

Forgotten Topics Part I: Laughter and Humor



Psychology of Emotions
Lecture 15
Professor David Pizarro

The world's funniest joke

- Dr. Richard Wiseman from the University of Herfordshire, got people to submit jokes on the web.
- 40,000 jokes and 1 million ratings later, he determined what the funniest joke in the world was:

Prepare to laugh...

Two hunters are out in the woods when one of them collapses. He doesn't seem to be breathing and his eyes are glazed. The other guy takes out his phone and calls the emergency services.

He gasps: "My friend is dead! What can I do?" The operator says: "Calm down, I can help. First, let's make sure he's dead."

There is a silence, then a gunshot is heard. Back on the phone, the guy says: "OK, now what?"

The Psychology of Real People

- The things we study most are not necessarily the most prevalent/important/frequent things
- e.g., Social psychologists spend a lot of time and journal space covering things like prejudice/stereotyping, cognitive dissonance, and helping behavior
- But what are the things that we do every day? Across culture, time, location?

Forgotten?

- Sex
- Religion
- Sports
- *Laughter and Humor*

The Ubiquity of Laughter

- Good estimate: We laugh about 17 times a day
- It's pleasurable--we have industries explicitly built around making us laugh.
- Laughing makes us feel *good*

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www.filmratings.com

www.mpa.org

we love us some funny

- *Borat* grossed \$68 million in the first 10 days
- Some of the most popular TV shows of all time are comedies (*I Love Lucy*, *Seinfeld*)
- We watch very very stupid shows and pay to see bad stand-up comedians, all in a hope to make us laugh

So then why...

- Is humor/laughter rarely covered in psychology textbooks?
- Perhaps it's so prevalent that it is easily ignored? (fish don't notice water)
- But human laughter/humor also poses a real mystery...

What is laughter?

- A human universal
 - Starts at about 3.5/4 mos of age.
- “rhythmic, vocalized, expiratory and involuntary actions”
- Automatic physiological reaction to amusing stimuli (or tickling, or nitrous oxide)
- A series of staccato segments about 1/15 of a second each, separated by about 1/5 of a second.
- Vowel-like utterances (e.g., ha-ha or ho-ho)

What is laughter?:

Physiology

- Fifteen facial muscles contract and stimulation of the zygomatic major muscle (the main lifting mechanism of your upper lip) occurs
- In the respiratory system: The epiglottis half-closes the larynx, so that air intake occurs irregularly, making you gasp
- In extreme circumstances, the tear ducts are activated.
- While the mouth is opening and closing and the struggle for oxygen intake continues, the face becomes moist and often red (or purple)

Laughing at a joke: EEG Analysis

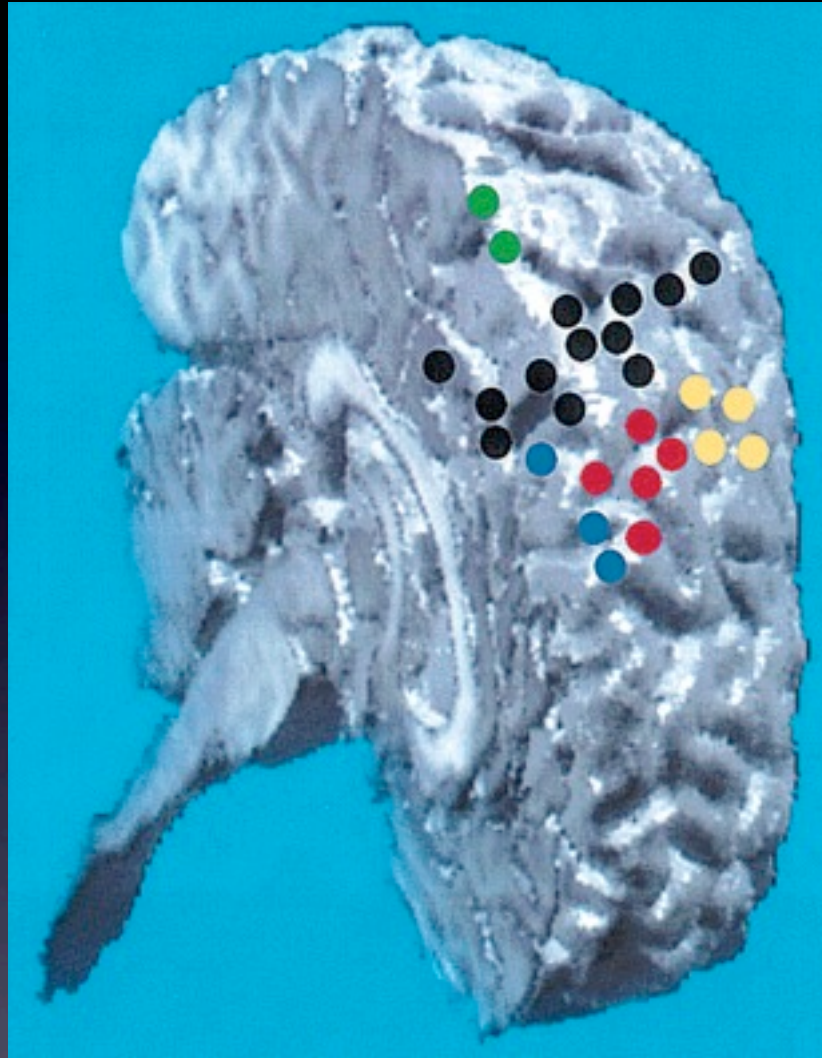
(Peter Derks)

