Social Cognition

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Thinking is for Doing

“My thinking is first and last and always for the sake of my doing, and I can only do one thing at a time.” (William James, 1890)

Overview

- Definition and troublesome concepts
- Heuristics
- Attribution
- Affect
- The self

Social Cognition

- The psychological processes that results from inferring the actual, imagined, or implied mental state of another
  - Includes both cognitive and affective processes
- Occurs spontaneously (automatically) to other people

What is Social Cognition?

- Person perception is fundamentally different from object perception
- Involves physical perception of body parts and the gestalt person...
  - Based on feature space mapping just like object perception
- And and inference of what is going on inside someone's head
  - Based on Bayesian statistics and logical reasoning
  - As well as interoception

Social Cognition Disciplines

- Social Psychology
    - How does the **social context** shape social cognition?
- Developmental Psychology
    - How does social cognition **unfold across the life-span**?
- Evolutionary Anthropology
    - How did social cognition **evolve**?
- Philosophy of Mind
    - What are the **possibilities** for a species with social cognition?
- Neuroscience
    - What are the neural and other biological **mechanisms** of social cognition?

Social Perceivers

- Cognitive Misers
    - Saving scarce cognitive resources by taking short-cuts
    - Extra processing triggered by extreme or negative, not slightly positive baseline
- Motivated Tacticians
    - Thinking strategy depends on goals
    - Strategy depends on motives (BUCET)
- Activated Actors
    - Respond to people affectively, physiologically, and biologically
- Inequality Enablers
    - Endorse attitudes that determine who is blame-worthy

Automatic Processes: Four Horsemen

Without

- Intent
- Capacity (i.e., efficient)
- Effort (i.e., autonomous)
- Awareness

Automaticity

- We know the mind's *not* fully conscious
- Often lacks intent, capacity, effort or *awareness*

Intent

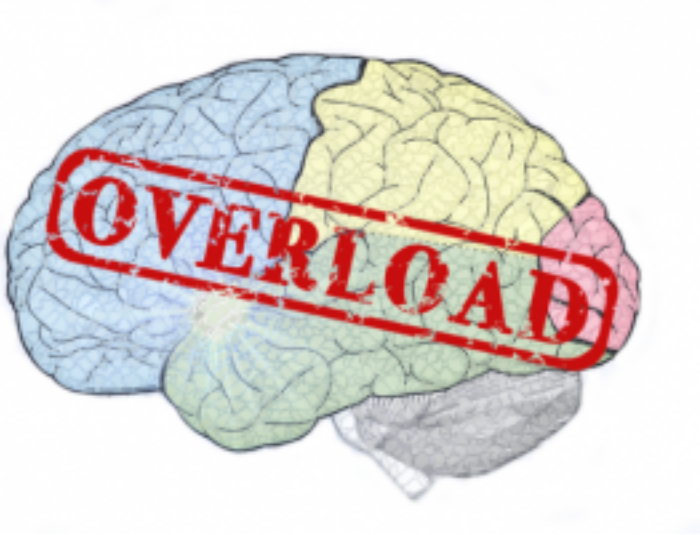
- Having options
- Especially making the hard choice
- Paying attention

- Legal example
  - manslaughter

  versus
  - Pre-mediated murder

Why Functional to Automate?

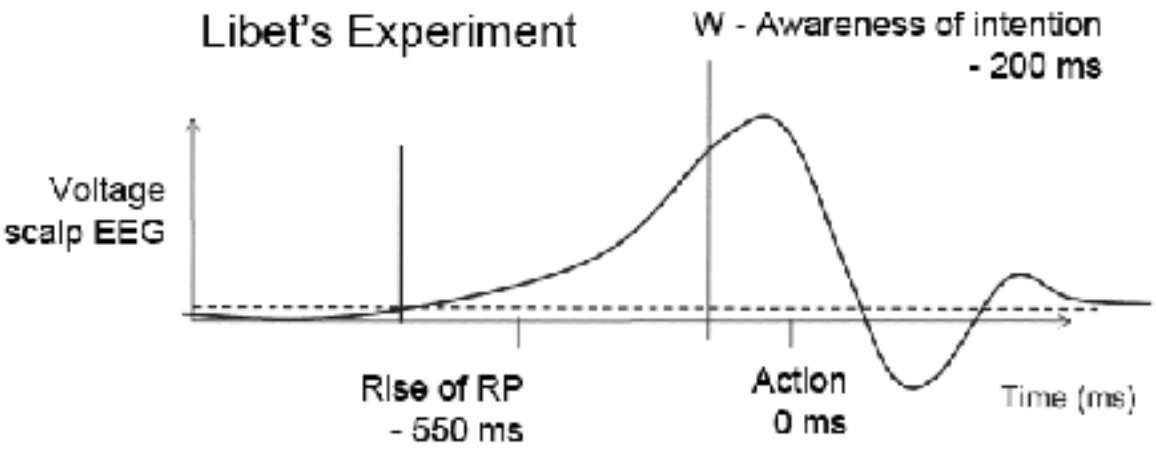
- Saves capacity
- Illusion of choice



Free Will?

Does paying attention cause the action?

- Illusions of agency
- If imagine outcome, assume authorship



Varieties of Automaticity + Control

- Preconscious (subliminal)
- Postconscious (supraliminal)
- Goal-dependent (habitual)
- Intentional (controlled)

Heuristics

Mental Shortcuts

Heuristics

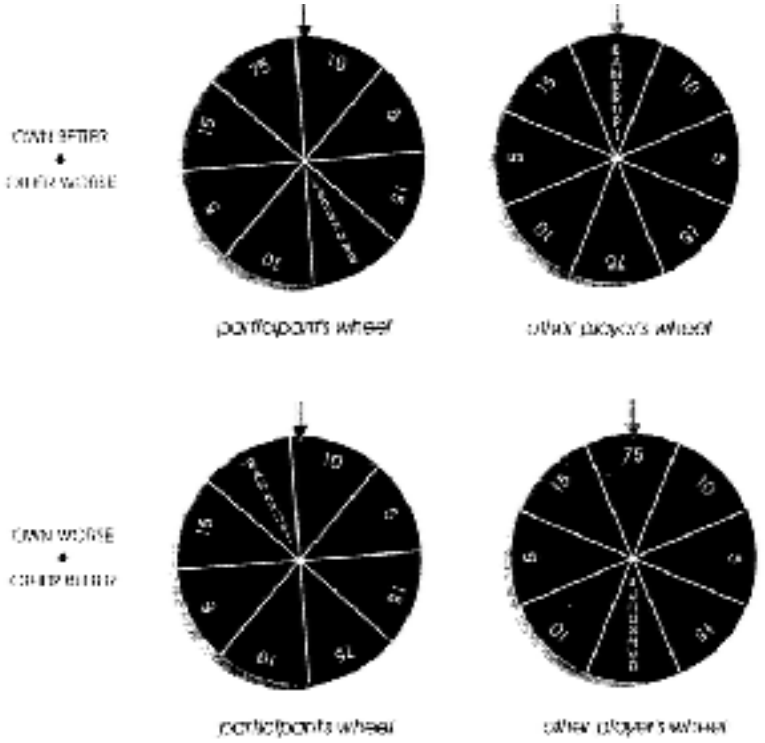
- Representativeness
- Availability
- Simulation (counter-factuals)
- Anchoring & adjustment
- Framing (prospect theory)

Simulation Theory
(McMullen & Markman, 2000)

- Downward counterfactuals:
  (could have been worse),
- If assimilation, worst case *could have* happened,
  - Negative affect because focus on counterfactual,
  - Motivate to change
  - = Wake-up call
- If contrast, successfully *avoided* worst case,
  - Positive affect because focus on factual,
  - Reduced motivation
  - = Pangloss effect

Design

- IV = counterfactual manipulation
  - Downward assimilation (*could have* been bad)
  - Downward contrast (avoided the worst)
  - Control (none)
- DV
  - Abandon investmen
  - How much
  - Feelings (Study 2)



Results

- Assimilate *(worst could have happened)*
  - Pull out
  - Feel bad (worry, fear, regret)
- Contrast (*avoided the worst)*
  - Stay in
  - Feel good (satisfaction)

Anchoring + Adjustment
(Mussweiler, Strack, & Pfeiffer, 2000)

- Anchoring makes consistent info accessible
- So consider the opposite
  - Make accessible anchor-inconsistent info
- Will counteract anchoring effect

Study 1: Car Dealers

- Estimate price of used car
- IV:
  - Anchor (high/low)
  - Consider opposite
- DV
  - Price
  - # arguments
  - Correlation (difficulty arguing against low estimate)

TABLE 1: Absolute Estimates for the Value of the Car by Anchor and Argument

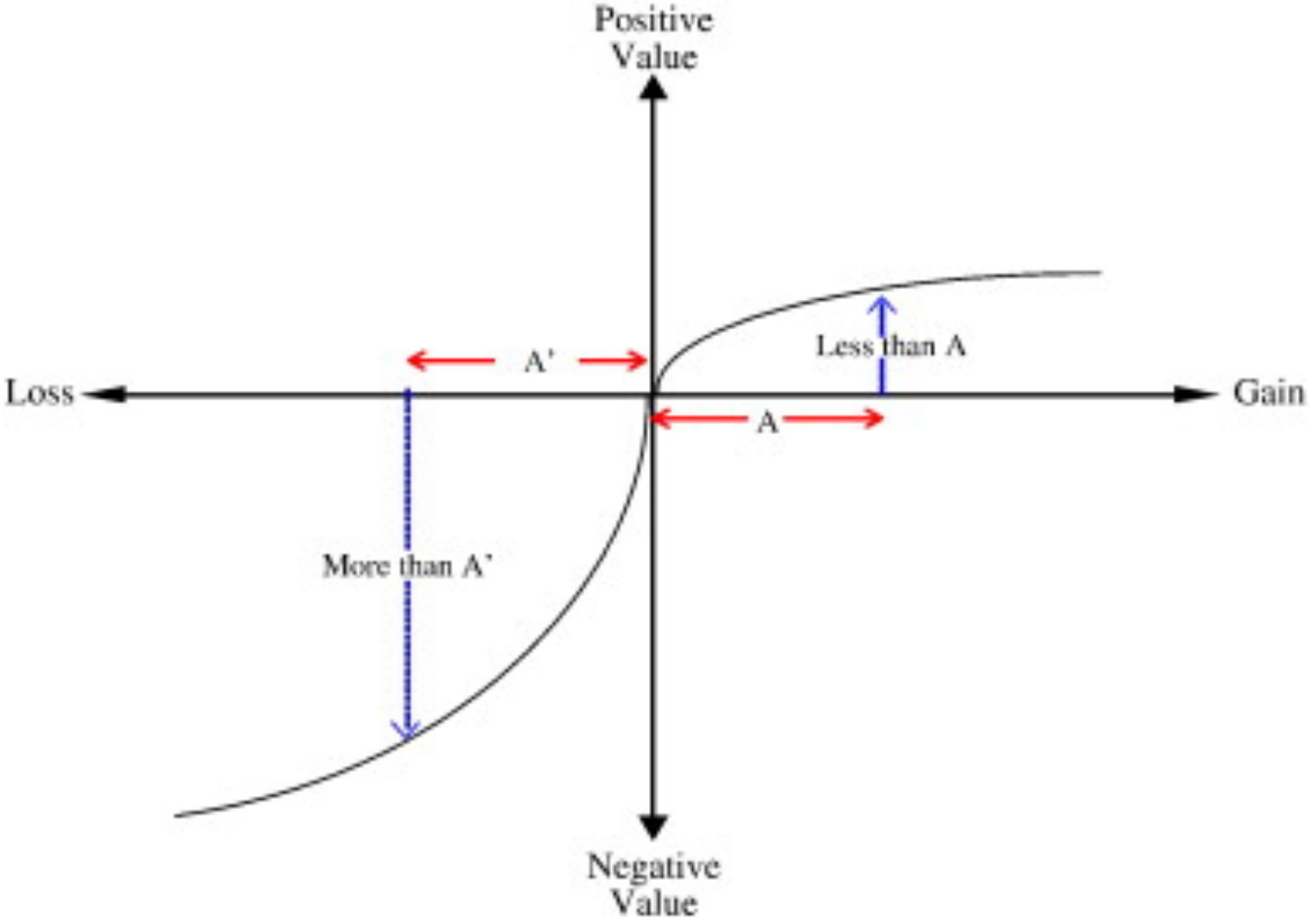
	Argument	
Anchor	*No*	*Anchor Inconsistent*
High	3,563	3,130
Low	2,520	2,783

NOTE: Estimates are given in German Marks. $N = 15$ in all cells.

