

Why do we still have big questions? Information is expanding 10 times faster than any product on this planet – manufactured or natural. According to [Hal Varian](#), an economist at UC Berkeley and a consultant to Google, worldwide information is increasing at 66 percent per year – approaching the rate of [Moore's law](#) – while the most prolific manufactured stuff – paper, let's say, or steel – averages only as much as 7 percent annually. By this rough metric, knowledge is growing exponentially. Indeed, the current pace of discovery is accelerating so rapidly that it seems as if we're headed for that rapture of enlightenment known as the Singularity.

In fact, we may be nearly there. A decade ago, author [John Horgan](#) interviewed prestigious scientists in many fields and concluded in his book *The End of Science* that all the big questions had been answered. The world of science has been roughly mapped out – structure of atoms, nature of light, theories of relativity and evolution, and so on – and all that remains now is to color in the details.

So why do we still have so many unanswered questions? Take the current state of physics: We don't know what 96 percent of the universe is made of. We call it “dark matter,” a euphemism for our ignorance.

Yet it is also clear that we know far more about the universe than we did a century ago, and we have put this understanding to practical use – in consumer goods like GPS receivers and iPods, in medical devices like MRI scanners, and in engineered materials like photovoltaic cells and carbon nanotubes. Our steady and beneficial progress in knowledge comes from steady and beneficial progress in tools and technology. Telescopes, microscopes, fluoroscopes, and oscilloscopes allow us to see in new ways and to know more about the universe.

The paradox of science is that every answer breeds at least two new questions. More answers mean even more questions, expanding not only what we know but also what we don't know. Every new tool for looking farther or deeper or smaller allows us to spy into our ignorance. Future technologies such as artificial intelligence, controlled fusion, and quantum computing (to name a few on the near horizon) will change the world – that means the biggest questions have yet to be asked. –[Kevin Kelly](#), author of *Cool Tools*