- The left side of the cortex analyzed the words and structure of the joke.
- The frontal lobe then becomes very active.
- The right hemisphere of the cortex showed activity, presumably the intellectual analysis required to "get" the joke.
- Brainwave activity then spread to the sensory processing area of the occipital lobe (the area on the back of the head that contains the cells that process visual signals).
- Stimulation of the motor sections evoked physical responses to the joke.

The Brain's “Funny Bone”

(Fried, Wilson, Macdonald & Behnke, 1998)

- Electrical stimulation was applied to 85 sites on the brain of a 16 year-old girl who had serious seizures
- A small area measuring about 2 cm x 2 cm was identified on the *left superior frontal gyrus* where stimulation consistently produced laughter
- Laughter was accompanied by a sensation of merriment or mirth
- Patient confabulated--gave reasons why she was laughing.



Where “Funny” Resides in the
Brain (the red dots)

Laughter is rewarding...

- Laughter also appears to be regulated by the same reward-circuit that makes us feel good when we perform activities.
- Endorphins are released during laughter, just like after sex and eating

The Best Medicine?

- Laughter has many physiological features that make it healthy for us.
 - Reduces the presence of stress hormones
 - Decreases muscle tension
 - Increases presence of positive immune markers
 - In diabetics, less increase in blood sugar after a meal.
 - Laughter is incongruent with many chronic negative emotional states (anger and depression) that are bad for health.

So...Why do we laugh?

- Laughter is **social** and **communicative**
 - We rarely laugh alone
 - People are 30 times more likely to laugh in social setting (even with nitrous oxide. But TV is “parasocial”)
 - May help social bonding
 - Contagious
 - (e.g, laugh tracks, children)
 - Provine suggests that humans have a "detector" that responds to laughter by triggering other neural circuits in the brain, which, in turn, generates more laughter.



So what makes us laugh?

- Incongruity/Surprise Theories:
 - “We laugh when there is incongruity between what we expect and what actually happens, unless the outcome is frightening”
- BUT:
 - -- doesn't explain **why** incongruity causes laughter
 - -- most incongruity **doesn't** cause laughter
 - -- a lot of laughter **isn't** caused by incongruity

Other possibilities...

- Surprise and tension-release
 - Philosopher John Morreall:
 - human laughter may have its biological origins as a kind of shared expression of relief at the passing of danger
 - We laugh when something builds up tension then relieves it
- But this certainly doesn't explain most of the things we find funny...
- But isn't this an empirical question? Can we simply record what people find to be funny?

ROBERT R. PROVINE
LAUGHTER
A SCIENTIFIC INVESTIGATION



What would an alien visiting earth do to figure out what humor is?

Provine's Naturalistic Studies

- Provine and RA's went to local malls and city sidewalks and recorded what happened *just before* people laughed.
- Over a **10-year period** they studied over 2,000 cases of naturally occurring laughter.
- Women laugh more than men
 - UNLESS men are listening to a woman
- The talker laughs 50% more than the listener
- MOST laughter doesn't follow jokes...

Typical prelaugh comments (=90%)

- I'll see you guys later
- Look, it's Andre!
- Are you sure?
- I know!
- How are you?
- I try to lead a normal life
- Does anyone have a rubber band?
- It wasn't you?
- We can handle this

“Humorous” prelaugh comments (=10%)

- Poor boy looks just like his father
- You smell like you’ve had a good workout
- Did you find that in your nose? [reference to dormitory food]
- He has a job holding back skin in the operating room

Evolutionary Roots of Laughter?

