



## Q&A: WIRED MAGAZINE FOUNDER KEVIN KELLY

*WIRED co-founder Kevin Kelly reveals the complex relationship between access to technology and standard of living.*

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Few people have spent more time thinking about the relationship between technology and human progress than **Kevin Kelly**. A co-founder of **WIRED** and the author of more than a half-dozen best-selling books, Kelly believes the iPad was in many ways as inevitable as the Big Bang. Access caught up with him at his Silicon Valley office.

*Access: In your new book, **What Technology Wants**, you suggest technology operates by a set of principles that make it similar to an evolving organism. So what does technology ultimately want?*

**KEVIN KELLY:** It wants the same thing that the evolution of life wants: increased complexity. Technology, like life, is tending toward increased diversity. It's tending toward increased specialization. It's tending toward increased energy density.

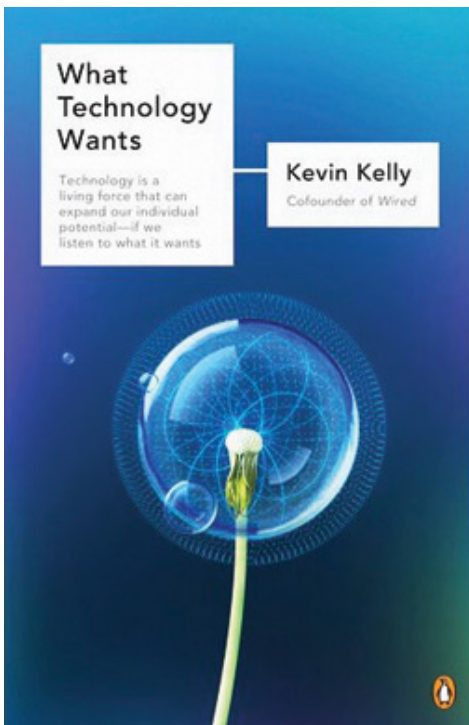
It's tending toward increased mutualism.

I used the word "want," but I mean "want" in a way that a grasshopper wants to eat. It's not necessarily a conscious thing; it's just a built-in tendency for that system.

*Access: How does that relate to globalization? Technology has always been key to raising our standard of living. It seems as if digital technology does this exponentially faster.*

**KK:** In a certain sense it's a kind of tautology, because we partly define "standard of living" as an increased use of technology.

I'm not using the word "technology" like most people do, which is to describe something that was invented after they were born. We think of the iPhone as technology — but of course, technology is much broader. It's the concrete the Romans invented. It's the steel the Chinese invented.



*In this provocative book, Kevin Kelly turns the conversation about technology on its head by viewing technology as a natural system, an extension of biological evolution. By mapping the behavior of life, we paradoxically get a glimpse of where technology is headed — or “what it wants.”*

It's the materials of the Industrial Revolution. I would even include intangible things that we have invented with our minds, like the calendar, libraries, writing.

What we see over time is an increase in progress, an increase in living standards, an increase in the prevalence of technology that is brought about by previous technologies.

It's circular in that sense and it feeds on itself.

There has been a hope that we could leapfrog and bring digital technology to the developing world without them having to go through an industrial age. Unfortunately, it doesn't work that way. But there is a fast-following effect. The introduction of, say, cellphones into an area that has very little technology can help accelerate the arrival of necessary things like clean water and roads. But you can't live on cellphones alone.

*Access: So what ideas and governmental policies can unleash this positive effect the fastest?*

**KK:** In developing countries, telecoms tend to be a state industry, regulated and run by the government, and not at all market-oriented. That's one of the reasons why their resources are so scarce. And much of the developing world's transportation industry is often like that. Making things more open, more transparent, more decentralized unleashes the natural tendencies of technology toward increased complexity, diversity and specialization.

It's like nature. You're letting the plants grow. You protect them when they're seedlings, and then they'll just take off. And so I think many of the best policy decisions are moving in the direction of openness and decentralization.

There are plenty of problems that market forces will not solve on their own. This is not a libertarian argument. But when we see technology being constricted, an opening up and decentralization will help it accelerate.

*Access: Many people assume technology and the natural environment are enemies. You seem to counter this view.*

**KK:** That's right. My argument is that technology is an outgrowth of the same forces that shaped life and evolution on the planet. They are from the same genealogical stock. So they are not inherently antagonistic. But just as we can weaponize any technology, we can also make versions of technology that are more harmful to the environment. Or less. So we can always make something greener.

*Access: People still say things like, “I'm going to go and look that up on the internet.” But aren't we always online at this point? Where does the internet stop and the so-called real world begin?*

**KK:** It's a skeuomorphism, which is a fancy word for using old technology to describe new things. So we still talk about "dialing" the phone, even though there hasn't been a dial on a phone in a long time. Or we say we're "filming" something, even though we don't use film anymore.

The idea of being "on the internet" may be similar.

The language may be carrying on past its logical expiration date. Perhaps part of the reason is there has been an expansion of what we think of as the internet.

People may not realize that when they're text messaging, they're using the internet. When they're Skyping, even though it sounds like a phone call, it is over the internet. So the internet has expanded to include behaviors that were not internet-ish before.

But that's part of the process, and it may take a generation before language catches up.

*Access: It seems as if what technology wants is no different from what global trade wants.*

**KK:** Throughout history and in every culture that I'm aware of, people move toward choices and opportunities. In a certain sense this is true of the larger movement through the universe. I'm trying to connect technology to the long journey from the Big Bang, which began with only a few parameters and eventually became an entire universe of possibilities.

I think trade is part of that kind of self-organization, which increases the possibilities that in themselves will then unleash future possibilities downstream. This is one of the reasons why trade is good, and why it has done so much good in the world.

People like biological evolutionist Robert Wright believe that the process of exchange is really the fundamental element of society and progress. I tend to agree. It's a long thread that started way before us and will continue way past us.

### 3 WEBSITES KEVIN KELLY CAN'T LIVE WITHOUT

1. **Google**. Google counts, right? I also like Google+ more than Facebook.
2. **Kottke.org**. One of two or three blogs I go to daily.
3. **Laughing Squid**. It's sort of a digital culture thing.