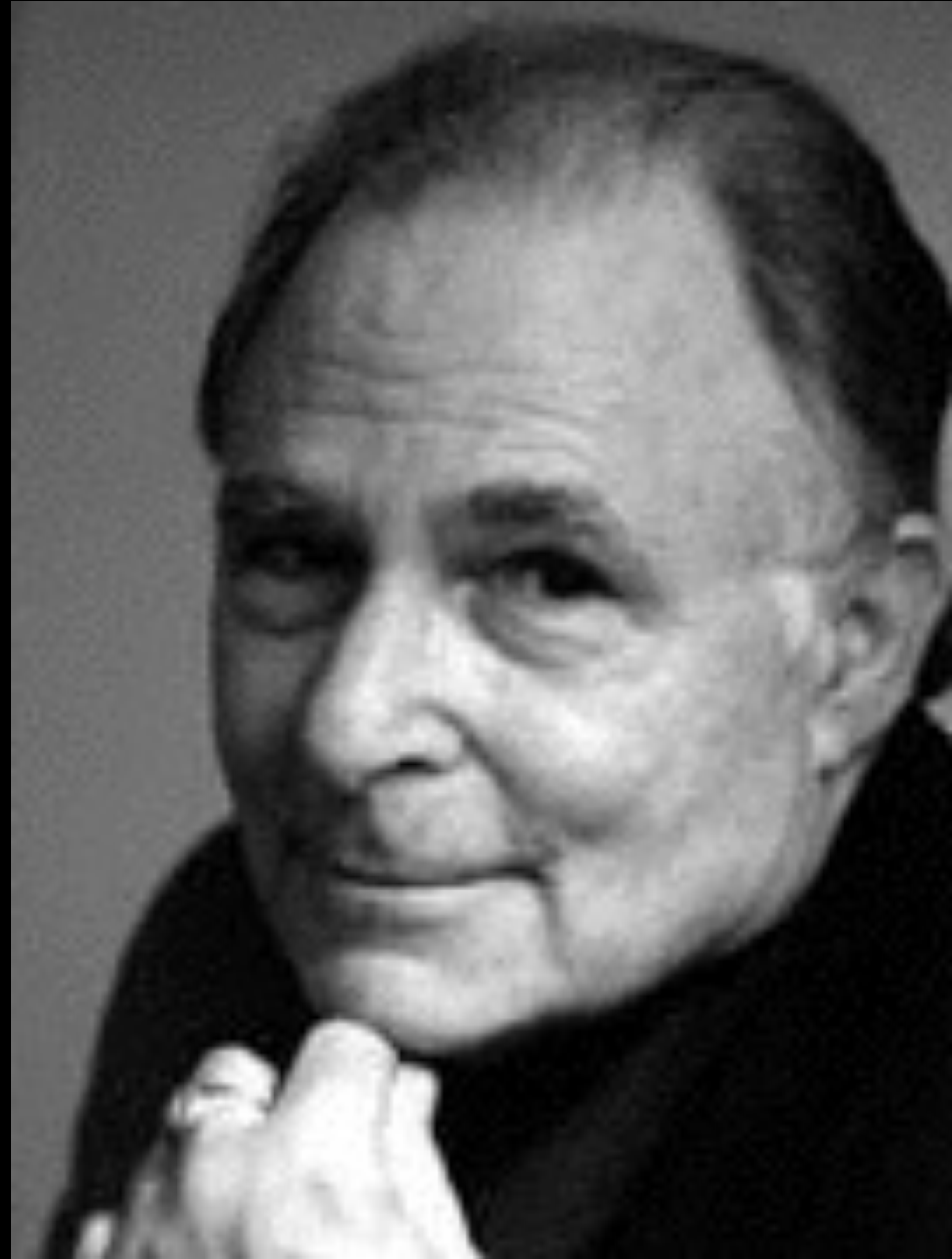


Quote of the Week

“The human face - in response and in movement, at the moment of death as in life, in silence and in speech, in actuality or as represented in art or recorded by a camera - is a commanding, complicated and at times confusing sure of information.”

-Paul Ekman & W. Friesen (1972)



Human Emotion

Psychology 3131
Professor June Gruber



Human Emotion

Emotion Expression

Why do we laugh and cry?



Roadmap

Course Logistics

Laughter

Crying

Touch

Take-Away Qs & Expert Interview

Course Logistics

Exam 1 - Review Sheet

Handed Out Today in Class

Exam 1 - Special Accommodations

MUEN E212 (3 or 3:30-5:00pm) - LMK which start time!

Proctored by Graduate TA

RECEIVE EMAIL: If you have not, you must before attending this special accommodations exam.

Course Logistics

Exam 1 - Review Opportunities

1 - OFFICE HOURS

Weds 2-3 (this week), Mon 2-3 (next week) : Email 24 hrs in advance

2 - EMAIL QUESTIONS

Must Email by 5pm Mon 2/12 - Plan in Advance!

