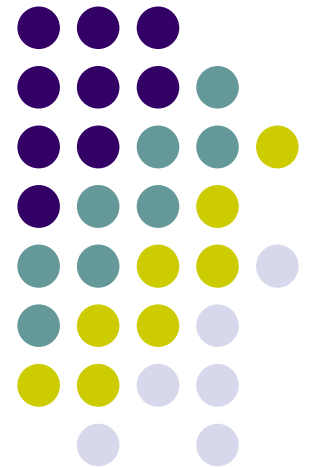


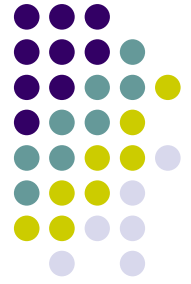
Brain Injury and Behavior

What are the Building Blocks of Behavior Change?



Rolf B. Gainer, Ph.D.
Brookhaven Hospital
Tulsa, Oklahoma
Neurologic Rehabilitation Institute of Ontario
Etobicoke, Ontario





Building Blocks of Behavior

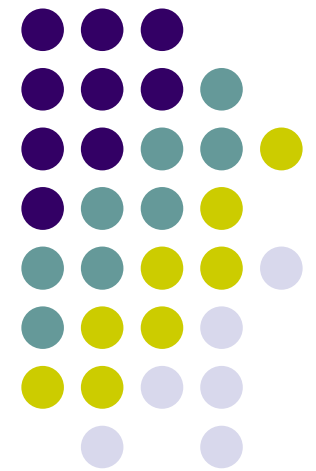
- Cognitive problems underlay behavior problems
- Learning capacity determines the person's ability to relearn old behaviors as well as new behaviors

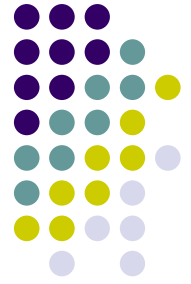




It's the person,

...not the behavior.....

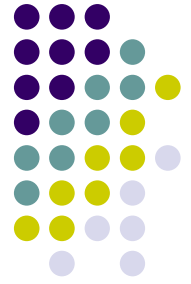




What changes behavior?

- Behavior is changed by learning
- Reinforcement facilitates learning
- Primary reinforcers pertain to comfort, shelter, food
- Secondary reinforcers pertain to social recognition, delayed responses, indirect rewards





Stay positive...

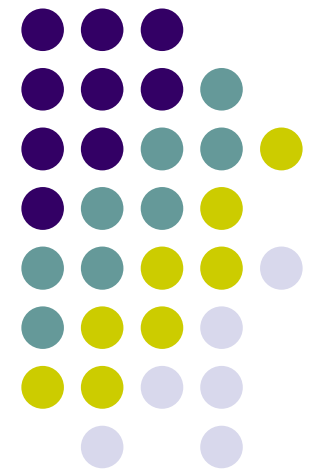
- Avoid the use of negative reinforcement, punishment or loss of privileges
- Provide support, direction and encouragement
- Respond to positive steps, even at a small level
- Know when to “back off”

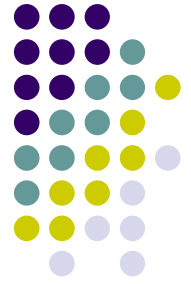




Good behavior therapy is:

.....Taking with one hand
and giving with the other

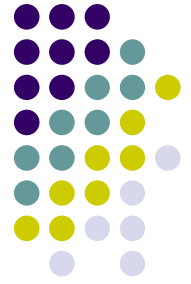




Two Types of Behavior

- “Too much” as seen in agitation
- “Too little” as seen in lack of initiation

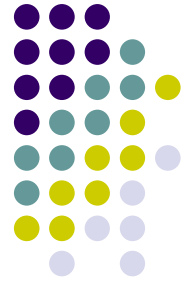




Two types of stimuli

- Internal- produced within the person
- External-produced outside of the person by the environment or a person

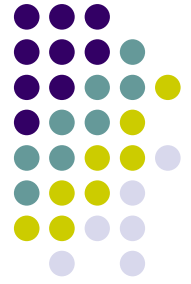




Two types of responses

- Random- a response without a relationship to a stimuli
- Organized- a response which is shaped or formed to respond to a stimuli

