The Dunning-Kruger effect

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An expert in your field, and everyone else's, too

It's not just sitcom dads and bosses—the people who know the
least are often convinced they know the most. And there’s research to prove it. Social psychologists David Dunning and Justin Kruger identified this all-too-frequent cognitive bias as “illusory superiority.”

To investigate this phenomenon, now known as the Dunning-Kruger effect, they designed some clever experiments. In one study, they asked undergraduate students a series of questions about grammar, logic, and jokes, and then asked each student to estimate their score overall, as well as their relative rank compared to the other students. Those who scored in the bottom quartile estimated that they had performed better than two-thirds of the other students.

Before you roll your eyes and protest that of course stupid people are too stupid to realize it, let this sink in: While Dunning and Kruger did find a link between obnoxious overconfidence and ignorance, the effect is universal. We all have blind spots of unearned confidence, and it can be an important (if embarrassing) part of the learning process.

As legions of armchair epidemiologists spring up in the midst of a global pandemic, and celebrities with millions of followers on social media, but no relevant medical training repeat dubious information, the Dunning-Kruger effect seems less like a punchline. So how do we know what we know—and what we don’t?

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BY THE DIGITS

90%: Share of participants, in a study at Cornell University, who claimed to be familiar with at least one of nine made-up concepts or terms

>33%: Share of participants in a recent study who claimed to know more about the causes of autism than doctors or scientists

70%: Share of people who have imposter syndrome—the belief that they don’t deserve their success
AUS$7 million: Estimated cost of the Sydney Opera House, projected to be opened in 1963, a classic example of planning fallacy

AUS$102 million: Actual cost of the project when it opened in 1973

23%: Share of recently bankrupt respondents to the 2012 National Financial Capability Study who gave themselves the highest possible rating on financial knowledge

EXPLAIN IT LIKE I'M 5!

It's about ignorance, not intelligence

The Dunning-Kruger effect is often oversimplified and misunderstood. It’s more competency and skills than inherent ability or intelligence, and it’s a common part of the learning process.

“A whole battery of studies conducted by myself and others have confirmed that people who don’t know much about a given set of cognitive, technical, or social skills tend to grossly overestimate their prowess and performance, whether it’s grammar, emotional intelligence, logical reasoning, firearm care and safety, debating, or financial knowledge,” Dunning writes in Pacific Standard. “College students who hand in exams that will earn them Ds and Fs tend to
Students who hand in exams that will earn them Ds and Fs tend to think their efforts will be worthy of far higher grades; low-performing chess players, bridge players, and medical students, and elderly people applying for a renewed driver’s license, similarly overestimate their competence by a long shot."

Each of us, when learning something new or diving into unknown subject matter, is likely to believe, at some point in the process, that we are experts—when we’ve just begun to scratch the surface of what is knowable.

MEMBERSHIP

Business after the coronavirus

Charting a new path. Plunging consumer demand and the prospect of an extremely sharp and possibly very protracted global recession threaten to put countless startups out of business. Quartz reviewed advice from VCs, and drew on some lessons of past crises, to help startups respond to the coronavirus pandemic.
FUN FACT!

According to David Dunning, feeling mortified by earlier versions of yourself is a sign of personal growth.

THIS ONE WEIRD TRICK!

The Dunning-Kruger effect, but make it business

In 1969, Canadian educator Laurence J. Peter took aim at the “ever-present, pestiferous nuisance” that nearly everyone has experienced first-hand: incompetent managers.

“The Peter principle,” the eponymous scholar explained, happens when any employee in a hierarchy rises to the level of his or her own incompetence. Organizations, Peter and his co-author Raymond Hull argued, tend to reward rank-and-file high performers with promotions to management, even though the roles demand utterly different skills.

A recent working paper for the US National Bureau of Economic Research looked at the career paths of more than 53,000 salespeople at 214 US companies between 2005 and 2011. Researchers found those who closed twice as many deals as the average salesperson were promoted to management positions about 14% more often than their peers.
But the better the salesperson, the worse the manager: Sales declined an average of 7.5% on teams led by former wheelers and dealers. Meanwhile, sales rose under managers who are meh at selling things themselves.