Normative Models

- Subjective expected utility theory (SEU)
  - Value x probability = expected utility
  - Economic model
  - What are values & probabilities?

Prospect Theory



When Do Heuristics Go Wrong?

- Gathering information
  - Prior theory bias
- Sampling information
  - Law of large numbers
  - Ignoring biases
- Regression to the mean
- Dilution by non-diagnostic info
- Base-rates v. case histories
  - Conjunction fallacy
- Integrating information
  - Assessing covariation
  - Illusory correlation
- Judgments over time
  - Temporal construal
  - Learning from the past

Accuracy-Efficiency Tradeoff

- Errors & biases as consequential: Improving the inference process
  - Using computers
  - Teaching inference
- Errors & biases perhaps don't matter
  - Experiments flawed
  - Normative models flawed
  - Inconsequential or self-correcting flaws
- Maybe heuristics outperform excessive thought; rationality is over-rated
  - Unconscious & holistic
  - Motivated inferences

Framing
(Roney, Higgins, & Shah, 1995)

- Outcome focus
  - Rewards: reach, fail to reach
- Results
  - Persistence
  - (Dis)satisfaction, not nervousness
  - Performance better

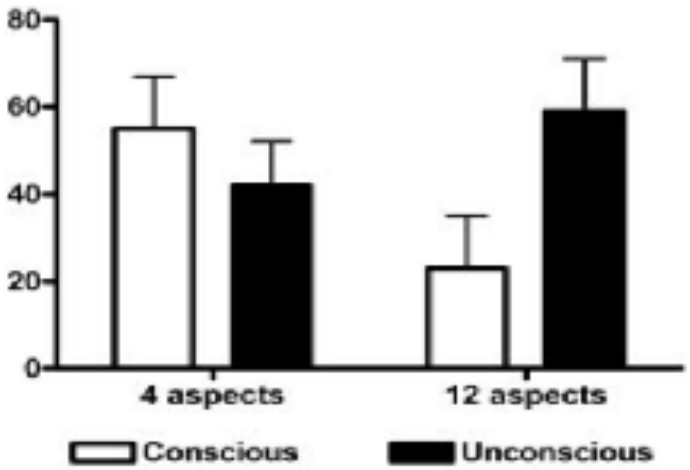
TABLE 1: Mean Ratings of Dejection-Related and Agitation-Related Emotions as a Function of Framing Condition and Measurement Period, Study 1

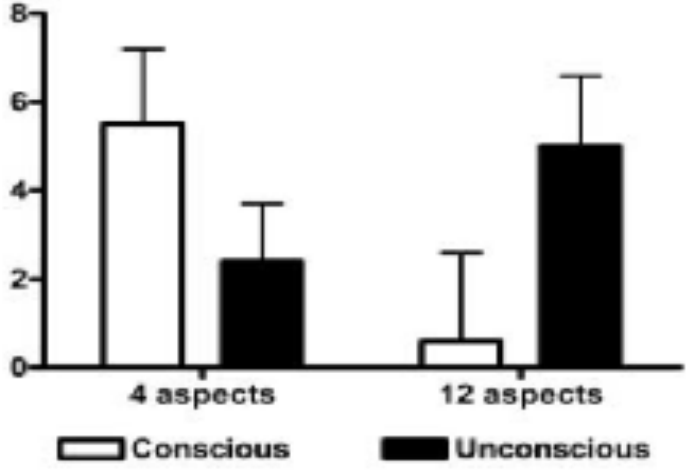
	Framing Condition	
	Positive Outcome Focus	*Negative Outcome Focus*
Dejection-related emotions		
Pretest	5.55 (6.08)	3.82 (4.12)
During the task	5.28 (4.90)	4.00 (4.46)
Posttest	4.76 (4.03)	3.11 (4.00)
Agitation-related emotions		
Pretest	4.79 (4.22)	4.58 (5.27)
During the task	5.19 (4.58)	4.15 (4.89)
Posttest	5.02 (4.33)	3.08 (3.93)

Rationality

(Dijksterhuis, Bos, Nordgren, & van Baaren, 2006)

- Simple choice better after conscious thought
  - Oven mitts, towels
  - Can precisely consider all attributes
- Complex choice better after distraction
  - House, cars
  - Can take more attributes into account





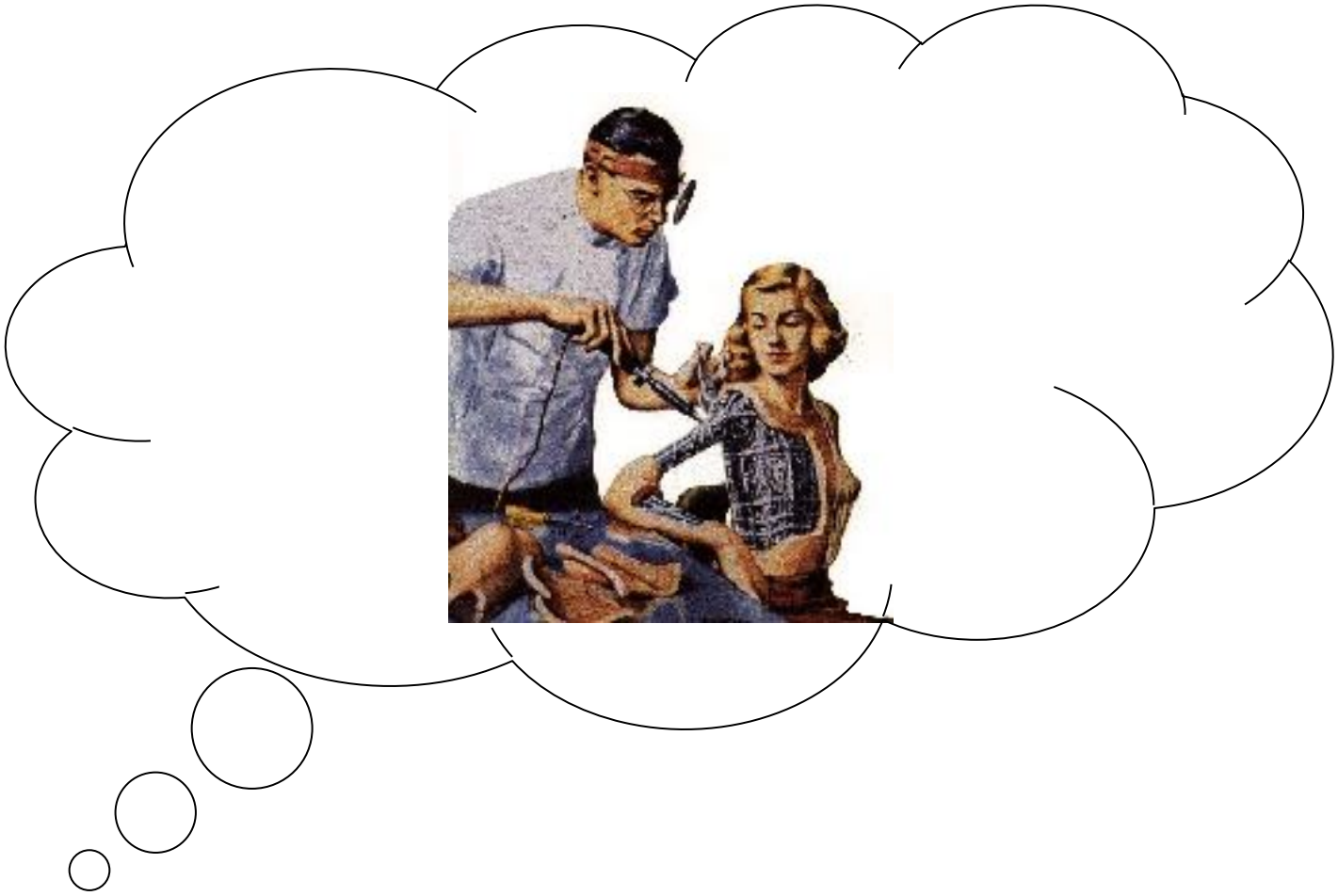
Attribution

Understanding Other Minds

Attribution Processes

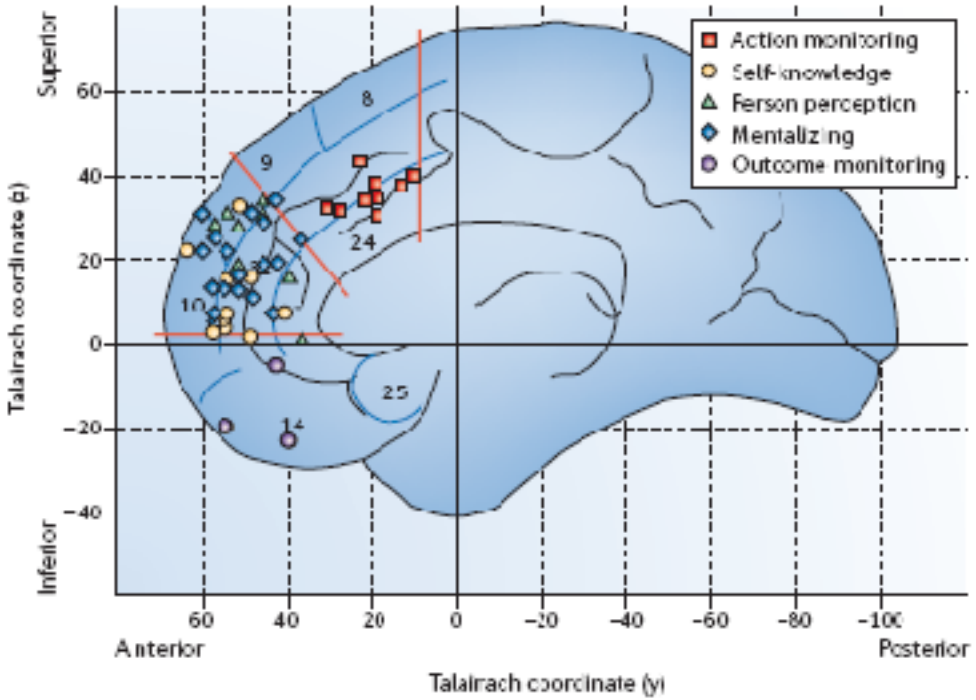
- What is attribution?
- Early contributions to attribution theory
- Processes underlying attribution
- Attributional biases

