



With AI, Answers Are Cheap, But Questions Are The Future (<http://www.gereports.com/Ai-Answers-Cheap-Questions-Future/>)

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We're getting reliable, instant answers from machines

thanks to advancements in artificial intelligence. But if knowledge is growing exponentially because of scientific tools, then we should be running out of puzzles. Instead we keep discovering greater unknowns. In the future, questions will be more valuable than answers. Author and *Wired's* "Senior Maverick" Kevin Kelly predicts our biggest questions are yet to come.

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Because of the tools of science, we know vastly more about the universe, our world and ourselves than we did a century ago. Yet the paradox of science is that every answer we uncover yields at least two brand new questions. More tools and more answers lead to ever more questions.

Telescopes, scanners and atom smashers expanded not only what we knew but expanded what we didn't know. Previous discoveries helped us to recently realize that 96 percent of all matter and energy in our universe is outside of our vision. The universe is not made of the atoms and heat we discovered last century; instead it is primarily composed of two unknown entities we call "dark"—dark energy and dark matter.

Let's be honest: "dark" is a euphemism for ignorance. We really have no idea what the bulk of the universe is made of. We find a similar proportion of ignorance if we probe deeply into the cell or the brain. We don't know nothin' relative to what could be known.

Thus, even though our knowledge is expanding exponentially, our questions are expanding exponentially faster. And as mathematicians will tell you, the widening gap between two exponential curves is itself an exponential curve. That gap between questions and answers is our ignorance, and it is growing exponentially.

We have no reason to expect this to reverse in the future. The more disruptive a technology or tool is, the more disruptive the questions it will breed. We can expect future technologies such as artificial intelligence, genetic manipulation and quantum computing (to name a few on the near horizon) to unleash a barrage of  new huge questions we could have never thought to ask before. In fact, it's a safe bet that we have not asked our biggest questions yet.

Today we have rapidly improving technology to answer our questions. We have Siri on our phones and Alexa in our homes. We have Google, Bing and Baidu getting smarter every day. Very soon we'll live in a world where we will be able to ask the cloud, in conversational tones, for free, any question at all. And if that question has a known answer, the machine will explain it to us, again and again if need be.

Yet, while the answer machine can expand instant answers infinitely, our time to form the next question is very limited. There is an asymmetry in the work needed to generate a good question versus the work and speed needed to absorb an answer. While answers become cheap, our questions become valuable. This is the inverse of the situation for the past millennia, when it was easier to ask a question than to answer it. Pablo Picasso brilliantly anticipated this inversion in 1964 when he told the writer William Fifield, "Computers are useless. They only give you answers."

There is great opportunity and a lot of money to be made in developing new technologies to provide instant, cheap, correct answers to the world's billions of questions every minute. Billions of dollars of VC investment are pouring into startups for machine learning and artificial intelligence. Answers are on their way to becoming a commodity. It will not be an exaggeration to say that if you want an answer in the future you will ask a machine. It will deliver a great one for free.

The role of humans, at least for a while, will be to ask questions. To ask a great question will be seen as the mark of an educated person. A great question, ironically, produces not only a good answer, but also more good follow-up questions! Great question creators will be seen, properly, as the engines that generate the new industries, new brands and new possibilities that our restless species can explore. A good question is worth a million good answers. Questioning is simply more powerful than answering. If answers indeed become a commodity, questions become the new wealth.

(Top photo: Courtesy Getty Images.)

This column is based on an excerpt from *The Inevitable* (<http://kk.org/books/the-inevitable/>).



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