Chapter 3
Social Cognition


II. The Information Processing Metaphor
   - People as Computers
   - The cognitive version of People as Naïve Scientists
B. People as Information Processors (computers) - The Flow chart

Sensory Register = Filters out irrelevant sensory information. Is directed by Executive Processor which directs attention.

A. Sensation = sensory cells react to environmental / proprioceptive stimuli and sends information to the brain.
- STM = Short Term Memory (7 +/- 2)

B. Encoding = when information is passed on from the SR to STM

- Elaboration = when information is maintained and/or manipulated in the STM

8-3-1-5-5-2-1
Vs
831-5521
vs.
831-55-21
When making on-campus calls; there is a $55 fine for drinking & dialing on your 21st birthday.
- **LTM** = Long Term Memory: Contains our Mental Representations of the world.

C. **Storage** = when information is passed on from STM to LTM

D. **Retrieval** = when information is passed from LTM to STM

- **Executive Processor** - Directs Attention, Provides Rules and Strategies for processing information
- **Behavior** is the result of Conscious and Preconscious processes.

E. **Feedback Loop** = your own behavior serves as a source of stimuli
C. Automatic vs. Controlled Processing
- Controlled Processing = Effortful, Intentional, Serial, Reduces Cognitive Resources.
  - Multi-tasking interferes with Controlled Processes
- Automatic Processing = Effortless, May be Unintentional, Parallel, Does Not Reduce Cognitive Resources.
  - Frequent activities become automatic
  - Multi-tasking makes us use Automatic Processes
- Memory Demonstration 1
- You have been randomly assigned to 1 of 3 groups.
- I will read a story to you.
- Please try to remember as much of the story as you can.

Group 1 – Keep your eyes open
Group 2 – Close your eyes
Group 3 – Close your eyes
Group 1
The __________ Story

Group 1 – Close your eyes
Group 2 – Open your eyes
Group 3 – Close your eyes
Group 2
The Photo Copy Story

Group 1 – Close your eyes
Group 2 – Close your eyes
Group 3 – Open your eyes
Group 3
The Laundry Story

• Listen to the following Story:
Write down each step of the procedure that you remember.

Grade your answers – (reread story)
1. How many Correct Steps remembered?
   Group 1
   Group 2
   Group 3
2. How manyIncorrect Steps Included?
   Group 1
   Group 2
   Group 3

II. Schemas
A. Schema (Schemata or Schemas) = a highly organized abstract mental representation of an event, group, person, or topic.
   - Abstract = generalization based specific information
     e.g. Italian Restaurant Script (p.78)
          Group Stereotypes (p.42)
          Tree Prototype (p. 42)
          Bird Exemplar (p. 42, 79)
B) Functions of Schemas
   – Solving Puzzles with Missing pieces.

1. Finding the missing pieces
   a. Schemas let us know what to expect (expectancies) -
      - Tells us:
        Where to look for info (attention)
        What info is useful (encoding)
      - Consequence – sometimes we only see what we want to.
   b. If we don’t know we assume

- Memory Demonstration 2
  - You will be given a piece of paper with some questions on it. When you get the paper place it face down on your desk and please do not look at any of the questions until you are asked to
  - You have been divided into groups randomly.
  - Each group will be shown a word list for 10 seconds. Try to remember the list without writing down any of the words.
Group 1
Keep eyes open

Group 2
Close your eyes

Group 1
Ocean  Moon  Tree
Building  Chair  Salt
Sand  Fire
Group 1
Close your eyes

Group 2
Open your eyes

Group 2
Smile  Face  Lips
Cheerful Teeth  Party
Eyes  Happy
- Group 2, please wait quietly with your eyes closed
- Group 1 – Please turn over the paper you received and answer the questions presented there.
- (10 seconds)
- Group 2 – Please turn over the paper you received and answer the questions presented there.

Brands of Coffee

Group 1  Group 2

Tide

Cheer
B) Function of Schemas

2. Seeing the Puzzle Whole
   a. Schemas organize so it is easy to think about
   b. Schemas makes the puzzle pieces fit
      - Data is interpreted to fit the schema (elaboration and storage)
      - Consequence – Sometimes data that does not fit is made to fit.

3. Remembering the Puzzle Whole (true or not).
   - Active Schemas can guide retrieval
      - We are more likely to remember pieces that are part of the puzzle.
      - Consequence- we may remember pieces that were never really there.

C) Consequences of Schema

1- Active Schemas influence our interpretation of social information
   - Changing the schema can change your interpretation of the situation.
   - Some Schemas are almost always active
     - Self Schemas    - Gender Schemas
     - Group Stereotypes

2- Self-Confirming/fulfilling Nature of Schemas.
   - Self-Fulfilling Prophesy (Merton, 1948)
   - Behavioral Confirmation of Stereotypes (Snyder)
   - Confirmatory Hypothesis Testing (Text)
   - Having expectations about other people’s behavior, can cause us to treat others so they act out our expectations.
c1) Rosenthal & Jacobson (1968) - 
- Gave Teachers False Feedback regarding students’ “IQ”. Randomly selected “Bloomers” from each class. 
- 8 months later, “Bloomers” showed greater increase in IQ.

- Followup studies (Jussim 1989; Meichenbaum et al. 1969) identified differences in teachers behavior toward “Bloomers”
  1) Warmer Socioemotional Climate
  2) Gave more feedback to Bloomers
  3) Challenged Bloomers More
  4) Gave Bloomers Greater Opportunity to Respond
c2) - Snyder, Tanke, & Bersheid (1977)
- males randomly given 1 of 2 photos:
  attractive woman vs. unattractive woman
- had telephone conversation with a female
  (males believe she is the one in the photo).
- Prior to call
  - attractive photo expected: socially poised, humorous, and social adept female
  - unattractive photo expected: unsociable, awkward, serious, and socially inept female

- During the call
  - attractive photo = males behaved with warmth, friendliness, humor, and animation
  - unattractive photo = males were cold, uninteresting, and reserved.
- Female’s Behavior
  - attractive photo = friendly, likeable, and sociable.
  - unattractive photo = cool, aloof, and distant.
- Anderson and Bem did this with females getting the photo of the males = Same Results
D. The Cognitive Miser Metaphor.