Thought Experiment



Mentalizing

- Inferring the mental state of another- intentions, goals, desires
- Impression formation, attribution theory
- People spontaneously infer behaviors of other people
  - satisfies the desire for information and allows prediction of behavior



Importance of Inferring Mental States

- Unlike objects, people are agents
  - originators of action
- Want to know intent (good/ill)
- Want to know ability to enact (capability)
- Broad dispositions in person perception
  - Social intent (warmth) & personal ability (competence)

Major Attribution Models

- Disposition, intent both identify causal agents
- Jones (single behavior → intent?)
  - Given: Choice & knowledge ("can," capability)
  - What do others do? (low social desirability→ intent)
  - What do other targets evoke (unique effect→intent)
- Kelley (over time → disposition?)
  - Consensus over actors (low→disposition)
  - Distinctiveness over entities (low→disposition)
  - Consistency over time (high→disposition)

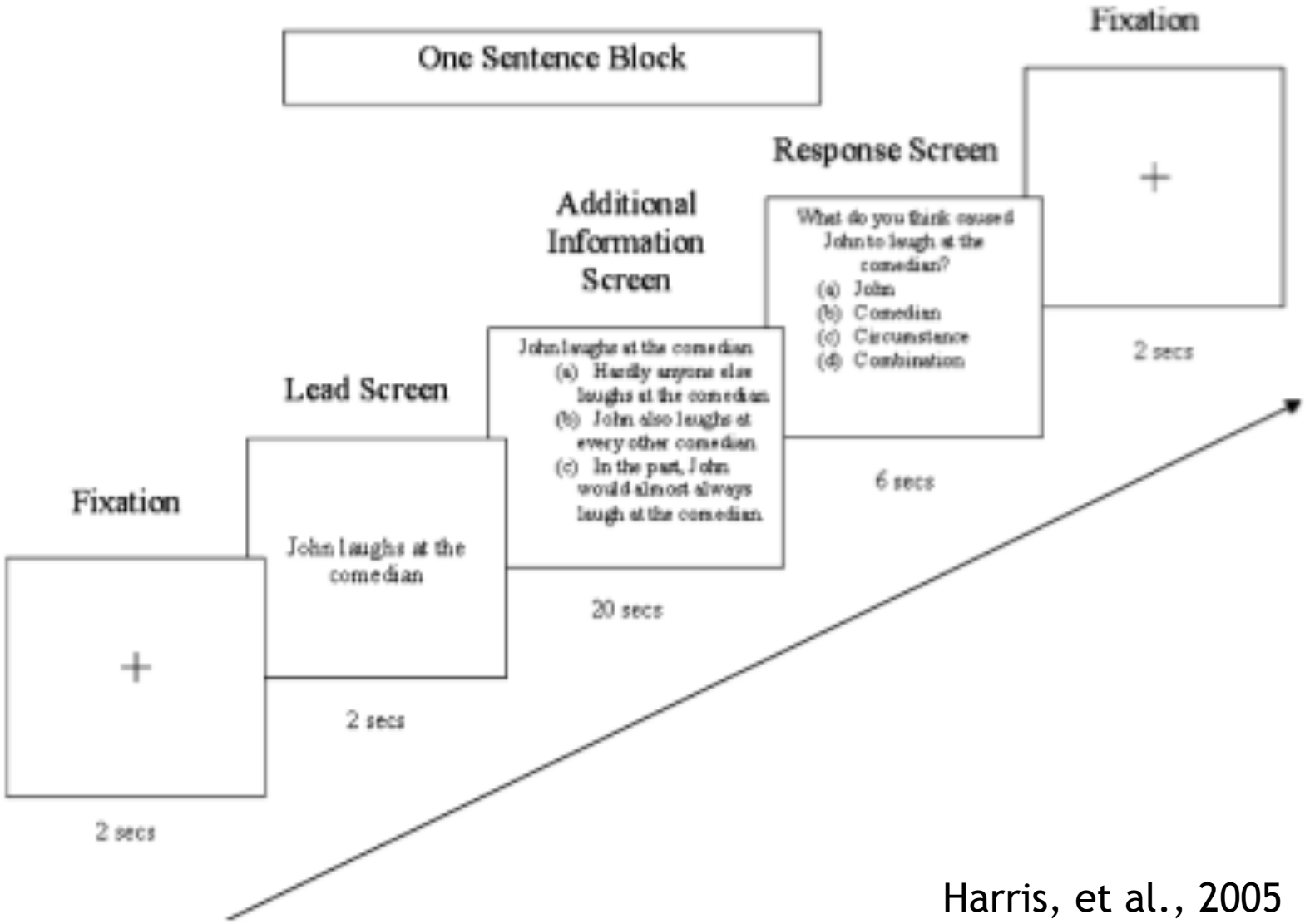
Dispositional Inference

- John laughs at the comedian.
- Plus
  - ***No one else*** laughs at the comedian.
  - John laughs at ***every comedian***.
  - John laughs at the comedian ***every time***.
- Respectively:
  - Consensus (low)
  - Distinctiveness (low)
  - Consistency (high)

Stimulus Combinations (2x2x2)

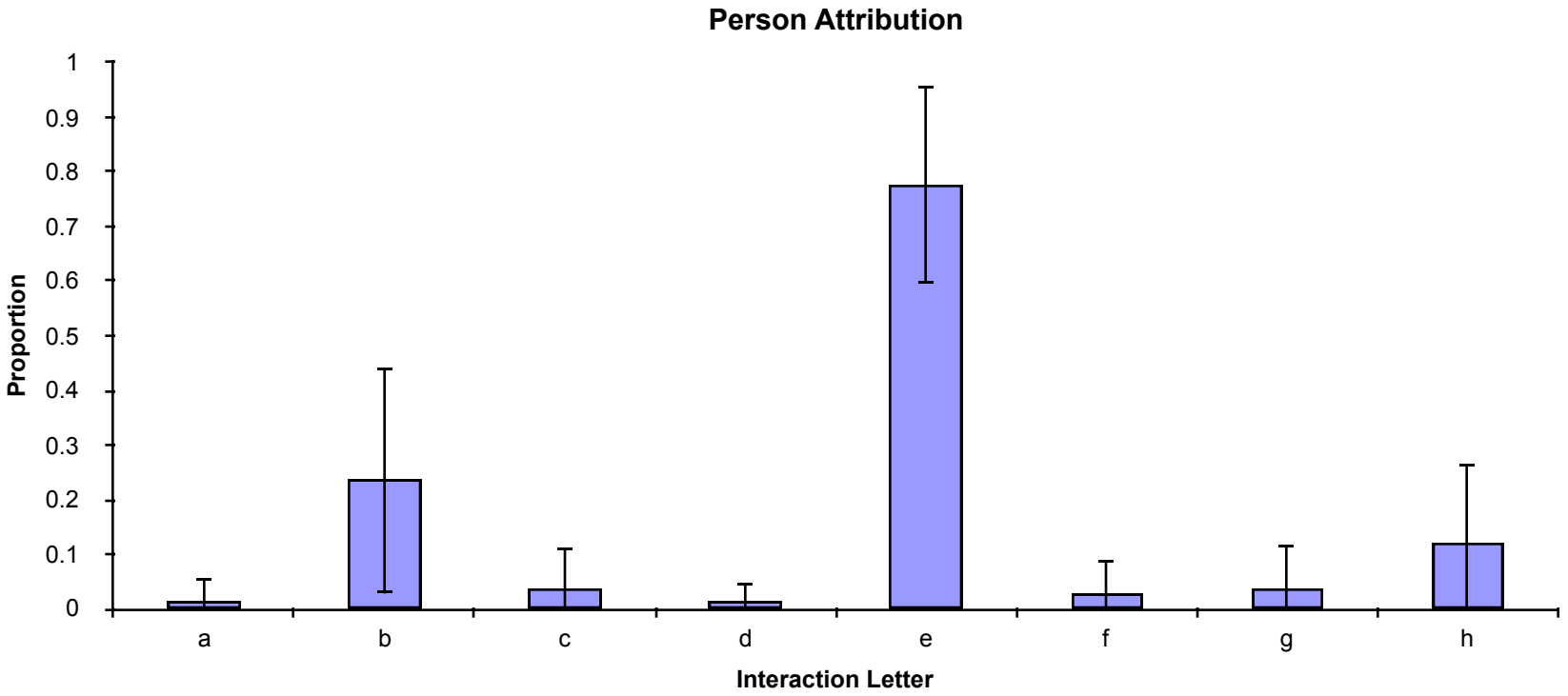
- a
  - high consensus
  - high distinctiveness
  - high consistency
- b
  - low consensus
  - high distinctiveness
  - high consistency
- c
  - high consensus
  - low distinctiveness
  - high consistency
- d
  - high consensus
  - high distinctiveness
  - low consistency
- e
  - low consensus
  - low distinctiveness
  - high consistency
- f
  - low consensus
  - high distinctiveness
  - low consistency
- g
  - high consensus
  - low distinctiveness
  - low consistency
- h
  - low consensus
  - low distinctiveness
  - low consistency

