

Q&A | IDEAS

Why our brains make us laugh

From a Tufts term paper to a new book on the cognitive origins of humor

By **Chris Berdik** | NOVEMBER 20, 2011

He who laughs last usually has to have the joke explained. But then why bother? After all, nothing kills humor faster than analysis. That sentiment has long dogged humor studies, a field often disparaged as an affront, even an existential threat, to its subject matter. It's just a joke: Don't overthink it.

But what if humor (or mirth, in research speak) is intimately linked to thinking? What if we'd have trouble thinking without it? That's the argument of "Inside Jokes: Using Humor to Reverse-Engineer the Mind" (MIT Press, 2011).

Coauthored by three scholars, the book had an unusual genesis: It began in 2004 as an undergraduate term paper. First author Matthew Hurley, a native of Reading, Mass., had enrolled at Tufts University after a few years of travel and work as a computer programmer. As part of a self-designed major in cognitive science, Hurley took a course on humor taught by the psychologist Reginald Adams Jr. It struck Hurley that most humor theories focused on why we find certain things funny. But, he wondered, why do



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Co-author Matthew Hurley of "Inside Jokes: Using Humor to Reverse-Engineer the Mind"

humans find *anything* funny? Why do we have a sense of humor in the first place?

Hurley, now a doctoral student in cognitive science at Indiana University, offered his own theory, first in a final paper and then as a thesis guided by the prolific philosopher of mind Daniel Dennett. Encouraged to revise and publish his theory, Hurley solicited Dennett and Adams as coauthors on what became this book.

Hurley and his coauthors begin from the idea that our brains make sense of our daily lives via a never ending series of assumptions, based on sparse, incomplete information. All these best guesses simplify our world, give us critical insights into the minds of others, and streamline our decisions. But mistakes are inevitable, and even a small faulty assumption can open the door to bigger and costlier mistakes.

Enter mirth, a little pulse of reward the brain gives itself for seeking out and correcting our mistaken assumptions. A sense of humor is the lure that keeps our brains alert for the gaps between our quick-fire assumptions and reality. As “Inside Jokes” argues, much of what we consider comedy takes advantage of this cognitive reflex, much as McDonald’s taps our evolved taste for high-energy food.

To learn more, we crossed the road, walked into a bar, and tapped Hurley for a serious talk about funniness. Hurley spoke to Ideas by phone from his home.

Ideas: What’s so funny about how we think?

Hurley: As Dan Dennett puts it, our brains are Chevy engines running Maserati software. We’re a species that thinks prodigiously. In every situation, the human brain needs to constantly anticipate the future by making assumptions about the world that unfold at breakneck speed.

We do a quick and dirty assessment and make a lot of best guesses. But this fills our mental spaces with junk, small mistakes that could trigger a cascade of errors if they go undetected, leading us to waste a lot of energy and resources and, in the worst case, inviting disaster.

Finding and disabling these errors is a critical task. But it’s a resource-hungry job that

has to compete with everything else our brains are doing. We think the pleasure of humor, the emotion of mirth, is the brain's reward for discovering its mistaken inferences. Basically, the brain has to bribe itself to do this important work.

Ideas: Can you give an example?

Hurley: Sure. The basic, most simple humor is first-person humor. It's when you catch yourself in an error, like looking for the glasses that happen to be on the top of your head. You've made an assumption about the state of the world, and you're behaving based on that assumption, but that assumption doesn't hold at all, and you get a little chuckle.

But we've become complex social creatures, and as we grow, humor takes on all the aspects of our complex social life. For instance, here's a joke we tell in our book: A man and a woman who have never met before find themselves sharing a sleeping car on an overnight train. After some initial embarrassment, they both go to sleep in their bunksBut in the middle of the night, the woman leans over and says to the man: "I'm sorry, but I'm a little cold. Could I trouble you to get me another blanket?"

"I've got a better idea," the man replies with a glint in his eye. "Just for tonight, let's pretend we're married."

"OK, why not," giggles the woman.

"Great," the man says. "Get your own damn blanket!"

The woman and the audience both make the same mistake by assuming something about what the man said. Punch lines make us aware of these automatic covert inferences. Humor rewards the discovery of our mistakes.

Ideas: But joking aside, couldn't discovering these mistakes also be shameful, discouraging, or even terrifying?

Hurley: Well, anytime you find yourself making an error, it's a downer initially. The initial emotional response to any discovery of error in your understanding of the world has got to be "uh oh." But in humor, the brain doesn't just discover a false inference, it

almost simultaneously recovers and corrects itself. It gets the joke. The pleasure of the punch line is enhanced by that split second of negativity just before the resolution.

Ideas: Would we be doomed without humor?

Hurley: We claim in the book that humor is a requirement for thinking beings like us. But that's probably too severe a claim. The ability to detect humor certainly improves your chances at getting by in this world. It reduces the mistakes we make and act upon.

But it is probably an overstatement to say, as we do in the book, that the world would not forgive the humorless person. The more proper claim would be just that somebody with a sense of humor would be a lot more fit as a thinker.

Ideas: If a sense of humor is part of our basic, human thinking machinery, then why can't we agree about what's funny?

Hurley: What's universal about humor is the process, not the content. Everybody faces every situation with different beliefs, knowledge, and understandings about the world. And different understandings lead to different assumptions and therefore different false assumptions.

Mirth is agnostic of the content, because it's just the reward for the discovery of a false assumption, and that process doesn't require particular content. It can happen with any content in the world, which is why we have so many jokes out there. When different minds bring different content to bear, they find different kinds of mirth. So, in that way, humor is both universal and uniquely personal.

Ideas: Your book isn't comedy, but it is well-stocked with jokes. Did you feel pressure to be funny?

Hurley: Yeah, to some extent, because people might think that if you write a book on humor and it's not funny, then the question is: Do you even know the subject matter?

But if we try too hard to be funny, then there's a chance that we wouldn't be taken

seriously, which is a problem in humor studies generally. Some people believe that humor's not a topic of science, and that it's a subjective feeling and there's nothing more to it. So, we tried to bring a light tone to this book as much as we could without undermining ourselves.

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Chris Berdik is a journalist in Boston. He is writing a book on the science of expectations, forthcoming from Current, an imprint of Penguin.

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