

# Unconscious Mental Life

## Lecture 37

# The Contradiction of the Unconscious

Kant, *Anthropology from a Pragmatic Point of View* (1798)

***To have ideas, and yet not be  
conscious of them, --***

there seems to be a contradiction in that; for how can we know that we have them, if we are not conscious of them?

Nevertheless, we may become aware indirectly that we have an idea, although we be not directly cognizant of the same.



# Two Aspects of Consciousness

- Monitoring (Awareness)
  - Sensation, Perception, Memory, Thought
  - Cognition, Emotion, Motivation
- Controlling
  - Cognition, Emotion, Motivation
  - Behavior

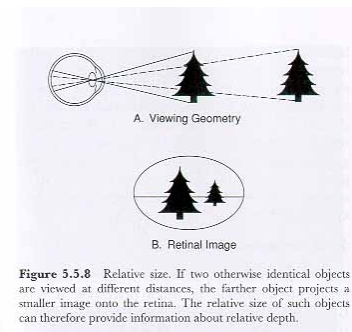
# Automatic vs. Controlled Processes

After LaBerge & Samuels (1974); Posner & Snyder (1975);  
Schneider & Shiffrin (1977); Shiffrin & Schneider (1977)

- Features
  - Inevitable Evocation
  - Incorrigible Completion (Ballistic)
  - Efficient Execution
  - Parallel Processing
- Unconscious in the Strict Sense of the Term
  - Operate outside phenomenal awareness
  - Operate outside voluntary control

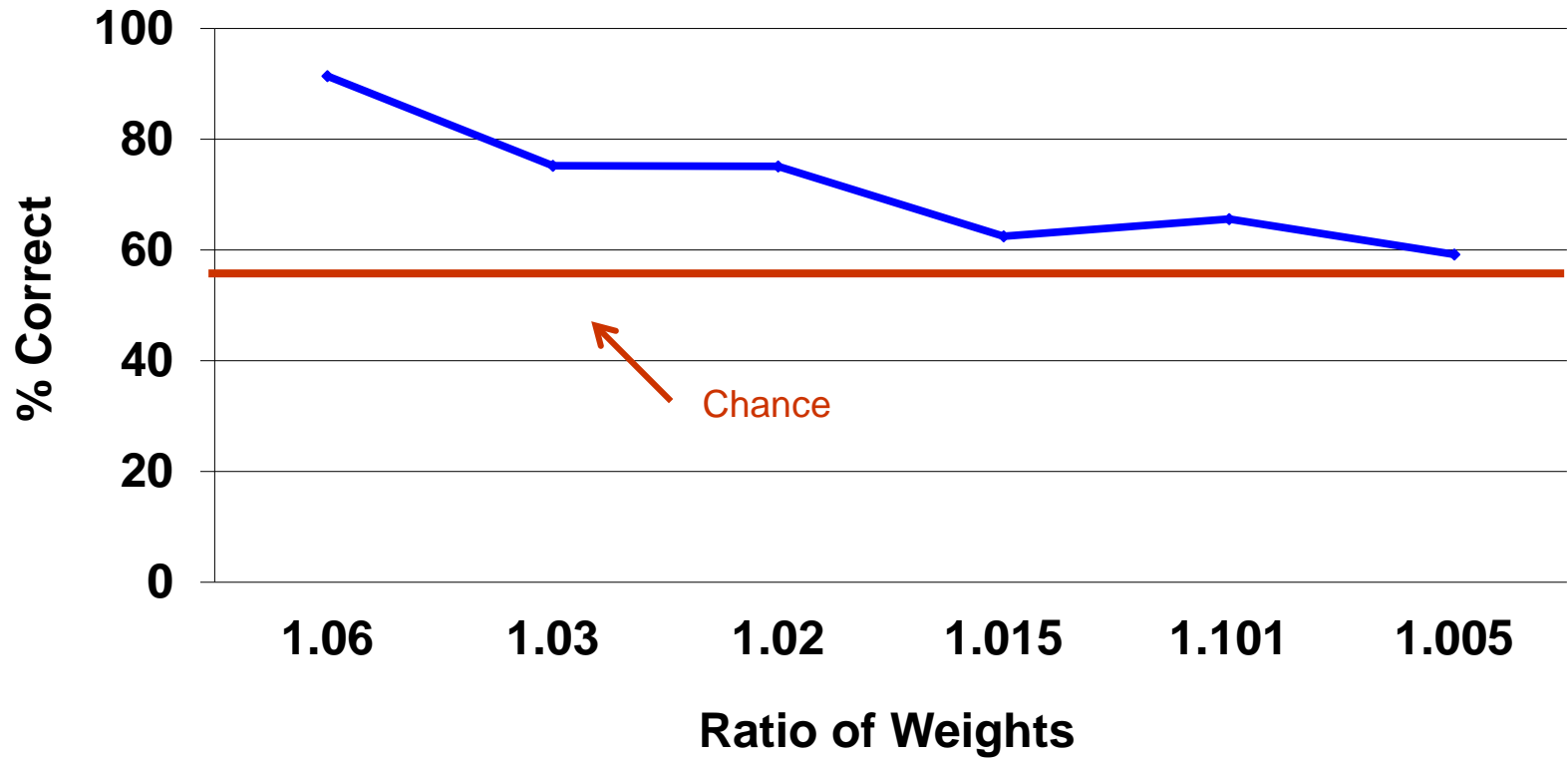
# Implications of Attention and Automaticity