Ask Specific Questions (not “what do I need to know” about this term)

Course Logistics

Outreach Project Partners - 5 mins

1. What is one topic you are considering?
2. What is one question you have?

Course Logistics

SNACKS

1. Because it's Tuesday afternoon
2. Because snacks —> reward circuitry —> positive valence states
3. Optional: Take only as much as you want

Roadmap

Course Logistics

Laughter

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Take-Away Qs & Expert Interview



Ubiquity of Laughter

- We laugh about 17 times per day.
- We have industries devoted to making us laugh.
- Borat grossed \$68 million in first 10 days
Seinfeld one of most popular TV shows of all time.



THE FOLLOWING **PREVIEW** HAS BEEN APPROVED FOR
ALL AUDIENCES

BY THE MOTION PICTURE ASSOCIATION OF AMERICA

THE FILM ADVERTISED HAS BEEN RATED



www.filmratings.com

www.mpa.org

Evolution of Laughter

What's in a Laugh?

Series of “sigh” exhalations

- Exhale = heart rate decreases
- Slows down heart rate, Signal to “rest and digest”

Brief acoustic bouts

- Series of staccato movements about 1/15 sec each

Vowel-like utterances (e.g., ha-ha, ho-ho)

Laughter precedes language

- Emerged 4 million yrs ago, before humans put vowels & consonants together

Built for Laughter?

15 facial muscles contract during laughter

Respiratory system:

larynx partially closed, so air intake occurs irregularly, causing gasping

Tear ducts activated (at times)

Face Becomes Red/Purple (at times)

As mouth opens and closes, struggle for oxygen intake continues, leading to red/purple color in face.

What does laughter sound like?

Laughter Dictionary

Jo-Anne Bachorowski

Developed a “Laughter Dictionary”

Not all laughs are alike

Cackles, hisses, pants, snorts,
grunts, songlike laughs



Bachorowski (2001, 2003)

**Voiced
Songlike
Female**

**Voiced
Songlike
Male**

**Unvoiced
Snort &
Pant Male**

**Unvoiced
Grunt
Female**

**Unvoiced
Snort
Male**

**Unvoiced
Snort &
Cackle Male**



Bachorowski (2001, 2003)
Audio files courtesy of Jo-Anne Bachorowski

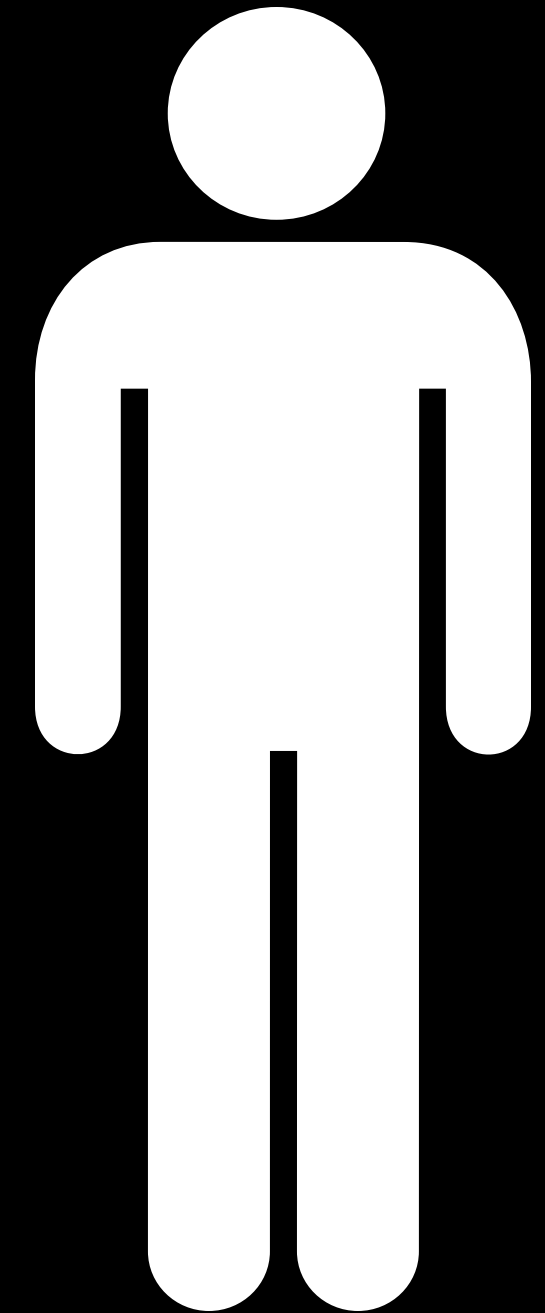
Gender Differences

Women

Laugh more frequently than men

Men

Laughs contain more snorts and grunts than women



Laughs Elicit Reactions

Voiced Laughs

-- perceived by others as signs of camaraderie

Unvoiced Laughs

-- unvoiced laughs (hisses, grunts, snorts) =
not perceived as affiliative



Friends Laugh Differently

Friends

Vocalizations become overlapping and intertwined
Acoustic properties of laugh mirror each other
Called “Antiphonal laughter”

Laughter Builds Friendship

Unites people in brief 2-3 second periods of
antiphonal laughter



What makes us laugh?