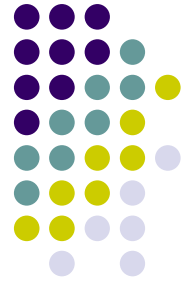




Behaviors are Learned

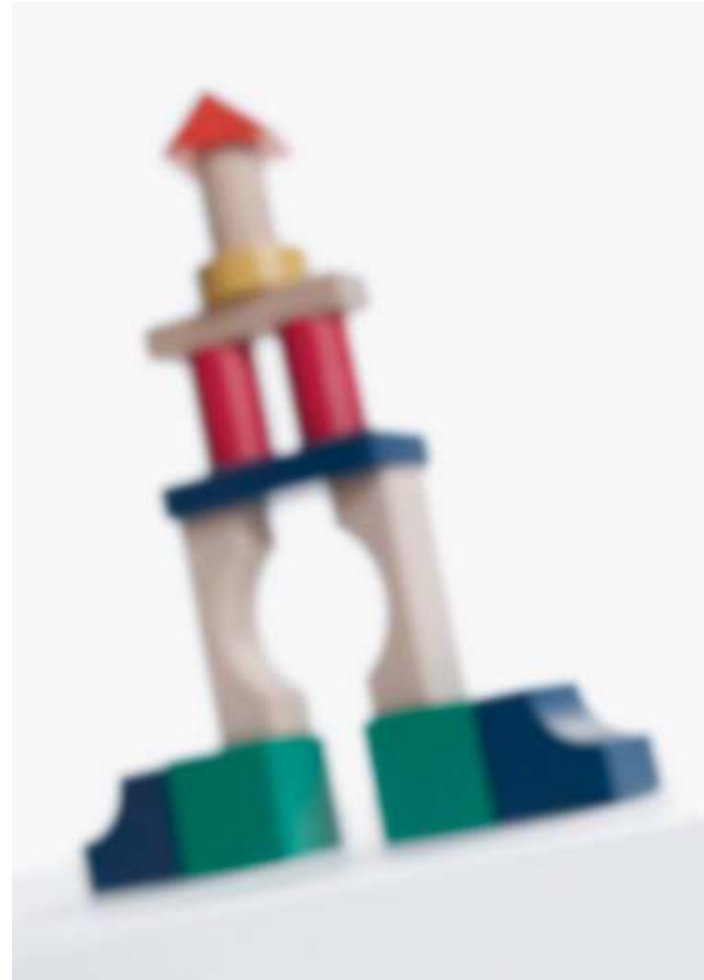
- A person learns a behavior when it is reinforced or rewarded
- Reinforcements can be positive feeling states, good sensations
- Reinforcement can also be what a person wants from the behavior, such as, to be left alone
- Negative “reinforcers” provide a punishment or negative consequence, such as being burned after touching a hot object



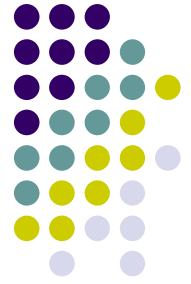


Behaviors are social

- Behavior is used to respond to others
- To get what we want
- To get other people to do what we want



Behaviors are based on cognition



- A behavior is a response
- The level of response is influenced by the person's cognitive capacities and skills
- A person with a brain injury which affects their cognitive skills will likely experience some problems in their behavior



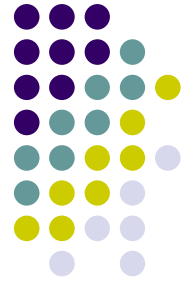
Cognitive Skills and Behavior



- Arousal
- Attention/Focus
- Filtering
- Selection
- Memory/ Retrieval
- New Learning
- Applied Learning
- Planning
- Decision Making
- Executive Functions

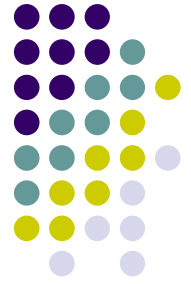


Arousal Problems



- Over aroused behaviors prevent the person from focusing attention
- Under aroused behaviors prevent the person from taking action
- Does the intervention strategy “fit” the person’s level of arousal and attention?