Design



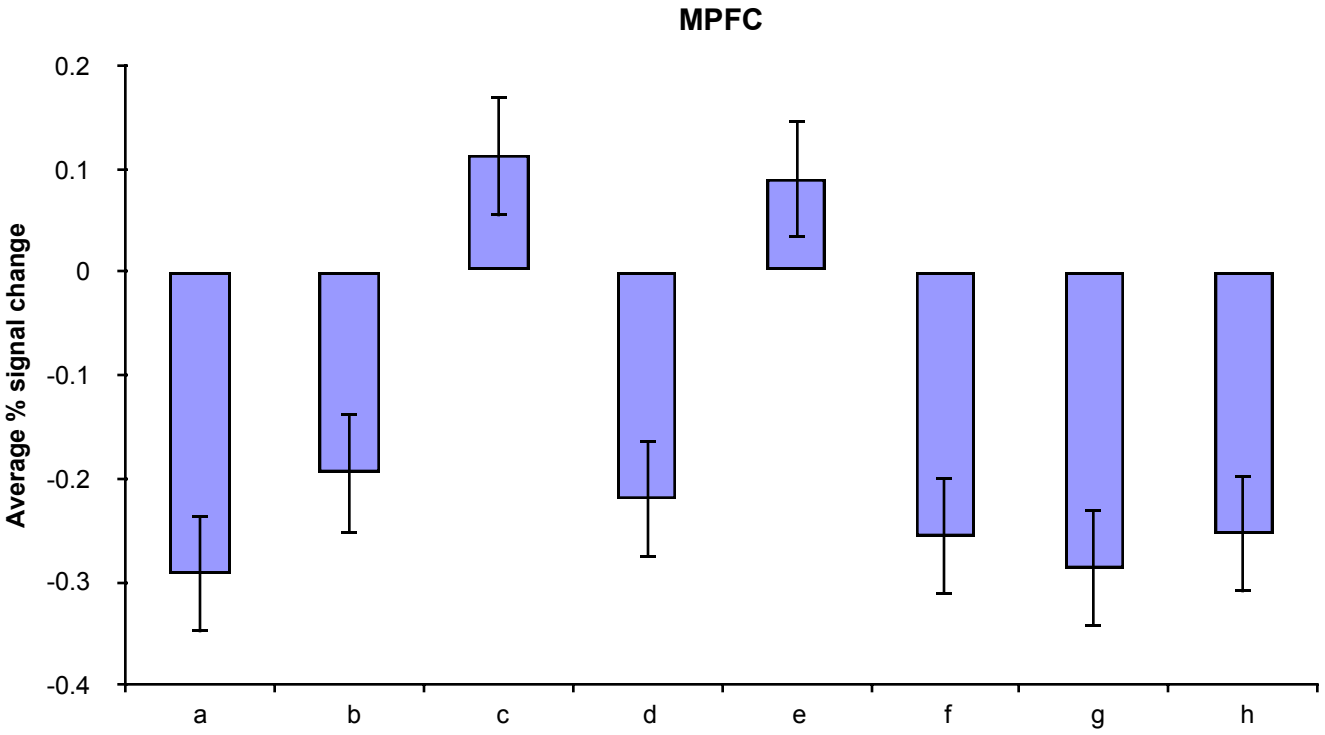
Harris, et al., 2005

Behavioral Data



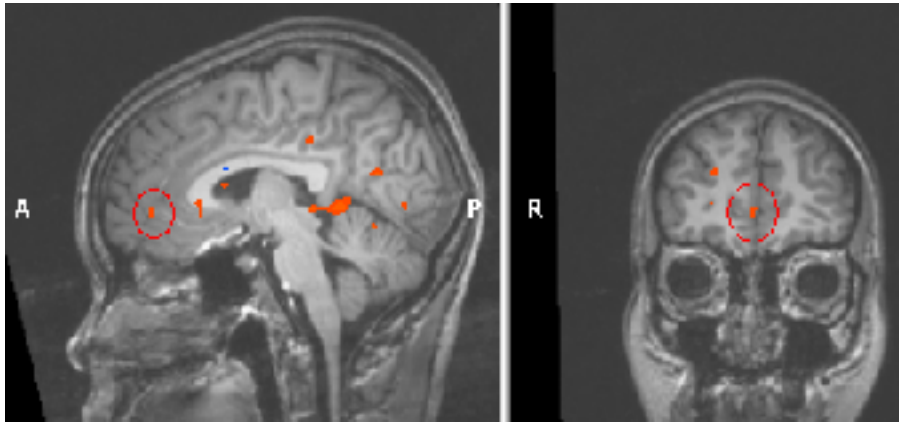
Harris, et al., 2005

Medial Prefrontal Cortex

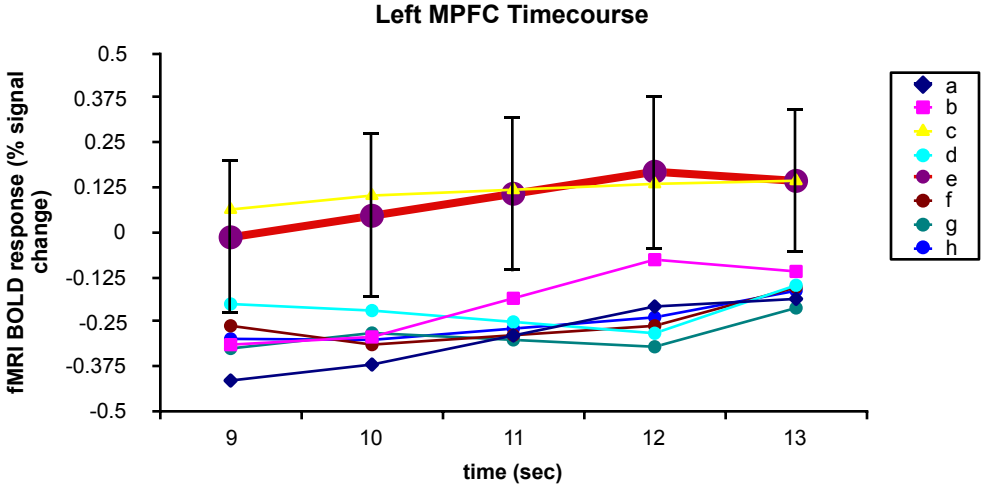


Harris, et al., 2005

Medial Prefrontal Cortex



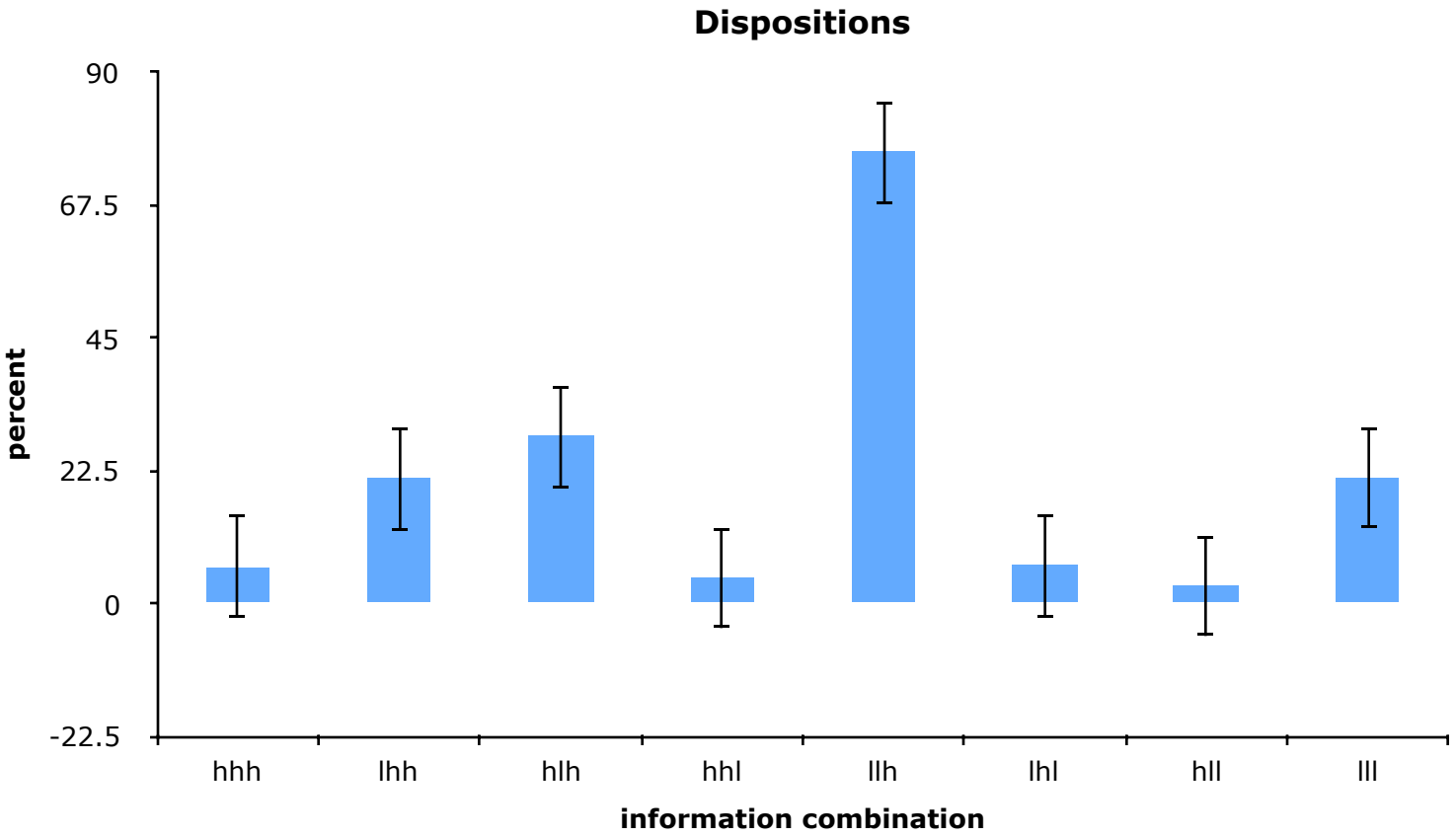
- t (11) = 2.85, p < 0.03, coordinates: 5, 50, 0



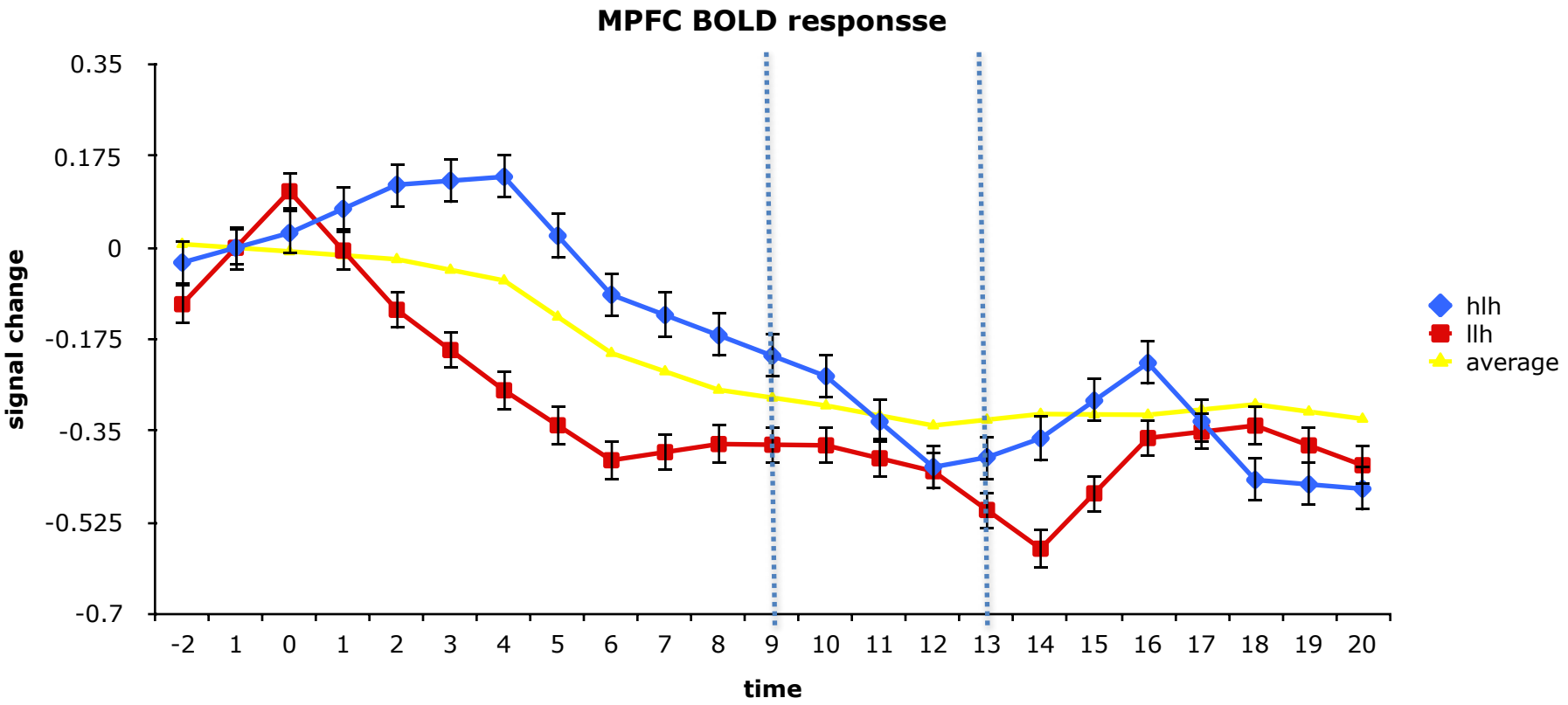
Harris, et al., 2005

But What About Objects?

