

## PSYC EXAM 3 STUDY GUIDE

### Chapter 9- Thinking, Reasoning, and Language

- Cognitive biases
  - Heuristics
    - Representativeness: "like goes with like"
    - over estimating the likely-hood of an event to happen
    - tossing a coin 10 times
  - Availability "off the top of my head"
    - over estimating the likely-hood of an event to happen based on how easily it comes to mind
  - Heuristics and biases simplify and reduce the information needed for decision making
  - Top-Down Processing
    - streamlines cognitive functioning by utilizing preexisting knowledge
  - Decision-making: many of our daily decisions are made implicitly and based on cognitive economy
    - Framing has an impact on decisions even when the underlying information relevant to these decisions is identical
- Problem Solving: generating a cognitive strategy to accomplish a specific goal
- Obstacles to Problem solving
  1. Salience of surface similarities: finding similarities in both problems to solve a problem)
  2. Mental sets: stuck with one way to solve a problem the prevents us from looking for an easier way
  3. Functional fixedness: fixated on the conventional use
- Language
  - Features of Language
    - highly practices and automatic process
    - four levels of analysis must be coordinated:
      - Phonemes: sounds we use
        - probably around 100 total
        - each language only uses a subset ranging from 15-60
        - 40-45
        - Hawaiian has as few as 13 phonemes
      - Morphemes: smallest units of meaning
        - convey information about semantics
        - can be full words ("dog")
    - Syntax

- include word order, morphological markers and sentence structure
  - real-world language rarely follows these rules completely
- Extralinguistic information
  - facial expressions, tone of voice, previous statements by others
  - used to help interpret ambiguous information
- Perception of Language: "flowers bloom in the the spring"
- How and Why Did Language Evolve
  - Advantages:
    - communication complex ideas
    - coordinating social interactions
    - assisting in complex activities
  - Studying language evolution is complicated
    - phonemes, morphemes, and syntax are not usually related to what they refer
    - exceptions include onomatopoeia and sound symbolism
- Learning Words
  - how do children learn language?
  - comprehension precede production
    - recognize words long before they re able to say them
  - Begin to produce words around 1 yr of age, with an exponential rate of increase
    - two word stage around 2yrs old
  - Tend to over- and under-extend word meanings early on
    - over extend: "tall bearded guy=dad, any tall bearded guy=dad"
- Sensitive period: the younger you are, the better you will learn a new language ("less is more" theory)
- Sign Language
  - uses the same area of the brain as speech (Broca& Wernicke's)
  - relies on visual communication
  - not just gestures; exhibits all features of spoken language
- Bilingualism
  - same brain areas
- Nonhuman Animal Communication
  - animal species differ in the complexity and type of communication
    - scent, visual, vocal
- Teaching Human Language
  - Many attempts to teach animals human language, with mixed results
    - chimps: used reinforcements
    - bonobos (most like human)

- learn simply through observing
- african gray parrot: used reinforcements
- Humans appear unique in our ability to use language in a sophisticated way

## Chapter 11

- Emotion
  - refer to perturbations of
    - Response patterns (that subserve function)
      - Behavioral: muscle response appropriate for facial expression
      - Hormonal: secretion of stress hormones
      - Autonomic: sympathetic activation
    - Feelings (typical aspect of emotion)
      - Negative: anxiety, fear, anger
      - Positive: euphoria, joy
  - Mental state or feelings associated with our evaluation of our experiences
  - Discrete emotions theory
    - Good support for seven primary emotions
      - happiness, disgust, fear, sadness, surprise, anger, and contempt
    - these combine to form secondary emotions
  - Cultural Differences in Expression
    - Cultural differ in display rules: can't kiss in public in Europe
    - Do not influence emotion itself, but instead its overt expression
  - Emotions and Physiology
    - Able to differentiate some primary emotions physiologically
      - Heart rate increases more with negative emotions
      - Digestive systems slow down with fear
    - Not all are different
      - Happy and sad look the same in brain scans
      - Multiple brain regions are active in all emotions
  - Recognition of Emotion
    - We infer emotional state using
      - Visual cues (facial expression, body language)
      - Auditory cues (intonation)
    - Recognition of emotion in other persons involves the right hemisphere
      - right hemisphere lesions impair recognition of emotions from facial expressions or hand gestures