- Though we may be Information Processors, the processing we do is incomplete and potentially error prone.

- Thought takes effort/Cognitive Resources. We are stingy when it comes to expending effortful cognition.

1) Stereotyping
- Simplifies the process of thinking about the social world.
  - We lump individual’s information into groups.
  - When we need information about an individual (especially new people) we access the information about the group.
  - If we have gaps in our information about a person, we can fill in the gaps with the group information (the stereotype).
- For the most part, stereotyping is helpful, but it can lead to mistakes. (Robert L. Heilbroner)

- Positive Aspects
  – Stereotypes clarify the “one great, blooming, buzzing confusion” William James
  – Make perception of an ambiguous world manageable.
  – We cover up the confusion with recognizable cutouts
  – Walter Lippman “For the most part we do not first see, and then define; we define first, and then see.”
- Negative Aspects
  - Stereotypes may be based on inaccurate information
    - e.g. racial/ethnic stereotypes

  – “The danger of stereotypes lies not in their existence, but in the fact that they become for all people some of the time, and for some people all of the time, substitutes for observation.” (Italics in the original)

  – When stereotypes are believed to be true, they are not revised even in the face of contradictory evidence. “The exception proves the rule.”

  – we can become slaves to the stereotypes we hold for our own group and incapable of individual action.

More Fun Quizzes

1. Which of the following patterns of coin flips is more likely to occur?
   a. HHTHTTHT    b. HHHHTTTT
More Fun Quizzes

2. Person X is “shy and withdrawn, invariably helpful, with little interest in people, or in the world of reality. A meek and tidy soul, X has a need for order and structure and a passion for detail”

Is X a trapeze artist, farmer, or librarian?

More Fun Quizzes

3. Estimate the Following Value.
   \[ 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 \]
More Fun Quizzes

4. Estimate the number of words in the English Language with “n” as the next to last letter.

More Fun Quizzes

5. a. Is the number of African Nations that are members of the United Nations greater than or less than 65?

   b. Estimate the number of African Nations that are in the UN.
More Fun Quizzes

6. Estimate the Following Value.
   \[2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8\]

More Fun Quizzes

7. Estimate the number of words in the English Language that end in "ing".
8. Mr. X and Mr. Y are both trying to catch flight to London for a very important business meeting. Mr. X arrived 30 minutes late for his flight and missed it. Mr. Y arrived 5 minutes late and missed it.
- If anyone, who is more upset?

2) Heuristics
- Another way to save cognitive resources is to rely on heuristics.
- Heuristics = Simple rules for making complex decisions easier.
  - often defined as mental shortcuts or rules of thumb.
- The Speed / Accuracy Tradeoff
  - Evolutionarily Adaptive.
ANSWERS
1. Which of the following patterns of coin flips is more likely to occur?
   a. HHTHTTHT      b. HHHHTTTT

ANSWER – They are equally likely.
Concept – Representativeness
   – The Gamblers Fallacy

ANSWERS
2. Person X is “shy and withdrawn, invariably helpful, with little interest in people, or in the world of reality. A meek and tidy soul, X has a need for order and structure and a passion for detail”
-- Is X a trapeze artist, farmer, or librarian?
Answer – Farmer (there are more farmers in the U.S. than librarians)
Concept - Representativeness
ANSWERS

4. Estimate the number of words in the English Language with “n” as the next to last letter.

7. Estimate the number of words in the English Language that end in “ing”.

Answer: There are more words with “n” as next to last letter

Concept: Availability

ANSWERS

3. Estimate the Following Value.
   \[7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1\]
   (Answer 5040)

6. Estimate the Following Value.
   \[2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8\]
   (Answer 40320)

Concept: Anchoring
ANSWERS
5. a. Is the number of African Nations that are members of the United Nations greater than or less than 65?
   b. Estimate the number of African Nations that are in the UN.

Answer: I have no clue, but people’s answers depend on whether you start with 65 or with 10.
Concept: Anchoring

ANSWERS
8. Mr. X and Mr. Y are both trying to catch flight to London for a very important business meeting. Mr. X arrived 30 minutes late for his flight and missed it. Mr. Y arrived 5 minutes late and missed it.

- If anyone, who is more upset?
Answer – They should be equally upset.
Concept – Contrary to Fact Reasoning
   - Upward Counterfactuals
a) Representativeness
   - Classification judgements are often made based on how similar a target is to the category. (Does it look like an X).
   - Ignoring Base Rate Probabilities: people base judgement on similarity rather than on the actual frequency with which events happen in the world (Base Rate).

b) Availability
   - We base our estimates of frequency or likelihood on the ease with which we can generate examples, or on the number of example we can generate.

The effects of Priming:
   - Priming Increases Availability (accessability) of information
c) Anchoring & Adjustment
- When making numerical estimates, we tend to be influenced by primed values (anchors) and then insufficiently adjust our estimates in the desired direction.

d) Simulation (Counter Factual Reasoning)
- The strength of our reactions to actual events (positive or negative) is shaped by the ease with which we can mentally undo an event. Easier = Stronger

Downward Counter-factuals
- We won the football game by 1 point vs. We won by 50 pts.

Upward Counter-factuals
- We lost the football game by 1 point vs. We lost by 50 pts.