Competing in the AI economy: An interview with MIT's Andrew McAfee

AI has arrived, but are companies ready for it? According to an MIT scientist, executives are underestimating the speed, scope, and scale of the disruption it will bring.

It's not just some far-off dream anymore. The promises and practical applications of artificial intelligence (AI) are here. In this interview with Andrew McAfee, principal research scientist at the Massachusetts Institute of Technology (MIT) and cofounder of the MIT Initiative on the Digital Economy, he explains how AI, and machine learning in particular, is quickly disrupting companies' economic models, strategy, culture, and even the very nature of how they are structured and run. But there are opportunities for companies that can answer the call—and meet the needs and wants of consumers. An edited transcript of McAfee's remarks follows.

Today's digital disruption: Overstated or underappreciated?

There are billions of people walking around with a supercomputer, by the standards of a generation ago, in their pocket. Those devices are connected to each other and to this thing that we call the Internet. And then, just within the past five or six years at most, all the promises made by the artificial-intelligence community have started to be delivered on.

So we really are living in this era of machine learning, which is the dominant AI technology, and probably will be for some time to come. Executives who I talk to today are a lot more aware of previous waves of disruption, and they're more keenly aware of the possibility that it's going to happen again. They've internalized Andy Grove's advice that only the paranoid survive.

However, even though they see a lot of disruption coming, I still think that many really smart, well-managed companies are underestimating the scale, scope, and speed of disruption this time around.

How machine learning will change the way executives do their jobs

There are some things about running an organization that I don't think are going to change, even in the face of these crazy, powerful technologies: articulating a compelling vision that will attract talent, customers, and stakeholders; being true to that vision; and managing the culture that you've created to go tackle those visions. Those are deeply human skills, and leaders who are good at them are going to become even more valuable.

A lot of executives who I talk to think that a big part of their job is making the tough calls; relying on the experience, industry knowledge, and judgment that they've built up; and having a clearer crystal ball of things that are going to happen in the industry or in the future than other competitors have.

While I value those things, I value them a lot less than I used to, because of two fundamental changes that are occurring. Number one, over and over again we're seeing that technology is better at human-judgment tasks than humans. To me, it's the most unsettling by-product of the machine-learning revolution.

And number two, I was just on a panel earlier today with a set of machine-learning all-star geeks, and when talking about the future of the technology, one of them said, "Well, as far as we can see into the future. I'm talking three to five years." And I'm thinking, "Hold on. What? Only three to five years?" We used to think about business generations being a lot more on the timescale of human generations—a decade or two. He said, "Why even think about what might be happening 36 months from now, because so much is going to change between now and then."

Both of these developments are pretty profoundly upsetting to the kind of Industrial Age. I don't mean that disparagingly, but these are both really, really deep threats to the model of running an organization that we've built up over a couple of centuries.

Should we fear giant digital natives?

Well, that depends. First, are they facilitating or impeding competition? Economists love competition, as we should. Are you going to fund the next social network that's going to directly compete with Facebook? Is that a thriving, competitive space? Probably not, as you can make a decent case that Facebook is not having a salubrious effect on competition, right?

Number two, how are they doing on innovation? One of the things that we should care a great deal about is the state of innovation; that's how we get more prosperous. Amazon is the world's number-one spender on R&D. Alphabet and Microsoft are among the top five or easily ten spenders in the world on R&D.

Amazon has just opened to the public a physical grocery store that has no checkout lanes or cashiers. You fill up your bag, walk out the front door, and get a receipt minutes later for everything that's in your bag. No human beings are involved in the transaction. Most of the competitors would say that there's a little too much innovation going on out there.

Are prices going up or down for the things that we care about? Lower prices are good for consumers. Do we have more options or fewer? In general, more options are better. Are we able to communicate with more people around the world at lower cost? Cost has essentially vanished as a consideration for expressing yourself and interacting with people all around the world.

I think we're ignoring some very powerful lessons from business history, especially technology-industry history: the pattern is dominance and then disruption. I think worrying about alleged permanent monopolies in the technology industry is to profoundly ignore the lessons of history.

The playbook: How can incumbents compete against digital natives?

A lot of companies in the incumbent economy don't seem to be getting me out of the headache business. There are a lot of hassles involved in most routine transactions, such as those for travel and financial services. And while the great mantra of user-interface designers is, "Don't make users think," I have to do way too much thinking in most of those kinds of interactions.

When I look at the companies where I'm willingly giving more of my time, energy, and money and the apps that I use most often on my phone, it's amazing how little they make me think and how they're trying to get the headaches and the transactional nonsense out of my flow and instead start giving me something that I value.

And we still like to have experiences. I think that is what independent bookstore owners have realized—that going to the bookstore is not just a transactional thing. It's not "I want a book. I'm going to find it in a store and then bring it back to my house." Going to the bookstore is actually a whole experience.

I think the experience economy is already pretty big, but as a share of the stuff that we want to do and that we want to spend our time and money on, it's probably going to get a lot bigger. So figure out what people actually want to do in this weird, new world free of all of the hassles we used to experience.◆

Andrew McAfee was interviewed by **Rik Kirkland**, the senior managing editor of McKinsey Publishing, who is based in McKinsey's New York office.