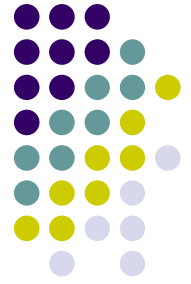




Attention Problems

- Heightened attention effects the person's ability to task performance by interfering with performance
- Diminished attention prevents the person from paying attention to the task

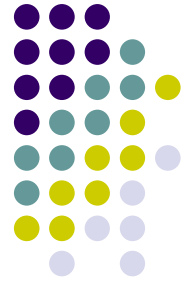




Filtering and Selection

- Different stimuli can compete for a person's attention
- We select what stimuli to pay attention to based on:
 - Power of Stimuli
 - What we want
 - What reward is available
 - What negative consequence could occur

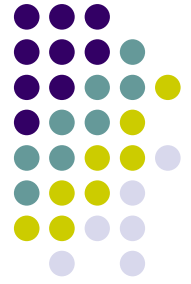




Memory and Behavior

- We produce behavior that we have learned from previous responses
- We use memory to access information about previously experienced stimuli and the related behavior
- Memory exists in different forms
- Why does the smell of cookies baking make you want to eat one?



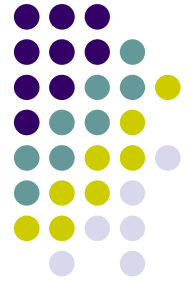


New vs. Old Learning

- Old learning/information is stored in a different area of the brain from new information
- For some people with a brain injury, old learning is easier to access
- Do you know a client who remembers the words to old songs but cannot remember where they are today?



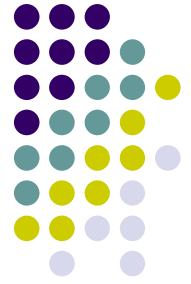
Learning new behaviors can be based on prior learning



- Some learning occurs through generalization of past learned responses to new situations
- For some people with brain injury, access to old information is impaired
- Behavior can become “stuck” or repetitive if the person cannot recognize that the response is dysfunctional or not relevant to the situation



Planning, decision making and executive skills represent higher cognitive functions



- Poor planning will cause a behavior response which is dysfunctional
- Planning and decision making require the ability to analyze, prioritize and implement an action
- Executive skills are the meta level of organization which help us to observe our responses and change them to meet demands



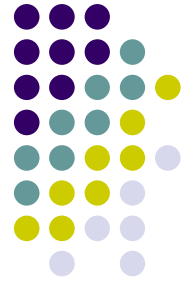
So, why can't people behave?



- Behavior may not be volitional
- It may not be planned
- It may occur in response to an internal stimuli
- It may occur in response to a stimuli which is no longer present
- It may have nothing to do with you or anything you have asked the person to do



Tips for working with people with problem behaviors



- Don't take problem behaviors on a personal level
- Avoid confrontation and power struggles
- Be clear and concise about what you are asking the person to do
- Make sure your instructions are at a language level which the person can understand



- Identify the steps involved in the task for the person
- Offer to help the person
- Give them the space and time they need to comply

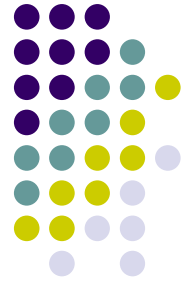
Not every behavior requires a response



- Avoid responding to all behavior cues the person puts out
- Stay focused on what you are asking the person to do
- Be clear, repeat instructions if needed
- Remind them of the “reinforcer” available
- Make sure that the reinforcement schedule meets the person’s concept of time and reward delay

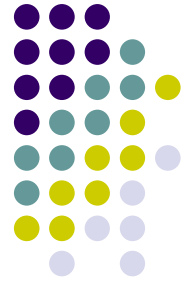


Fit the intervention to the person, not the person to the intervention



- Remain flexible
- Prepare to change strategy if success is not encountered
- Old or undesirable behaviors may increase when you initiate a program
- Know the person you are working with
- Don't become frustrated
- Decide what is valuable





What about rewards?

- Interpersonal recognition is very important
- Social rewards help shape more complex behaviors
- If using earned reinforcement be sure to accompany that reinforcement with praise and social recognition
- Talk with the person about what they have earned and accomplished. Create a roadmap of success