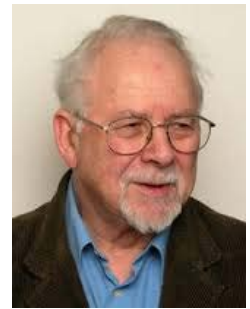
- Mental Processes can be Unconscious
  - Especially Preattentive or Automatic
    - Helmholtz: ‘Unconscious Inferences’
- Mental States are Conscious
  - Beliefs, Feelings, Desires
    - Percepts, Memories, Images, Thoughts
- Role of Conscious Mental States
  - Evoke Unconscious, Automatic Processes
  - Created by Unconscious, Automatic Processes



# “Subliminal” Perception

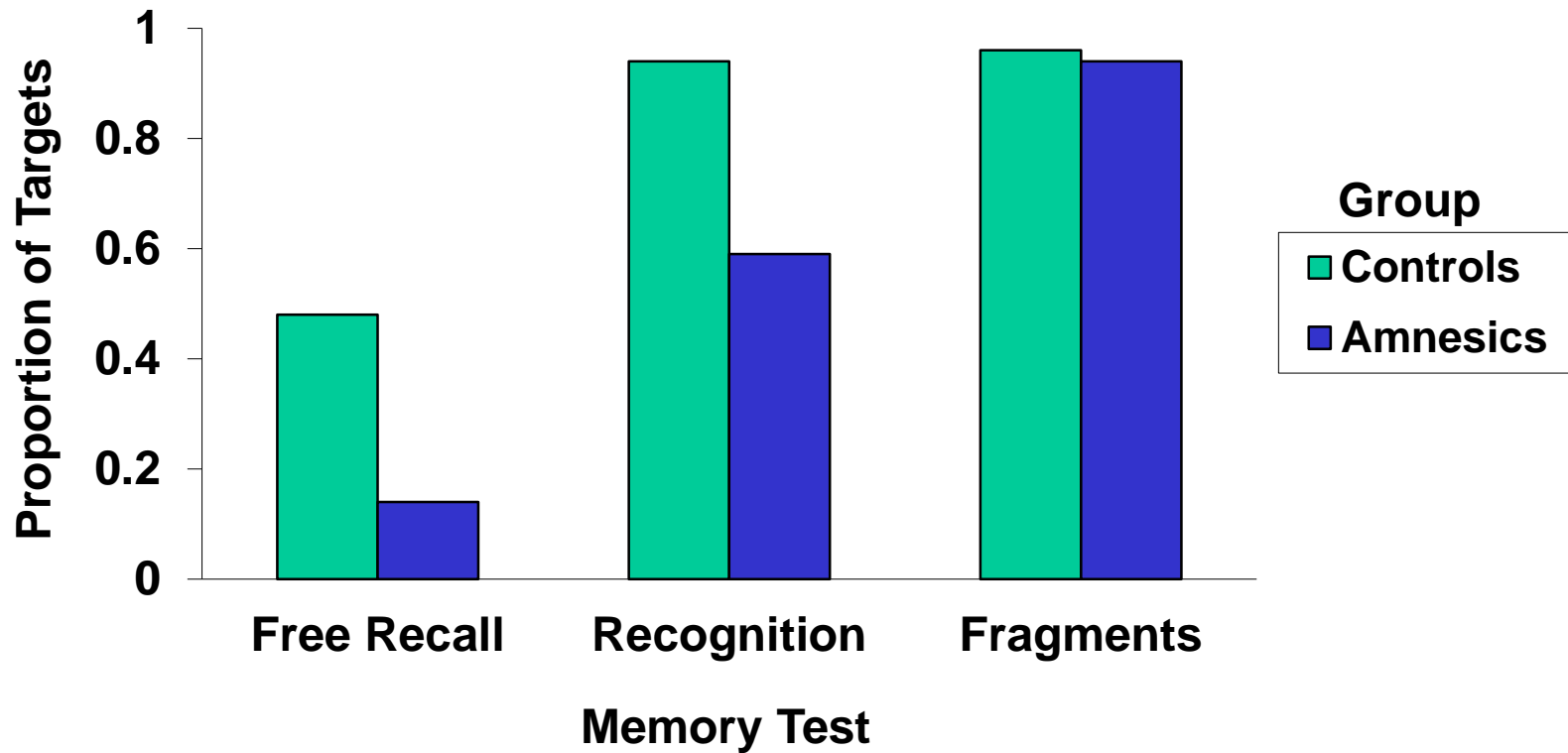
Peirce & Jastrow (1884)





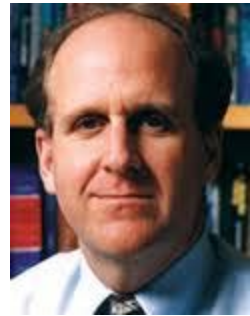
# Priming Effects in Amnesia

After Warrington & Weiskrantz (1970, Exp. 1)



# Explicit and Implicit Memory

After Schacter (1987)



- Explicit Memory
  - Conscious Recollection
    - Free Recall, Cued Recall, Recognition
- Any Effect of a ***Past Event*** on Experience, Thought, or Action
  - Absence of Conscious Recollection

Dissociation:

Implicit Memory Preserved in the Absence of Explicit Memory



# Dissociations Between Explicit and Implicit Memory

- Amnesic Syndrome
- Electroconvulsive Therapy
- General Anesthesia (?)
  - Conscious Sedation
- Dementia (Early Stages)
  - Alzheimer's Disease
- Dissociative Disorders
  - Psychogenic Amnesia
  - Psychogenic Fugue
  - Multiple Personality Disorder
- Posthypnotic Amnesia

# Dissociations Between Explicit and Implicit Memory

## Normal Forgetting

- Aging Memory
- Memory Development in Infants and Children (?)
- Levels of Processing
  - Elaboration Principle

