Midterm Exam
Wednesday, October 21, 2015

Review in Class (Q&A Format)
Monday, October 19

Narrative Review
Now Posted to Course Website

DSP Students
Information on Accommodations Forthcoming

Covers August 26 – October 14, Inclusive

• Introduction
  – Fiske & Taylor Chs 1-2; Zerubavel Ch 1

• Social Perception
  – F&T Chs 3, 9-10; Z, Chs 2-3

• Social Memory
  – F&T, Ch 4; Z, Ch 6

• Social Categorization
  – F&T, Chs 11-12; Z, Chs 4-5

• Social Judgment & Inference
  – F&T, Chs 6-8
Format of Exam

• Exactly 15 Questions
  – 3-5 Points Each
  – 50 Points Total
• Short Answers
  – No More Than 3-5 Sentences
• Answer on Exam Itself
  – No “Blue Books” Required
  – Write Answers in Ink
    • If Pencil, No Re-Evaluation

Exam Preparation

• “Exam Information” Page on bCourses
  – “Philosophy of Exams”
  – Information on Scoring
  – Narrative Review
  – All Old Exams (with Scoring Guide)
• Lecture Illustrations
• Lecture Supplements
• Post Questions to bCourses Forum
  – “Comments and Queries”
  – Deadline: Tuesday, October 20, 12:00 Noon

Tasks of the Social Perceiver

• Impression Formation
  – Mental Representations of Social Stimuli
• Social Categorization
  – Similarity Judgment
• Causal Attribution
  – Explanations of Social Events
  – Sufficient Reasons
• Moral Judgment
  – When Outcome Attributable to a Person
Lewin’s Formula
Lewin (1933/1935)

\[ B = f(P, E) \]

where
- \( B \) = Behavior
- \( P \) = Factors Internal to Person
- \( E \) = Factors in External Environment

Lewinian Framework for Causal Attribution

\[ B = f(P, E) \]

Fritz Heider (1896-1988)

- Basic Writings
  - “Social Perception and Phenomenal Causality” (1944)
  - The Psychology of Interpersonal Relations (1958)

- Lewin: \( B = f(P, E) \)
  - Possible Causes of Behavior
    - Something About Person (Actor)
    - Something About the Environment (Situation)
  - Actual vs. Perceived Causes
    - Professional vs. Naive Psychologist
Covariation Model of Causal Attribution  
Kelley (1967, 1971)

- Statistical Model: Analysis of Variance  
  - Multiple Observations of Behavior  
- Principal Causes (Main Effects)  
  - Actor  
  - Target  
  - Context  
- Joint Causes (Interaction Effects)  
  - Actor x Target  
  - Actor x Context  
  - Target x Context  
  - Target x Context  
  - Actor x Target x Context  
  - Actor x Context x Target  

Information for Causal Attribution  
Kelley (1967, 1971)

- Consistency Across Contexts  
  - Actor’s Behavior Toward Target  
    - High vs. Low  
- Distinctiveness of Across Targets  
  - Actor’s Behavior In Context  
    - High vs. Low  
- Consensus Among Actors  
  - Behavior Toward Target in Context  
    - High vs. Low  

\[2 \times 2 \times 2 = 8\text{ possible combinations}\]

Naïve Experiment

- Vary One Cause, Keep Others Constant  
- Phenomenal Cause  
  - Element which Covaries with Behavior  
- *John laughed at the comedian*  
  - Behavior: Laughing  
  - Actor: John  
  - Target: Comedian  
  - Context: Performance
Why did John Laugh at the Comedian?

- Something about John
- Something about the Comedian
- Something about the Situation
- Something about John and the Comedian
  - Interaction
    - Both Necessary Causes
    - Neither Cause is Sufficient

Event Descriptions

McArthur (1972)

- Event: John Laughed At the Comedian
- Consensus Information
  - Almost everyone vs. Hardly anyone...
  - ...who heard the comedian laughed at him.
- Consistency Information
  - In the past, John has almost always vs. has hardly ever...
  - ...laughed at the comedian.
- Distinctiveness Information
  - John rarely vs. almost always...
  - ...laughs at other comedians
- Control
  - No Consensus, Consistency, or Distinctiveness Information

Choice Among Alternative Causes

McArthur (1972)

- Something About the Actor
- Something About the Target
- Something About the Circumstances
- Some Combination of Causes
John Laughed at the Comedian…
Case 1

