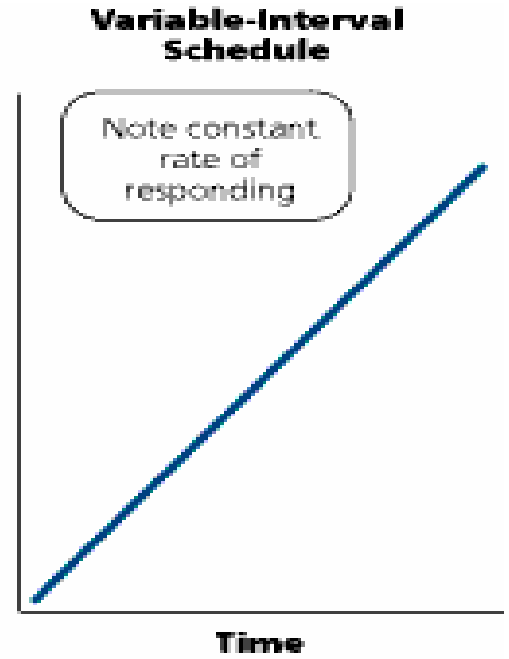


Cumulative Frequency of Responses

Gambling Behaviour
(e.g., Slot Machine Plays)



Work Output by Employees



ATTENTION
Extent to which
we focus on others'
behavior

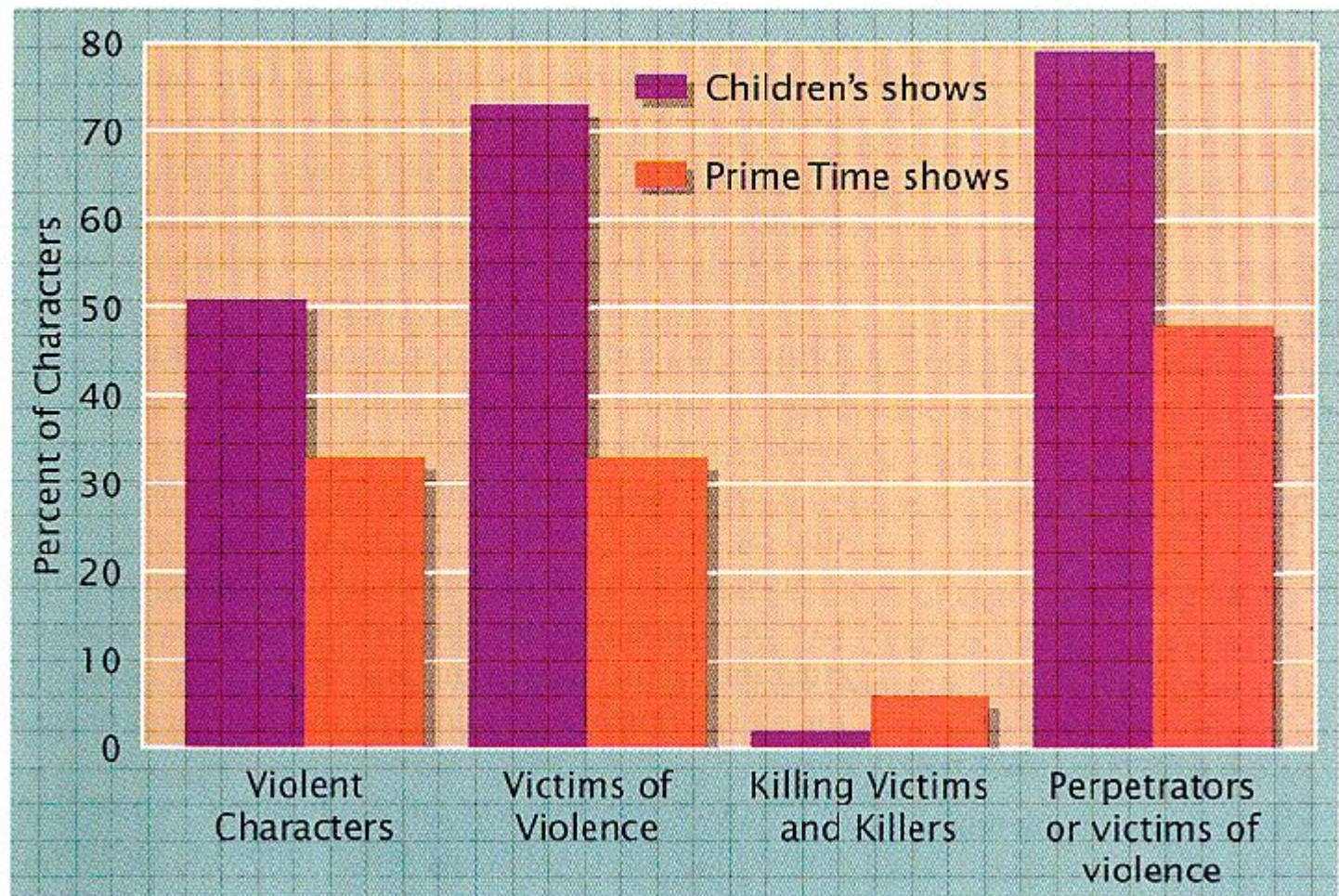
RETENTION
Our ability to retain
a representation of
others' behavior
in memory