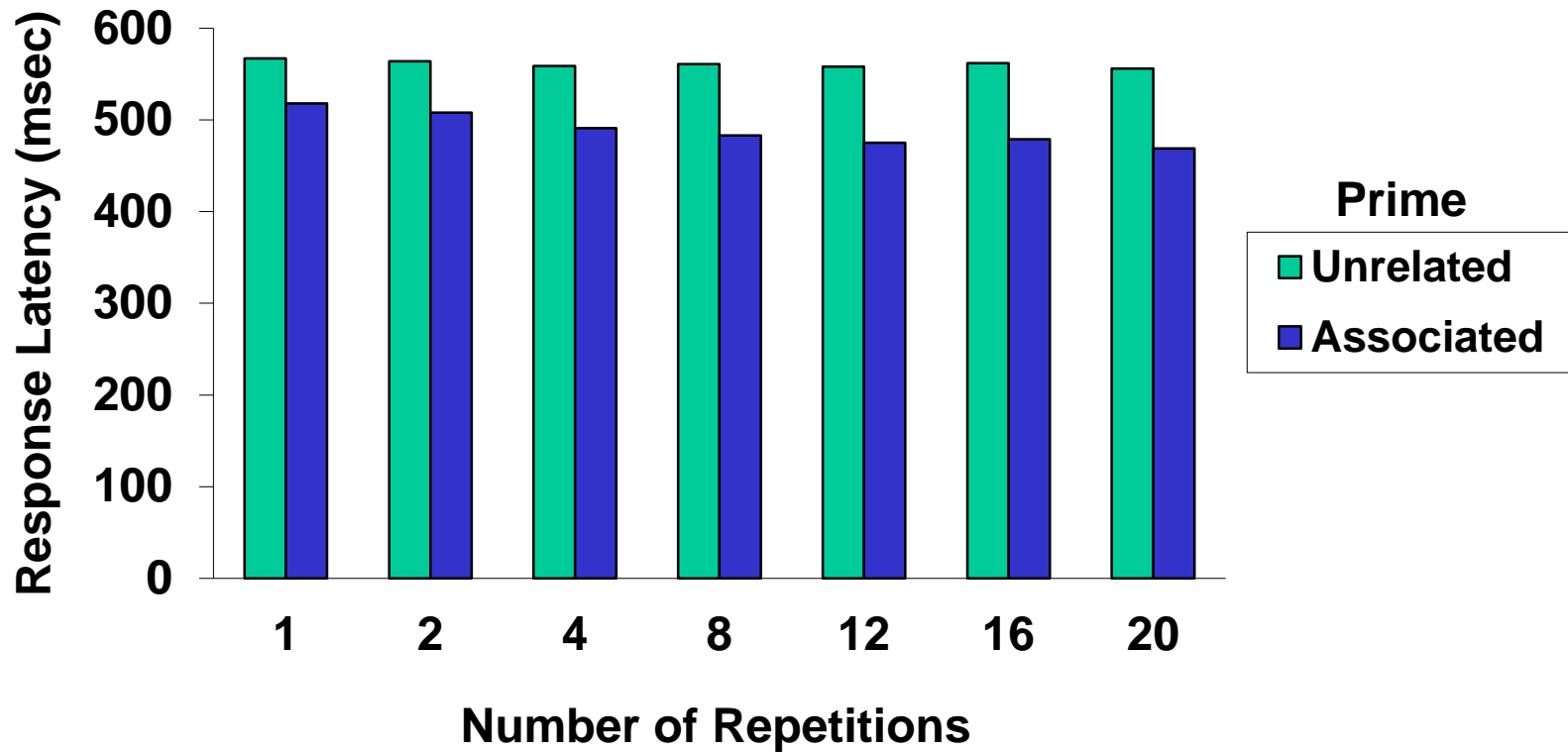
# Explicit and Implicit Perception

After Kihlstrom, Barnhardt, & Tataryn (1992)

- Explicit Perception
  - Conscious Perception
    - Detection, Distance, Motion, Form
    - Identification, Categorization
- Any Effect of a ***Current Event*** on Experience, Thought, or Action
  - Absence of Conscious Perception

# Masked Semantic Priming

Marcel (1983a), Experiment 5



# Dissociations Between Explicit and Implicit Perception

- “Subliminal” Perception
  - Intensity, Duration
- Masking
- General Anesthesia
- Neurological Disorders
  - Blindsight, Visual Neglect
  - Prosopagnosia
- Conversion Disorders (“Hysteria”)
  - Blindness, Deafness, Tactile Anesthesia
- Hypnotic Suggestion
  - Blindness, Deafness
  - Analgesia/Anesthesia

# Dissociations Between Explicit and Implicit Perception

## Normal Perception

- Preattentive Processing

- Parafoveal Vision
- Dichotic Listening

- “Cognitive Blindness”

- Inattentional Blindness

- Selective Looking

- Attentional “Blindness” in Rapid Serial Visual Presentation (RSVP)

- Repetition Blindness

- Attentional Blink

- Change Blindness

“Gorillas in Our Midst”  
Simons & Chabris (2009), after Mack & Rock (1998)