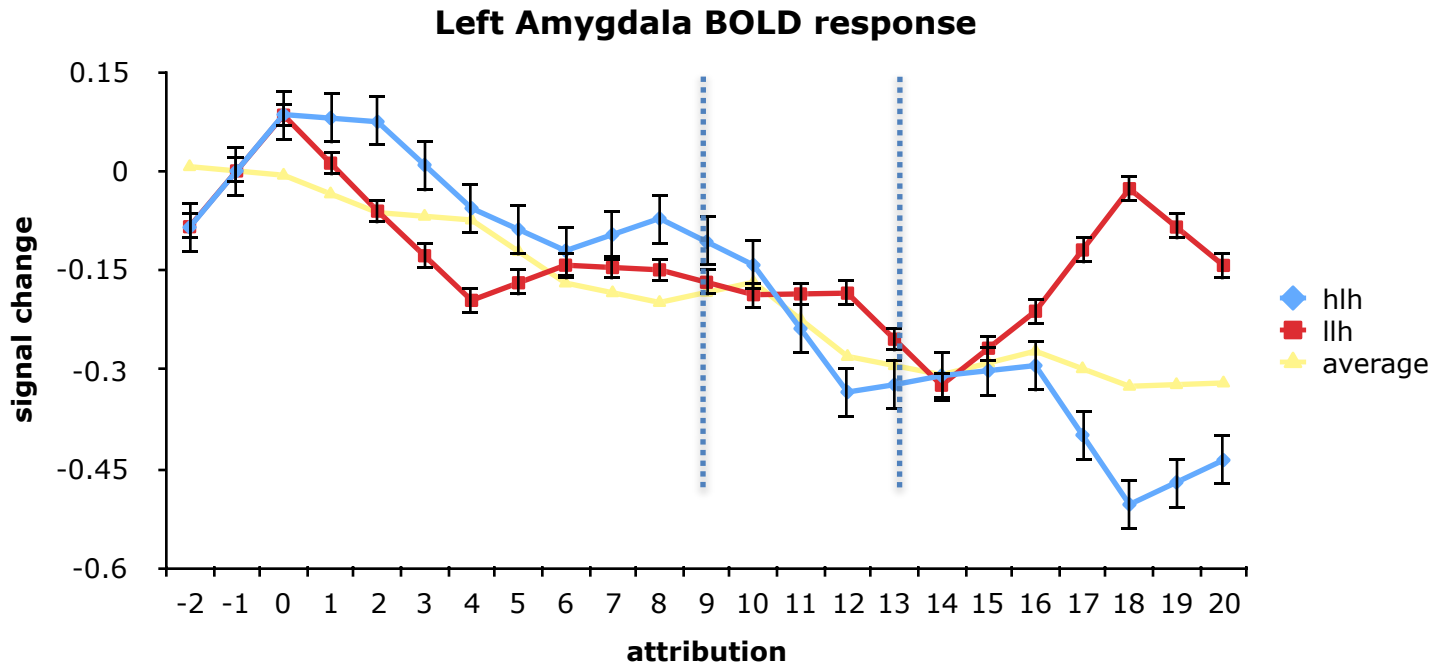
Behavior

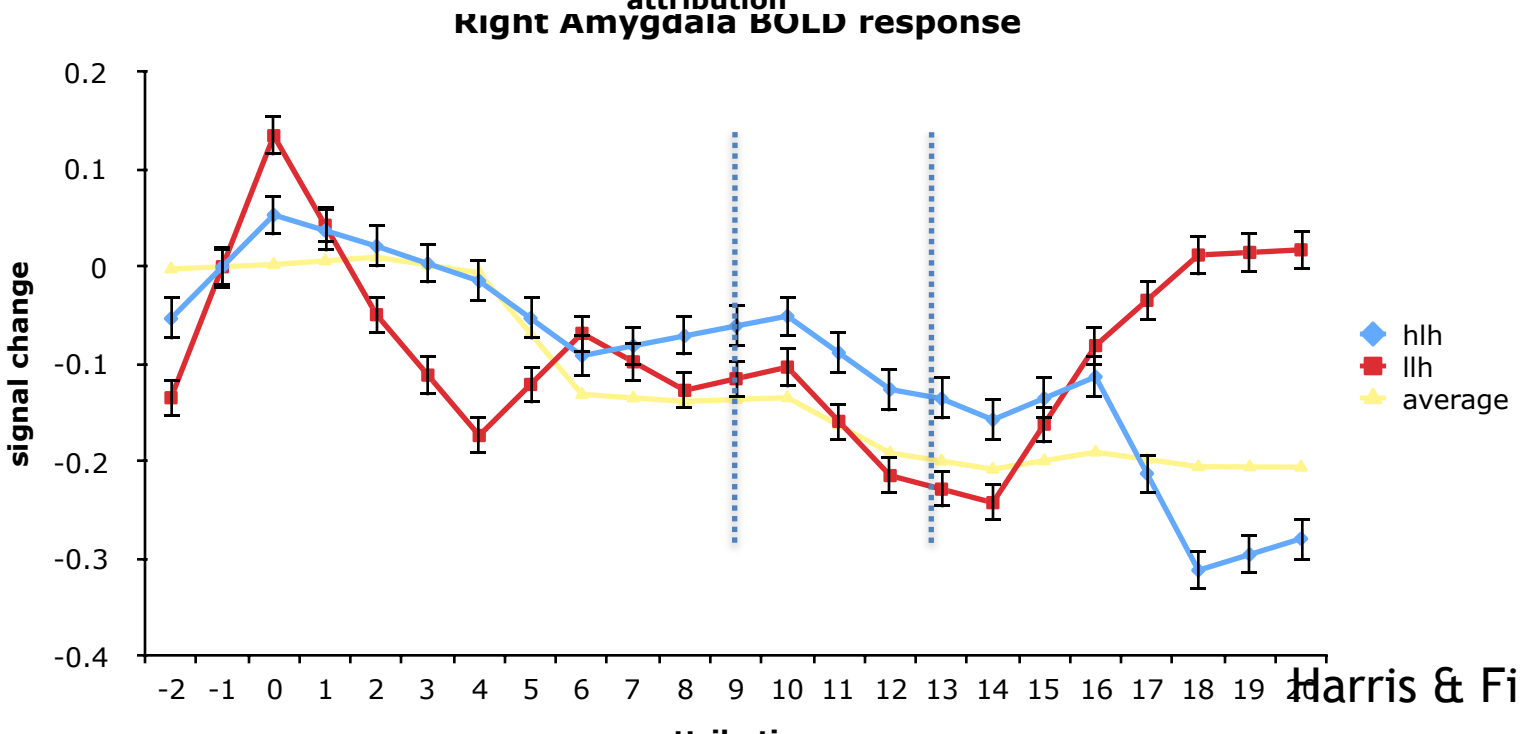


Harris & Fiske, 2008



Harris & Fiske, 2008





Harris & Fiske, 2008

Why Amygdala?

- Patients with amygdala lesions
  - Show mentalizing impairments
  - Cannot anthropomorphize
  - Cannot reason about social exchanges
  - Cannot process emotion from faces
- Primates with amygdala lesions
  - Decrease social ‘typical’ functioning
  - Lack of social inhibition

