



Cognitive Bias in Performance

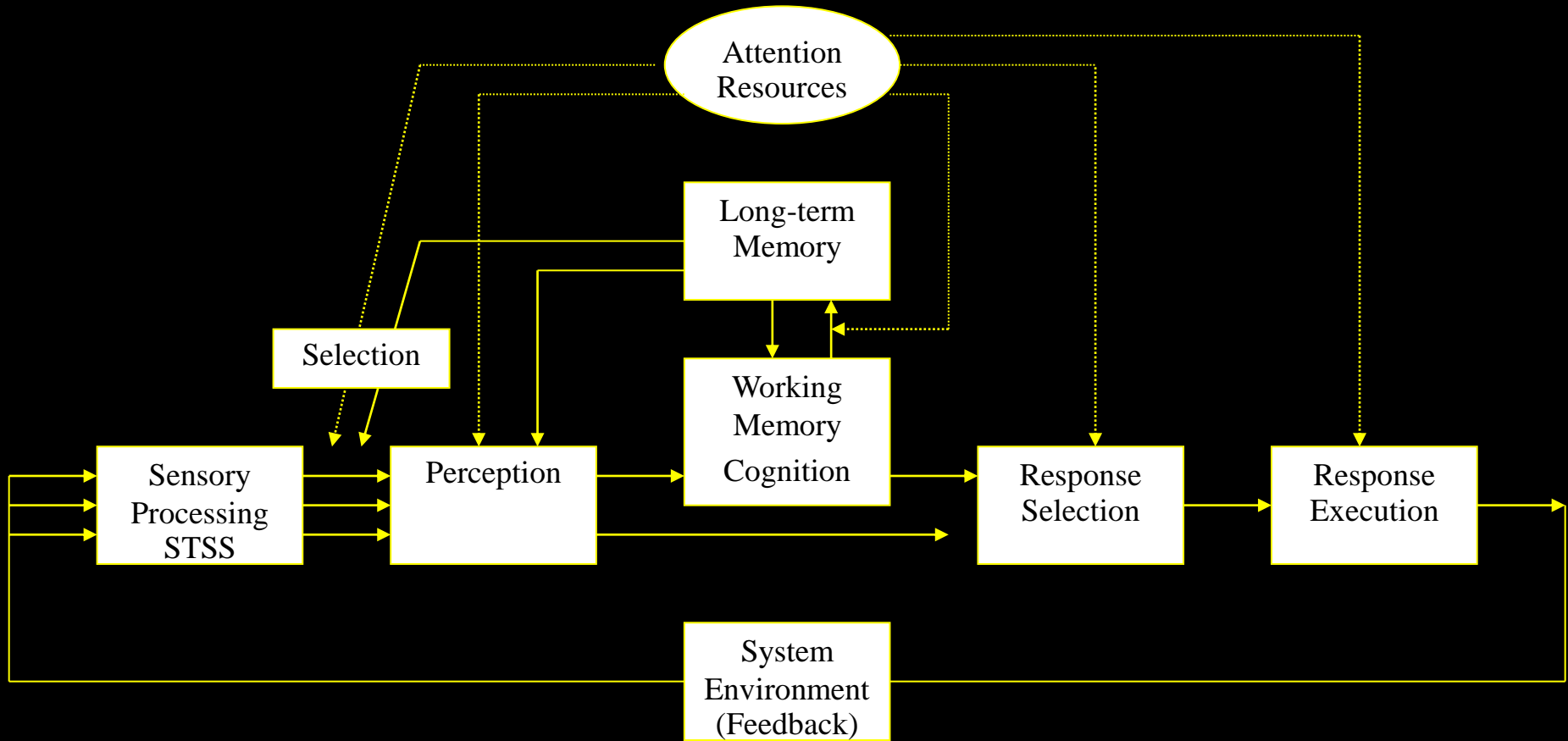


Appraisal

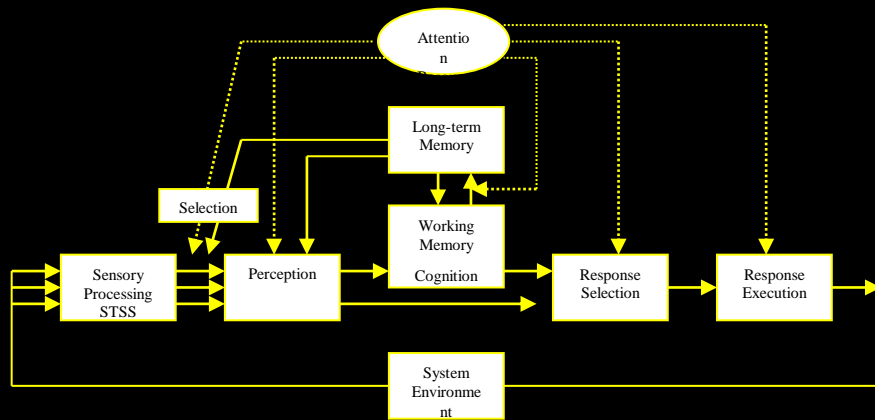
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Cognitive Model



Cognition Component



- Perception
- Working Memory
 - Thinking
 - Making Decision
 - Response Selection
 - Representation
- Long-term Memory
- Attention Resources

What is the most important factor?

Selective Attention

- **Sensory Memory** (i.e. Echoic Memory, Iconic Memory)
- **Selective Attention** is the process selecting from sensory memory to working memory
- Why there are **failures** of selective attention? (Missing Trials)
- Factor that affected: **Saliency, Effort, Expectancy and Value**

Selective Attention

- Raters in organizations are likely to acquire information about ratees' performance while they are concentrating on tasks other than evaluation
- In long-term, a small amount of relevant information may lead to more accurate evaluations than a large amount of information that includes both relevant and irrelevant observations

Perception

- **Perception** is the process extraction of meaning from the data that attended or imagined
- Three perceptual processes
 - **Top-down processing** (Associating b/w stimuli and memory)
 - **Bottom-up processing**
 - **Unitization** (Perception can unitize from different sensation)

Working Memory

- Another name is **short-term memory**.
- **Working memory** is relatively transient and limited to holding a small amount of information that may be rehearsed or “worked” on by other cognitive transformation
- **Limitation** of working memory
- Affected from **attention resource**