What Makes Us Laugh?

Triggers of Laughter - Robert Provine



(1) Examined triggers of laughter

(2) Secretly recorded bursts of laughter

Malls, street corners, cafeterias, etc.

1,200 laughs audiotaped & transcribed

(3) Humor Preceded 10-20% Laughs

“You just farted!”

What Triggers Laughter?

(The Other 80%)

“I see your point”

“I hope we all do well.”

“I told you so!”

“Are you sure?”

“What is this supposed to mean?”

ROBERT R. PROVINE
LAUGHTER
A SCIENTIFIC INVESTIGATION



HA-HA

Benefits of laughter

Why is Laughter Good for Us?

Example 1

Laughter builds social bonds



Laughter Builds Social Bonds

Two Ways

1. Social Contagion

- We routinely laugh at the sound of another person's laughter
- Mirror neuron system in brain

2. Reward Value

- Mutually beneficial social exchanges
- Signals appreciation and shared understanding
- Evokes pleasure (endorphins released, reward-circuit in brain stimulated)

Why is Laughter Good for Us?

Example 2

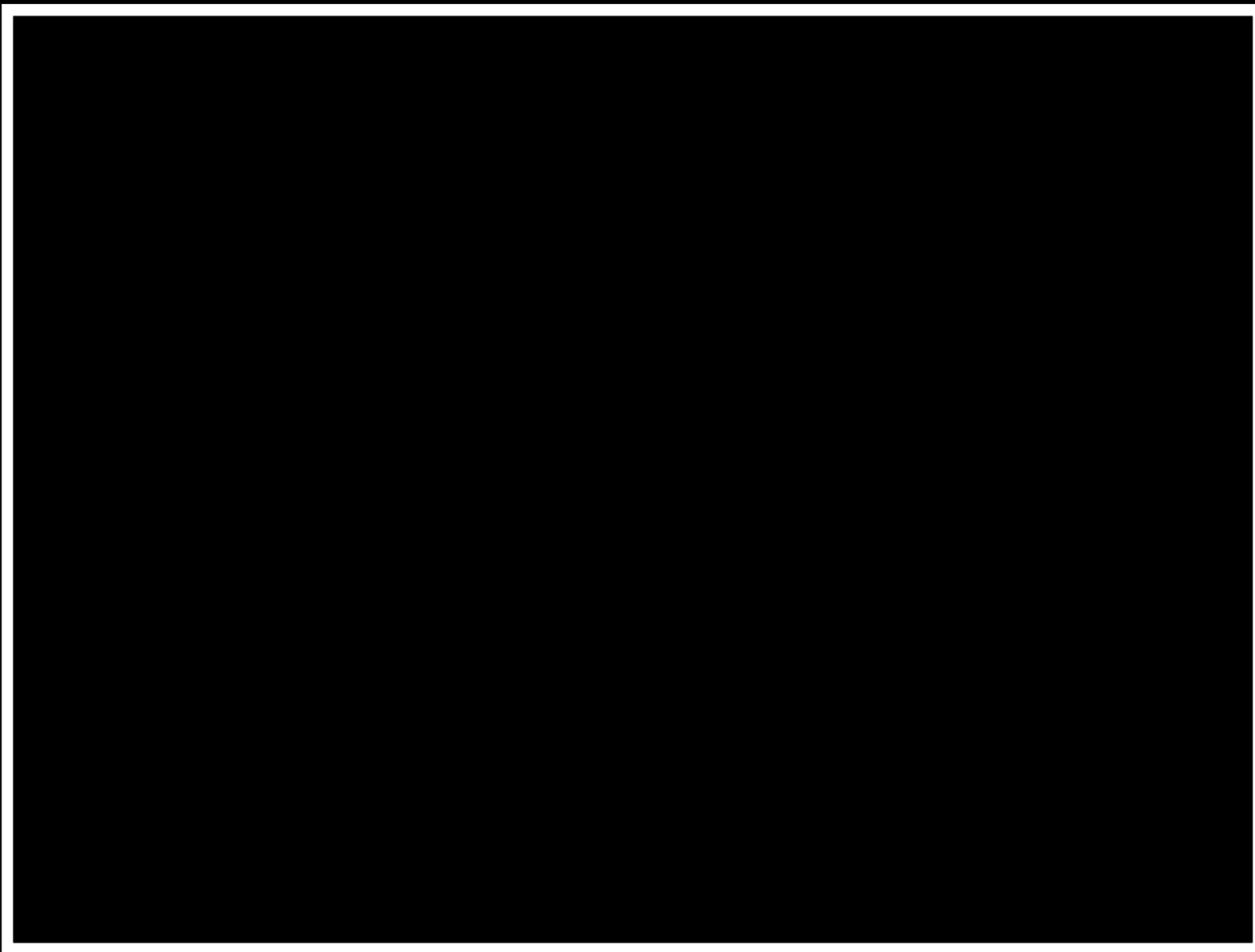
Laughter promotes recovery from negative emotions

Laughter Best Medicine?