Reuters/Damir Sagolj

POP QUIZ
The research that established the Dunning–Kruger effect was inspired by which inept criminal?

A burglar who left his passport at the scene of a crime

An embezzler who bragged to his boss about his crime at happy hour

A kidnapper who used a personalized letterhead for a ransom note

A bank robber who thought lemon juice would make him invisible to security cameras

If your inbox doesn’t support this quiz, find the solution at bottom of email.

Have a friend who would enjoy our Obsession with The Dunning-Kruger effect?

https://qz.com/email/quartz-obsession/1824679?referred_by=[%email%]

Forward link to a friend
IN CONTEXT

Scaling Mount Stupid

If you’ve seen the meme Mount Stupid, a chart that approximates the learning curve, you may have thought that it came out of research from the Dunning-Kruger effect. Some images are even labeled as though Mount Stupid was designed by Dunning and Kruger.

They did not. Dunning, though, intrigued by the ubiquity of the image, designed an experiment designed to test its theory. He found that its trajectory, an initial quick rise in knowledge to the top of Mount Stupid where you think you’ve got it all figured out, then a steep fall and gradual rise to actual mastery, was relatively accurate.

QUOTABLE

“An ignorant mind is precisely not a spotless, empty vessel, but one that’s filled with the clutter of irrelevant or misleading life experiences, theories, facts, intuitions, strategies, algorithms, heuristics, metaphors, and hunches that regrettably have the look and feel of useful and accurate knowledge.”

—David Dunning, writing in Pacific Standard

DIY

When you know what you don't know, ya know?

The flip-side of the Dunning-Kruger effect is that highly intelligent people are all too aware of their shortcomings, and may censor
themselves needlessly. Many psychologists see this as an important factor in imposter syndrome.

“There is evidence to suggest that imposter syndrome correlates with success, and that those who don’t suffer imposter symptom are more likely to be the real frauds,” writes Quartz reporter, Olivia Goldhill. “People with imposter syndrome tend to be perfectionists, which means they’re likely to spend hours working overtime to make sure they excel in every single field.”

Think that might describe you? Take this test to see how you rank on the imposter syndrome scale.

TWEETED

Armchair expert

Guy Who Cheated Off Your Biology Homework in High School Has A Lot To Say About The Coronavirus

LISTEN TO THIS!

He puts the Dunning in Dunning-Kruger
The Dunning-Kruger effect

Barry Ritholtz interviews David Dunning about the origins of the Dunning-Kruger effect study, overconfidence, misinformation, and many other topics for the Bloomberg podcast Masters in Business.

TAKE ME DOWN THIS 🐰 HOLE!

The philosophy of knowing what we know

If you start thinking about what you don’t know you don’t know, you can quickly descend into the ultimate rabbit hole. Are you sure you’re not dreaming? Hallucinating? Or possibly inside of an experience machine, unaware of the “real” world outside? Even if you are reading these words, how do you know what they mean? How do you know that you know what they mean?

In his Meditations on First Philosophy, the 17th-century thinker René Descartes famously posed these questions. They may seem silly, but if you start really thinking about it, it’s hard to make a solid, unshakeable case that you can be certain about… well, anything.

The very nature of knowledge, and of knowing—where it comes from, how we experience it, the differences between knowledge and belief, truth, and more—is studied in a branch of philosophy, epistemology.

If you want to dip your toe in, try these interviews with Notre Dame philosophers Meghan Sullivan and Robert Audi, this conversation between Washington University’s Roy Sorensen and Brown
University's David Christensen ("the world's scariest epistemologist"), or check out a series of lectures by University of Georgia professor Richard Dien Winfield.

POLL
Which do you notice more often in your workplace?

- The Dunning-Kruger effect
- The Peter Principle
- Imposter Syndrome

✍️ LET'S TALK!
In yesterday's poll about skeuomorphs, 40% of you said you don't have a preference between them and flat design.

✍️ What did you think of today's email?
💡 What should we obsess over next?
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Today's email was written by Annaliese Griffin, Holly Ojalvo, Adam Pasick, and Corinne Purtill, edited by Whet Moser, and produced by Tori Smith.