Working Memory

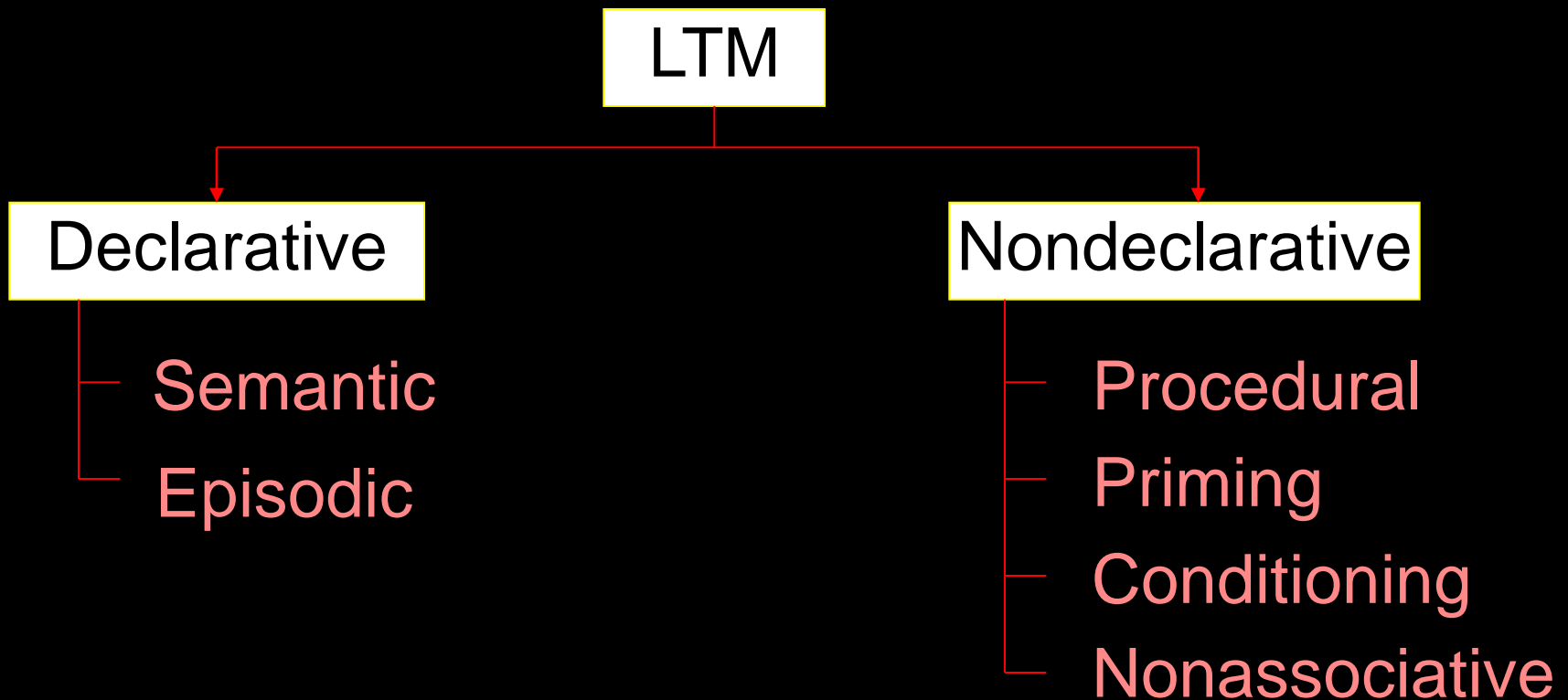
- Time-limited
- Confusability

Long-term Memory

- **Long-term Memory** is main storage of information in cognition
- **Learning** is the processing of storing information in long-term memory
- **Assimilation and Accommodation**

Long-term Memory

- Distinguished of long-term memory



Squire's Taxonomy of Memory

Long-term Memory

- In PA, almost memory are declarative
- In addition to working memory, factor that affected forgetting in long-term are strength, association, confusability, time and flashbulb.

Long-term Memory

- Time

Effects of Previous and Subsequent Performance on Evaluations of Present Performance (Murphy, Balzer, Lockhart, & Eisenman, 1985)

Delay b/w Observations and Ratings	Pervious Performance	Subsequent Performance
Short	Strong accommodation effect	Weak assimilation effect
Long	Weak accommodation effect	Strong assimilation effect

Response Selection

- In addition to perceived performance, there are a lot of factor that affect PA.
- **Rater motivation**

Motivation

สาเหตุของการประเมิน

ความตั้งใจในการประเมิน

การคาดการณ์ผลกระทบที่จะเกิดจาก
ratee และ **other**
ถ้าประเมินได้ถูกต้อง

การคาดการณ์ผลกระทบที่จะเกิดขึ้นกับตนเอง
ถ้าประเมินได้ถูกต้อง

การคาดการณ์ผลกระทบที่จะเกิดขึ้นจากองค์กร
ถ้าประเมินได้ถูกต้อง

ต้องการได้รับการยอมรับ
จากสังคม

การยอมรับจากผู้มีอำนาจ

การป้องกันผลกระทบ
ทางลบจากลูกน้อง

Response Selection

- Rater Motivation affects Leniency, Severity and Central Tendency.
- There are a lot of motivation theory that can apply to response selection. For example:
 - Needs theory
 - Equity theory
 - Reinforcement theory

