

YOU'D HAVE TO LAUGH

By

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Question: "What do you give the man who has everything?"

Answer: "Antibiotics".

This joke was included in a battery of jokes used by researchers Vinod Goel and Raymond Dolan to tickle the funny bones of 14 volunteers while their brains were scanned using a technique called functional magnetic resonance imaging. One aim of the research was to identify which parts of the brain process two types of jokes – phonological jokes (puns – related to sounds) and semantic jokes (related to meanings of words). The antibiotics joke is semantic. One of the phonological jokes used was –

Question: "Why did the golfer wear two pairs of pants?" Answer: "He got a hole in one".

The work of Goel and Dolan is published in *Nature Neuroscience*, Vol. 4, 237-238, (2001).

The research found that semantic jokes are processed by areas of the brain (bilateral posterior, inferior temporal lobes) involved in the semantic processing of language. Phonological jokes are processed in areas of the brain known to be involved in speech production (left inferior pre-frontal cortex and insula). However, it was further noted that both types of joke also activate the median ventral pre-frontal cortex, an area of the brain known to represent and control reward-related behaviour. The extent of activation of this region also correlated positively with the volunteers' ratings of the funniness of the jokes. It seems that the brain feels rewarded by finding something funny and this lends credence to the idea that laughter is therapeutic.

In contrast, no increased activity was seen in these various brain regions when the jokes were told with the punch lines changed to logical statements such as: "Why did the golfer wear two pairs of pants? ... It was a very cold day".

Just think for a minute about the structure of a typical joke. The set-up part of the joke focuses your mind in one direction. Then the punch line suddenly snaps you into another direction. Goel and Dolan were particularly interested in studying this lateral thinking shift that takes place in the brain's processing of humour. The research showed that the functional brain anatomy correlated with the lateral shift is different than previously thought. Overall, this research contributes significantly to our understanding of brain organisation and function.

When we find something funny we spontaneously laugh. Aristotle claimed that people are the only animals that laugh but we now know that laugh-like behaviour is common in other primate species too. Chimpanzees make rhythmic noises when playing and, although the noises sound more like pants than chuckles, sound analysis suggests that the chimps are vocalising their 'ho-hos' while inhaling as well as exhaling. People vocalise laughter only during exhalation.

Laughter is contagious. The world record example of this characteristic has to be Kashasha, a small village near lake Victoria. On January 30, 1962, three girls at a missionary school began to giggle uncontrollably. Their classmates joined in, some having laughing bouts that lasted for hours, making studies impossible. Laughing spread over the following weeks until the school had to be closed on March 18 with two-thirds of the girls convulsed. The epidemic spread far beyond the school. Laughter rang out from the houses and public gatherings were hilarious affairs. The matter was serious. Quarantine was imposed and

laughing villagers were not allowed to leave home even on serious business. At the peak of the laughing epidemic, over 1,000 people were afflicted and over 14 schools were closed. The area was not declared to be laughter-free until June 1964.

My most vivid personal memory of contagious laughter is of the sharpest and most cutting theatre review I ever heard. It happened when I was a schoolboy. There were two boys' secondary schools in our town. The neighbouring school to mine was visited by an actor of some note who had agreed to perform Shakespearian recitations for the boys. Our school was invited to send over about 15 boys to also enjoy this treat. I was one of the boys selected. The performance began at 3.00 p.m. The performance was stagey and heavy and made no concessions to the fact that we were rough and ready schoolboys. We applauded politely after each recitation and the actor warmed to his task. And then it happened. In the middle of an emotional soliloquy he took a long pause for effect in the middle of which we were treated to a low, rumbling sound of breaking wind from one of the lads at the back. Someone ventured a nervous laugh. And that was it – immediately we were all in unstoppable convulsions. The performance of course had to stop. When we got back to our own school the word spread like wildfire and pretty soon the whole school was laughing.

And now, I will treat you to a selection of the jokes used by Goel and Dolan in their recent study, starting with pokes at 2 professions.

Question: "Why don't sharks bite lawyers?"

Answer: "Professional courtesy".

Question: "What do engineers use for birth control?"

Answer: "Their personalities."

Question: "Where can you find a turtle with no legs?"

Answer: "Right where you left him".

Question: "If you have spots before your eyes, shouldn't you see a doctor?"

Answer: "No, only spots".

Question: "Which side of a dog usually has the most hair?"

Answer: "The outside".

Question: "What did the grape say when he was sat on?"

Answer: "Nothing, he just let out a little whine".

I will leave you with one final joke of my own. A science-columnist walked into a bar with a chicken under his arm. "Hey" said the barman, "where did you get him?". "Down at the market" said the chicken.

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