**Making of the Modern Mind | HSSP room 4-231**

**Class Lesson Plan for July 20, 2014 11:05-12:25 (80 minutes- no break)**

Hello Everyone! Welcome to week number three! This week we link in current theories, science and experiments, including: Theory of Mind, Behaviorism and Conditioning with a discussion on Skinner’s experiments. We’ll also discuss Modeling and the Bobo experiment. As time allows, I’ll introduce the topic of memory with a close look at the Chicago University study on attention.

**I. Introduction to class**

* Quick review: Any questions?
* M. Michaels: “Persons, Brains and Bodies” Would Schwanda feel “discombobulated?”

**II. The Problem of Other Minds**

* Rebecca Saxe, Theory of Mind, (Saxe Lab at MIT) her TED Talk
* Child development, RTPJ, & connection to Confabulation and the Left Brain Interpreter
* How, and/or should, TOM (and the development of the TPJ) be connected to Ethics?

**III. Mirror Neurons vs Right TPJ** (Quick review: We’ll return to this later in the course)

* See monkey, see monkey do
* Empathy (feelings) vs. physiology

**IV. Blank Slate:** Aristotle vs. Plato

* Nature vs. nurture
* Innate qualities vs. learned qualities
* **Question: Can you think of examples?**

**V. Behaviorism | How do we learn?**

* Skinner experiments
  + Superstitious belief
  + Learned responses and scheduled responses
* Classical Conditioning

**VI. Modeling| How do we learn, continued**

* Bobo Experiment (see handout for how the experiment was set-up and its results)

**VI. Class Discussion: Suggested Questions**

* Behaviorism- Do We Have Free Will?
* How is conditioning used today regarding behavior?
* Does Behaviorism relates to education- If so, how?
* Do we each have our own learning style, or is it a combination

**VII. Memory and Attention**

* Yes: there will be a test ☺ How do you remember?
* Memory, STM, WM, LTM
* Cognitive Budget
* Attention: Chicago Experiment

VOCABULARY:

**Theory of Mind:** sometimes referred to as reading another person’s mind. TOM is the ability to interpret one’s own and other people’s mental and emotional states, understanding that each person has unique motives, perspectives, etc.

**Tabula Rasa:** dating back to Aristotle, the idea that the mind is a blank slate when we are born and our knowledge comes from [experience](http://en.wikipedia.org/wiki/Experience) and [perception](http://en.wikipedia.org/wiki/Perception). It’s the nurture side of the nature vs. nature debate. The Platonic view is that the mind is not a blank slate and the mind existed before it joined the body, (nature side of the argument, and Dualism). Steve Pinker: language is innate

**Behaviorism**: behavior changes in response to different configurations of stimuli, including rewards and punishments.Behavior and ‘who we are’ is learned from the environment around us

**Conditioning:** when specific types of experience make certain behaviors more or less probable.

**Classical Conditioning** abehavioral process when a response becomes more frequent or predictable as a result of reinforcement, with a stimulus or reward for the desired response

**Operant or Instrumental Conditioning: Skinner argues** that internal thoughts and motivations could not be used to explain behavior. Instead he believed that behavior was explained as a relationship between a stimulus and a response, that an association is made between a behavior and a consequence for that behavior.

**Positive Reinforcement**: A favorable response or behavior is strengthened by a direct reward

**Negative Reinforcement:** when the response or behavior is unfavorable, there is no praise, and instead receives an unfavorable or negative reinforcement

**Social conditioning or reinforcement** is a positive [interpersonal](http://psychologydictionary.org/interpersonal/) [stimulus](http://psychologydictionary.org/stimulus/) like verbal praise, smile, touch or a sign of approval.

**Attention** when we actively process certain information but ignore other information. Attention allows us to "tune out" information, sensations and perceptions that are not relevant at the moment so we can focus on information we think is important. Therefore, the central [nervous system](http://psychologydictionary.org/nervous-system/) is in a state of [readiness](http://psychologydictionary.org/readiness/) to respond. Because human beings do not have limited attention [capacity](http://psychologydictionary.org/capacity/), they focus on certain items at the expense of others.

**Short term memory** is the temporary storage of information – about 7 to 30 seconds

**Working Memory**: the processes to temporarily store, organize and manipulate information

**Implicit Memory**: information that we remember unconsciously and effortlessly. This includes procedural memory. (Long-term memory)

**Explicit Memory** is information that we have to consciously work to remember. Explicit memory is Long-Term Memory and includes:

[Episodic memory](http://psychology.about.com/od/eindex/g/episodic-memory.htm): These are long-term memories of specific events

Semantic memory: These are facts, concepts, names, and general knowledge information.