Response Selection

- Theory that may applied to explain response selection: Multiple utility theory (adapted)

$$U(v) = \sum_{i=1}^n p(i)v(i)$$

Utility of each choice = sum of valence of each outcome multiplied by probability of each outcome

Response Selection

- Example

โคนลูกน้องคนนั้นต่อว่า
 ดำรงความถูกต้อง ลูกน้องโคนลดเงินเดือน

ตนเองไม่ปลอดภัย

Outcome	1	2	3	4	
Valence	9	-3	-7	-5	U(v)

PA	High	1	0	0	0	9
	Med	5	7	0	2	14
	Low	10	10	6	4	-2

Response Selection

- Multiple utility theory is the classic theory that cannot verify or falsify
- Multiple utility theory is the example of normative decision models (rational models of decision making)
- Rational consideration of all factors, all outcomes is time consuming and effort demand.
- Limited Capability in working memory.
- Descriptive decision models (Real cognitive processes in human behavior but do not reflect full range of decision making situation)

Response Selection

- Descriptive decision models
- Heuristic is shortcut, rule of thumb

Tversky, A., & Kahneman, D. (1974). Judgement under uncertainty: Heuristics and biases. Science, 185, 1124-1131.

- Availability heuristic – Priming, Recency, Halo
- Representative heuristic – Stereotype
- Anchor and adjusting – Confirmation bias, Contrast effect

Response Selection

- Other Heuristic
 - Limited Capacity of Working Memory
 - Cognitive tunneling
 - Attention to limited number of cues
 - Limited possible outcomes

Response Selection

Assimilation and Contrast Effects in Performance Ratings (Canan Sumer & Knight, 1996)

Group	Previous Performance	Subsequent Performance	Dependent Variable
1	Good Review and rate	Average Review and rate	
2	Good Review but not rate	Average Review and rate	$2 > 4$ Assimilation
3	Poor Review and rate	Average Review and rate	
4	Poor Review but not rate	Average Review and rate	$1 < 3$ Contrast

Response Selection

Assimilation and Contrast Effects in Performance Ratings (Canan Sumer & Knight, 1996)