Physiological features that make laughter healthy

- Reduces presence of stress hormones
- Decreases muscle tension
- Increases positive immune markers
- In diabetics, less increase in blood sugar after a meal

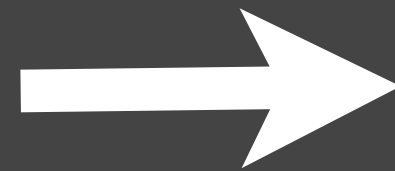


Laughter “Undoing Hypothesis”

EXPERIMENTAL PROCEDURE



PART I:
Fear Film “Ledge”



PART II:
Amusing Film
LAUGHTER

EMOTION MEASUREMENTS



Physiology

Laughing at Death

Laughter following bereavement predicts better outcomes

(1) 45 Adults: Death of Spouse in Past 6 months

- Question: Does laughter promote healing?

(2) Interview with Spouses

- “Tell me about your relationship with your deceased partner.”
- 6 minutes to share narrative

(3) Coded expressions of laughter

- Laughter predicts reduced grief at 14 & 25 mos. post-loss



Roadmap

Course Logistics

Laughter

Crying

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Take-Away Qs & Expert Interview

Exam: Grade Distribution & Hand Back



Boys Don't Cry

The Cure



The Crying Game

Boy George





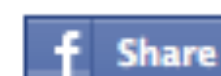
U.S. POLITICS

CHANGE TEXT SIZE - +

10 Politicians Who Turned on the Tears in Public From Obama to Muskie

Nov 10, 2012 4:45 AM EST

President Obama cried this week while thanking campaign workers in Chicago. See John Boehner, Hillary Clinton, Newt Gingrich, and others get misty.



10



27



16



Barack Obama

Obama Cries In Final Speech - Last C

Share

More info



RELATED VIDEO



What's Wrong With The Republican Party?

Where did they go wrong?...

STORIES WE LIKE

ROLLING STONE

The Obama Campaign's Real Heroes

YOUR TANGO

Jessica Biel's Sexy Reason She Loves Life With Justin Timberlake

BUZZFEED

28 Reasons Why Kids Ruin Christmas

HUFFINGTON POST POLITICS



Theories of crying

*“It is a relief to weep;
grief is satisfied and carried off by
tears.”*

Ovid (43 BC-17 AD)

1. Popular Articles: Crying is healthy

- Analysis of 140 years of popular articles about crying
- 94% suggest crying is beneficial
- Suppressing tears is deleterious to body and mind

2. Cross-cultural study: Crying is cathartic

- Survey spanning 30 countries
- People report feeling better after crying

3. Psychodynamic Theories

- Blocking tears --> Causes Psychological Damage
- Encourage clients to cry in therapy sessions

4. Biochemical Theories

- Tears rid body of harmful toxins

Is Crying Really Healthy?



Where's the
Evidence?