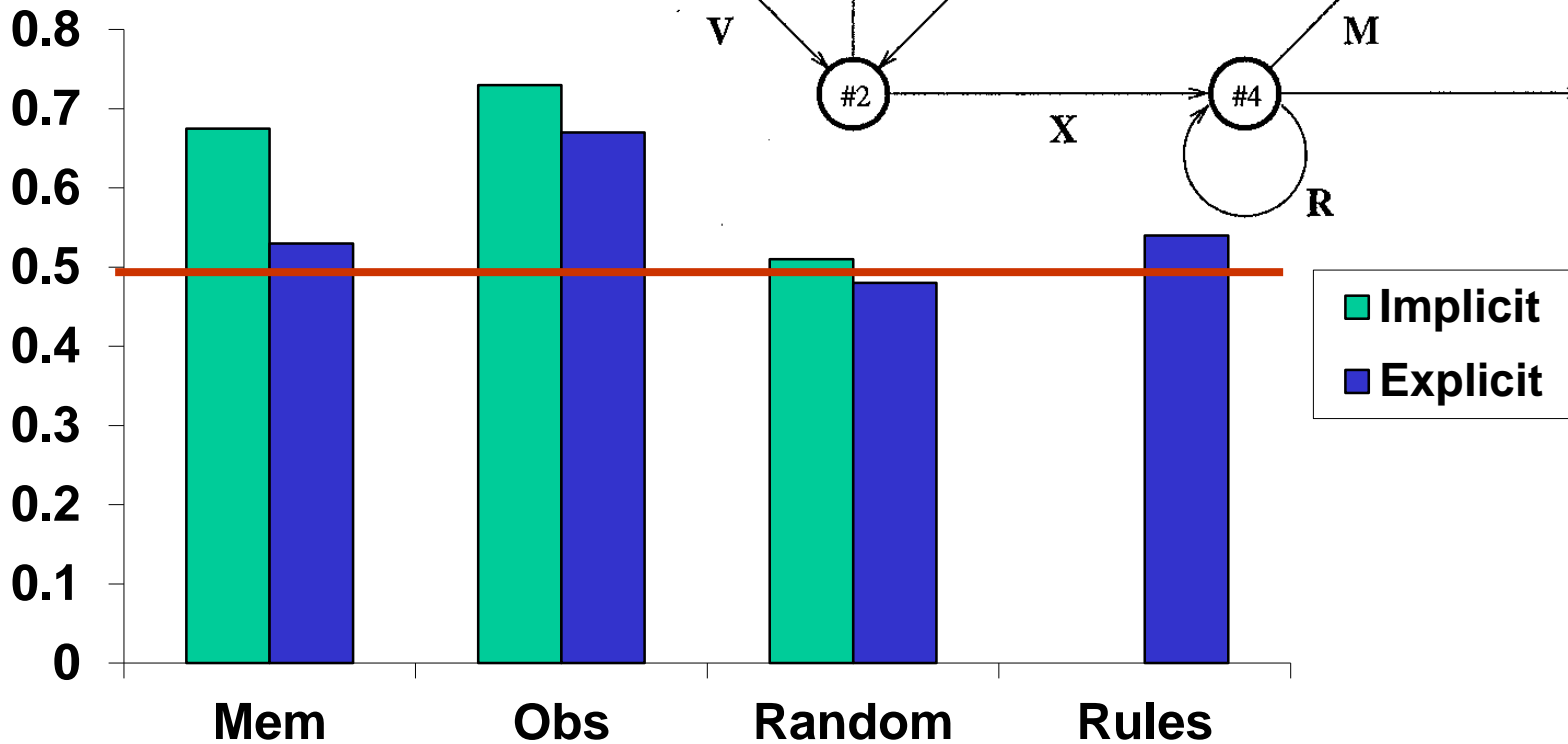
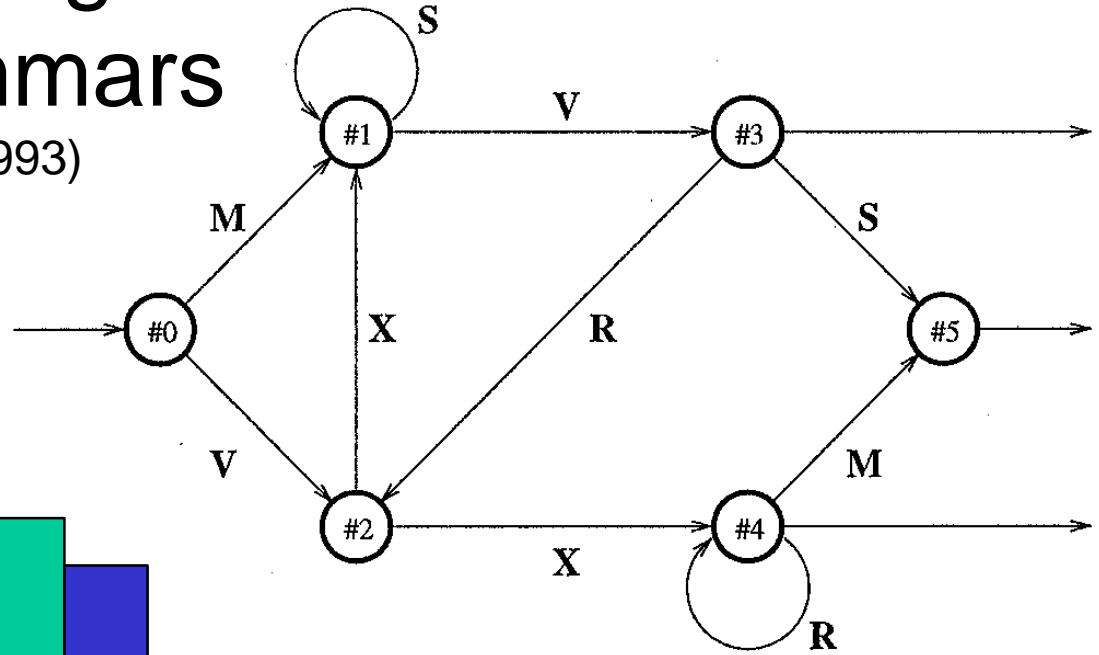
# Explicit and Implicit Learning

After Reber (1967, 1993)

- Explicit Learning
  - Conscious Access to Knowledge
    - Semantic, Procedural
  - Acquired Through Experience
    - Not Merely *Incidental* Learning
- Any Effect of **New Knowledge** on Experience, Thought, or Action
  - No Conscious Awareness of Knowledge