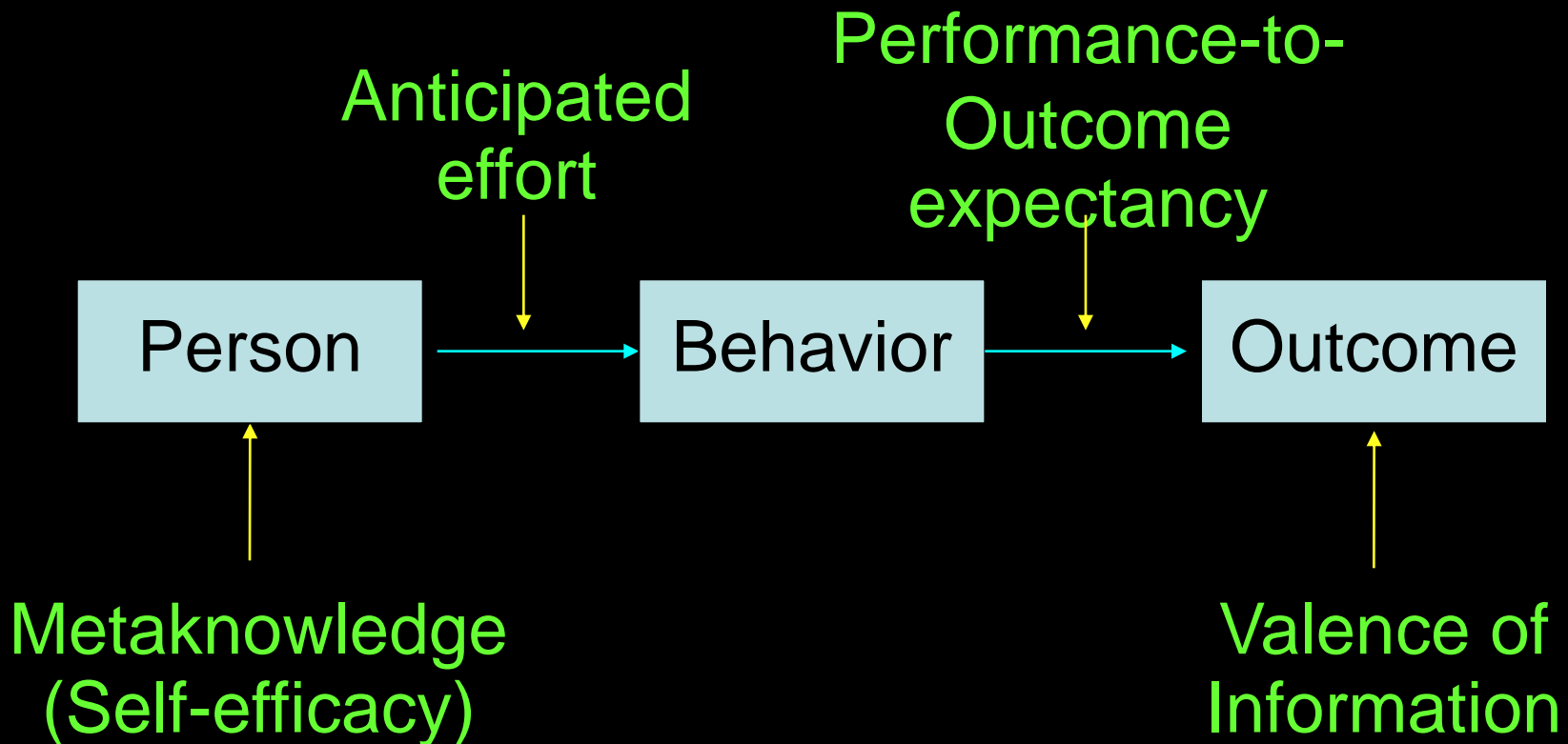
- There are **several mechanisms** underlying these phenomenon
 - **Representative Heuristic**
 - **Anchoring and adjusting**: Condition 2 and 4 didn't anchoring then there aren't contrast effect

Metacognition

- Metacognition or metaknowledge refers to people's knowledge about their own knowledge and abilities
- People judge how much they know about ratee
- Low metacognition – Resource Demand
- Metacognition = self-efficacy

Metacognition

- Model of metacognition for taking effort (adapted from self-efficacy theory and expectancy theory)



Metacognition

- Model of metacognition for taking effort

	Action	No action
Metacognition	Low	High
Anticipated effort	Low	High
P-to-O expectancy	High	Low
Valence	High	Low

Theory about cognitive aspects in Performance Appraisal

- Implicit personality theory
- Mood congruence effect

Implicit Personality Theory

- Each of us has a **theory of personality (Implicit theory)**, defined in terms of the categories we use to describe people
- It is the **content and organization** of these categories, and our **explanations for why people behave** as they do including casual explanation and attributions.

People → Category → Behavior

- Such theories are considered **implicit** in that most people cannot make them explicit or organize them as part of a formal theory of personality

Implicit Personality Theory

The effect of implicit person theory of performance appraisals (Heslin, Latham, & VandeWalle, 2005)