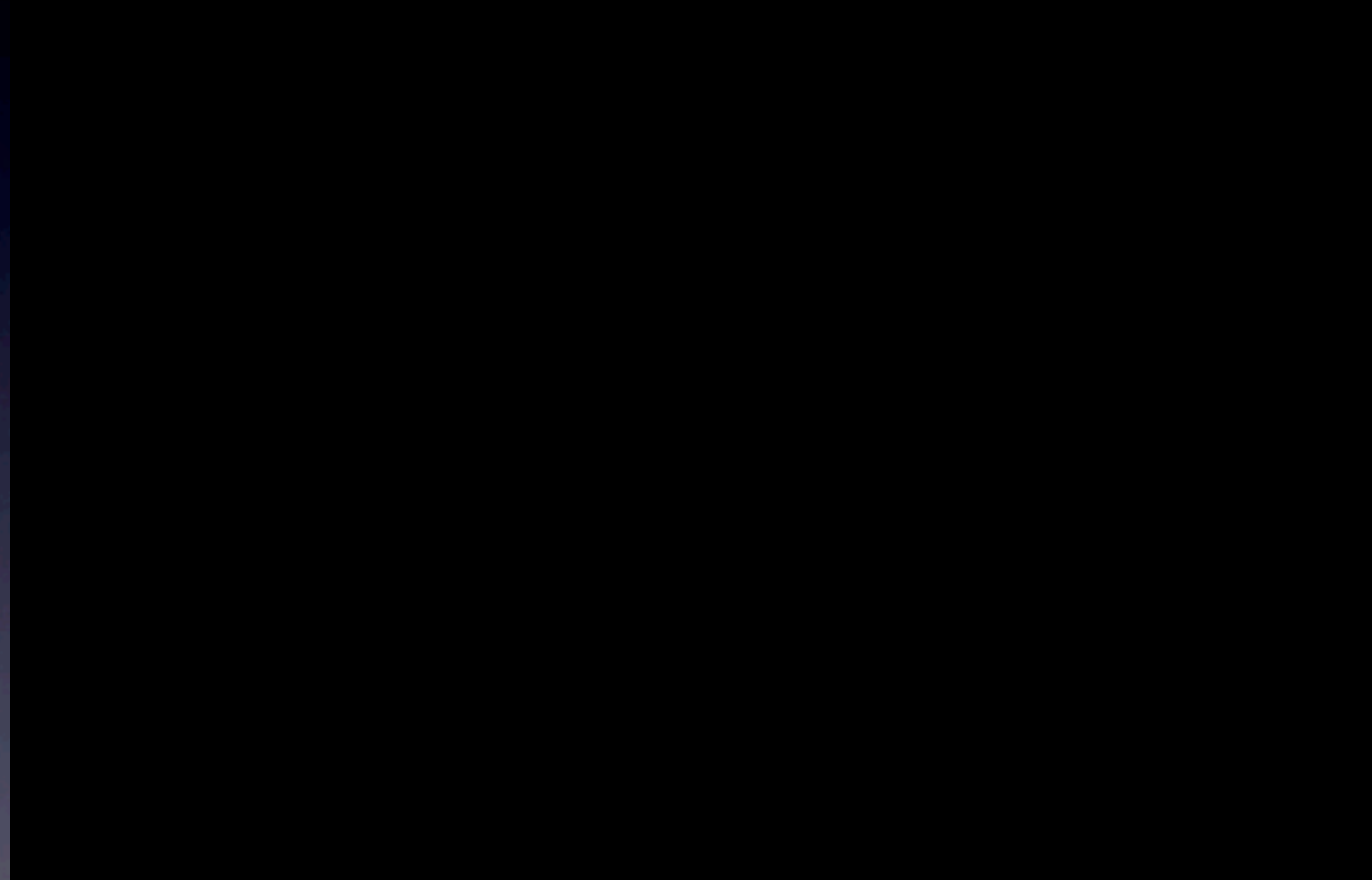


“Man is the only animal who laughs”

Henri Bergson

Panksepp's Rats

- Rats chirp while they play, again in a way that resembles our giggles.
- When rats are playfully tickled, they chirp and bond socially with their human tickler.
- Rats seem to like it, seeking to be tickled more.
- “Chirpy” rats also prefer to hang out with other chirpers



<http://www.youtube.com/watch?v=qObkITM5I2Y>

But we're more likely to
find answers in other
primates...