Contextual Factors

Crying Depends on Context

Example 1

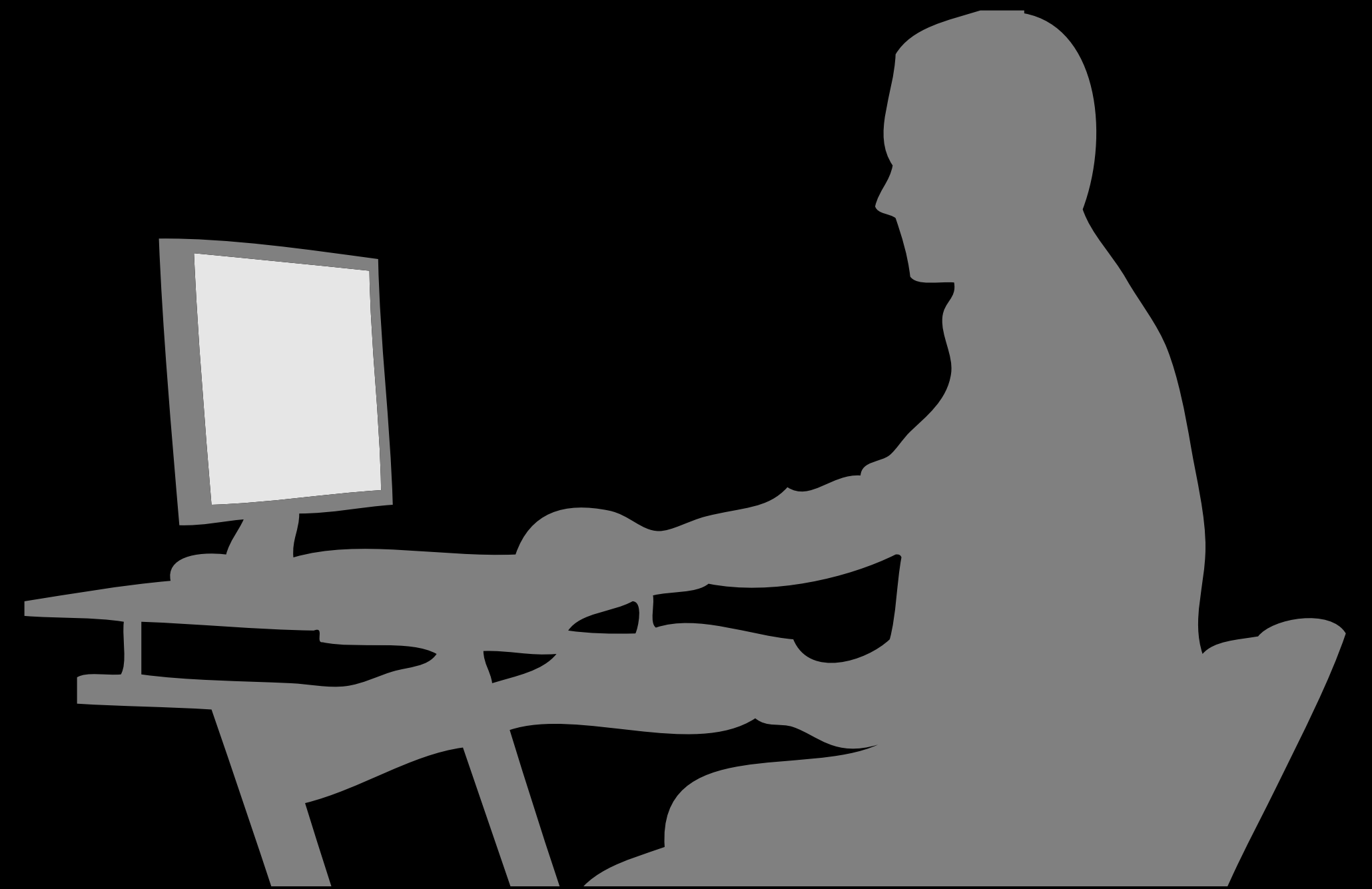
Depends on how you measure crying



SURVEYS

Measure benefits of crying retrospectively.

60-70% report crying as cathartic
(less tension, more relief).



LABORATORY STUDIES

Measure right after crying (1-2 min).

Report feeling worse (sad) and more
physiologically aroused when watching
sad films.