**Phonological loop** an [element](http://psychologydictionary.org/element/) of [working memory](http://psychologydictionary.org/working-memory/) that stores verbal data by rehearsal over brief intervals of time. **Articulatory loop** is an auditory element of WM that helps one to remember

**BOBO Experiment**

**PREDICTION:**

1. Children who observed an adult acting aggressively would be likely to act aggressively even when the adult model was not present.

2. Children who observed the non-aggressive adult model would be less aggressive than the children who observed the aggressive model; the non-aggressive exposure group would also be less aggressive than the control group.

3. Children would be more likely to imitate models of the same-sex rather than opposite-sex

4. Boys would behave more aggressively than girls.

**SAMPLE:**  Bandura, Ross and Ross (1961) tested 36 boys and 36 girls from the Stanford University Nursery School aged between 3 to 6 years old. The average age was 4.4

### METHOD: A lab experiment was used, in which the independent variable (type of model) was manipulated in three conditions: (72 children)

### Aggressive model shown to 24 children

* Non-aggressive model shown to 24 children
* No model shown (control condition) - 24 children

**STAGE 1: MODELING**

In the experimental conditions children were individually shown into a room containing toys and played with some potato prints and pictures in a corner for 10 minutes while

1. 24 children to watch a male or female model behaving aggressively towards a toy called a 'Bobo doll'. The adults attacked the Bobo doll in a distinctive manner - they used a hammer in some cases, and in others threw the doll in the air and shouted "Pow, Boom".
2. Another 24 children (12 boys and 12 girls) were exposed to a non-aggressive model who played in a quiet and subdued manner for 10 minutes
3. The other 24 children were a control group and not exposed to any modeling

**STAGE 2: AGRESSION AROUSAL:**

All the children (including the control group) subjected to 'mild aggression arousal'. The child was taken to a room with relatively attractive toys. As soon as the child started to play with the toys the experimenter told the child that these were the experimenter's very best toys and she had decided to reserve them for the other children.

#### STAGE 3: TEST FOR DELAYED IMITATION

-The next room contained some aggressive toys and some non-aggressive toys. The non-aggressive toys included a tea set, crayons, three bears and plastic farm animals. The aggressive toys included a mallet and peg board, dart guns, and a 3 foot Bobo doll.

-The child was in the room for 20 minutes and their behavior was observed and rated though a one-way mirror. Observations were made at 5-second intervals therefore giving 240 response units for each child. Other behaviors that didn’t imitate that of the model were also recorded e.g. punching the Bobo doll on the nose.

**RESULTS:**

1. Children exposed to the violent model tended to imitate the exact behavior they had observed when the adult was no longer present

2. The results indicated that children of both genders in the non-aggressive group did exhibit less aggression than the control group; boys who had observed an opposite-sex model behavior non-aggressively were more likely than those in the control group to engage in violence.  
  
• The girls in the aggressive model conditions showed more physical aggressive responses if the model was male but more verbal aggressive responses if the model was female; (However, the exception to this general pattern was the observation of how often they punched Bobo, and in this case the effects of gender were reversed).

 There were important gender differences when it came to whether a same-sex or opposite-sex model was observed. Boys who observed an adult male behaving violently were more influenced than those who had observed a female model behavior aggressively. Interestingly, the experimenters found in the same-sex aggressive groups, boys were more likely to imitate physical acts of violence while girls were more likely to imitate verbal aggression.

 The researchers were also correct in their prediction that boys would behave more aggressively than girls. Boys engaged in more than twice as many acts of aggression than the girls.

**CONCLUSION:**

The findings support Bandura’s Social Learning Theory that children learn social behavior such as aggression through the process of observation learning - through watching the behavior of another person. This study has important implications for the effects of media violence on children

According to Bandura, the adult's violent behavior toward the doll led children to believe that such actions were acceptable. He also suggested that as a result, children may be more inclined to respond to frustration with aggression in the future. In a follow-up study conducted in 1965, Bandura found that while children were more likely to imitate aggressive behavior if the adult model was rewarded for his or her actions, they were far less likely to imitate if they saw the adult model being punished or reprimanded for their hostile behavior.