- **Consistency High**
  - In the Past, John has *Almost Always* Laughed at this Comedian
- **Distinctiveness Low**
  - John *Also* Laughs at Other Comedians
- **Consensus Low**
  - *Hardly Anyone* Laughed at this Comedian
  - *Causal Attribution to John (Actor)*

Attributions to Actor
McArthur (1972)

- **Consistency Remains High**
  - In the Past, John has *Almost Always* Laughed at this Comedian
- **Distinctiveness Now High**
  - John *Doesn’t* Laugh at Other Comedians
- **Consensus Also High**
  - *Everyone* Laughed at this Comedian
  - *Causal Attribution to the Comedian (Target)*
Attributions to Target

McArthur (1972)

John Laughed at the Comedian…
Case 3

• Consistency Now Low
  – In the Past, John has Almost Never Laughed at this Comedian
• Distinctiveness Remains High
  – John Doesn’t Laugh at Other Comedians
• Consensus Also Remains High
  – Everyone Laughed at this Comedian

Causal Attribution to the Context (Situation)

Attributions to Circumstances
(Situation)

McArthur (1972)
The Covariation Calculus for Causal Attribution
After Kelley (1967), and Brown (1986)

<table>
<thead>
<tr>
<th>Consistency</th>
<th>Distinctiveness</th>
<th>Consensus</th>
<th>Attribution</th>
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<tr>
<td>High</td>
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<td>Low</td>
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<td>High</td>
<td>Target</td>
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<td>Low</td>
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<td>Context</td>
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<tr>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Actor x Target</td>
</tr>
</tbody>
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The Covariation Calculus and Theories of Normative Rationality

• Person as Naïve Scientist
  – Designs Controlled Experiments
  – Takes Account of Confounding Variables
  – Statistical Analysis of Data
  – Logical Conclusions Given Premises

• Covariation Calculus as Rational
  – Algorithm for Combining Information
  – Always Gives the Correct Answer

Problems with Algorithms in Social Judgment

• Algorithm Unknown
• Not Enough Information Available
• Available Information Cannot Be Used
  – Insufficient Time
  – Insufficient Motivation

Judgment Under Uncertainty
Departures from the Covariation Calculus

Despite Sufficient Information

• Fundamental Attribution Error (Ross, 1977)
  – Overestimate Role of Dispositions
  – Underestimate Role of Situations
• Actor-Observer Difference (Jones & Nisbett, 1972)
  – Make Dispositional Attributions About Others
  – Make Situational Attributions About Self
• Self-Serving Bias (Hastorf et al., 1970; Greenwald, 1980)
  – Take Responsibility for Good Outcomes
  – Deny Responsibility for Bad Outcomes

The Fundamental Attribution Error

Changes in the environment are almost always caused by acts of persons in combination with other factors. The tendency exists to ascribe the changes entirely to persons. Heider (1944, p. 361)

[T]he intuitive psychologist’s shortcomings… start with his general tendency to overestimate the importance of personal or dispositional factors relative to environmental influences…. He too readily infers broad personal dispositions…, overlooking the impact of relevant environmental forces and constraints. Ross (1977, p. 183)

[T]he tendency to attribute behavior exclusively to the actor’s dispositions and to ignore powerful situational determinants of the behavior. Nisbett & Ross (1980, p. 31)

Attitude Attribution Paradigm

Jones & Harris (1967)

• Read Transcripts of Pro/Con Speeches
  – Castro, Racial Segregation
  – “Con” Side is Normative
• Evaluate Attitudes of Speech-Writers
• Choice vs. Assignment
Ratings of Speaker’s Attitudes
Jones & Harris (1967), Exp. 1

Attitudes Toward Castro

Dispositions and Situations in Causal Attribution
McArthur (1972)

Consensus and Consistency in Causal Attribution
McArthur (1972)
The Actor-Observer Difference in Causal Attribution

The person tends to attribute his own reactions to the object world, and those of another, when they differ from his own, to personal characteristics [of the other]. Heider (1958, p. 157)

There is a pervasive tendency for actors to attribute their actions to situational requirements, whereas observers tend to attribute the same actions to stable personal dispositions. Jones & Nisbett (1972, p. 80)

Also known as the Self-Other Difference in Causal Attribution

Illustrating the Actor-Observer Difference in Causal Attribution

Jones & Nisbett (1972, p. 79)

When a student who is doing poorly... discusses his problems with a[n] adviser, there is often a fundamental difference of opinion between the two.