Crying Depends on Context

Example 2

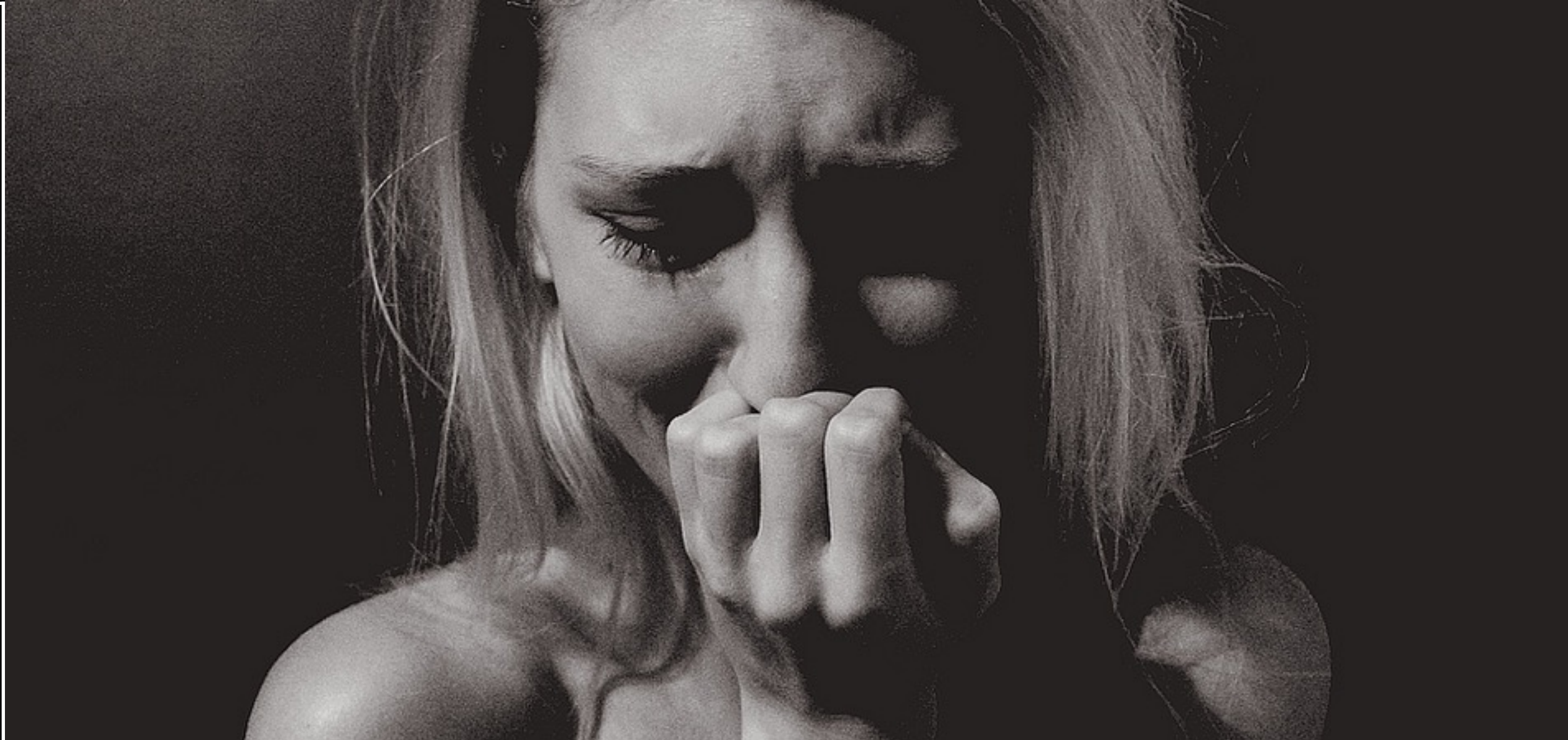
Depends on social context



AROUND OTHERS

- Crying signals others to provide solace and comfort.

- When around others, benefits may come from social support of others comforting the crier.



ALONE

- No one to provide comfort.

- Crying alone does not reap positive health benefits.

Crying Depends on Context

Example 3

Depends on personality and gender of person



PERSONALITY

People who score higher in neuroticism (trait involving emotional instability) have more frequent crying episodes.



GENDER

Adult women cry more frequently and intensely than men

Crying Depends on Context

Example 4

Depends on emotional state of person

Depression

People in a depressed mood experience less improvement in mood after crying

Anxiety

Anxious people less likely to feel better after crying

Tears of Joy?

Restore emotional equilibrium after intense positive emotional experience



More Studies and Data are Needed!

