

“Hysteria” and Hypnosis

Fall 2014




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Early Concepts of Hysteria

Veith (1965)

- Ancient Egypt, Greece
 - Diseases Produced by Migrating Uterus
- Sydenham (1697)
 - Physical Symptoms
 - Produced by Emotional Causes
 - ≈ Psychosomatic Disorder
- Briquet (1859)
 - Multiple, Chronic Physical Complaints
 - No Obvious Organic Basis
 - ≈ Somatization Disorder

Kathos Papyrus, 1600 BCE






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Charcot's Concept of Hysteria

Charcot (1877); Kihlstrom (1994)

- Symptoms Mimicking Organic Illnesses
 - Tactile Sense
 - Special Senses
 - Motor Function
- Produced by Emotion, Suggestion
- Diathesis-Stress Theory
 - Hereditary Constitutional Weakness
 - Adaptation Compromised by Traumatic Stress
- “Functional” Lesions
 - Psychological rather than Physical Causes




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Janet's Concept of Hysteria

Janet (1889, 1894, 1907); Kihlstrom (1994)

- Constriction of Awareness
 - Unconscious Perception, Memory, Action
- Psychological Automatism
 - Complex Responses to Situation
 - Idea, Action, Emotion
 - Normally Accessible to Awareness, Control
- Dissociation
 - Automatism “Split Off”
 - Outside Conscious Awareness, Control

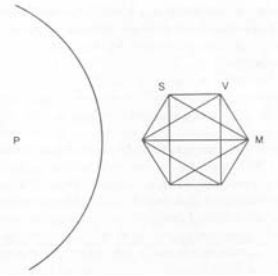


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The Case of Irene

Janet (1907)

- Sight of Dead Mother
- Sound of Her Voice
- Movements While Carrying the Body
- Whole Personality of Irene





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Hysteria in Freud

Breuer & Freud (1893-1895); Freud (1915)

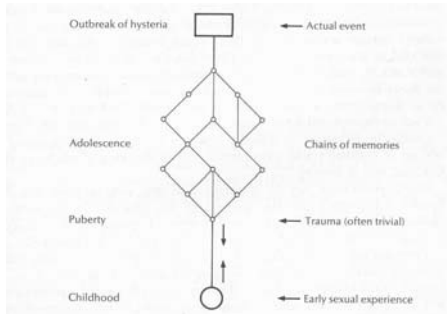
- *Studies on Hysteria*
 - “Hysterics Suffer from Reminiscences”
 - Repression of Traumatic Events
 - Unconscious Expression of Repressed Memories
- Doctrine of Repression
 - Seduction Theory (1893-1895)
 - Early Traumatic Experience
 - Theory of Infantile Sexuality (1905)
 - Instinctual Conflict

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Original Doctrine of Repression

Ellenberger (1970), after Breuer & Freud (1893-1895)



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Hysteria: The 19th-Century Legacy

- “Organic” - “Functional” Distinction
 - Brain Insult, Injury, Disease
- Somatogenesis vs. Psychogenesis
 - Biological vs. Psychological Cause
 - Neural Correlates of Mental States/Processes
- Role of Trauma
 - Doctrine of Dissociation (Janet)
 - “Accidental” – “Weakest Link”
 - Doctrine of Repression (Freud)
 - Intentional (though Unconscious)

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Dissociative Disorders

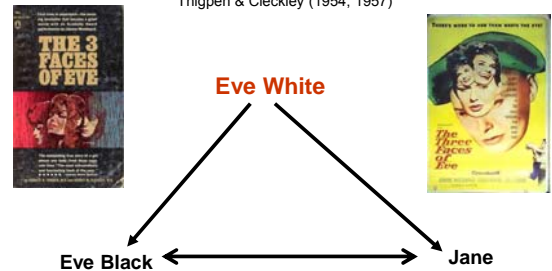
American Psychiatric Association, *DSM-5* (2013)

- Awareness of Memory, Identity
 - Psychogenic Amnesia
 - Dissociative Amnesia
 - Psychogenic Fugue
 - Dissociative Fugue
 - Multiple Personality Disorder
 - Dissociative Identity Disorder
 - Depersonalization and Derealization
 - Depersonalization/Derealization Disorder
- But Traumatic Etiology Not Necessary

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Interpersonality Amnesia in Eve

Thigpen & Cleckley (1954, 1957)