More likely to find answers in other primates

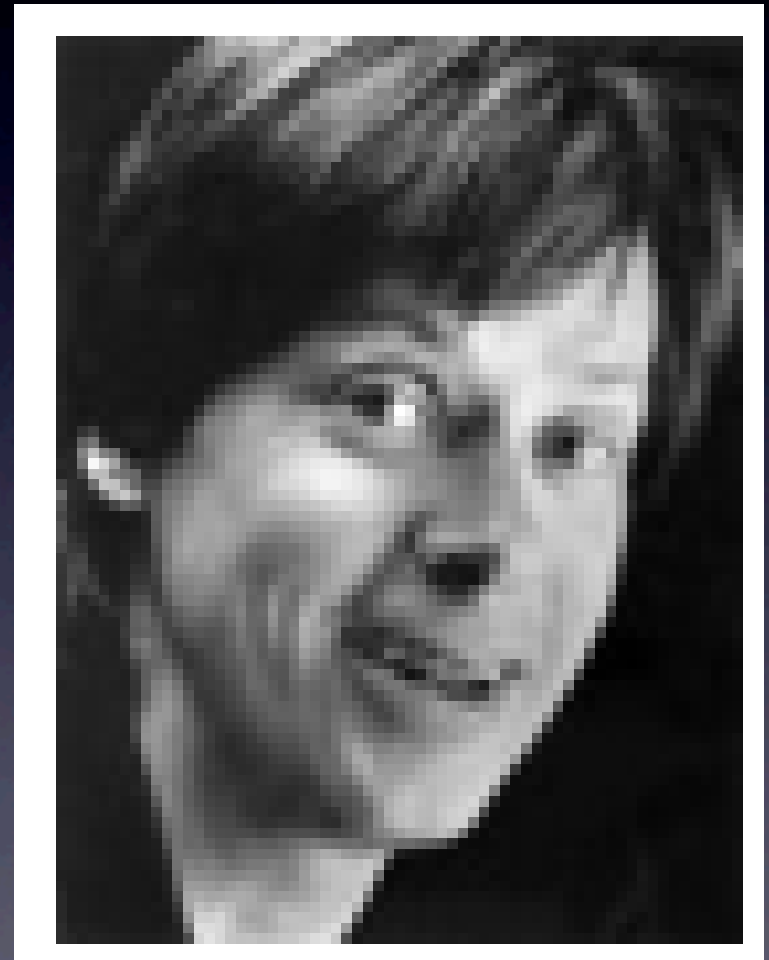
- Laughter is shared with other primates
- When chimps play and chase each other they produce a sound similar to human laughter
 - laughing-like sounds in monkeys when they attack a common enemy
 - laughing-like sounds in chimpanzees when they tickle each other

Laughter as a signal of mock aggression and collective aggression?

- Mock aggression
 - (tickling, teasing, insults, kidding around)
- Collective aggression
 - (mob assault, executions)
 - social bonding (Plato), often against a common enemy
- Even much of our humor is just MEAN