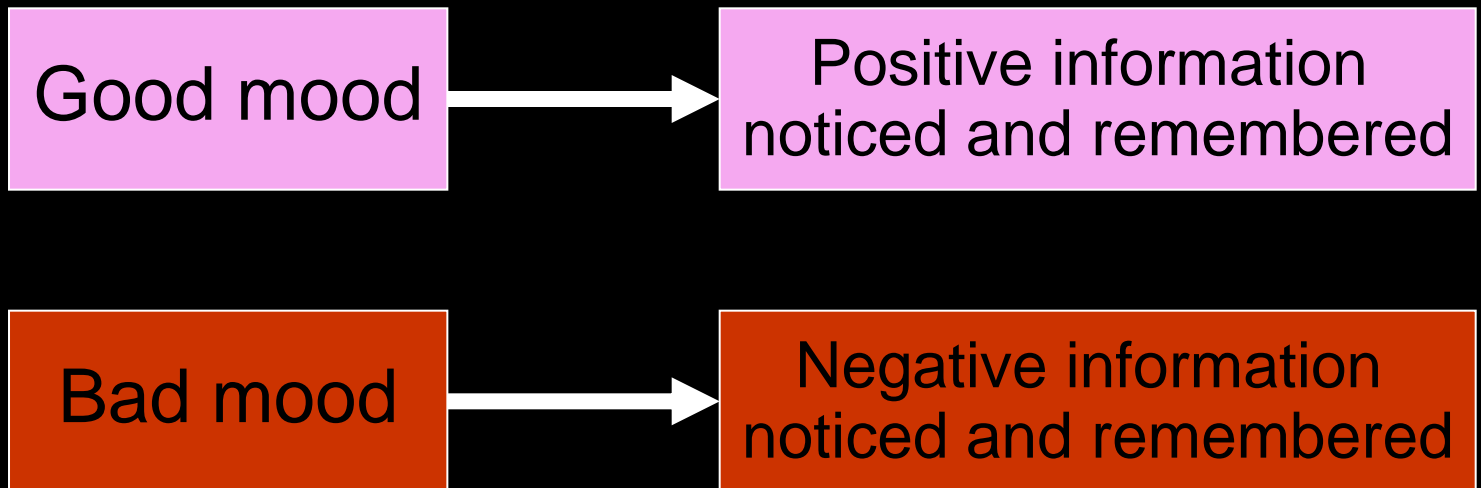
- **Incremental IPT** – People can change
- **Entity IPT** – People can not change
- Managers who held an **incremental IPT** was **positively related** to their **recognition** of both good and bad performance, relative to the employee behavior they initially observed
- Changing to **more incremental IPT**, people are **greater acknowledgement** of an improvement in employee performance

Implicit Personality Theory

- Implicit theories seem to operate more often in trait evaluations than behavioral evaluations
- Implicit theories is one of the heuristic devices
- Implicit theories = mental model (all of memory in LTM) about personality and behaviors of people

Mood congruence effect

- **Mood congruence effect** is our tendency to store or remember positive information when in a positive mood and negative information when in a negative mood



Additional Topic

Attitude, Self-monitoring and Appraisal Behaviors (Jawahar, 2001)

- **Attitude toward accurate appraisal**
- **Self monitoring:** high self-monitoring is people who are good at realizing the social cues and capable to tailoring their behaviors to fit social contexts
- **Accuracy of ratings**
- Self monitoring **negatively related** to accuracy of ratings
- Self monitoring **moderate relationship** b/w attitude and accuracy such that relationship is stronger for low self monitoring than high self monitoring

Additional Topic

Presentation Modality and Indirect Performance Information: Effects on Ratings, Reactions, and Memory (Uggerslev & Sulsky, 2002)

- **Direct** Performance Information (Positive, Negative)
- **Indirect** Performance Information (Positive, Negative)
- **Modality** (Auditory, Textual)
- **Perceived Utility**
- **Confidence**
- **Memory for performance incidents**

Additional Topic

Presentation Modality and Indirect Performance Information: Effects on Ratings, Reactions, and Memory (Uggerslev & Sulsky, 2002)

- Found that **indirect information** has utility, increases rating confidence and has an effect on the resultant of performance ratings
- If **there are inconsistent** b/w direct and indirect information, raters will **use their memory and cognition** to scrutinize.
- In organizational context, raters not only use direct information but use indirect information

Suggested Research

- Does **episodic or semantic memory** affect more in PA?
- How rater **differentiating in motivation** affect relation among metacognition, anticipated effort, P-to-O expectancy and valence of information?
- Does **personal communication**, indirect source of information, with one who familiar affect performance rating more than direct observation or other indirect sources?

Q & A