Apply Your knowledge of the Psychology of Learning

You should start relating the psychology of learning to your list of occupations and/or social issues. Where do you see the psychology of learning in "the real world" at work?

- If you think classical conditioning is involved, identify the neutral stimulus and the UCS → UCR
- If you think operant conditioning is involved (reinforcement and punishment), identify the behavior and the consequence

If conditioning is used well,

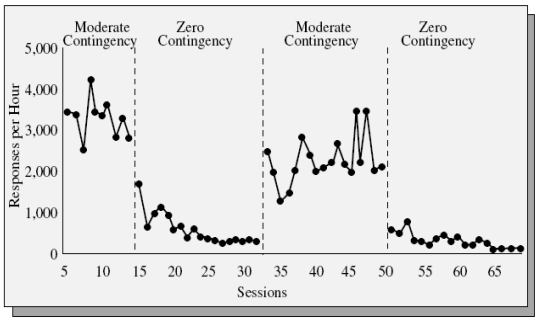
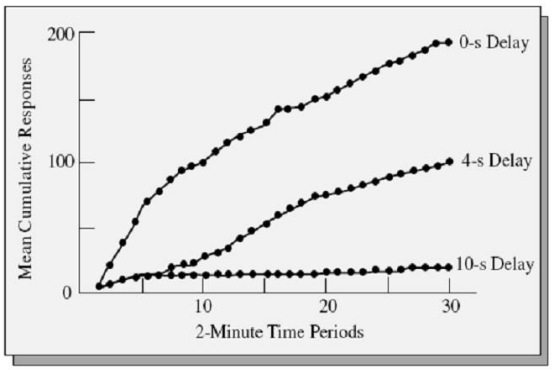
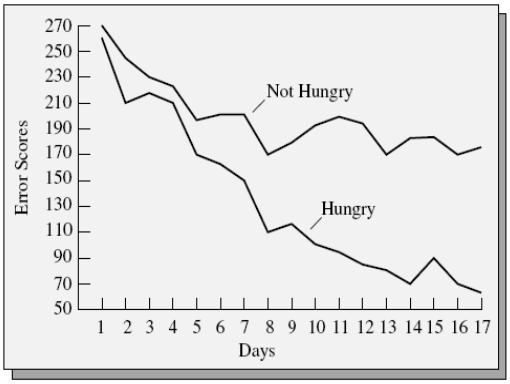
- The consequence reinforces or punishes the actual behavior for operant conditioning (see creativity with Ocean Science Theater and porpoises)
- There is high contingency
- There is high contiguity

If conditioning is used poorly

- The consequences reinforce or punishes the wrong behavior for operant conditioning (see creativity where reinforcement occurred for a story, not creative stories)
- There is low contingency
- There is low contiguity

Conditioning is used, but needs improvement (the theory is sound, but implementation is bad) or problems with punishments

Factors that Affect Reinforcement and punishment

Contingency	
Contiguity	
Reinforcer/ Punisher Characteristics	Amount of reinforcement, size of reinforcement, primary versus secondary reinforce Intensity of punisher (e.g. electric shock), initial starting point of the punisher, accidental reinforcement of behavior you want reduced
Task Characteristics	Is it compatible with prior learning histories or biological tendencies for animals?
Motivating Operations	
Other Variables	Competing reinforcers Electric shock versus high pitched noise

Education

By using the processes of shaping and positive reinforcement, we can make schools a place where students are challenged, successful and can enjoy themselves, rather than a place where kids get into trouble, fail and are frustrated (page 233) [how is this related to classical conditioning and negative reinforcement?]

Teacher A: ignored good behavior and scolded misbehavior and offered threats.

She made reprimands and other punishments at a rate of about 1 per minute.

Teacher A (reversal): ignored bad behavior (extinction) and praised them for good behavior.

At the beginning of the study she was giving positive comments about 1 per 15 minutes and approached 1 per 2 minutes at the end of the study. Her tendency to criticize dropped to once per 6 minutes.

When she focused on positive behavior of two students who were not engaged and creating problems, Cliff worked harder, and learned to ignore other children's misbehavior. Frank did his work, asked for extra assignments, and volunteered to do things to help his teacher.

