PY 101 - 012

Friday, February 26, 2016

Week 7 - Day 3 (Chapter 7 - part 2 - Schemas)

Quizlet: <https://quizlet.com/_22fu12>

**Schema**

* Networks of knowledge, beliefs, associations, and expectations
  + For example, you could have a schematic response
* Schemas are adaptive in that they enable us to make quick judgments with little effort
  + Ex: Think about a doctor
    - You might come up with
      * Lab coat
      * Nurse
      * Stressed
      * Wealthy
      * Hospital
      * Fear
      * Educated
      * Brave
      * Heroic
      * Busy
      * Stethoscope
* We tend to remember schema-consistent information when information is ambiguous
  + For example, if I were to tell you
  + John is a doctor he…
    - Works hard
    - Enjoys movies
    - Spends time with his family
    - Is well-educated
    - Creative
    - Has irregular schedule
    - Has two dogs
  + You're more likely to remember
    - Works hard
    - Well-educated
  + If I told you john was a doctor you'd remember
    - Enjoys movies
    - Creative
    - Has two dogs
* When you encounter a person who diverts from our schema, we are unlikely to adjust our schema, but more likely to adjust our perception of that person; make them an exception

How do we know schemas work this way?

* Study was done where people asked people
  + Are doctors educated
    - They answered quickly
  + Do doctors have eyes?
    - It was less quick
      * You have to link the schema of doctor to human

* If I say doctor, the schema of nurse becomes more accessible to me
* Doctor might bring up the following connections
  + Medical doctor
  + Parent
  + Doctor who
  + Professor

Which would you pick

* In the first program there is %100 probability that 1/3 patients are saved
* In the second, there is 1/3 possibility that all are saved and 2/3 probability that nobody is saved.

**Scripts**

* Essentially behavioral schemas
* Shaped by culture
* What is your script for going to the movies?
  + In a group
  + Going to buy popcorn or soda
  + Go to theater and sit quietly
* You don't have to think about it, you just do it
* You probably have a behavioral script for class
  + You sit down
  + You take notes
  + You might respond when he asks questions
  + When you leave, you no longer act with your student script

Schemas

* The schemas and scripts that children learn are likely to affect their behavior when they are older
* Cognitive schemas allow for easy, fast processing of information about people based on their membership in certain groups
  + Stereotypes
* Almost every individual is stereotyped in some way
  + Do you think this is useful?
  + In what ways could schemas like stereotypes be adaptive?

Solve this riddle

* A father and son are in a horrible car crash that kills the dad. The son is rushed to the hospital. Just as he's about to go under the knife, the surgeon says, "I can't operate - that boy is my son!"
* Explain how this could be true
* Answer: The surgeon is the boy's mother
  + Gender roles=schemas
* That's how schemas can be detrimental. If it took you a moment, you don't picture doctors as females

Modes of thinking

* Automatic vs. Controlled Processes
  + **Automatic**
    - Picking up on someone else's emotions
  + **Controlled**
    - Ex: doing a math problem
* Subconscious process
  + Mental processes outside of conscious awareness but accessible when necessary.
  + Driving a car, typing
* Nonconscious processes
  + Mental processes occurring outside of and not available to conscious awareness
  + Can't be retrieved or elaborated on
  + Example: impression formation
    - Positive mood -> meet a new person -> favorable impression
* *Implicit learning*: Learning that occurs when you acquire knowledge about something without being aware of how you did so
  + Learning to ride a bike vs. learning to walk up the stairs
    - You can't elaborate or remember how that process was learned.

What keeps us from thinking rationally

* In a perfect world we would think in algorithms
  + *Algorithm*
    - A procedure that, if followed correctly, will always yield the correct answer
* We think in **Heuristics**
  + Heuristic thinking often occurs unconsciously and allows us to free up some cognitive resources
  + Heuristic thinking can be adaptive in that it allows us to decide quickly rather than weighing all the evidence
* Consider the following
  + What makes you more uncomfortable, riding in a car or in an airplane?
  + Have you ever wished someone a "good flight"?
  + Have you ever wished someone a "good drive" to work?
  + How do you explain these differences?
    - Control
    - How much you're exposed to either
    - News covers these accidents more
* **Availability heuristic**
  + Making a decision based on the answer that most easily comes to mind

Come back to which would you pick (reworded)

* 100% probability that 2/3 die
* 33% probability that no one dies and 2/3 that all will die

Changing representations

* In problem solving, we often need to revise a mental representation to overcome an obstacle
  + **Restructuring**
* New view reveals a solution that was not clear

Task is to connect dots using at most 4 striaght lines

Vocab

|  |  |
| --- | --- |
| Schemas | Cognitive structures which help us perceive, process, and organize information |
| Scripts | Schemas that dictate appropriate behavior |
| Stereotype | Information assumed about people who are classified as a certain group |
| Automatic process | Unintentional, involuntary, effortless process outside awareness |
| Controlled | A process that the enactor is fully conscious of |
| Heuristic | Shortcuts used to reduce the amount of thinking needed to make decisions |
| Availability heuristic | Making a decision based on the answer that most easily comes to mind |
| Restructuring | A new way of thinking about a problem that aids its solution; representing the problem in a novel way |
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