Five Minute Break

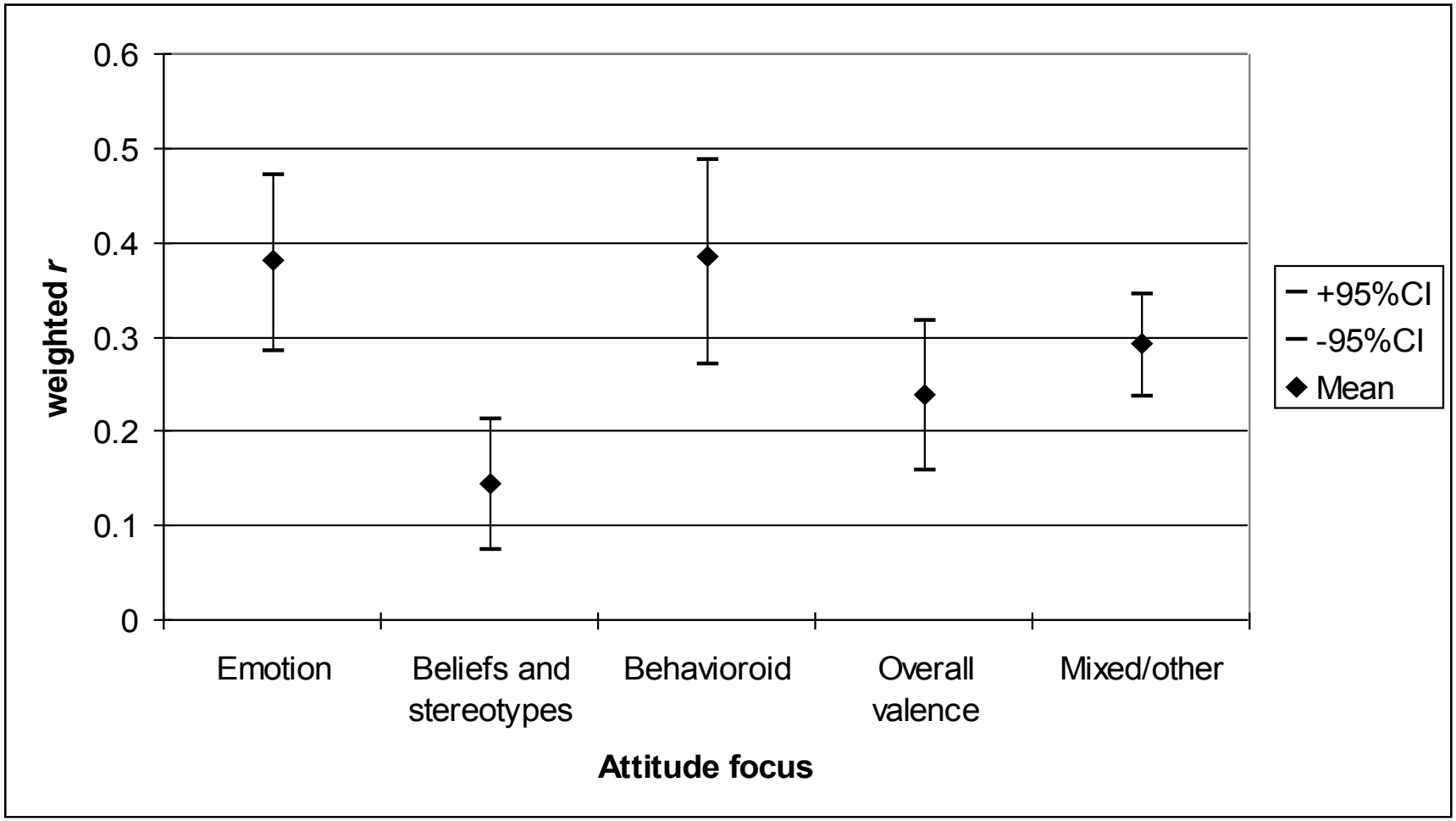
Affect and Cognition

Feelings, Preferences, Moods, Emotions

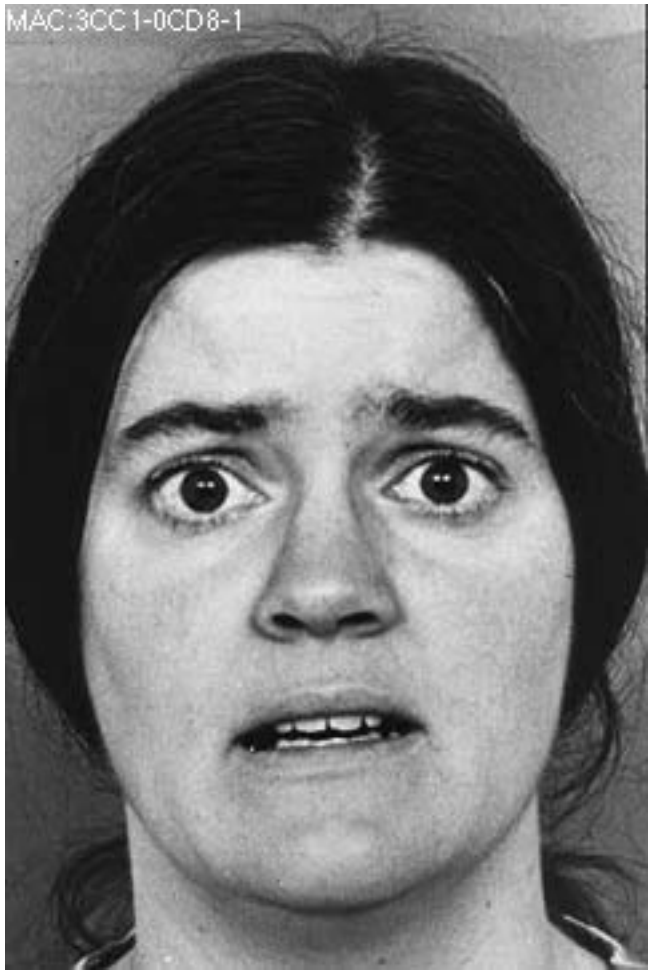
From Social Cognition to Affect

- Differentiating among affects, preferences, evaluations, attitudes, moods and emotions
- Early theories
- Physiological theories
- Social cognition foundations of affect

Weighted *r* by Attitude Focus



Talaska, Chaiken, & Fiske, 20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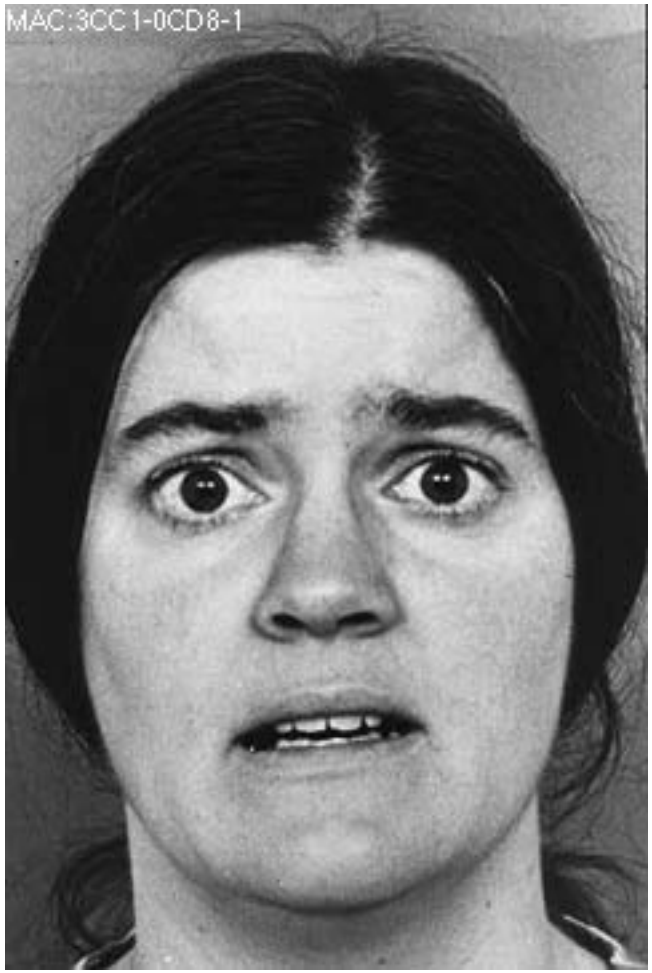
Sally planned a romantic evening for herself and her husband. She made a reservation at the most exclusive restaurant in NYC two months ago; a restaurant where it was notoriously difficult to get a reservation. When they arrived, they were informed by the host that, despite the reservation, they would have to wait 2 hours to be seated. Five minutes later, a celebrity walks in and gets seated immediately. This was the look on Sally's face.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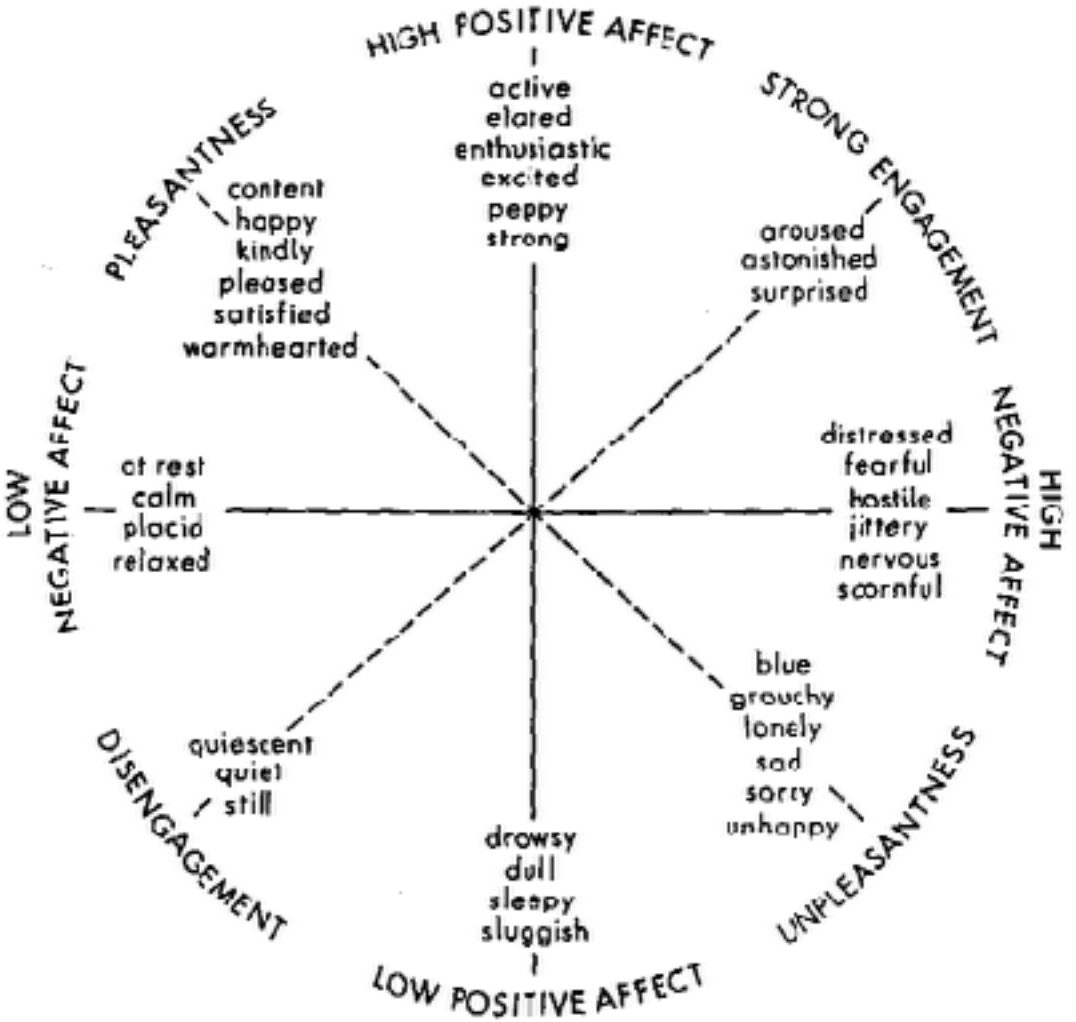
Definitions

- Affect- generic term
- Preferences/Evaluations- valenced like/ dislike
- Moods- diffuse, long-lasting affective states
- Emotions- complex affect

Taxonomy Methods

- Emotion words
  - Self-reported experiences
  - Dictionaries
- Factor analysis
- Convergence: Circumplex
- Neuroscientific methods