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The Case of Jonah

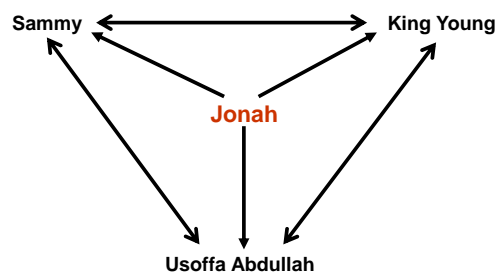
Ludwig et al. (1972)

- Jonah, “The Square”
 - Suffers from Blackouts
 - Shy, Retiring, Sensitive
- Sammy, “The Lawyer”
 - Intellectual, Rational
- King Young, “The Lover”
 - Pleasure-Oriented, Glib Talker
- Usoffa Abdulla, the Son of Omega, “The Warrior”
 - Cold, Belligerent, Angry

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Interpersonality Amnesia in Jonah

Ludwig et al. (1972)



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Implicit Memory in Fugue

Lyon (1985)

- Jane Doe
 - Discovered by Police
 - Disheveled, Wandering, No Identification
 - No Memory, No Identity
- Clinical Evaluation
 - Modeling Use of Telephone
 - “Dial Randomly”
 - Connected with Mother



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Conversion Disorders

American Psychiatric Association, DSM-5 (2013)



- “Pseudoneurological” Disorders
 - Distinguished from Psychosomatic Disorders
- “Hysterical” Anesthesias
 - Deafness
 - Blindness
 - Tactile Anesthesia
- “Hysterical” Paralysis, Aphonia
- Functional vs. Organic
- Somatic Symptom and Related Disorders
 - Somatoform vs. Dissociative

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Analysis of Visual Conversion Disorder

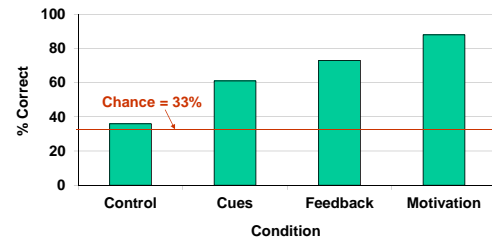
Bryant & McConkey (1989), after Brady & Lind (1961, 1965)

- 3-Choice Decision Task
 - Chance Performance = 33%
- 3-Light Visual Cue
 - Phases
 - 1-9, Cue Present
 - 10, Cue Absent
 - 11-14, Inform Patient of Visual Processing
 - 15-19, Exhortations for Maximal Performance
 - 20, Cue Absent
 - 21, Cue Present

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Visually Guided Behavior in Visual Conversion Disorder

Bryant & McConkey (1989)



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Dissociations in “Functional” Disorders

- “Hysteria”
 - Dissociative Disorders
 - Memory
 - Conversion Disorders
 - Perception, Action
- Explicit vs. Implicit Expressions of...
 - Memory
 - Perception, Action

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Unified View of Dissociative Disorders

Kihlstrom (1994)

- Disruption of the Monitoring and/or Controlling Functions of Consciousness
- Not Attributable to Brain Insult, Injury, or Disease
- Reversible
- Evidence of Intact Functioning Outside of Awareness
 - Implicit Memory
 - Implicit Perception

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Taxonomy of Dissociative Disorders

Kihlstrom (1994)

- Affecting Memory, Identity
 - Functional Amnesia, Fugue
 - Multiple Personality Disorder
- Affecting Sensation, Perception
 - Functional Blindness, Deafness
 - Functional Analgesia, Anesthesia
- Affecting Voluntary Action
 - Functional Weakness, Paralysis
 - Aphonia, Swallowing
 - Urinary Retention

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Hypnosis

- Social Interaction
 - Subject, Hypnotist
- Imaginative Experiences
- Altered in Consciousness
 - Perception, Memory, Voluntary Control
 - Subjective Conviction (Delusion)
 - Experienced Involuntariness (Compulsion)
- A Laboratory Model for Hysteria?
 - Functional vs. Organic
 - Psychogenic vs. Somatogenic



Huffington Post (06/26/2013)

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Dissociative Phenomena in Hypnosis

Functional Alterations in Conscious Awareness

- Perception
 - Analgesia, Tactile Anesthesia
 - Blindness, Deafness, Anosmia
 - Positive, Negative Hallucinations
- Memory
 - Posthypnotic Amnesia
 - Age Regression
- Action
 - Ideomotor Suggestions (Direct, Challenge)
 - Posthypnotic Suggestion (with Amnesia)



A Clinical Lesson at the Salpêtrière
Pierre Brocalet (1887)

A Laboratory Model
for Dissociative Disorder?