# Implicit Learning of Artificial Grammars

After Reber (1989, 1993)





# Dissociations Between Explicit and Implicit Learning

- Artificial Grammar Learning
- Categorization
- Covariation Detection
- Sequence Learning
- Control of Complex Systems

# Explicit and Implicit Thought

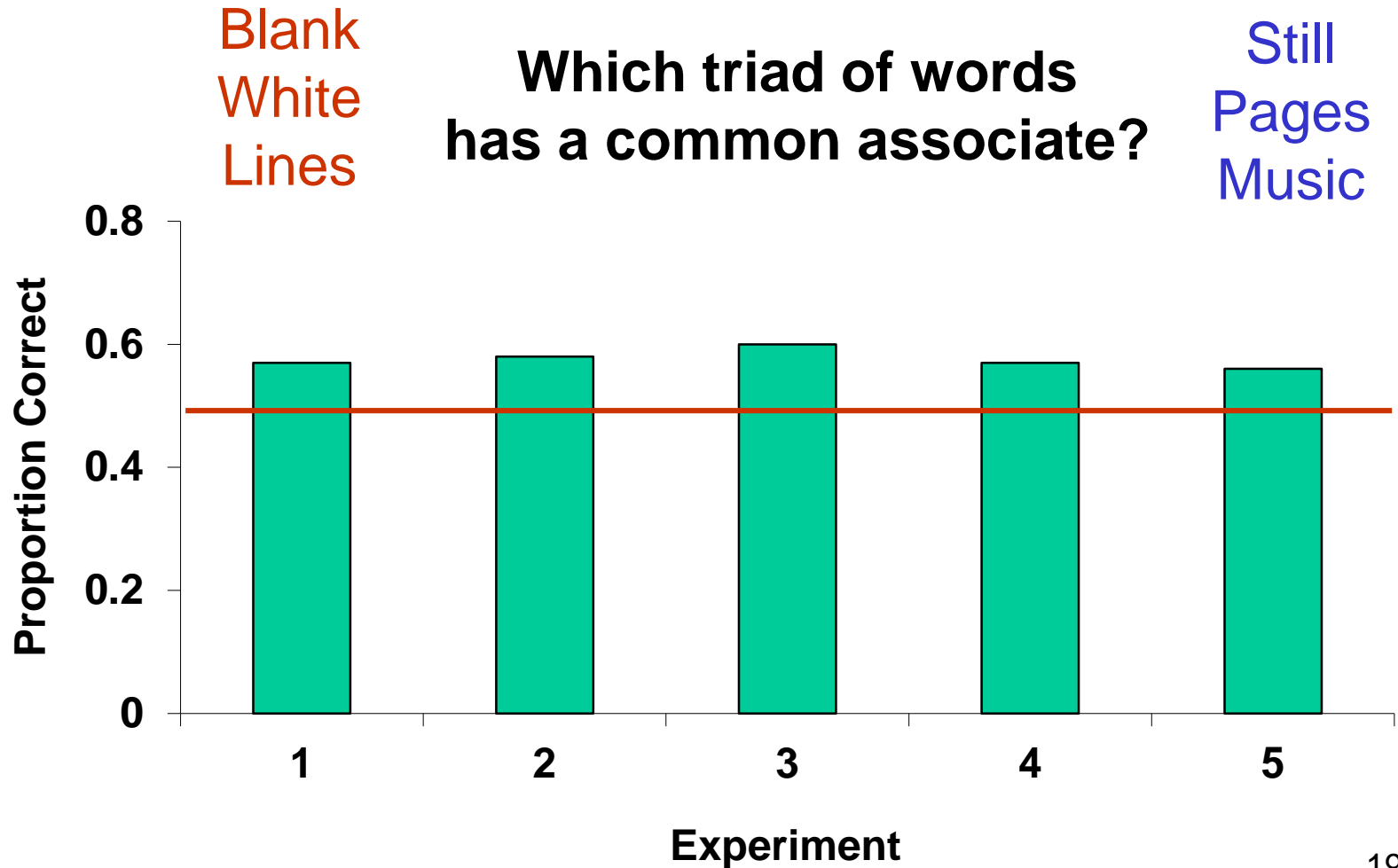
After Kihlstrom, Shames, & Dorfman (1996); Dorfman, Shames, & Kihlstrom (1996)

- **Explicit Thought**
  - Conscious Cognitive Activity
    - Reasoning, Problem-Solving
    - Judgment, Decision-Making
- Any Effect of an ***Idea*** (or *Image*) on Experience, Thought, or Action
  - Not Itself a Percept or (Episodic) Memory
    - Nor Recent Learning
  - Absence of Conscious Access to Idea

# Choice in Dyads of Triads Task

## Remote Associates Test

Bowers et al. (1990), after Mednick & Mednick (1962, 1967)