The student... is usually able to point to environmental obstacles such as a particularly onerous course load, to temporary emotional stress..., or to a transitory confusion about life goals....

The adviser... is convinced... instead that the failure is due to enduring qualities of the student -- to lack of ability, to irremediable laziness, to neurotic ineptitude.

Aspects of the Actor-Observer Difference

Watson (1982)

- Attributions re: Self
- Situations > Traits
- Attributions re: Others
- Traits > Situations
- Attributions to Traits
- Other > Self
- Attributions to Situations
- Self > Other
The Self-Serving Bias in Causal Attribution

That reason is sought that is personally acceptable. It is usually a reason that flatters us, puts us in a good light, and it is imbued with an added potency by the attribution. Heider (1958, p. 172)

We are prone to alter our perception of causality so as to protect or enhance our self esteem. We attribute success to our own dispositions and failure to external forces. Hastorf, Schneider, & Polefka (1970, p. 73)

Also known as the Ego, Ego-Defensive, or Ego-Protective Bias

The Totalitarian Ego

Greenwald (1980), p. 604

- **Conservatism**
  - The Self-Concept is Characterized by “Resistance to Cognitive Change”
- **Egocentricity**
  - People Perceive Themselves as “More Central to Events” Than They Really Are
- **Beneffectance**
  - People Perceive Themselves as “Selectively More Responsible for Desired, but not Undesired, Outcomes.

Illustrating the Self-Serving Bias in Causal Attribution

Greenwald (1980, p. 605)

In asking students to judge an examination’s quality as a measure of their ability to master course material, I have repeatedly found a strong correlation between obtained grade and belief that the exam was a proper measure.

Students who do well are willing to accept credit for success; those who do poorly, however, are unwilling to accept responsibility for failure, instead seeing the exam (or the instructor) as being insensitive to their abilities.
Aspects of the Self-Serving Bias
Miller & M. Ross (1975)

• Self-Protective Bias
  – Failure is Attributed to External Rather than Internal Causes
• Self-Enhancing Bias
  – Success is Attributed to Internal Rather than External Causes

Moderators of the Self-Serving Bias
Campbell & Sedikides (1999)

• Self-Esteem
• Achievement Motivation
• Self-Focused Attention
• Task Choice
• Outcome Expectancies
• Task Difficulty
• Interpersonal Orientation
• Status
• Affect
• Locus of Control
• Gender
• Task Type

The Self-Serving Bias
Campbell & Sedikides (1999)

Meta-Analysis of 70 Experiments

Moderator's Variable

Effect Size d

-0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1 1.2
Import Self-Est Self-Focus Diff Overall

Low High

Overall

Moderator's Variable

-0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1 1.2
Import Self-Est Self-Focus Diff Overall

Low High
Normative Model of Human Rationality

- When Reasoning About Events…
  - People Follow Normative Principles of Logic
- Judgments, Decisions, Choices…
  - Based on Rational Self-Interest
- Rational Self-Interest…
  - Expressed as Principle of Optimality
    - Maximize Gains, Minimize Losses
  - Also Expressed as Principle of Utility
    - Achieve Goals as Efficiently as Possible

Expressions of Normative Rationality: Covariation Calculus for Causal Attribution

- Logical, Systematic Rules for Judgment, inference
  - Specifies All Necessary Information
  - How Information is Combined
- Problems Soluble
  - Appropriate Algorithm Inevitably Leads to Correct Solution
- Rational Thought Employs Algorithms
  - Guaranteed to Reach Correct Answer

Departures from the Covariation Calculus as Departures from Normative Rationality

- Fundamental Attribution Error (Ross, 1977)
- Actor-Observer Difference (Jones & Nisbett, 1972)
- Self-Serving Bias (Hastorf et al., 1970; Greenwald, 1980)
**The Ultimate Attribution Error**

Pettigrew (1979)

- Negative Behaviors by Outgroups
  - Attributed to Internal, Dispositional Causes
- Positive Behaviors by Outgroups
  - Attributed to Variable / Situational Causes
    - Good Luck / Special Advantage
    - High Motivation
    - Exceptional Cases
- Positive Behaviors by Ingroups
  - Attributed to Internal, Dispositional Causes
- Negative Behaviors by Ingroups
  - Attributed to Variable / Situational Causes
    - Bad Luck / Special Disadvantage, etc.