Roadmap

Course Logistics

Laughter

Crying

Touch

Take-Away Qs & Expert Interview



I Wanna Hold Your Hand

The Beatles

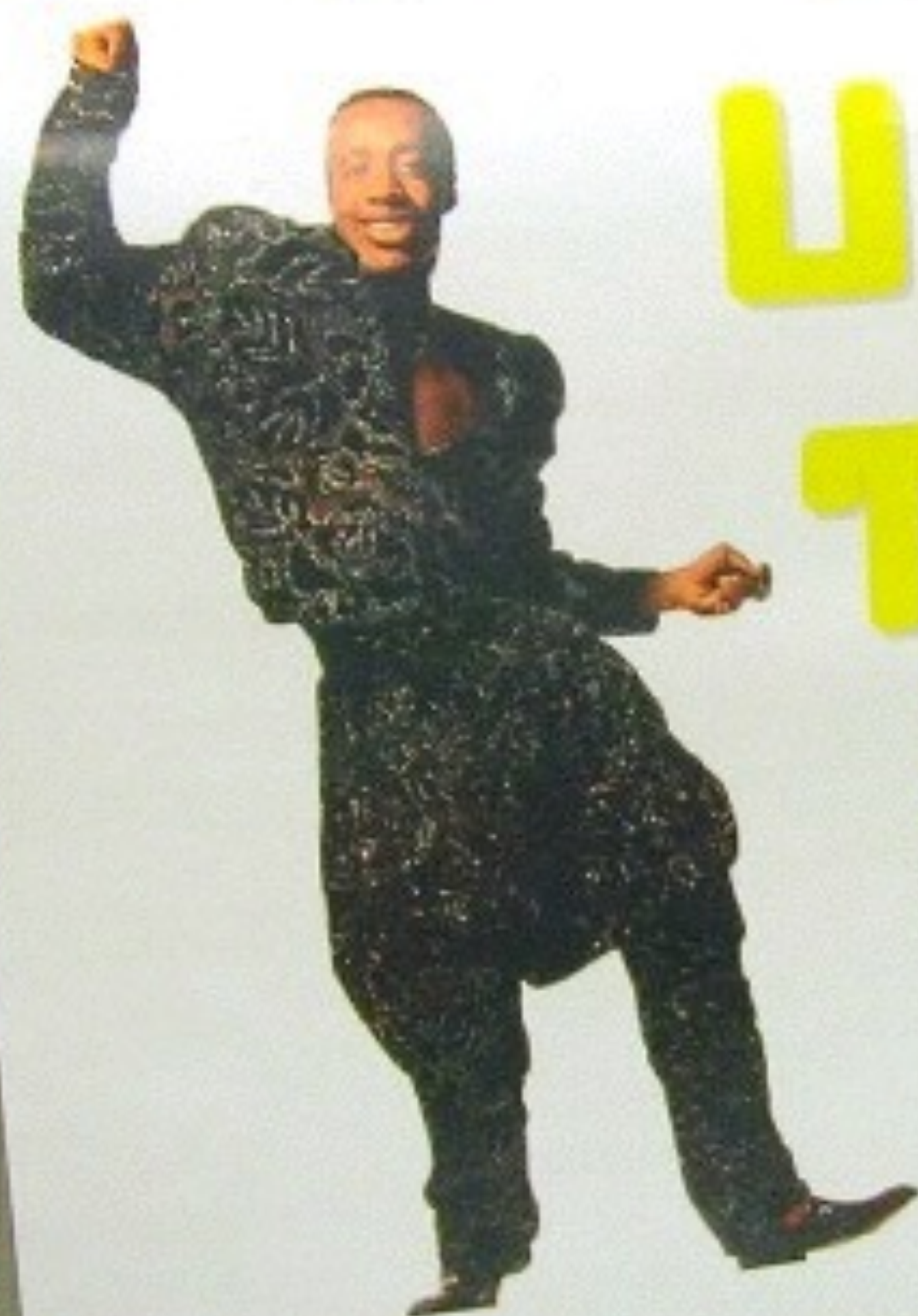


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U Can't Touch This

- MC Hammer

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211

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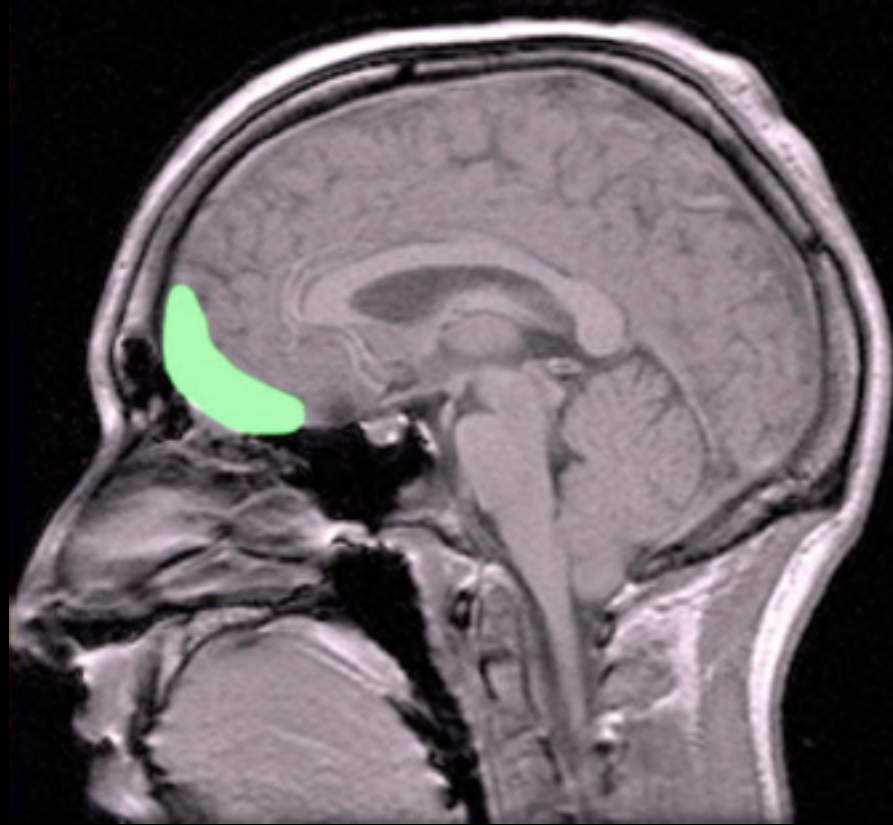
Touch Reflection Exercise

- What sensations?
- What kinds of thoughts going through your mind?
- What expressions on your face?
- Any changes in your tension, stress, etc?