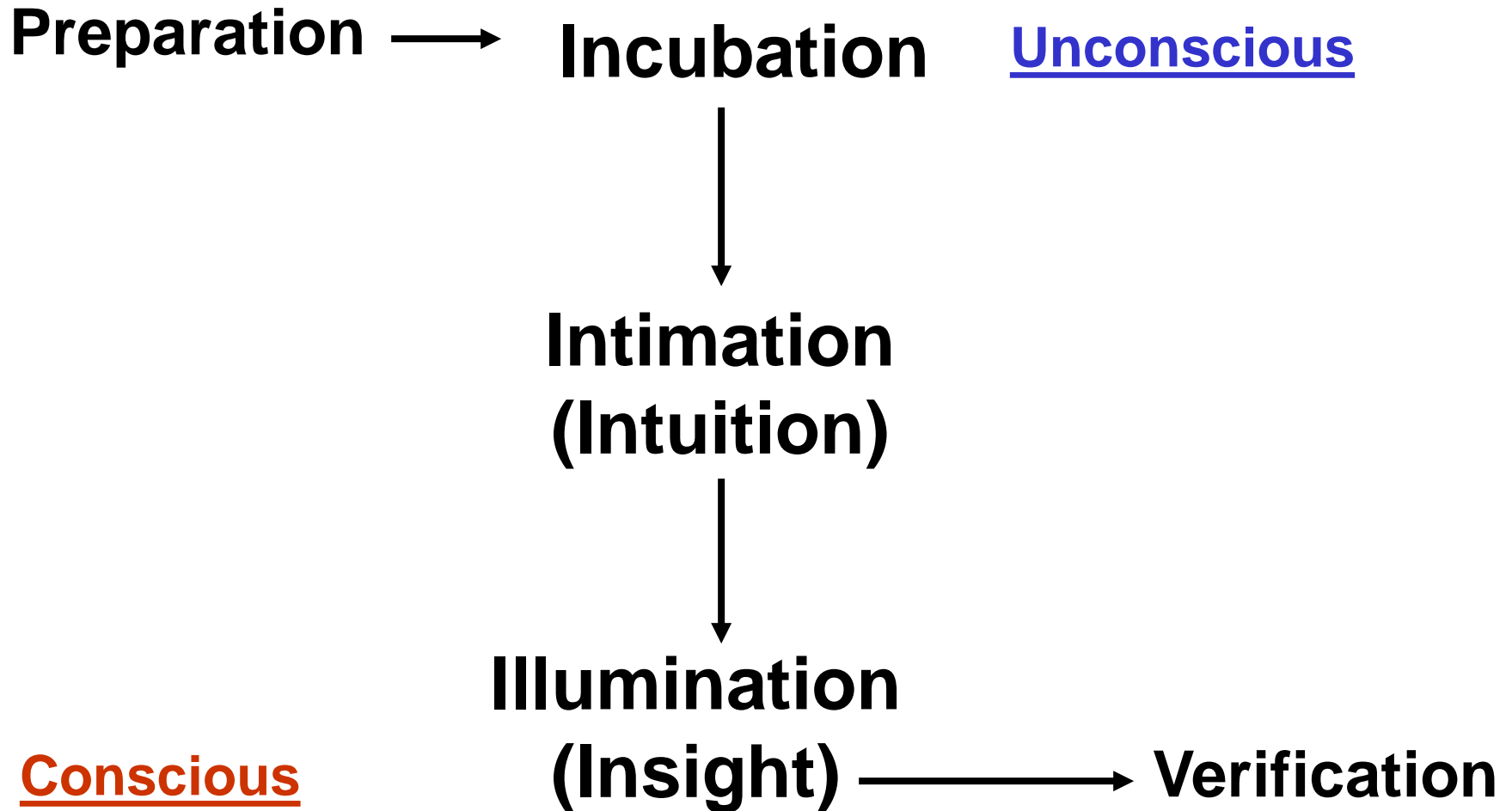


# Dissociations Between Explicit and Implicit Thought

- “Dyads of Triads” Paradigm
  - Semantic Priming
- Risky Choices
  - Damage to Prefrontal Cortex
- Insight Learning

# Intuition in the Stages of Thought

After Wallas (1926)



# The Cognitive Unconscious

Kihlstrom (1987)

- Automatic Processing
- Explicit-Implicit Dissociations
  - Perception
  - Memory
  - Learning
  - Thought

# Explicit and Implicit Motivation

After McClelland, Koestner, & Wenberger (1989)

- Explicit Motivation
  - Conscious Drive, Need, or Goal
    - *n*Achievement, *n*Power, *n*Affiliation/Intimacy
- Any Effect of a ***Drive or Goal*** on Experience, Thought, or Action
  - Absence of Conscious Awareness of Motive

# Assessing Explicit and Implicit Motivation

After Jackson (1965); McClelland, Koestner, & Wenberger (1989)

- **Personality Research Form**

- **Questionnaire Measure**

- “I enjoy doing things which challenge me”
    - “I will keep working on a problem after others have given up”
    - “I often set goals that are very difficult to reach”