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**Human Inference: Strategies and Shortcomings of Social Judgment**

Nisbett & Ross (1980), p. 273

“We have identified a number of shortcomings in everyday inference – shortcomings that, for the most part, can be traced either to people’s over-reliance on primitive judgmental heuristics or to their inattentiveness to conventional normative considerations.”

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**How We Know What Isn’t So: The Fallibility of Human Reason in Everyday Life**

Gilovich (1991), pp. 2-3

“[M]any questionable and erroneous beliefs have purely cognitive origins, and can be traced to imperfections in our capacities to process information and draw conclusions…. They are the products, not of irrationality, but of flawed rationality.”
A Little List of Errors and Biases
After Krueger & Funder (2004), Table 1

- Overconfidence Bias
- Confirmation Bias
- Hot-Hand Fallacy
- Self-Protective Similarity Bias
- Optimistic Bias
- Ingroup-Outgroup Bias
- Systematic Distortion Effect
- Dispositional Bias
- Clouded Judgment Effect
- Empathy Neglect
- Correspondence Bias
- Halo Effect
- False Uniqueness Effect
- Negativity Bias
- Disconfirmation Bias
- Male Bias
- Gambler’s Fallacy
- Highlight Bias
- “Ultimate” Self-Serving Bias
- Pessimistic Bias
- Corroborated Fallacy
- Positive Outcome Bias
- Vulnerability Bias
- Labeling Bias
- External Agency Illusion
- Intensity Bias
- Just-World Bias
- Romantic Bias
- Bias Blind Spot
- Empathy Gap

The “People Are Stupid” School of Psychology
Kihlstrom (2004)

- People Are Fundamentally Irrational
- People Act on Automatic Pilot
- Behavior is Unconscious
- We Don’t Know What We’re Doing
- Unconscious Thought Is Superior
- We Don’t Know How Stupid We Are
  – Lack Appreciation of Errors and Biases

Self-Other Difference in Causal Attribution

- Internal vs. External Attributions
- Is It an Error?
  – Contrast with Fundamental Attribution Error
  – Informational Differences
- Limited Evidence
  – Self-Enhancing but not Self-Protective
  – Greatest Under Conditions of High Self-Threat
Self-Other Difference (Malle, 2006)

- Limited Evidence (Watson, 1982)
  - Attributions to Situations: Self > Other
- But New Review
  - Quantitative vs. Narrative Analysis
    - Strength of Effect
    - 173 Published Studies
  - Bias Scores
    - Personal or Internal Attributions
    - Situational or External Attributions
    - Bias Score = Internal - External
      - + = Bias toward Internal Attributions
      - - = Bias toward External Attributions

The Actor-Observer Difference in Causal Attribution – Not!

Malle (2006)

Mean Score
All Studies
I = 0.062
E = 0.023
I - E = 0.095*

Standard Studies
I = -0.093
E = 0.007
I - E = -0.001

Not Much Self-Serving Bias, Either!

Malle (2006)

Mean Score
Positive Events
I = -0.140
E = -0.134
I - E = -0.158*

Negative Events
I = 0.311*
E = 0.200
I - E = 0.241
Nor, for that matter, Much Fundamental Attribution Error!

If there is little or no actor-observer difference in causal attribution, then people make attributions about others the same way they make attributions about themselves!

35 Years to Correct the Record
(Or, Anchoring and Adjustment at Work)

Attribution “Errors” Based on Misconception?

- Lewin: \( B = f(P, E) \)
  - Common Assumption that \( P \) and \( E \) Independent of Each Other
- But \( P \) and \( E \) are Interdependent
  - (As Lewin Clearly Understood)
- \( P \) Constructs \( E \)
  - Through Behavior
  - Through Mental Activity
- Behavior Caused by Perception of the Situation
  - Perception is Internal to the Person
Analyzing Social Interaction
Lewin (1939/1951), p. 140


The psychological environment has to be regarded functionally as a part of one interdependent field, the life space, the other part of which is the person. This fundamental fact is the keynote of the field-theoretical approach.

The Doctrine of Interactionism

People Influence the Situations that Influence Their Behavior.

