

General Psych

Learning & Problem Solving

Reinforcement

Positive (Give)

Negative (Take)

Rewards are not incentives

Incentives are promised rewards

Punishment

Punishment decreases a behavior temporarily

Has unwanted emotional consequences

Positive Punishment

Give an aversive stimulus (Positive)

Parent spanks a child for taking candy...

Owner swats a dog who chewed slippers...

Negative Punishment

Removal of a reward (Negative)

Teenager who stays out past curfew is not allowed to drive the family car for 2 weeks...

Husband who forgets anniversary sleeps on couch for a week...

Difficulties in Punishment

Learner may not understand which behavior is being punished

Fear and emotional upset

May not undo existing rewards for behavior

Tends to be used when angry

Models aggressive behavior

Blocks behavior; doesn't change it

Summary

Rewards should be given differentially

Reward behaviors want

Ignore (extinguish) behaviors don't want

Shape behavior by rewarding successive approximations

Practice without reinforcement doesn't improve performance

Theories of Forgetting

1. Decay Theory

Would expect it to gradually go away

Ebbinghaus showed forget quickly

2. Interference Theory

Other information causes interference

Learn A

Learn B

Recall A

2 kinds of interference

Proactive interference = Previous info impacts new

Retroactive interference = New info impacts old

Mnemonics

Naive Mnemonics

People naturally use them

Rhymes

Troubadours used rhyme

Until 14th century, everything except legal documents were written in rhyme

To remember business conduct, French merchants used a poem with 137 couplets

Songs

Alphabet

50 Nifty United States

Do Re Mi

Rehearsal

6th century BC; knew that rehearsal helps memory

rehearsal = repetition

keep things in STM; repeat number on the way to the phone

Reduction Mnemonics (condense material)

Acronyms

RADAR

MASH

HOMES

FACE

Elaboration Mnemonics (add more things but make it simpler)

Acrostics

On old Olympus towering top, a Finn and German viewed some hops

12 cranial nerves

Every Good Boy Does Fine

Visualization & Bizzare Images

Bizarre helps for tests with very short delays

If:

1. both bizarre & normal images are used
2. imagery instructions are emphasized
3. free recall task

Compare

bizarre interactive

bizarre not interactive

common interactive

common not interactive

Bizarreness didn't help or hurt

Interactive was better than non-interactive

Hands, etc.

Knuckles are months with 31 days:

Chunking

3-4 items per chunk

7 chunks (plus or minus 2)

Technical Mnemonics

Not spontaneously used by people

Often an encoding technique

1. Method of Loci

(Simonides of Ceos (556-468 BC)

great banquet, roof collapsed

Named each person there, imagining where they sat

House or building

each room in a major point of the speech

walk through the speech; front door is the “opening”

Buildings

Walls & ceiling painted dramatic scenes;

Bible stories; to help remember dates, names, events

Numbering each pew (bench); use each pew to remember something

Windows (lites)

2. Peg system

Set of memory hooks

Steps

1. learn the pegs; an image for each number from 1 to 10

2. find a list of words

3. match each word to a peg

Advantages

1. can recall items in any order

2. same pegs are used each time

Pegs to use

1 bun

2 shoe

3 tree

4 door

5 hive

Make an image of the word and peg

3. Translation schemes

Number-letter mnemonic

digits from 0 to 9 each has a consonant

vowels don't count

n = 2 (has 2 down strokes)

m = 3 (m on its side)

team = 13

0 = zoo

10 = tie zoo or toes

100 = disease

4. Link & Story

Link

Form visual image; visualize link between them

Story

Like a link mnemonic; use sentences instead of images

The car drives to the post office and cruises by the bakery before stopping to get its brakes checked.

Problem Solving

Radiation problem
Heuristic vs algorithm
rule of 72
Insight (ah ha)
Scripts, functional fixedness

Only 3 things can be learned

Facts

We don't like to carry facts with us
Too much storage space required; look up the details when needed
We carry general rules
Organize Facts

Ebbinghaus (1850-1909)

1. Difficulty and amount learned are not related one-to-one
Learning is linearly related to the amount of time spent on studying
2. Recall falls off rapidly, then more slowly
A very rapid forgetting in the first hour
Forget 60% in first day
Forget 70% by second day
3. Recall better if learning is spaced out over small study times
Distributed practice vs mass practice
Most efficient schedule for most any learning is one 1-hour session per day
Diminished returned at 2-hours
Virtually flat beyond 4-hours
4. Associations in list help
adjacent associated words very helpful
nonadjacent associations helpful
5. The best strategy for limiting the decline in recall is to "over learn" the material
Complete memory = can say it correct once
Savings = effort saved
Total time hypothesis

Pollyanna Effect

Older adults recall fewer negative than positive images
The bias increased with age

3 Types of distinctiveness

1. Primary Distinctiveness
Von Restorff effect = isolation effect
unusual item in middle of list
divides the list into two list
incongruent in current context
2. Secondary Distinctiveness
incongruent with past experience
1st day in college
1st boyfriend-girlfriend
unusual spellings

3. Emotional Distinctiveness

Interrupted tasks

words form lists that were interrupted

plot of a novel while reading it

Doesn't allow closure

Which put first?

Most important first (primacy effect) = serial recall

Most important last (recency effect) = free recall

The importance of context

Behaviors

Behaviors are the things we do

Classical conditioning

Operant conditioning

Concepts

1. Person schema

Consist of general knowledge and beliefs about other people's consistent traits and characteristics

2. Self-schema

Consists of general knowledge that we believe to be true about our own personality traits, abilities, goals etc.

3. Scripts

Contain generic information that people have about common, frequently occurring events

allow us to fill in missing details

allow us to anticipate events

Scripts = cultural assumptions

REVIEW

Nominal, ordinal, interval, ratio

Thinking

Theories of Emotion

2-factor theory of emotion

Cognitive mediation

Common sense

James-Lange

Basic Emotions & Drives

Emotional Expression

Gestures

Emblems

Expressions

Micro-expressions

Mental images

Memory

Confabulation

Consolidation

Ebbinghaus

Distributed practice

Massed practice

Types Of Memory

Episodic memory

Everyday memory

Short-term memory

Long-term memory

Practical memory

Procedural memory

Prospective memory

Sensory memory

Iconic memory

Echoic memory

Working memory

Viso-spatial sketchpad

Phonological loop

Executive process

Semantic Memory

Semantic network model

Spreading activation model

Feature comparison

Categorical search

Speed of recognition = “distance” between perceived item & prototype

Mnemonics

Naïve

Rhymes & Songs

Rehearsal

Chunking

Visualization

Bizarre

Interactive

Reduction Mnemonics

Acronym

Elaboration Mnemonics

Acrostics

Hands, etc.

Technical

Translation schemes

Method of loci

Link and story

Peg words

Problem Solving

Analogical Reasoning

Algorithm

Heuristic

Insight

Steps

Schema

Script

Classical Conditioning

CR

CS

UCR

UCS

Inter-stimulus interval

Simultaneous conditioning

Backward conditioning

Forward conditioning

Stimulus generalization

Blocked response

Pavlov

Watson

Reflex

Operant Conditioning

Continuous reinforcement

Extinction

Skinner

Operational definition

Behavior analysis

Fiction

Schedules of reinforcement

Variable interval

Fixed interval

Variable ratio

Fixed ratio

Operant

Shaping

Reinforcement

Negative reinforcement

Positive reinforcement

Punishment

Negative punishment

Positive punishment

Partially reinforced persists