- **Thematic Apperception Test**

- **“Picture-Story Exercise”**

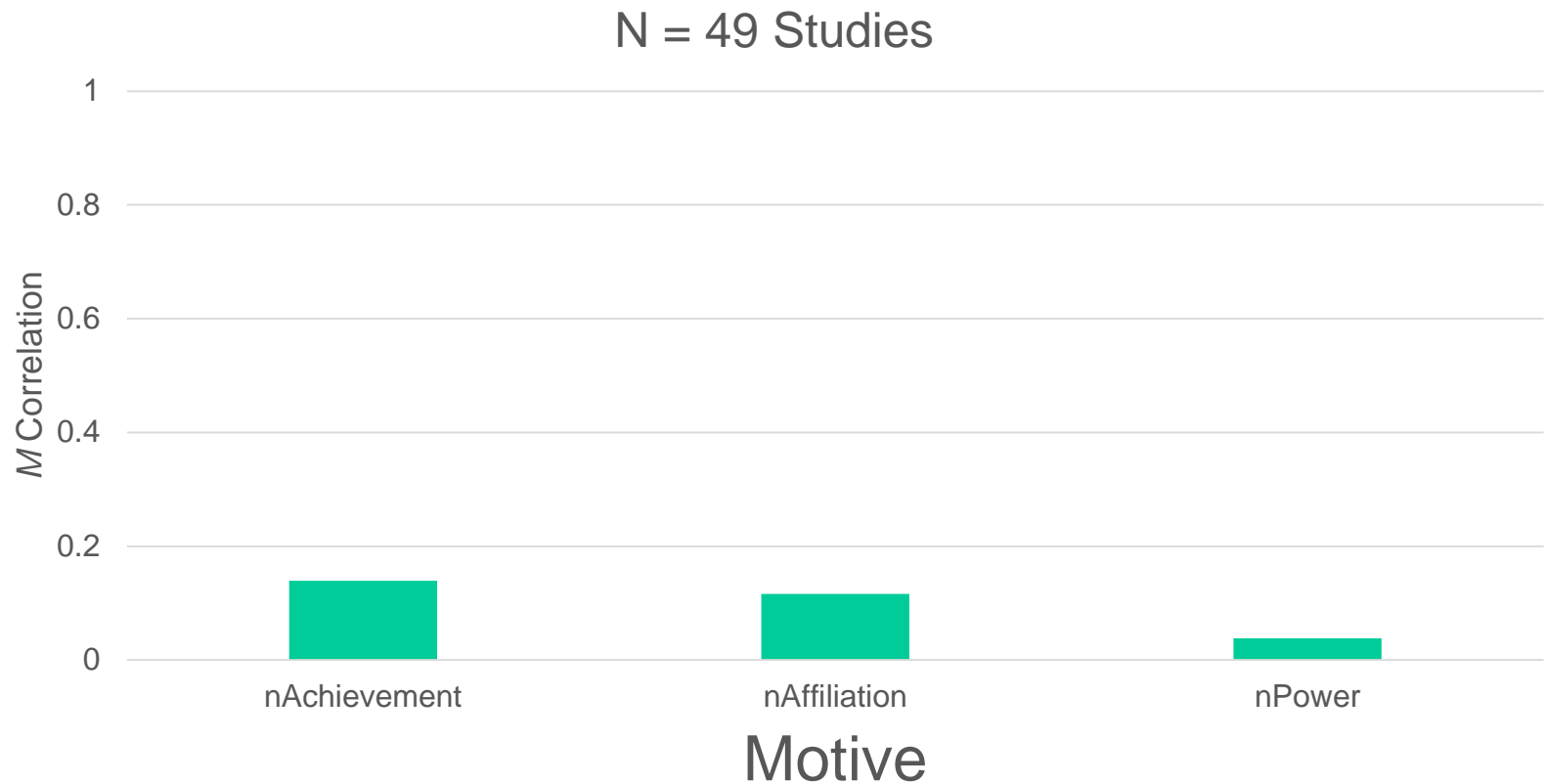
- Outperforming Someone else
    - Meeting or Surpassing a Self-Imposed Standard of Excellence
    - Unique Accomplishment
    - Involvement in Advancing One’s Career





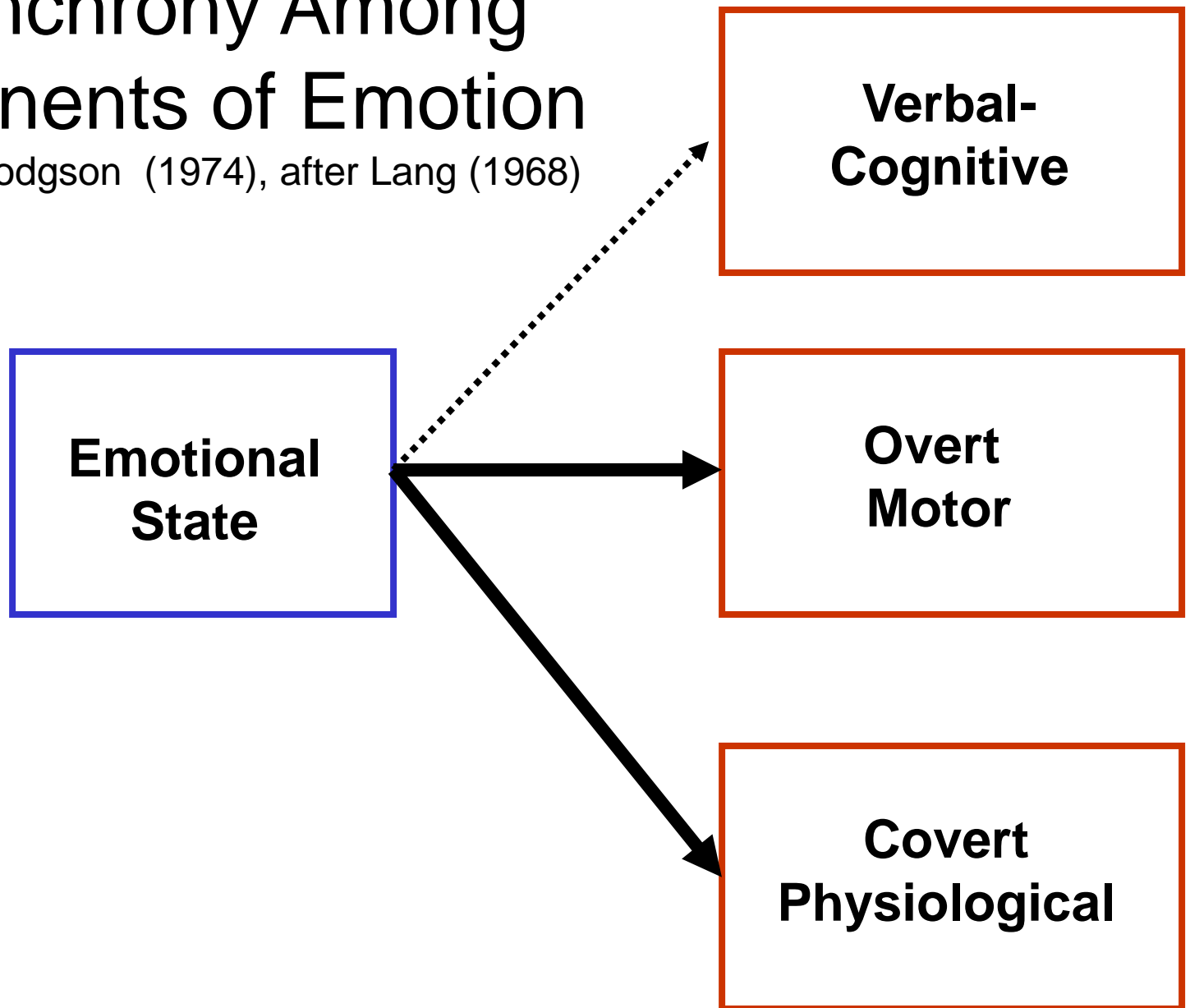
# Explicit vs. Implicit Motives

Kollner & Schultheis (2014)