How Persons Construct Environments

- **Through Overt Behavior**
  - **Evocation**
    - Person Evokes Response from Environment
  - **Selection**
    - Person Chooses to Enter Environment
    - Or, Environment Selected for Person
  - **Behavioral Manipulation**
    - Person Creates or Modifies Objective Environment Through Overt Behavior
- **Through Covert Behavior (Thought)**
  - **Cognitive Transformation**
    - Person Creates or Modifies Mental Representation of Environment
    - Covert Behavior Leads to Overt Behavior
A False Distinction Between the Person and the Environment

- **Perceived Situation Causes Behavior**
  - Perception Always a Feature of the Person
- **Action is Intentional**
  - Intentions Are Also Features of the Person
- **From a Psychological Viewpoint, Correct Attributions are Always to the Person**
  - Doctrine of Mentalism
    - Mental States : Action :: Cause : Effect

A New Framework for Causal Attribution

- **Folk-Conceptual Theory**
  - Back to Heider (1944)
- **Abandons Model of Naïve Scientist**
- **How People Actually Reason About Behavior**
- **Generating Factors**
  - Reasons (Rational Connection)
  - Mere Causes (Mechanical Connection)

Intentional vs. Unintentional Behavior

- **Intentional Behavior Explained by Reasons**
  - Actions
    - Beliefs, Desires, Values
      - Anne studied for the test all night because she wanted to do well.
  - Assumption of Rationality
- **Unintentional Behavior Explained by Causes**
  - Behaviors
  - No Assumption of Rationality
    - Ann was nervous about the test results because she wanted to do well.
Types of Reasons

- Beliefs and Desires
  - Mental State Necessary for Intentional Action
- Mental State Markers (vs. Unmarked)
  - She went to the café because she wanted an authentic cappuccino.
  - She went to the café because she thought they have authentic cappuccino.
- Unmarked Mental States
  - Can Confuse External with Internal Causes
  - Assume Subjectivity, Rationality
  - She didn’t speak up because the teacher was there.

Types of Causes

- Apply to Any Physical Event
- Dimensions of Causality
  - Internal vs. External
    - The tree fell because its roots were shallow.
    - The tree fell because the wind was strong.
  - Stable vs. Unstable
    - The tree fell because the winds are strong here.
    - The tree fell because of a tornado.
  - Global vs. Local
    - The tree fell because the soil is bad here.
    - The tree fell because it was planted poorly.

Enabling Factors

- Skill
  - She got an A because she’s very smart.
- Opportunity
  - She got an A because her date was cancelled.
- Removed Obstacles
  - She got an A because she found her notes.
Causal History of Reasons

• Explain Beliefs and Desires
  – No Assumption of Subjectivity, Rationality
• Causal Antecedents of Reasons
  – Unconscious Processes
    • He planted the garden because he loved his mother.
  – Personality Factors
    • He planted the garden because he’s cheap.
  – Socialization and Culture
    • He planted the garden because he’s a farm kid.
  – Immediate Context
    • He planted the garden because he likes fresh fruit.

Model for Intentional Action

Model for Unintentional Action
Flowchart for Behavior Explanations
Malle (2005)

Actor-Observer Asymmetries Revisited
Malle et al. (2007)

- Reason Asymmetry
  - Actors Use More Reasons (Privileged Access)
  - Actors Use Fewer Causal Histories
- Belief Asymmetry
  - Actors Use More Belief Reasons
  - Actors Use Fewer Desire Reasons (Simulation)
- Marker Asymmetry
  - Actors Leave Beliefs Unmarked
    - Direct Representation of Beliefs

Actor-Observer Asymmetries
Malle et al. (2007)

Meta-Analysis of 9 Studies
Social Cognition as Folk Psychology

- How Do People Actually Reason?
- Person-Situation Framework Inappropriate
  - Treats All Causes as “Mere” Causes
    - Traits, Situational Factors
  - Ignores Reasons, Beliefs
    - How People Really Explain Things
- Folk Psychology Better for Science?

The Fundamental Attribution Error

Attributing Behavior to the Person

It’s Not An Error!

But It Is Fundamental!