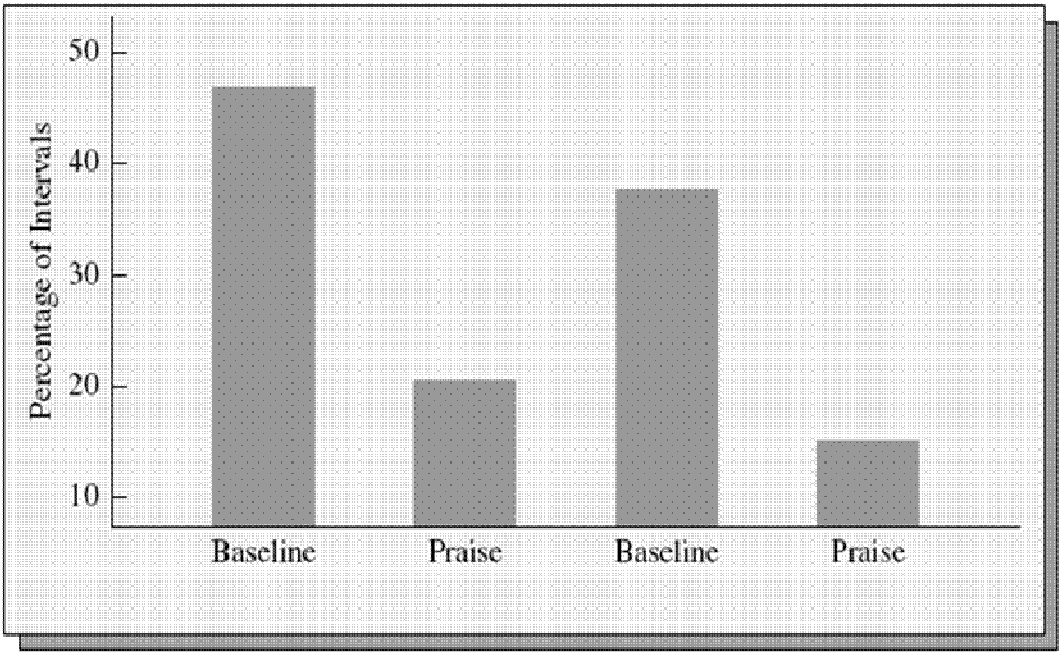


Figure 8-2 *Praise and disruptive behavior. Average percentage of intervals in which Cliff or Frank behaved inappropriately (talking, making noise, disturbing others, etc.) decreased when the teacher praised* appropriate *behavior. (Compiled from data in Madsen et al., 1968.)*

Self-injurious behavior

Punishments (electric shocks) reduced one boy's self-injurious behavior of hitting himself (dropped from 300 in a 10 minute periods).

Other researchers found that reinforcing incompatible behavior reduced problem behavior. To reduce problem behavior, researchers periodically provided food to an 8-year old if he played steadily with a ball rather than hitting himself in the face. Within 40 minutes, the rate of punching fell by 90% (page 240).

Previously, it we believed that these self-injurious behaviors were due to developmental problems. Operant conditioning was not a consideration.

Self-control

Self-control refers to the tendency to do things now that affect our later behavior. Usually when we exert self-control, we do something that is in our own long-term interests (page 242). Examples include drinking in moderation, avoiding seconds on desserts, giving up smoking or studying now instead of socializing with friends, or…

Most situations that involve self-control involve choices that have positive consequences now, but negative consequences later. To have self-control, we make choices that benefit us in the future, and not immediately. We postpone immediate reinforcement for later reinforcers (which may be less tangible). When we are able to exert self-control, we may need to remind ourselves that we have exerted self-control in the past to make ourselves successful today.

There are several strategies of self-control discussed in your text:

- Physical restraint
- Distancing
- Monitoring behavior

Self-Control: Physical Restraint

Physical restraint means doing something that physically prevents a behavior from occurring.