# Desynchrony Among Components of Emotion

Rachman & Hodgson (1974), after Lang (1968)



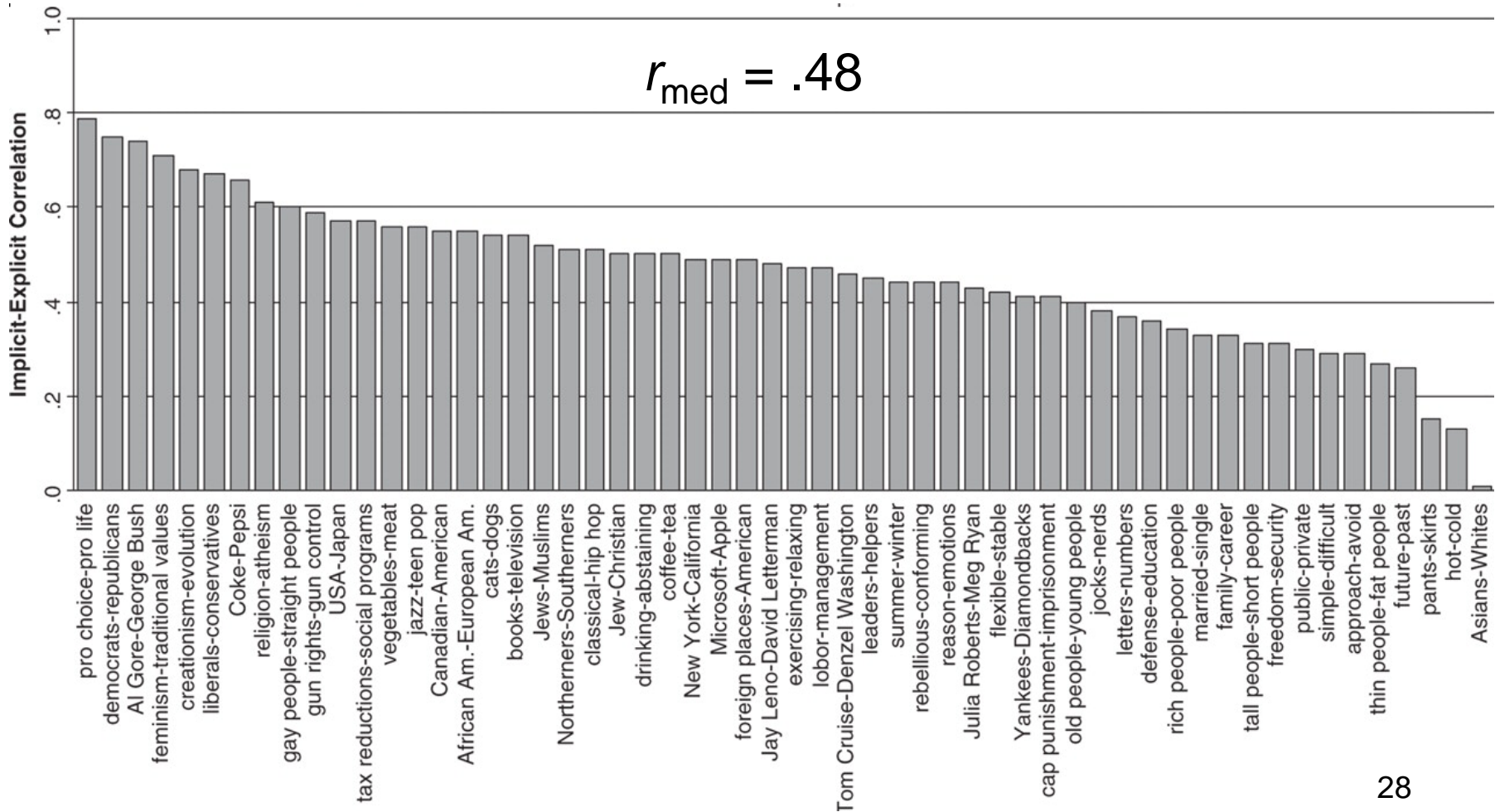
# Explicit and Implicit Emotion

After Kihlstrom, Mulvaney, Tobias, & Tobis (1996)

- Explicit Emotion
  - Subjective Mood, Affect, or Feeling
- Any Effect of an ***Emotional Response*** on Experience, Thought, or Action
  - Overt Motor Response
    - Facial Expressions
  - Covert Physiological Response
    - Autonomic Nervous System

# Correlations Between Explicit and Implicit Attitudes

Nosek (2007)



# Balancing the Ledger

## ***Strong Evidence***

- Implicit Memory
- Implicit Perception

## ***Weaker Evidence***

- Implicit Learning
- Implicit Thought

## ***Ambiguous Evidence***

- Implicit Motives
- Implicit Emotions

# A Tumbling-Ground for Whimsies?

James, *Principles of Psychology* (1890), p. 163

The distinction... *between the unconscious and the conscious being of the mental state...* is the sovereign means for believing what one likes in psychology, and of turning what might become a science into a tumbling-ground for whimsies.