Rewarding & Soothing Function

Touch is Rewarding



Orbitofrontal Cortex (OFC)

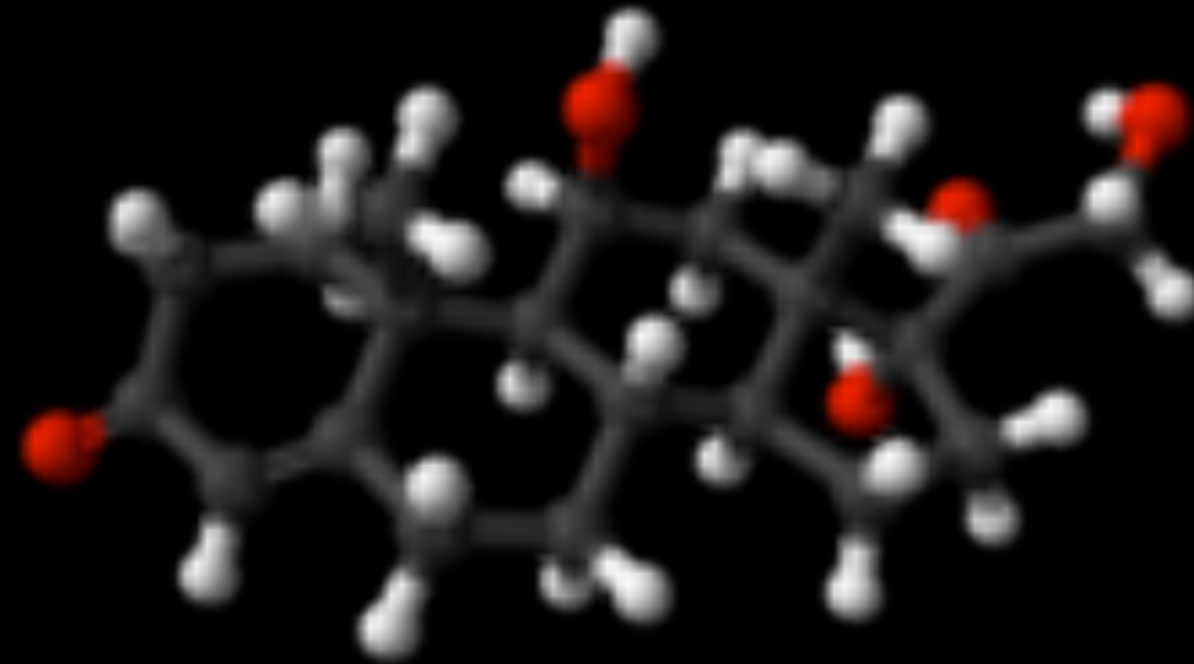
OFC associated with encoding reward value
Associated with self-reported pleasantness



Touch and OFC

Touching arm with velvety cloth activates OFC

Touch is Soothing



Cortisol

- Aka “stress hormone”
- Associated with increased reports of negative affect & stress



Oxytocin

- Aka “the love hormone”
- Associated with love, trust, and feelings of closeness

15-minute Swedish Massage

- Draw blood while receiving massage
- Associated with increased oxytocin & decreased cortisol

Touch is Soothing



Amygdala

- Located deep within medial-temporal lobes
- Activation in amygdala associated with stress and negative emotional responses

Awaiting Electric Shock in fMRI Scanner

- 16 Married Women
- 3 Conditions: (1) Alone vs. (2) Stranger hand holding vs. (3) Husband hand holding
- Amygdala response:
husband's hand < stranger hand < no hand

Touch is Soothing

Infants: Painful Heel Lance Procedure

- Painful procedure for sampling blood
- Study: (1) Infants held/touched by mother during procedure vs. (2) No touch
- Results: Infants touched cried 62% less, grimaced 65% less, & lower heart rate during procedure

Cooperation

Touch Increases Cooperation

Petition Signing

- Participants asked to sign petition supporting local issue
- Touched: 81% signed
- Not Touched: 55% signed

Cooperation (Robert Kurzban)

- Play prisoner's dilemma game (can cooperate or compete with fellow player)
- Experimenter touched on back (vs. not) before game started
- When touched, more likely to cooperate

Communication of Emotion

The New York Times

Five-Second Touch Can Convey Specific Emotion,
Study Finds



http://www.nytimes.com/2009/08/11/science/11touch.html?_r=0

1st Person Touchee:

Please extend arm under curtain.



2nd Person Toucher:

“Think about how you want to communicate the emotions. The touches can take any form, and last as long as you think they need to. Try to be expressive as possible in your touch.”

Negative:

Anger, Fear,
Disgust, Sadness

Positive

Love, Gratitude,
Awe



What emotion is this person expressing?

To Touchee:

Please select which emotion was being expressed by the touch?

Anger

Fear

Disgust

Love

Sympathy

Gratitude

Embarras

sment

Pride

Envy

etc



Communicate Distinct Emotions

TOUCH COMMUNICATES (6 emotions)

Anger - Hitting or squeezing

Fear - Trembling

Disgust - Pushing and lifting arm

Love - Stroking, finger interlocking

Sympathy - Patting, stroking, rubbing

Gratitude - Hand shake

TOUCH DOES NOT COMMUNICATE

More cognitively complex self-focused emotions

Embarrassment, Envy, Pride

Roadmap

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Experts In Emotion

***EXTRA CREDIT
OPPORTUNITY***

Experts In Emotion Interview

Dr. Jo-Anne Bachorowski

Professor of Psychology
Vanderbilt University

Laughter



Thank You!

Psychology 3131
Professor June Gruber