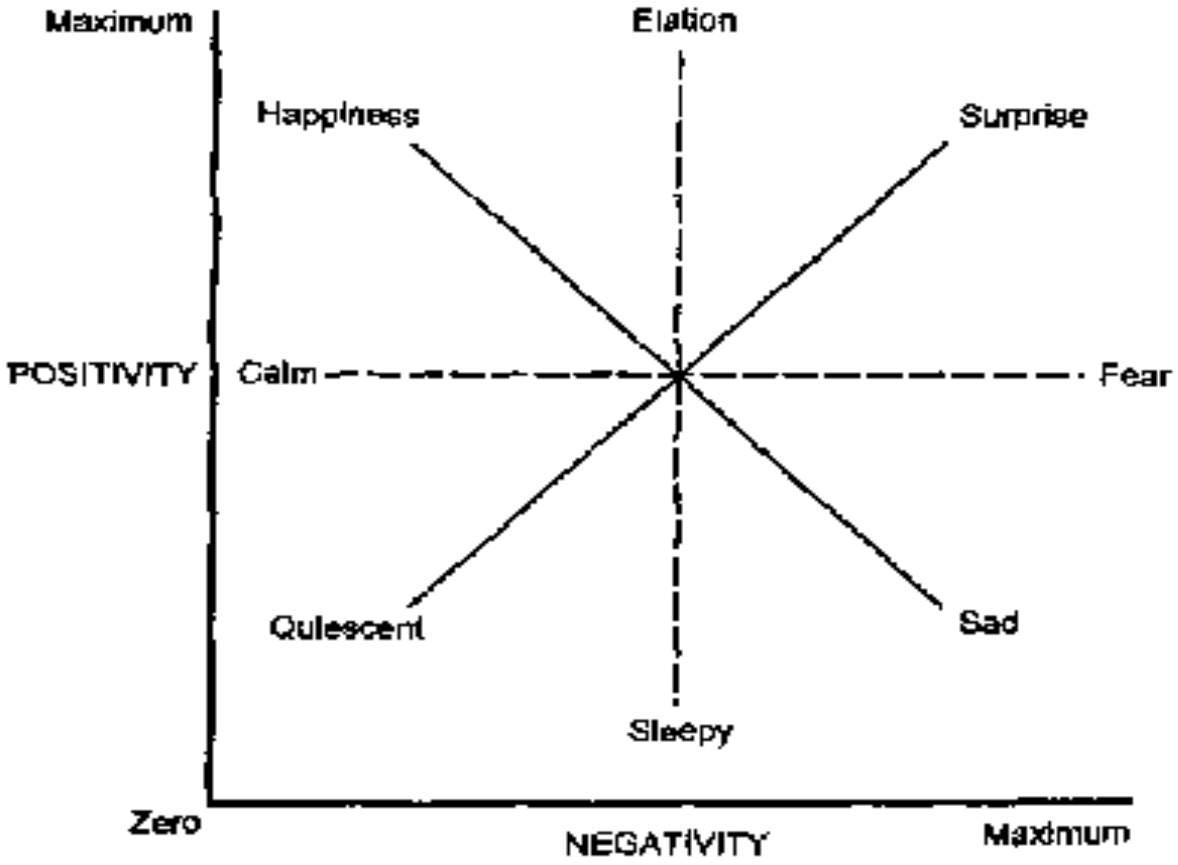
Russell, 1980 - - -
Watson & Tellegen, 1985 ----



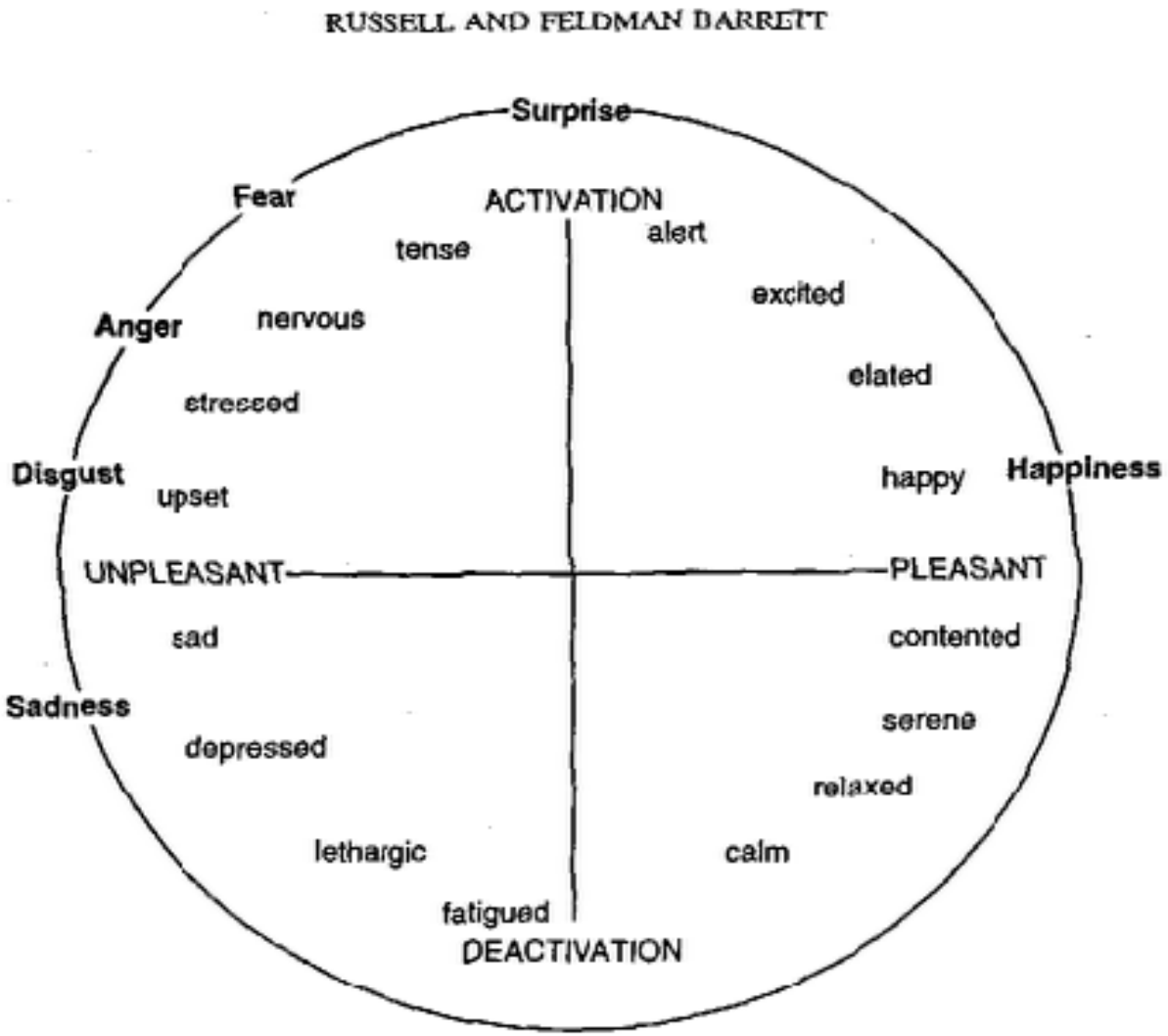
Cacioppo, Berntson, et al., 1999

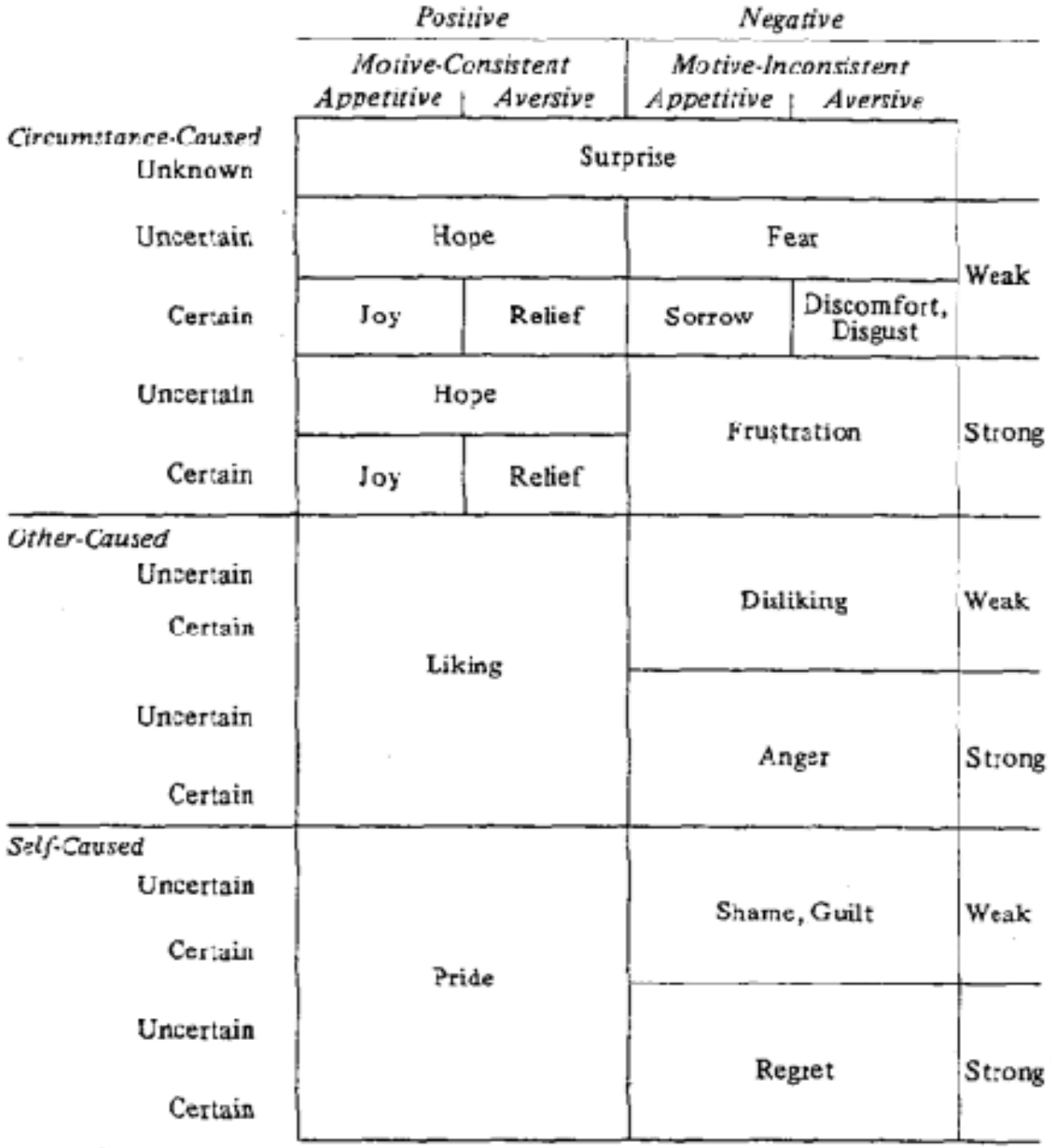
- Independent positive affect: appetitive
- Independent negative affect: avoidant
- Predicts evaluations

Cacioppo, et al., as Interpreted by Feldman Barrett & Russell



Prototypes Not Differentiated




Positive
Negative
Motive-Consistent
Motive-Inconsistent
Appetitive
Aversive
Appetitive
Aversive
Circumstance-Caused
Unknown
Surprise
Uncertain
Hope
Fear
Weak
Certain
Joy
Relief
Sorrow
Discomfort, Disgust
Uncertain
Hope
Frustration
Strong
Certain
Joy
Relief
Other-Caused
Uncertain
Certain
Liking
Disliking
Weak
Uncertain
Certain
Anger
Strong
Self-Caused
Uncertain
Certain
Pride
Shame, Guilt
Weak
Uncertain
Certain
Regret
Strong

Neuroscience Meta-Analyses

Phan et al. (2002)

- Anger: none
- Sadness: ACC
  - Subcallosal (cognitive)
- Disgust: basal ganglia
- Fear: amygdala
- Happiness: basal ganglia
- Generally: medial PFC

Murphy et al. (2003)

- Anger: lateral orbital FC
- Sadness: ACC
  - Supracollosal (visceral)
- Disgust: insula, globus pallidus (part of BG)
- Fear: amygdala
- Happiness: ACC
  - Rostral supraccollosal
- L/approach

Schachter and Singer

- Emotion is the result of a cognitive appraisal of an (ambiguous) physiological response