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“Credulous” and “Skeptical” Views of Hypnotic Phenomena

Sutcliffe (1960, 1961)

- Credulous
 - Mental processes affected by hypnosis are the same as those that would be instigated by the actual stimulus state of affairs
- Skeptical
 - Mental processes are unaffected by hypnotic procedures, but the subject acts as *if* the world were as suggested by the hypnotist



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Esdale on His Success

Esdale (1846)



I have *every month* more operations of this kind..., and I only see two ways of accounting for it:

my patients, on returning home, either say to their friends similarly afflicted, “Wah! Brother, what a soft man the doctor Sahib is! He cut me to pieces for twenty minutes, and I made him believe that I did not feel it. Isn’t it a capital joke? Do go and play him the same trick....”

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Esdale on His Success

Esdale (1846)



Or they say to their brother sufferers, -- “look at me; I have got rid of my burthen..., and am restored to the use of my body, and can again work for my bread: this, I assure you, the doctor Sahib did when I was asleep, and I knew nothing about it; -- you will be equally lucky, I dare say; and I advise you to go try; you need not be cut if you feel it.”

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The Irony of Self-Reports

Kihlstrom (2014, p. 140)

Too many psychologists
take self-reports seriously
only when they are made by
people who are brain-damaged!

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A "Neodissociative" View of Hypnosis

Hilgard (1977); Kihlstrom, 2007, 2008



- Sutcliffe's "Third View"
 - Hypnotic Subjects are Deluded
 - Believe that the World is as Suggested by the Hypnotist
- Hypnosis Entails a Division of Consciousness
 - Unaware of Percepts, Memories, Thoughts
 - Influence Behavior Unconsciously
 - Subject Unaware of Voluntary Control
 - Generates Experience of Involuntariness

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Hypnotic Susceptibility Scales

- Induction Procedure
- Test Suggestions
- Behavioral Scoring Criteria
- Stanford Hypnotic Susceptibility Scale
 - Harvard Group Scale of Hypnotic Susceptibility
 - Stanford Profile Scales of Hypnotic Susceptibility

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Stanford Hypnotic Susceptibility Scale, Form C

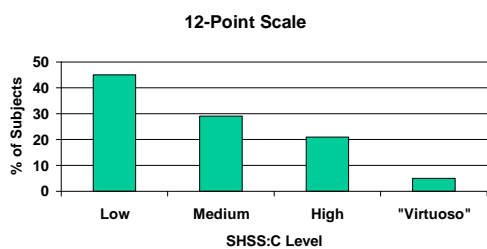
Weitzenhoffer & Hilgard (1962)

- Eye Closure (Induction)
- Hand Lowering
- Moving Hands Apart
- Mosquito Hallucination
- Arm Rigidity
- Dream (about hypnosis)
- Age Regression
 - 5th, 2nd grades
- Anosmia
- Arm Immobilization
- Voice Hallucination
- Negative Visual Hallucination
- (Posthypnotic Suggestion)
- Posthypnotic Amnesia

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Distribution of Hypnotizability

Hilgard (1965)



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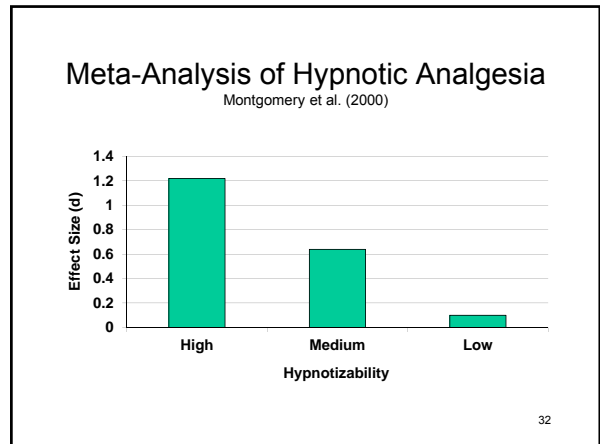
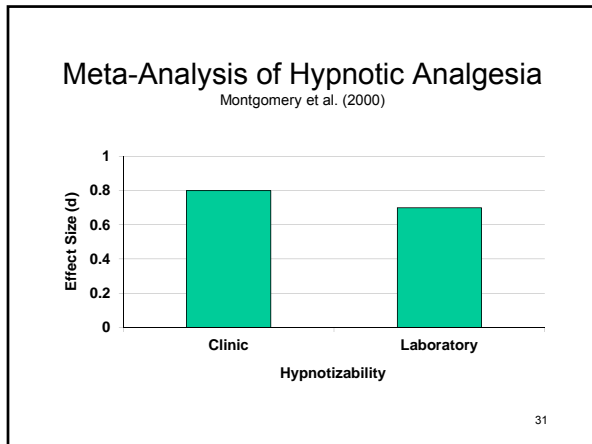