Legitimizes Moral Judgments

Automaticity and Control in Social Interaction

- Cognitive Perspective in Social Psychology
  - Traditional Focus on Conscious/Deliberate Thought
    - Impression Formation (Person Perception)
    - Attribution Theory (Causal Explanation)
    - Impression Management (Strategic Self-Presentation)
    - Social Exchange
- Reactions to “Cold, Rational” View
  - “Hot” Cognition (The “New Look”)
    - Emotion, Motivation
  - Automaticity
    - Social Interaction Constrained by Situational Influences
    - Interpretation of Situational Influences as Priming
- Most Social Cognition Is Automatic in Nature
Automaticity: Situationism Revived
After LaBerge & Samuels (1974); Posner & Snyder (1975); Schneider & Shiffrin (1977); Shiffrin & Schneider (1977)

- Inevitable Evocation by Stimulus
- Incorrigible Completion (Ballistic)
- Efficient Execution (No Resources)
- Parallel Processing (No Interference)
- *Unconscious* in the Strict Sense of the Term
  - Operate Outside Phenomenal Awareness
  - Operate Outside Voluntary Control

Mechanisms of Automaticity

- Innate
  - Reflex, Taxis, Instinct
- Acquired Through Extensive Practice
  - Conditioned Responses, Habits

Automaticity in Social Behavior

- Most Social Behavior is Automatic
  - Triggered by Environment
  - Preattentive/Preconscious Processing
- Internal Mental Representations of the Situation are Constructed Automatically
  - Perception “Dumped” in Consciousness
- Behavior Follows Automatically from Cognition
“The Automaticity of Everyday Life”
Bargh (1984)

“As Skinner argued so pointedly, the more we know about the situational causes of psychological phenomena, the less need we have for postulating internal conscious mediating processes to explain these phenomena.”

Interruptions of Experimenter
Bargh et al. (1996), Experiment 1

• Cover task: Scrambled sentences
  – “Rude” Primes
    • aggressively, rude, bother, disturb, intrude
  – “Polite” Primes
    • respect, honor, considerate, appreciate, patiently
  – “Neutral” Primes
    • exercising, flawlessly, occasionally, rapidly, gleefully
• Experimenter Engaged with Confederate
  – Ignores Waiting Subject
• Interruptions During 10-minute waiting period

Interruptions of Experimenter
Bargh et al. (1996), Experiment 1

% of Subjects

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<th>Neutral</th>
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76
78
The Automaticity Juggernaut
Kihlstrom (2008)

• Social Behavior Largely Automatized
  – Conscious Percepts, Goals, Emotions Irrelevant
    • Automatically Triggered by Preconscious Analysis
• Consciousness is an Afterthought
  – Give Plausible/Acceptable Reasons for Behavior
• We Are All Zombies After All
  – Not Because Zombies are Conscious Too
    • Dennett
  – But Because Consciousness is Epiphenomenal
    • Plays No Causal Role in Behavior

“The Automaticity of Everyday Life”
Bargh (1997, p. 1)

“[T]he more we know about the situational causes of
psychological phenomena, the less need we have
for postulating internal conscious mediating
processes to explain these phenomena.…
[I]t is hard to escape the forecast that as knowledge
progresses regarding psychological phenomena, there
will be less of a role played by free will or
conscious choice in accounting for them…. That
trend has already begun…. and it can do
nothing but continue.”

“Is Consciousness
Riding into the Sunset?”
Bargh (1997), p. 50, 52

“Automaticity pervades everyday life, playing an
important role in creating the psychological
situation from which subjective experience and
subsequent conscious and intentional processes
originate…. I emphatically push the point that automatic,
nonconscious processes pervade all aspects of
mental and social life, in order to overcome what I
consider dominant, even implicit, assumptions to
the contrary.
The Unbearable Automaticity of Being
Bargh & Chartrand (1999, p. 462)

"Most of a person's everyday life is determined not by their conscious intentions and deliberate choices but by mental processes that are put into motion by features of the environment and that operate outside of conscious awareness and guidance."

Behavior -- It's Involuntary
Park (American Psychologist 1999), p. 461

"We perceive ourselves to have far more control over our everyday behavior than we actually do... The source of behavioral control comes not from active awareness but from... mental activations of which we are unaware and environmental cues to which we are not consciously attending that have a profound effect on our behavior. These articles represent... fundamental breakthroughs in the understanding of motivations, free will, and behavioral control."