PRODUCTION PROCESSES
Our ability to actually
perform the actions
we observe

MOTIVATION
Our need for the actions
we witness; their
usefulness to us

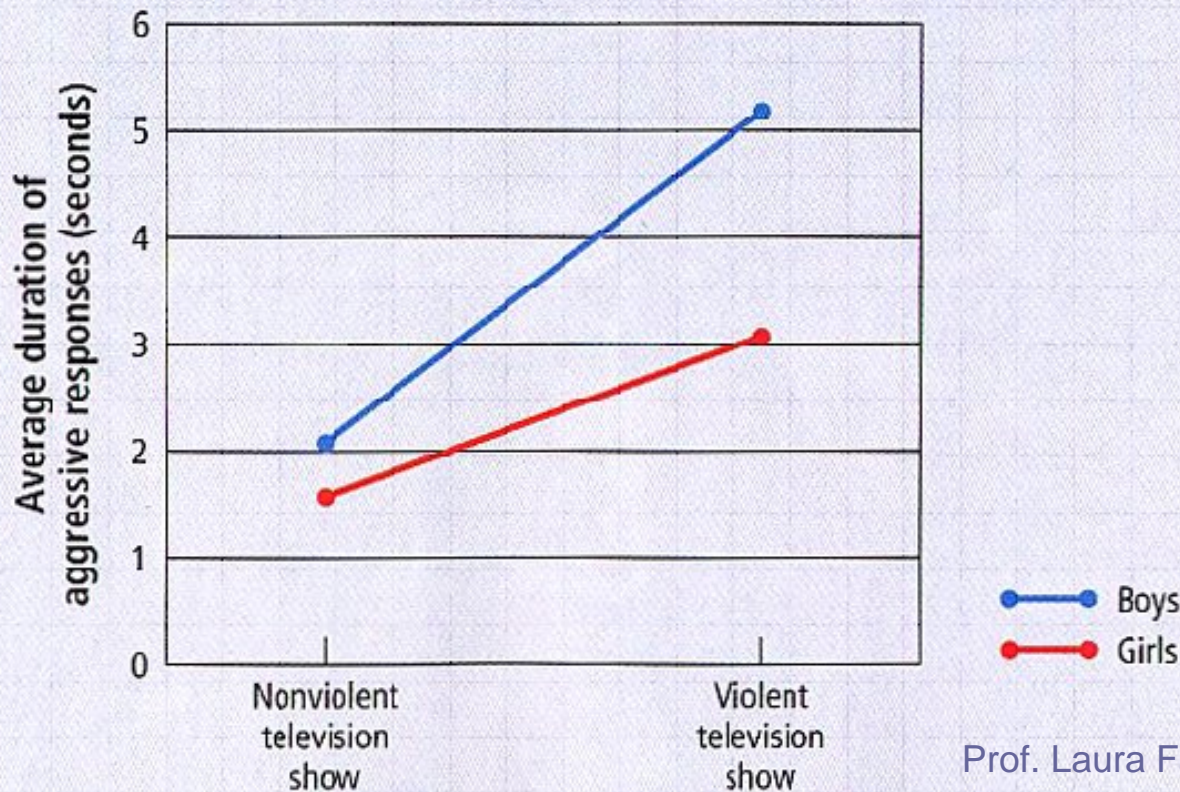
**OBSERVATIONAL
LEARNING**
Acquisition and later
performance of
behaviors demonstrated
by others

FIGURE 9-1 Violence on Television Violence in television programs targeted for both children and adults occurs at high levels. (Source: George Gerbner, University of Pennsylvania.)



Experimental Evidence

Exposure to a violent TV show increased aggression – especially among boys.



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