Major Surgery: Hypnosis as Sole Analgesic

Hilgard & Hilgard (1975)



- Appendectomy
- Caesarian Section
- Skin Graft
- Cardiac Surgery
- Orthopedic Surgery
- Ligature/Stripping of Veins


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Psychophysics of Hypnotic Analgesia

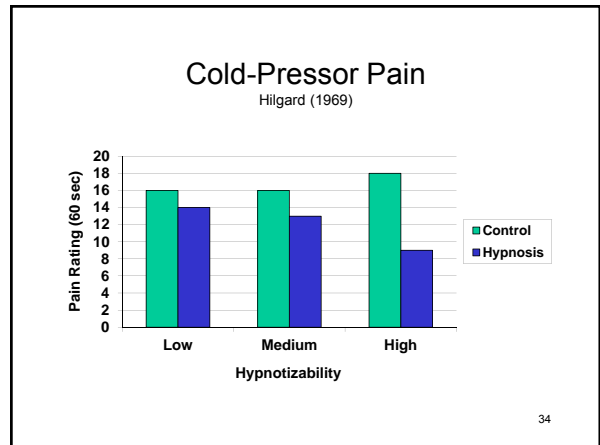
Hilgard (1967)

- Levels of Hypnotizability
 - Low, Medium, High
- Cold-Pressor Pain
 - 60 Secs
- Pain Reports
 - 1-10 Scale (Open-Ended)
 - Hypnotic Analgesia vs. Control




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Comparative Effects of Hypnotic Analgesia


Stern et al. (1977)



- Pain Stimuli
 - Cold Pressor, Ischemia
- Challenging Agents
 - Hypnosis
 - Acupuncture + Electrical Stimulation
 - Placebo Acupuncture
 - Morphine
 - Aspirin
 - Diazepam
 - Placebo

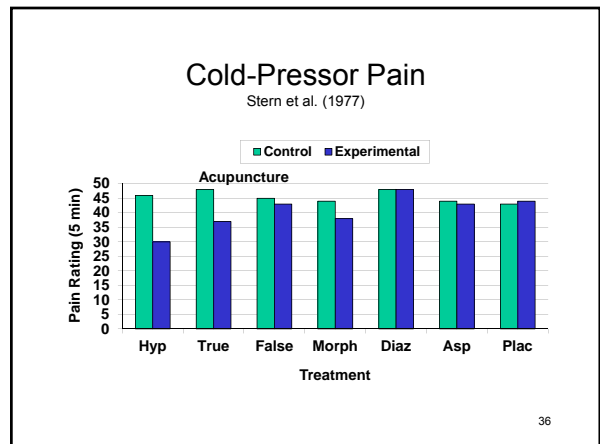


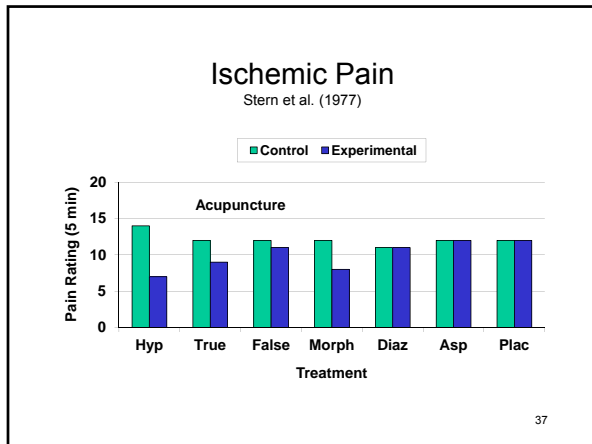
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Anesthesiology News

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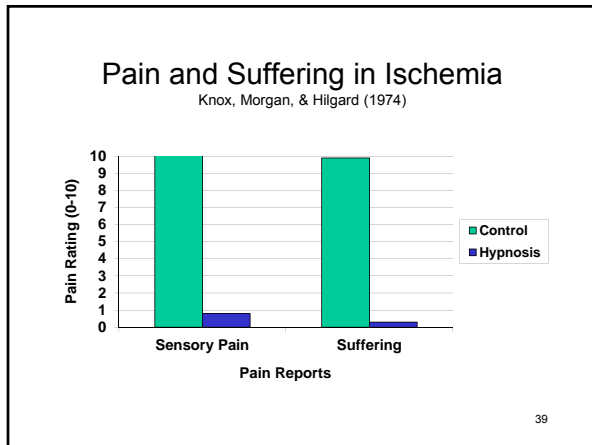