"Naturalization" and Freud's Sorrow
Introductory Lectures on Psychoanalysis (1915-1916)

- Copernicus
  - Earth is not Center of Universe
- Darwin
  - Man is Just Another Animal
- Freud
  - Man is Fundamentally Irrational
- Bargh (and Wegner)
  - Man is (Virtually) a Conscious Automaton
Automaticity Pervades Social Cognition
Bargh et al. (2012)

- Preconscious Automaticity
  - Unconscious Inputs to Conscious Processes
  - Direct Activation of Goal Pursuit/Social Behavior
- Postconscious (Goal-Dependent) Automaticity
  - Dependent on Prior Conscious/Intentional Thought

Sources of the Automaticity Juggernaut
Kihlstrom (2008)

- "Conscious Shyness"
  - Epiphenomenalism

"The consciousness of brutes would appear to be related to the mechanism of their body simply as a collateral product of its working, and to be completely without any power of modifying that working as the steamwhistle which accompanies the work of a locomotive engine is without influence upon its machinery." T.H. Huxley (1868)

Sources of the Automaticity Juggernaut
Kihlstrom (2008)

- Physics Envy
  - "Clockwork" or "Pinball" Determinism
    - "Free Will" Cannot Enter into Closed Causal Sequence
- Alliance of Social Psychology with Behaviorism
  - Traditional Definition as Study of Social Influence
  - Situationism
    - Explain Behavior in Terms of Stimulus
    - Avoidance of Mediating Conscious Processes
The Automaticity Principle
Huang & Bargh (2013)

• Doubts About Conscious Control
  – Power of Situational Influences
  – Limits of Introspective Access
  – Dual-Process Models

• Effects of Unconscious Processes
  – How a Person Perceives the World
  – How a Person Behaves in Response

A Softening of Views?
Bargh et al. (2012)

“Any process of sufficient complexity to be of interest to social psychologists involves a complex interplay between both controlled (conscious) and automatic processes.” (p. 601)

“Conscious thought is causal and it often puts automatic processes into play; similarly, automatic processes regularly cause and influence conscious thought processes. These two fundamental forms of human information processing work together, hand in glove, and indeed one would not be able to function without the other.” (p. 602)

Dual-Process Theories in Psychology
Chaiken & Trope (1999); Sherman et al. (2014)

• Conscious or Effortful or Controlled
  – Symbolically Represented Rules
    • Structured by Language, Logic
    • Learned in One Trial (or Very Few)
  – Conscious
    • Optional, Depending on Capacity, Motivation
    • Conscious Awareness of Steps in Processing

• Automatic or Unconscious
  – Associative
    • Structured by Similarity, Contiguity
    • Learned Over Many Trials
  – Automatic (As Defined Previously)
    • Preconscious, with Conscious Awareness of Result
Two Systems in Judgment and Decision-Making
Kahneman, Thinking, Fast and Slow (2011)

• System 1
  – Automatic, Fast, Unconscious
  – Heuristic, “Hot”
    • Emotions, Stereotypes
• System 2
  – Controlled, Slow, Conscious
  – Algorithmic, “Cold”
    • Logical, Systematic
• System 1 Usually Wins the Race

The Latest Word 1
Bargh et al. (2012), p. 593

“If there is one major trend in research on automaticity of the higher mental processes over the past few years, it is that the concept has now permeated nearly all psychological domains.…

“[It] is now a staple and indispensable construct for the explanation and prediction of almost all psychological phenomena.”

The Latest Word 2
Bargh (2014), p. 37

“Freud spent countless thousands of words in providing explanations as to why our unfulfilled wishes express themselves in the imagery and stories that populate our nightly dreams. The latest research provides a more pragmatic perspective on how thought and emotion just below the surface of our awareness shape the way we relate to a boss, parent, spouse or child. That means we can set aside antiquated notions of Oedipus complexes and accept the reality that the unconscious asserts its presence in every moment of our lives, when we are fully awake as well as when we are absorbed in the depths of a dream.”
Critique of Automaticity
Kihlstrom (2009)

- Weak Operationalization
  - Failure to Apply Canonical Features
    - Inevitable Evocation
    - Incorrigible Completion
    - Efficient Processing
    - Parallel Processing
- Confusion Between Automatic and Incidental
- Demand Characteristics
- No Assessment of Comparative Influence
  - Automatic vs. Controlled Processes

Process-Dissociation Procedure
Jacoby (1991); Yonelinas & Jacoby (2012)

