

## Don't get smart: The curse of knowledge

*Richard Fisher*

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*When it comes to success and happiness, ignorance will get you a long way*

HEY, you, stop reading right now. This article might be bad for you. Log off, kick your feet up and do something mindless instead.

Still here? Perhaps it would change your mind if I tell you that there are many virtues to being ignorant. We all aspire to have the smarts, but it now seems knowing less can sometimes be an asset. It can make you a better teacher, a more perceptive student and a happier person overall. It could even make you a little richer. "Ignorance can be valuable," says Nate Kornell of Williams College in Williamstown, Massachusetts.

An erudite mind could therefore be a dreadful hindrance. You may want to find out why by reading on, but if you come unstuck thanks to the "curse" of this new-found knowledge, don't say I didn't warn you.

The idea that ignorance could sometimes be beneficial can be traced, at least in part, to a used car lot in the US. In the 1980s, some behavioural economists noticed that some car salesmen were misjudging how much money could be made from their vehicles. These sellers knew their cars inside out - all the best bits and all the flaws. They assumed their customers did too, so they priced their cars accordingly. In doing so they misjudged their market. Their customers didn't know about the minor flaws that the dealers decided should depress the price, and would happily have paid more. These salesmen were suffering from a "curse of knowledge", said the economists. A car dealer ignorant of a car's true value could conceivably make more money than his more knowledgeable peers.

Soon, psychologists noticed the effect too. One of the first was Pamela Hinds of Stanford University in California, who found the curse of knowledge in another sales environment - the cellphone store. In one experiment, she asked experienced salespeople to predict how long it would take a novice to learn how to use one of their phones. She found that they grossly underestimated the time needed - it actually took the unskilled people twice as long as the experts predicted. Two other groups were asked the same question - novices and those with a bit of experience with a cellphone. Both gave closer estimates to the actual time ([\*Journal of Experimental Psychology: Applied\*, vol 5, p 205](#)).

Since then the curse of knowledge has been found in all sorts of areas, says psychologist Susan Birch of the University of British Columbia in Vancouver, Canada. One of the more obvious places to see it in action is the classroom. "It's an oxymoron, but ignorance can be a virtue in education," she says. To teach effectively, you need to see things from the naive perspective of the pupil - and the more knowledge you have acquired, the harder it becomes. "Sometimes a less-experienced teacher can be better at pitching the message at the right level," she says.

In fact, almost anytime you are explaining an idea to a less informed person, a dash of ignorance will help you to judge their knowledge and abilities more accurately - from a business presentation to an anecdote in the pub.

Acknowledging your ignorance could make you a better learner in the long term, too. Kornell and colleagues recently showed 25 participants a set of general knowledge questions and answers, and asked them to try to memorise the answers. They tested their knowledge a few minutes later. Next, they staged a more difficult trial: this time, the participants had to answer a set of similar questions, but without seeing the answers beforehand. They performed dismally, which was not surprising considering that many questions were fictional to prevent their prior knowledge playing a role. But they were then given the chance to look at the correct answers before repeating the test.

## **Hidden virtues**

The participants had learned a lot from their mistakes - in fact, they performed much better than in the first test. In other words, highlighting their ignorance by staging a fiendishly difficult test had boosted the students' learning overall. In a different experiment, this enhanced learning effect held even after 38 hours ([\*Journal of Experimental Psychology: Learning, Memory and Cognition\*, vol 35, p 989](#)).

Why is this? Kornell says it may be that the initial attempt to retrieve information prompts your brain to become more actively involved in the learning process, but he does not pretend that he knows for certain.

In fact, throughout our interview, Kornell is very honest about the limits of his knowledge - and more willing to confess his ignorance than some other academics I have interviewed. It turns out that he is taking some of his own advice. Together with Lisa Son of Barnard College in New York, he recently published a paper reviewing the "virtues of ignorance". "We wanted to tie together all the different strands of research," he says. One of their main conclusions is that expertise can make people overestimate the extent of their knowledge ([\*Behavioural Processes\*, vol 83, p 207](#)).