Two Components to Pain

McGill Pain Questionnaire

<u>Sensory Pain</u>	<u>Suffering</u>
Flickering	Tiring
Jumping	Sickening
Pricking	Fearful
Sharp,	Punishing
Pinching	Wretched
Tugging	Annoying
Hot	
Tingling	
Dull	
Tender	

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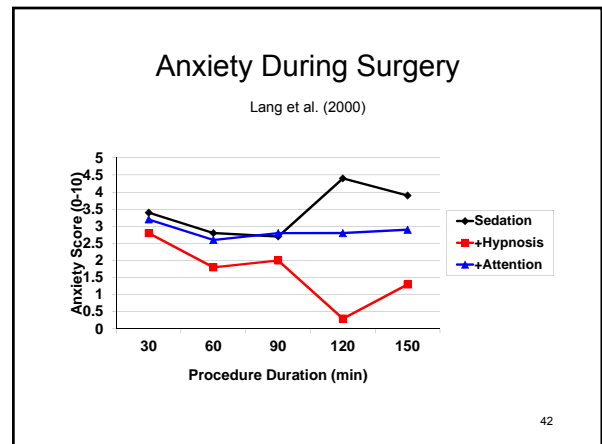
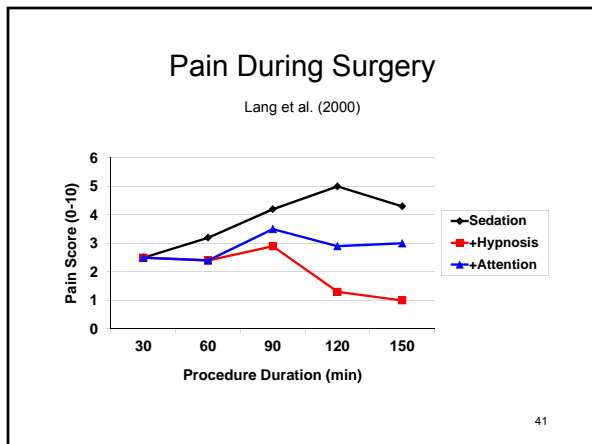


Hypnosis as an Adjunct to Conscious Sedation

Lang et al. (2000)

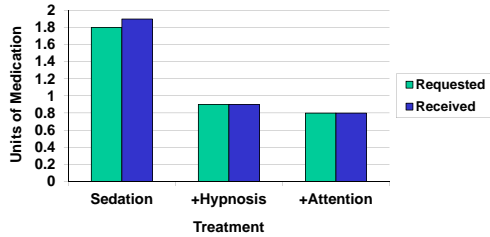
- Outpatient Surgery for Diagnosis
- Conscious Sedation
 - Patient-Controlled Analgesia
- Adjunctive Behavioral Techniques
 - Hypnosis
 - Attention Manipulation

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Medication Use During Surgery

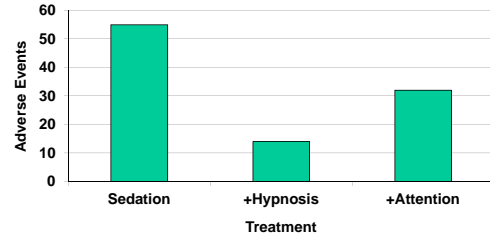
Lang et al. (2000)



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Adverse Events During Surgery

Lang et al. (2000)



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Hypnotic Modulation of Suffering

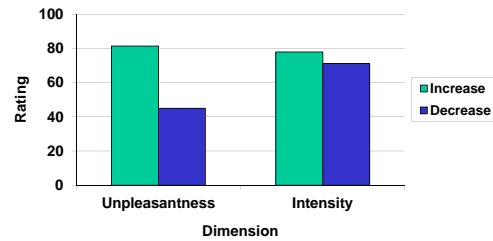
Rainville et al. (1997)

- “Hot Pressor” Pain
- Hypnotic Alteration of Unpleasantness
 - Increase vs. Decrease
 - Sparring Intensity of Pain
- PET Imaging
 - Primary Somatosensory Cortex (SI)
 - Location, Intensity
 - Anterior Cingulate Cortex (ACC)
 - Emotional Significance

