

**Emotions, Decisions, and Action:  
Implications of Affective  
Mechanisms for Effective Patient  
Decision Making**

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# Overview

- My Outline:
  - Does emotion help or hurt decision making?
  - Important distinctions
    - Low-road versus high-road affect?
    - Intuitive versus analytical tasks?
  - Implications from two example research findings:
    - Match affect to impulsive desired behavior (low road & intuitive)
    - Recognize that decision makers avoid emotional processing operations (high road & analytical)
- My Agenda: suggest (partial) frameworks for thinking about affect in medical decision making

# Big Questions

- Does emotion help or hurt decision making?
- Is understanding emotion useful for helping patients make better decisions?

# Big Questions: My answers

- Does emotion help or hurt decision making?
  - Both (or it wouldn't be a big question)
- Is understanding emotion useful for helping patients make better decisions?
  - Yes (or it wouldn't be worth thinking about)

# Does Affect “Hurt” Decision Quality?

## Affect Hurts

- Luce et al: Accuracy traded off in favor of minimizing negative emotion
- Slovic: Affect *heuristic* substitutes for rational analysis
- Hsee & Rottenstreich: Affect reduces sensitivity to scope, probability, logic
- Shiv et al.: Brain lesions hampering emotion improve decision making in investment task

## Affect Helps

- Simon: Affect signals what is important
- Peters & Slovic: Affect leads towards gains, away from losses
- Loewenstein: Visceral cues are necessary for prediction of later reactions
- Bechara et al., Damasio: Brain lesions hampering emotion hamper decision making in gambling task

# Two important contingencies

- Nature of the affect? e.g., Amount of Cognitive Activity: Low-road (intuitive, automatic) versus high-road\*
- Nature of the task? e.g., intuitive versus analytical task continuum\*
- \* Contingencies leverage the notion of non-conscious (or “automatic”) processing

# Nature of the Affect?: Amount of Cognitive Activity

## **Low-road (less cognition)**

- Zajonc “preferences need no inferences”
- Emotion generated by automatic associations
- *Health application:* fear of word the cancer (or low-fat)

## **High-Road (cognition precedes)**

- Lazarus: “a cognitivist’s reply”
- Emotion generated by cognitive appraisal, deliberation, assessment of goal-relevant implications
- *Health application:* anxiety generated by rumination on difficult tradeoffs between treatment (or dessert) options

# Nature of the Task?

## Intuitive Tasks

- Errors result from cognitive elaboration of irrelevant considerations such as reasons for a preference (Wilson)
- Common benchmark for accuracy is prediction of (own) later experience
- Preference *prediction* relies on *context matching* (Payne, Bettman & Schkade)
- *Health application* : prediction of satisfaction with outcomes, momentum for ongoing behavior

## Analytical Tasks

- Errors results from insufficient cognitive elaboration due to substitution of simplified heuristic criteria (Kahneman)
- Common benchmark for accuracy is formal rules of logic or maximization
- Preference *construction* (design) relies on a *coherent* process (Payne, Bettman & Schkade)
- *Health application*: treatment choices characterized by difficult tradeoffs

# Example Projects

	<b>Low-Road Affect</b>	<b>High-Road Affect</b>
<b>Intuitive Task</b>	Luce, Kahn, Passyn	---
<b>Analytical Task</b>	---	Luce, Bettman, Payne; Drolet and Luce

# Luce, Kahn, Passyn

- Low-Road affect: subtle feelings generated by persuasive appeals
- Specific type: Certain (regret, guilt) versus uncertain (fear) feelings
  - E1: manipulate with fluency, measure intentions
  - E2: manipulate with narrative, measure behavior
- More Intuitive Task: repetitive, impulsive behavior (snack choice)
- Basic H: certain (uncertain) -> approach (avoid)

# E1: Manipulate Fluency and Measure Intentions

Disfluent: *Good nutrition is important*  
Fluent: Good nutrition is important

**Intentions to eat healthy (9-point scales):**

	<b>Disfluent (Uncertain)</b>	<b>Fluent (Certain)</b>
<b>Approach (fruits and vegetables)</b>	5.5	6.8
<b>Avoid (junk food)</b>	6.8	5.6

Interaction  $p < .05$

# E2: Manipulate Narrative and Measure Behavior



Unhealthy Options

Healthy Options

	<b>Uncertain Narrative</b>	<b>Certain Narrative</b>
<b>Approach</b>	2.5	2.8
<b>Avoid</b>	2.9	2.6

Interaction  $p < .05$

# Luce, Bettman, Payne

- High-Road affect: Generated by implications of decision tradeoffs for valued goals
- Task(s): Difficult consumer decisions (choosing cars and apartments)
- Basic H: Tradeoff Difficulty -> Negative Emotion -> Avoidance

# Some Findings

- **Difficult Tradeoffs Lead to:**
  - Greater status quo bias (stick with the default)
  - Greater asymmetric dominance bias (choose something because it's clearly better than some terrible choice)
  - More decision deferral (paralysis by analysis)
  - Greater Prominence effects (choose the safest car even at prices that outstrip your earlier stated preference for safety over cost)
- **These findings are mediated by:**
  - Negative Emotion (suggests it's a coping strategy)
  - Longer Response Times (suggests it's not just a heuristic)
- **Cognitive Business shuts down these effects (Drolet and Luce), suggesting they are high-road**

# Implications: Implicit Side

- LKP Studies: certainty breeds approach behavior, uncertainty avoidance
- Generalization: Match affect to desired action
  - Anger and pride (versus fear and hope) may create compliance with medicine (approach)
  - Some ability to experience coping (and resultant emotion) now might mitigate mis-prediction of coping later

# Implications: Analytical Side

- LBP Studies: emotion-minimization goals shape decision strategy selection
- Generalization: Attend to the emotional costs of *making decisions*
  - Recognize that lexicographic statements (“survival is the most important thing”) may reflect coping rather than ‘true’ preference
  - Informed consent should avoid tortured responsibility and heightened regret

# Leveraging Emotion: Some Suggestions

## 2. Source of Affect during DM

### 1. Type of Decision Task

	<b>Low Road Affect</b>	<b>High Road Affect</b>
<b>Intuitive</b>	“Closing the Gap”: match choice to experience so affect now predicts experience later	“How Will I Feel About It?”: Simulate various outcomes to dilute impact of specific, vivid ruminations
<b>Analytical</b>	“Gut-Level Signals”: use immediate affective reaction as importance signals	“Problem-Focused Coping”: structure tasks so that tradeoffs can be considered without signaling responsibility