To illustrate what he means, Kornell points to a study in which he and Son staged a trivia quiz for mathematicians and historians. The pair asked these academics 90 questions about other experts in their field. Try two of the questions yourself: is Johannes de Groot a famous mathematician? What about Benoit Thoron? Would you answer yes, no, or don't know?

When asked about mathematicians, those in the same field were more likely to give a definite answer, yes or no. Yet while they might know their differential equations inside out, the mathematicians' confidence in naming members of their field was unfounded. They gave more wrong answers to these questions than the historians, who were more willing to confess their ignorance. But the historians weren't humble when it came to their own field - they made the same blunders over the questions about their peers. "They assumed their knowledge was great, but it wasn't in this case," says Kornell. "Experts should say 'don't know' in their own field of expertise more often."

Are you honest about the limits of your knowledge? How did you answer the mathematician question? De Groot is a Dutch mathematician who died in 1972. Thoron is fictional.

People often display such unfounded confidence, says Kornell. He points to the work of Philip Tetlock of the University of California, Berkeley, who spent two decades monitoring "experts" such as government advisers and TV pundits. He recorded what predictions they made about events in their field of expertise, then checked what actually happened. Tetlock found that [the accuracy of these specialists was terrible](#): sometimes no better than a random guess from a selection of choices, and rarely better than people with just a little knowledge of the affairs the experts specialised in.

So does that mean that the most ignorant people are the best judges of their own abilities? Quite the opposite, says David Dunning of Cornell University in Ithaca, New York - people at this extreme also suffer from unfounded confidence.

He cites the story of an ill-fated bank robber called McArthur Wheeler. One day Wheeler walked into two banks in Pittsburgh in broad daylight and robbed them. He did so in full view of the surveillance cameras, which meant he was easily captured. When police later showed him the tapes, he was incredulous. "But I wore the juice!" he protested. It soon emerged that Wheeler mistakenly believed that rubbing his face with lemon juice made his identity invisible to video cameras.

This bank robber was truly incompetent, that much was clear. But when Dunning read about Wheeler's story in the newspaper, something else occurred to him: perhaps Wheeler's high level of ignorance also prevented him from realising he would make a dreadful bank robber.

### **The bliss of ignorance**

It's just one of the examples that Dunning and his colleague Justin Kruger included in a seminal paper on incompetence in 1999 ([Journal of Personality and Social Psychology, vol 77, p 1121](#)). For instance, they also tested a group of students on their grammar and asked them to rate their performance relative to others. The quarter of them with the worst grammar knowledge were also by far the worst judges of their own talents.

The "Dunning-Kruger effect" has since been found in various other realms: among chess players, medical students, lab technicians and even hunters quizzed on firearm safety. It also turns up in more social abilities like emotional intelligence.

If you think this doesn't apply to you, think again. "Nobody knows everything about everything," says Dunning. "We are more ignorant than we realise." Yet even this cloud has a silver lining, Dunning assures me.

Believing we know more than we actually do is one of several "positive illusions" we hold about ourselves and our true talents, which are essential for our well-being. For instance, Shelley Taylor of the University of California, Los Angeles, has shown that [positive illusions](#) are associated with good mental health, and that people who don't entertain these misconceptions are more likely to be clinically depressed.

In a paper published last month, Dunning argues that this sort of misjudgement of your abilities can also be an energiser that spurs you on to achieve goals you wouldn't attempt otherwise, even unrealistic ones ([Advances in Experimental Social Psychology, vol 44, p247](#)). "The world you think you inhabit is a more benign and less stressful place than the world you actually live in," he says.

He explains that there are usually two stages to any given task: planning and execution. While you are more likely to be successful if you think through the first stage, he says, a fully realistic picture during the second could be a hindrance not a help. Dunning gives the example of a general sending troops into battle, but the same goes for many other settings: whether you're battling an illness or embarking on a difficult academic project, it helps to take a rosier view of life as you plunge into the various challenges they present.

In fact, the thing that you are by far the most ignorant of is the true extent of your own ignorance. Chances are, acquiring this nugget of knowledge won't have done you too much harm. Psychologists agree that learning about the extent of your ignorance and how it affects you is probably for the best.

Still, who knows? By definition, you cannot anticipate an "unknown unknown". That's one thing that it's always a virtue to know.