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Pain Ratings

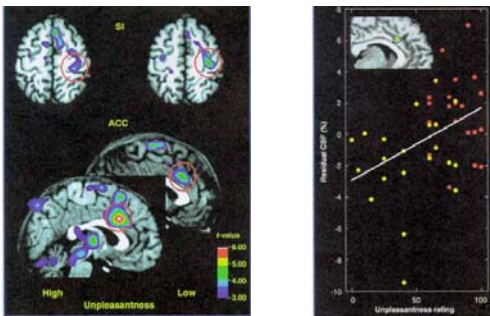
Rainville et al. (1997)



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Pain, “Suffering” and Activation of Anterior Cingulate Cortex

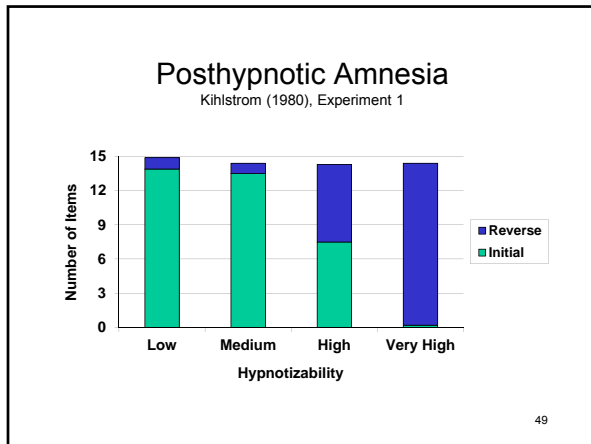
Rainville et al. (1997)



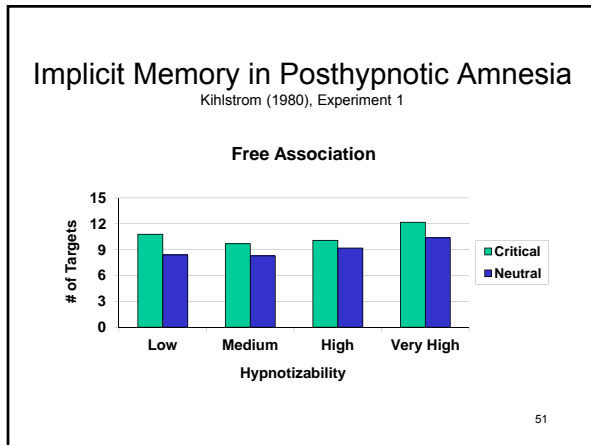
Posthypnotic Amnesia

Kihlstrom (1980), Experiment 1

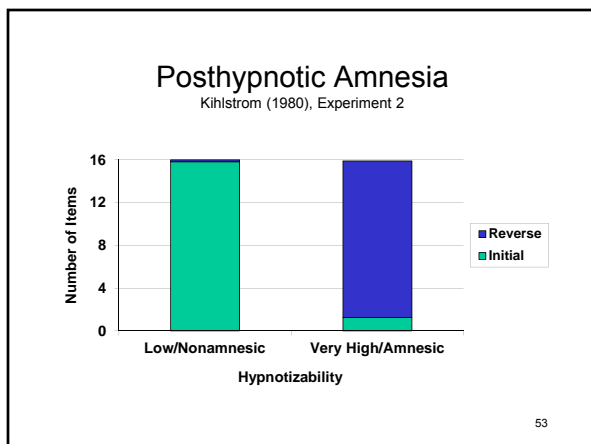
- Memorize Wordlist During Hypnosis
 - e.g., *girl, chair, flowers, short*
- Criterion for Learning
 - 2 Successful Repetitions
- Amnesia Suggestion
 - “You probably will have the impression that you have slept because you will have difficulty remembering the things you did while you were hypnotized.
 - “In particular, you will not be able to remember that you learned any words while you were hypnotized. “After waking you will have no memory that I told you these words, or what they were.
 - “You will not be able to remember them until I say to you, “*Now you remember everything*”. Then you will be able to remember everything, including the fact that you learned some words and what they were...”