Bridge Study

- IV:
  - Met experimenter after shaky (high) or sturdy (low)
- DV:
  - Interpretation of ambiguous images
  - Phone calls to experimenter
- Finding:
  - More sexual imagery and phone calls after shaky

Excitation Transfer

- People are bad at partitioning the sources of diffuse, non-specific, slow decaying arousal
- Residual arousal may enhance subsequent emotional experiences


VIDEO CD
SCARY
MOVIE


two

Facial Feedback

- Innate ability to imitate other's facial expressions
  - Motor neurons
- Facial configuration read unconsciously and emotion label assigned
- Emotions as socially learned scripts

Take out a pencil…

- Hold it between your teeth
- Jam it between your nose and upper lip
- Curl your lips around it

Goal Disruption

- Emotion as a result of impedance to goal
  - Smooth social interaction
  - Consistency between events
  - Planned behavior
  - Goal selector

Personal Meaning

- Event appraised in terms of its impact on self, resulting in emotion
  - Lazarus
  - Primary appraisals (basic emotions)
  - Secondary appraisals (secondary emotions)

Cognitive Appraisal

- People appraise dimensions of a situation which determines emotion
- Multiple sources
  - (Lazarus, Frijda, Scherer, Roseman, Smith & Ellsworth)
  - Convergence
- Two-step process
  - Primary: good/bad, automatic
  - Secondary: details, controlled

Primary Appraisals

- Relevant?
  - Importance re: needs & goals
  - If unimportant, not emotionally evocative
- Congruent/incongruent?
  - Good/bad
  - Approach/avoid

Secondary Appraisals

- Self-accountability: Am I responsible?
- Other accountability: Is other responsible?
- Control: Problem-focused coping potential
- Adjust: Emotion-focused coping potential
- Expectancy: Better or worse future?

Positive Emotions

- Negative primary, hi control: challenge
- Negative primary, lo control, hi expectancy: hope
- Positive primary, hi self-credit: pride
- Positive primary, lo control:
  - Joy if attain pos
  - Relief if avoid neg

Negative Emotions

- Hi other blame, lo self-blame: anger
- Hi self-blame, lo other-blame: guilt, shame
- Lo control: sadness
- Lo adjust: fear, anxiety

Mood Congruency

- Current mood determines lens through which future experiences will be interpreted
- Similar to excitation transfer

Schwartz and Clore, 1983

- What's the weather like?
- People report being happier when it is nice outside
- If made aware of the link, effect went away

From Affect to Social Cognition

- Affective influences on cognition
- Affect vs cognition
- Are they different?
- Becoming dominant: affect as cognitive interpretation of physiological arousal.

The Self

Who Am I?

Self in Social Cognition

- Mental representations of self
- Self-regulation
- Motivation & self-regulation
- Self as a reference point

Mental Representations of Self

- Self is similar to other representations
- Except
  - More complex than most
  - Usually the base, standard of comparison
- More elaboration if self-relevant
  - "depth of processing"

Self-Regulation Depends on:

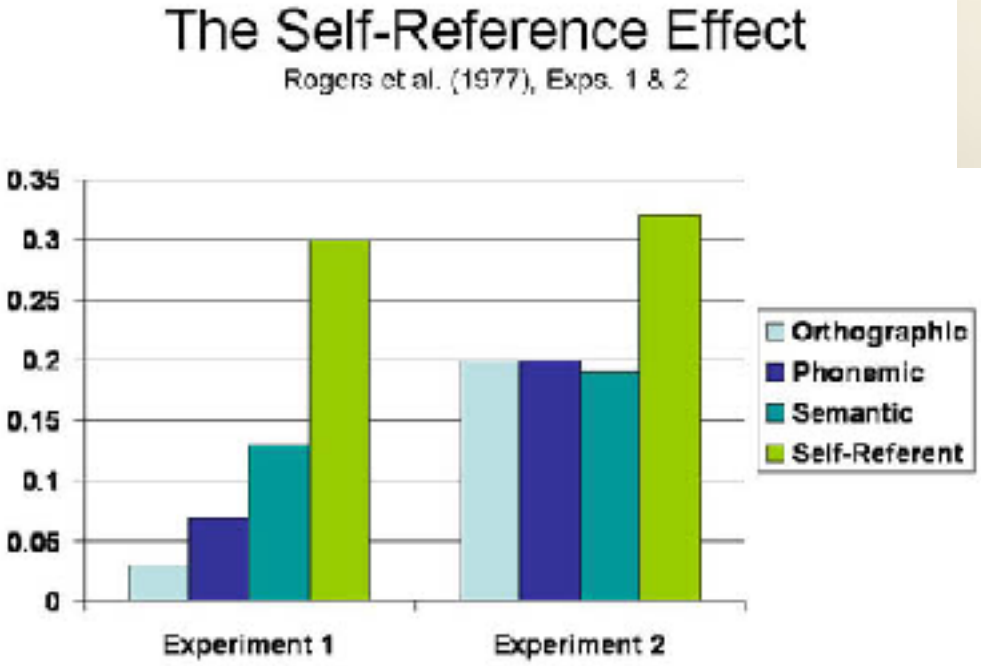
- Working self-concept
  - What's accessible
- BIS/BAS system
  - Approach/avoidance
- Prevention/promotion focus
  - ought/ideal self-discrepancies
- Self-efficacy & control
- Self-focus
  - Evaluate behavior against a standard

Motivation & Self-Regulation

- Accuracy (social comparison)
- Consistency (self-verification)
- Improvement (upward comparison)
- Enhancement
  - Positive illusions (downward comparisons)
  - Self-affirmation (under threat)
  - Self-evaluation maintenance (in relationships)
  - Terror management (mortality salience)
  - Culture moderates all this

Self as a Reference Point

- Self-reference
- Social projection



Summary

- Social Cognition is (among many other things)…
  - Thinking fast, thinking slow
  - Mental shortcuts
  - Understanding other people
  - Opinions + beliefs
  - Feelings
  - About you

End

Attitudes

What opinions and beliefs do I hold?

Cognitive Structures of Attitudes

- Cognitive features of two consistency theories
- Lay theories and attitude change
- Functional dimensions of attitudes

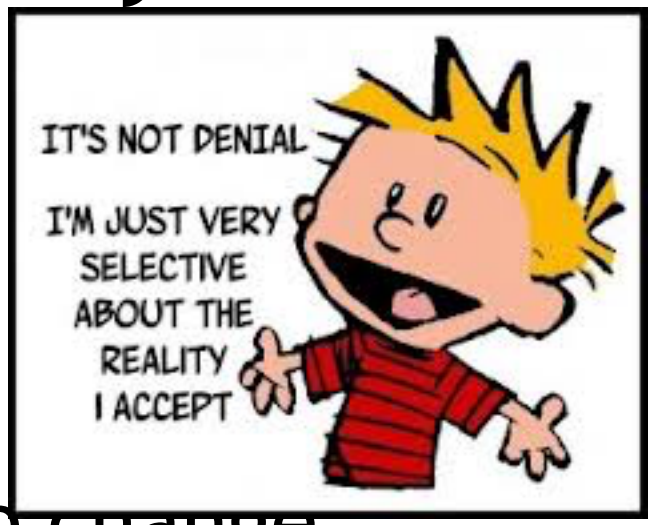
Background: Attitudes as the Cognitive Holdout

- Fundamental concept in social psych
- Despite behaviorism
- Definition: Evaluation, with correlates
  - Cognitive
  - Affective
  - Behavioral
- Hypothetical mediating construct

Consistency Theories

- Precursors to modern cognitive theories
  - Focus on coherence
  - Information-processing biases
  - Attitude change as a result
- Lacked modern methods
  - Now automaticity
  - Reaction time
  - Neuro-imaging

Dissonance Theory



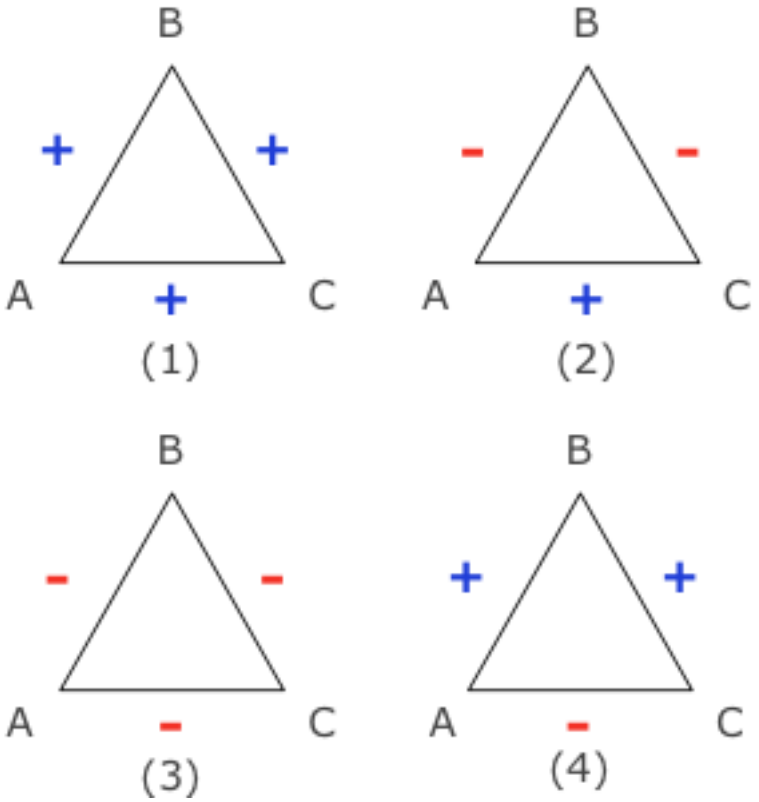
- Elements
  - Relevant
  - Consistent, not
- If inconsistent, motivation to change
  - E.g., smoking
- Selective attention & interpretation
- Selective learning

Modern Work

- Not just cognitions
  - Aversive consequences
  - Linked to self
- Cognitive consequences
  - Attitude change
  - Easier than behavior change

Balance Theory

- Heider's interpersonal Gestalts
- Agreeing friends
- (Disagreeing enemies)
- Cognitive consequences



Dual Process Attitudes Models

- Automatic & controlled
- Heuristic & systematic
- Peripheral & central: Elaboration likelihood
  - Communicator
  - Message
  - Audience
  - Individual differences

Cognitive Processing of Attitudes

- Heuristic vs systematic model
- Elaboration likelihood model
- MODE model
- Implicit associations
- Embodied attitudes
- Neural correlates of attitudes

Dual Process Models

A First Approach to the Social Thinker

WARNING!!

- THERE ARE NOT JUST TWO PROCESSES IN THE MIND/BRAIN
- Nonetheless…

Dual Modes in Social Cognition

- Controlled processes
- Automatic processes
- Motivations influence which modes operate
- Models of both automatic and controlled process

Priming

Exceptions

- Complements
  - Dominance→submission (only reciprocal)
- Contrasts
  - Exemplar→contrast
  - General→assimilation
- Experience matters
  - No effect of prime

Why Functional to Assimilate?

- Similarity-liking + attraction
- Matching-coordination
- Imitation-learning