- Estimates Influence of Automatic and Controlled Processes
- Method of Opposition
  - Pits the Two Against Each Other
    - Inclusion Condition
      - Automatic, Controlled Processes Work Together
        - Automatic Process Facilitates Performance
    - Exclusion Condition
      - Automatic, Controlled Processes Oppose Each Other
        - Suppress of Automatic Process

20-Year Retrospective of PDP
Yonelinas & Jacoby (2012)

- Many Applications Beyond Memory
- Criticisms of “Process Independence”
  - Processes May be Redundant/Embedded
  - May Need Multinomial Model (>2 Processes)
- But Converging Evidence
  - Outcomes as Predicted by Process-Independence
  - Alternative Measures of A and C in Memory
    - Remember/Know Judgments
    - Signal-Detection Theory
The False Fame Effect
Jacoby et al. (1989)

- Study List of Nonfamous Names
  - Memory Test
- 24 Hours Later, Make Fame Judgments
  - Famous, Nonfamous Names
- Previously Studied Nonfamous Names are Now Judged to be Famous
  - “Becoming Famous Overnight”
- Explanation
  - Study Primes Names on Judgment Task
  - Priming Increases Availability
    - Biases Judgments of Fame
    - Influence of Priming is Automatic

Components of Processing in Fame Judgments
Jennings & Jacoby (1993)

- Conscious
- Automatic

Spontaneous Trait Inferences
Uleman et al. (2005)

- Study Photos of Strangers
  - Paired with Behavioral Description
- 2 Days Later, Make Trait Judgments
  - Old, New Photos
- Old Photos Receive Trait Attributions in Line with Behavioral Descriptions
- Behaviors Prime Relevant Traits
  - Priming Increases Availability
- Influence of Priming is Automatic
Components of Processing in Spontaneous Trait Inferences
Uleman et al. (2005)

The Weapon Bias
Payne (2001)
- Identification Task: Weapon or Tool?
- Primed with Black or White Faces
- Priming Effects
  - Faster to Identify Gun after Black Prime
  - Faster to Identify Tool after White Prime
  - More Misidentification of Tools as Guns
- Faces Prime Racial Stereotypes
  - Stereotype Primes Related Judgment
- Influence of Priming is Automatic

Components of Processing in the Weapon Bias
Payne (2001); Payne et al. (2005)
Components of Processing in the Weapon Bias
Payne (2001); Payne et al. (2005)

![Graph showing estimates from 0.2 to 1.0 for Conscious and Automatic components of processing.]

QUAD Model of Automatic Bias in Stereotyping and Prejudice
Sherman et al. (2008)

- Dual-Process Theory of Stereotyping
  - Stereotypes/Prejudice Are Automatically Evoked
  - Both Subject to Conscious Self-Regulation
- Models 4 Parameters, Not Just 2
  - Automatic Association Activation (AC) of Bias
  - Discriminability of Correct Response (D)
  - Overcoming Bias (OB) to Select D
  - Guessing (G) When D and AC Fail

The Quad Model Applied to the Black-White IAT
Beer et al. (2008), after Sherman et al. (2008)

<table>
<thead>
<tr>
<th>Black vs. White Face</th>
<th>Positive vs. Negative Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association Activated</td>
<td>- Association Not Activated</td>
</tr>
<tr>
<td>Black Face</td>
<td>+ Association Activated</td>
</tr>
<tr>
<td>1 - AC</td>
<td>- Association Not Activated</td>
</tr>
<tr>
<td>Inhibition Not Achieved</td>
<td>+ Inhibition Achieved</td>
</tr>
<tr>
<td>Bias Overcome</td>
<td>+ Bias Not Overcome</td>
</tr>
<tr>
<td>Guess Against Bias</td>
<td>- Guess For Bias</td>
</tr>
<tr>
<td>Compatible</td>
<td>Incompatible</td>
</tr>
</tbody>
</table>

Black vs. White Face
Positive vs. Negative Word
Parameter Estimates: Black-White IAT
Conrey et al. (2005)

With and Without Response Window

Parameter Estimates: Black-White IAT
Beer et al. (2008)

The Automaticity Argument
Summarized

• Theoretical Conclusion: Automatic Processes are Pervasive, and Consciousness Is Largely an Afterthought.
  – But Does Not Follow From the Evidence