- ### Implicit Memory in Posthypnotic Amnesia
- Kihlstrom (1980), Experiment 1
- Free-Association Test
 - After Initial Amnesia
 - Critical Stimuli
 - Target Memorized Words
 - e.g., *Boy-Girl, Table-**Chair**, Blossom-**Flowers***
 - Neutral Stimuli
 - Target Matched Control Words
 - e.g., *Lamp-**Light**, Dogs-**Cats**, Man-**Woman***
- Girl
Chair
Flowers
Short*
- 50



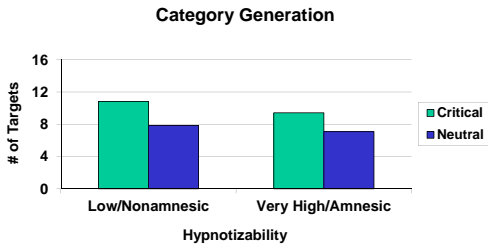
- ### Posthypnotic Amnesia
- Kihlstrom (1980), Experiment 2
- Memorize Wordlist During Hypnosis
 - e.g., *Judy, Foot, Lion, Fay*
 - Criterion for Learning
 - 2 Successful Repetitions
 - Amnesia Suggestion
 - “You probably will have the impression that you have slept because you will have difficulty remembering the things you did while you were hypnotized.
 - “In particular, you will not be able to remember that you learned any words while you were hypnotized. “After waking you will have no memory that I told you these words, or what they were.
 - “You will not be able to remember them until I say to you, “*Now you remember everything*”. Then you will be able to remember everything, including the fact that you learned some words and what they were...⁵²



- ### Implicit Memory in Posthypnotic Amnesia
- Kihlstrom (1980), Experiment 2
- Category-Instances Test
 - After Initial Amnesia
 - Critical Stimuli
 - Target Memorized Words
 - e.g., *Woman’s Name-**Judy**, Body Part-**Foot**, Animal-**Lion**, Time-**Day***
 - Neutral Stimuli
 - Target Matched Control Words
 - e.g., *Man’s Name-**Tom**, Country-**Germany**, Clothing-**Blouse**, Color-**Orange***
- Judy
Foot
Lion
Day*
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Implicit Memory in Posthypnotic Amnesia

Kihlstrom (1980), Experiment 2



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Repetition and Semantic Priming in Posthypnotic Amnesia

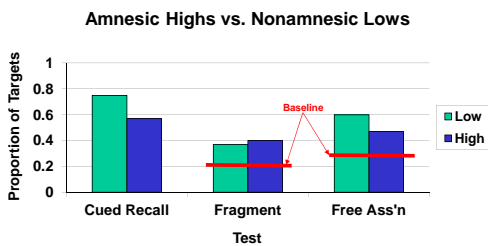
Barnier et al. (2001)

- Study Wordlist in Hypnosis
 - Suggestion for Posthypnotic Amnesia
- Tests of Memory
 - Explicit
 - Cued Recall
 - Implicit
 - Fragment-Completion (Repetition Priming)
 - Word-Association (Semantic Priming)

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Memory Test Performance

Barnier et al. (2001)



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Components of Memory Performance in Posthypnotic Amnesia

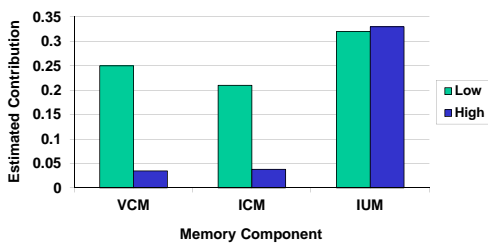
David et al. (2000)

- Study Word List
 - Suggestion for Posthypnotic Amnesia
- Memory Tests
 - Stem-Cued Recall (Explicit)
 - Stem-completion (Implicit)
- Variant on Process-Dissociation Procedure
 - Voluntary Conscious Memory
 - Involuntary Conscious Memory
 - Involuntary Unconscious Memory

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Components of Memory in Posthypnotic Amnesia

David et al. (2000)



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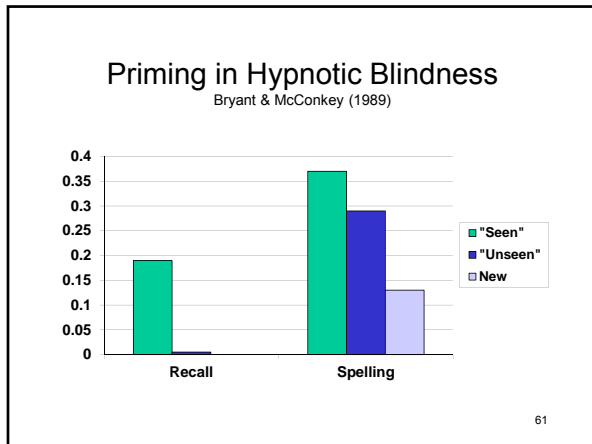
Priming in Hypnotic Blindness

Bryant & McConkey (1989)