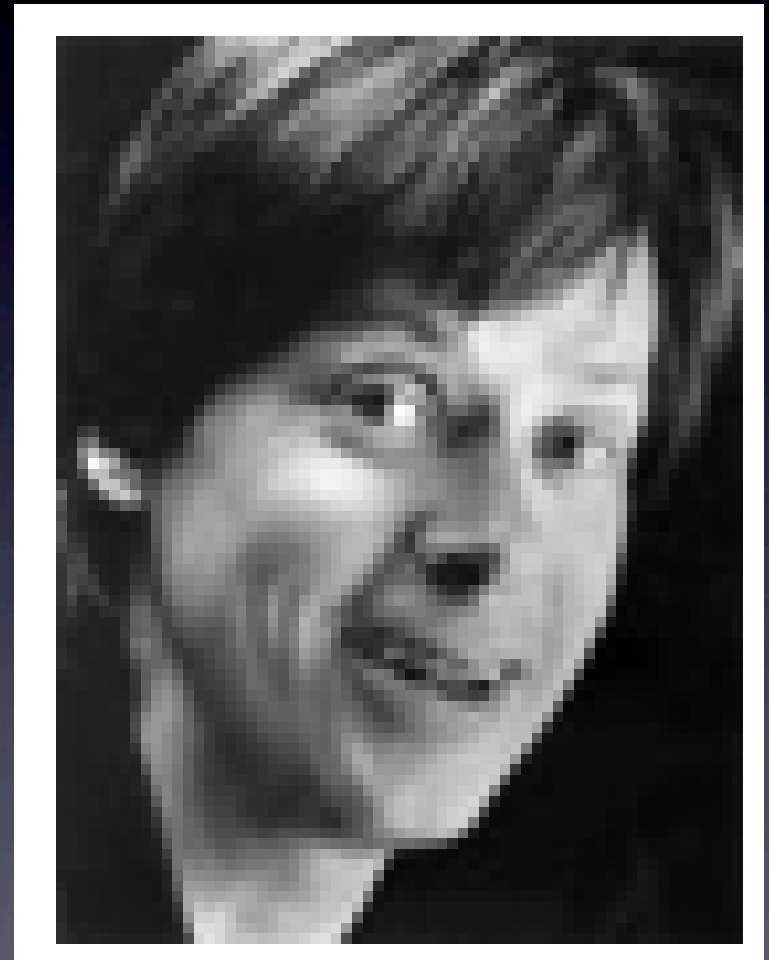
Comedians on humor

The most important humor truth of all is that to really see the humor in a situation, you have to have perspective.
“Perspective” is derived from two ancient Greek words: ...



Comedians on humor

“Persp” meaning
“something bad that
happens to somebody
else” and “ective”
meaning “ideally
someone like Donald
Trump”

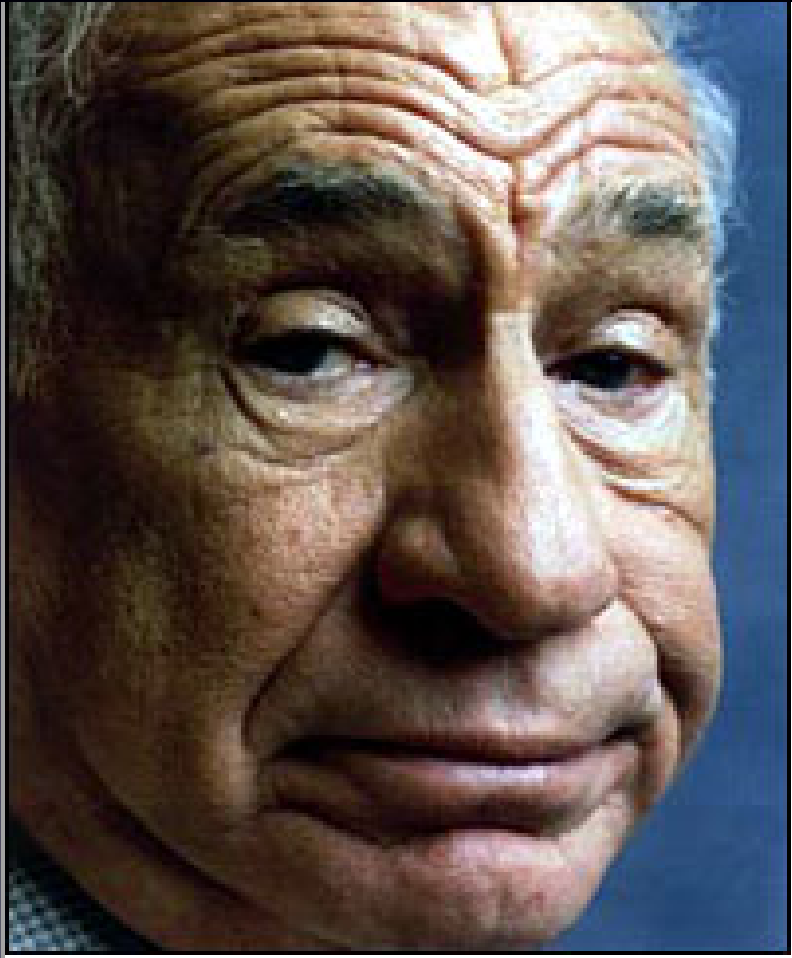


Mel Brooks



“Tragedy is when I cut my
finger.”

Mel Brooks



“Comedy is when you fall
into an open sewer and
die.”

So what are the Ingredients of humor?

- A target, a person or institution, who experiences some harm. It can be an enemy, but also a friend, or even yourself
- The harm should not be so serious that it elicits strong negative emotions such as fear, grief, or pity
- The harm is often of a social nature, sometimes involving sex or scatology--banana peel, pie in face, pants falling down, etc.
- Some level of surprise involved

Still unsatisfying...

- Perhaps you can study laughter and humor and make some discoveries
- ANY theory of humor though, must explain to ME PERSONALLY
- Why people think that farts are SOOOOOO funny.