- Locking liquor away in a cupboard
- Giving your cigarettes to a friend
- Destroying your credit cards
- Keeping as little junk food in the house

Self-Control: Distancing

Some behaviors that require you to avoid situations that lead to undesired behaviors.

- If you have a drinking problem, avoid places where you normally drink
- If you have a spending problem, avoid internet shopping websites or the mall
- If you have troubles with having desserts, turn down the dessert menu.

A similar technique to distancing is distracting. Find a task that in incompatible with the unwanted behavior

- If you want to refrain from an angry conversation, start a different conversation with someone else
- If faced with temptation of snacking on potato chips or brownies, distract yourself by reading, watching a video, do chores, play a game. The distracting task should not produce more bad habits.

Self-Control: Monitoring Behavior

A person who engages in behavior they want under control is to monitor their behavior—they need to count how often it occurs. Seeing the actual frequency of how often you eat junk food, spend money, smoke makes it easier to see how often you do it and see if your behavior is changing.

Self-Control: Inform others of your goals

The person who would like to stop their bad habits may want to make their intentions public. They may want to tell the friends and family that they are committed to self-control and/or change.

Friends can encourage us and become supportive of our changes and can reinforce us for not smoking, eating healthier, doing well at school (you may want to tell them to reinforce you for the appropriate behavior, and you want to make sure you have friends and family who are supportive)

Delusions

Delusions are false beliefs such as

- “Everyone is out to get me”
- “everyone is talking about me, especially in the summer when it is hot out”

that cannot be substantiated.

Excessive Gambling

Most activities when done in moderation is normal (see self-control). However, when it is done in excess and interferes with the person's quality of life, many psychologists would consider the involvement in the activity as being excessive.

When a person spends too much time in an activity that they neglect their personal hygiene, no longer takes an interest in their appearance, gets too little sleep, loses friends, work performance decreases, ignores family commitments behavior is excessive. Their behavior can be a drug addiction, gambling, internet surfing, spending, watching TV, playing video games, etc.

Excessive gambling

Most games of chance are designed so that the house will win if someone plays long enough. According to your textbook, the average payout of a $1 slot machine bet is $.90. If you have $100, the average gambler will lose it all on the average of 1,000 gambles of $1 each.

If you ask a gambler why they play when the odds are against them, they respond by saying that they gamble for the fun of winning (page 252). When people will lose money in the long run and the odds of walking away with money is slim, playing for the fun of winning is highly unlikely.

Excessive Gambling

It is common for people to explain why people gamble with a personality explanation—they are morally weak, they are stupid or anxious, etc.

The problem of gambling can be addressed by many factors

- Memory: persistent gamblers tend to remember their loses as an “almost win” rather than a loss
- Schedules of reinforcement: variable ratio schedules increase tend to produce high rates of behavior that are resistant to change.
- Biological foundations of behavior: dopamine levels are activated when we win making us feel good about whatever behavior we are engaging in.
- Learning histories

Excessive Gambling

Many people gamble without getting addicted. In the case of variable schedules of reinforcement such as slot machines, when one gets paid is not consistent. A person's experience at the slot machines is different.

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Gambler A:	**win** loss **win** loss loss loss loss loss
Gambler B:	loss loss **win** loss loss **win** loss loss
Gambler C:	loss loss loss loss loss **win** loss **win**

Early experiences with wins early on can increase the likelihood of persistent gambling.

Excessive Gambling

What about near misses and big wins on persistent gambling?

Slot machines can increase the perception that you are doing better than you actually are. Some slot machines are programmed that losses appear as an “almost win”

Normal outcomes of coin flips

H	H	H	H					
H	H	**T**	T	are replaced with	H	H	H	T
H	**T**	T	H		H	H	T	H
H	T	**H**	T		H	T	T	T
T	T	**H**	H		T	T	T	H
T	T	T	H					
T	T	H	T					

In experimental tests, students were assigned to one of two conditions

- near misses on 30% of the first 50 trials
- near misses on 15% of the first 50 trials

Those with 30% near misses gambled much more during the extinction phase (where no wins were assigned).

Size of reinforcer can make a difference. For the limits of psychology research money, size of the payoff made no effect on persistent gambling.