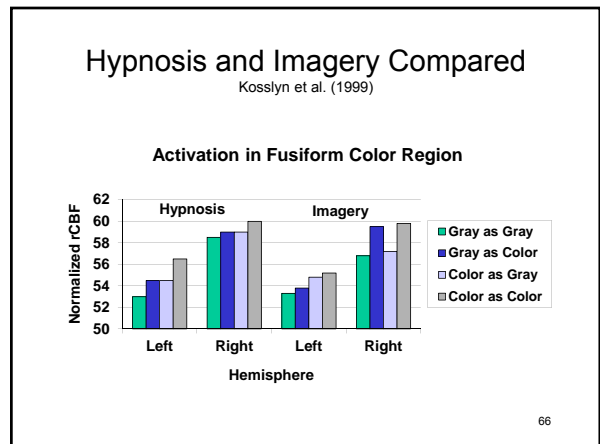
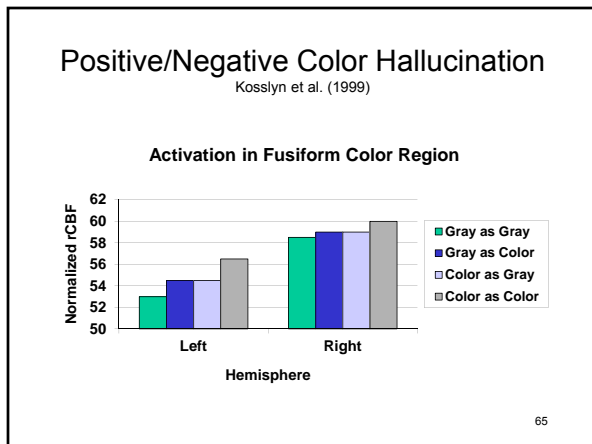
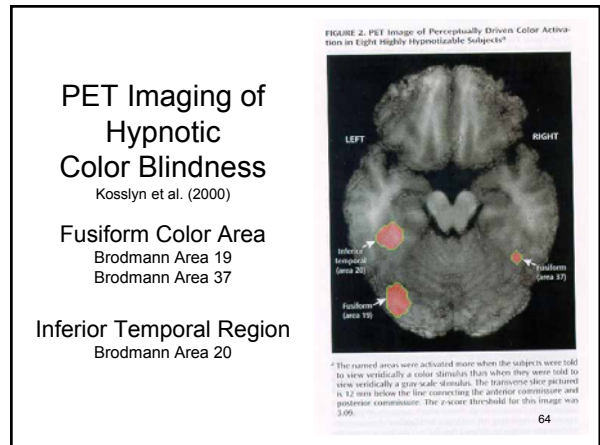
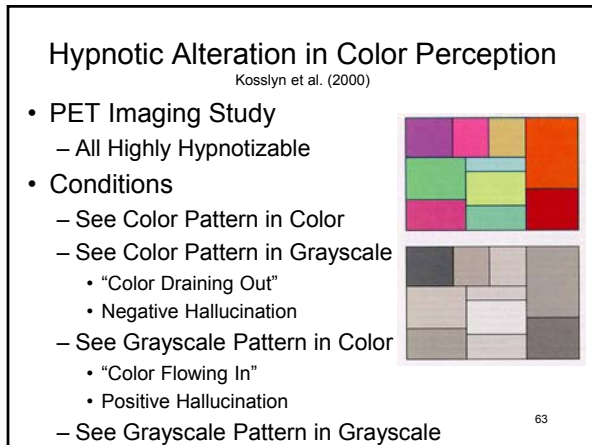
- Hypnotic Blindness
- Words Printed on Cards
 - Homophone plus Disambiguating Cue
 - *War* and *Peace*
 - *Hare* and *Tortoise*
 - “Seen” vs “Unseen”
- Memory Test
- Spelling Test
 - Auditory Presentation

*Peace or Piece?
Hare or Hair?*

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- ### Posthypnotic Suggestion
- Behavioral Response to Cue
 - Accompanied by Posthypnotic Amnesia
 - Quasi-Automatic
 - “Compulsive Automatism”
 - Executed Outside Awareness
 - Posthypnotic Amnesia
 - But is PHS *Really* Automatic?
 - Inevitable Evocation
 - Efficient Execution
 - Consumes No Cognitive Capacity
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Consciousness in Hypnosis

- Imaginative Experiences, Subjective Reality
- Dissociation Affecting Conscious Awareness
 - Explicit vs. Implicit Memory
 - Explicit vs. Implicit Perception
- Dissociation Affecting Conscious Control
 - Experienced Involuntariness
 - But Hypnotic Behavior Not Truly Automatic
 - No Awareness of Control Processes
- Brain Imaging
 - Correlates of *State vs Suggested Experiences*