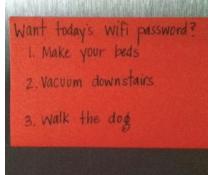


## 03-Instrumental Conditioning

 Want today's wifi password?  
1. Make your beds  
2. Vacuum downstairs  
3. Walk the dog

Advanced level parenting.

While classical conditioning allows learning the relationship between stimuli and reflexive responses, instrumental conditioning allows for learning of voluntary behaviors and their consequences to guide goal directed behaviour. In today's class, we consider applications into training, parenting and memes.

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### "Conditional" on Pairing, the CS Elicits a CR

Lemon cues  
CS → Salivation

Lemon juice  
US → CNS → UR  
Salivation

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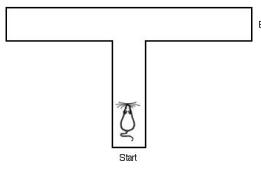
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## We Learn Effects of Behavior Through Operant Conditioning

A 

B 

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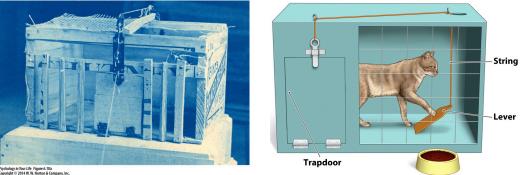
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 Thorndike's Experiments Reveal the Effects of Action




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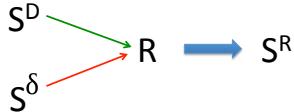


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 Instrumental Conditioning is learning between voluntary behaviour and its consequences.




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 How do superstitious behaviours form?




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 Using instrumental conditioning for evil.




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 Shaping a crow to use a vending machine.



1. What steps would you take to shape this behaviour?  
 2. Next steps: Can you devise a practical application of the crow vending machine?

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There are 4 types of Instrumental Conditioning		
	Presentation	Removal
Positive Reinforcer	Reward Training  behaviour	Omission Training  behaviour
Negative Reinforcer	Punishment  behaviour	Escape Training  behaviour

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 Reinforcers in Behavior Modification:  
Token economy

<p>Primary Reinforcers Satisfy biological need</p> 	<p>Secondary Reinforcers Established through classical conditioning</p> 
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 Behavior Modification Project:  
Replace unwanted with desirable sleep routine behaviours



2 glasses water      3 extra stories

Wearing lion suit - in summer      Bug is flying in room

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 Nature vs. Nurture in learning

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.

I am going beyond my facts and I admit it, but so have the advocates of the contrary and they have been doing it for many thousands of years. [p. 82]

John B. Watson, Hardcore behaviourist




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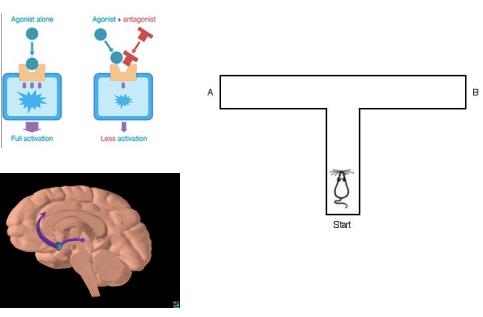


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 Dopamine activity in nucleus accumbens affects learning.



The diagram illustrates two receptor models: 'Agonist alone' (Full activation) and 'Agonist + antagonist' (Less activation). Below these is a 3D brain model with a blue arrow pointing to the nucleus accumbens. To the right is a T-maze task with a 'Start' point and two paths labeled A and B.

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 Bandura's Research Reveals Learning Through Observation



The left side shows a cartoon illustration of a clown standing next to a whiteboard. The right side shows a blurry video still of a person performing a task.

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 Biological predisposition to learn through modeling behaviours.



The left photograph shows a man holding a baby. The right photograph is a close-up of a baby's face.

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**Learning Through  
Vicarious Conditioning**



Psychology in Your Life - Figure 6.23  
Copyright © 2014 W. W. Norton & Company, Inc.

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 **Watching others results in cultural transmission**



ONE DOES NOT SIMPLY  
WALK INTO AN APE QUIZ WITHOUT STUDYING

Joe Kim  
[@josephkim](#)

Memes + #MacIntroPsych concepts = Friday night.



UR MY US

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 **The intelligence of crows.**




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