

# Man vs. Machine: The New Ethics of Cybersecurity

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What role do ethics play in technology? As a business executive or board member, when you approve a technology investment or have your teams create a new technology-based business service, do you ever think about the ethical considerations of what you are doing?

If you are like most business leaders, these types of considerations are not high on your list. You probably think about growth, revenue, risk, the bottom line, etc. Even if you wanted to think about the ethics of using a particular technology, you may not even know what questions to ask.

This is about to change. According to the futurist Gerd Leonhard, author of the book *Technology vs. Humanity*, we are moving headlong into a new era in the development of technology. Within the next five to 10 years, the big questions will not be about *if* we can do something; rather they will focus on *why* we are doing it and *who* is doing it.

This change in emphasis from science to ethics is being driven by the growth of exponential technologies such as machine learning and artificial

intelligence, plus the convergence of traditionally unrelated industries. As an example of converged technology, Leonhard points to Spotify, which was able to create its business model only because of the advent of cheap and powerful smartphones connected to fast mobile networks.

The impact of these exponential and converged technologies will have a profound impact on cybersecurity—not just from a technological perspective, but also from a moral and ethical perspective.

“Technological security can only be as good as the moral, ethical and political frameworks that surround and define it,” according to Leonhard. “The most advanced security technology will be useless if those who hold the key and those who use it, act unethically, with evil intent, or with negligence. In fact, the very same technology that is employed to protect consumers and users can be used to spy on them.”

The issues around ethics are becoming more urgent, Leonhard says, as machines get smarter and become more ubiquitous—to the point where technology is no longer simply around us, but is actually inside of us. For example, he points to the idea of having nanobots in our bloodstream monitoring and even regulating cholesterol levels, or the ability to connect our brains directly to the Internet to transform thoughts into actions.

It may sound mind-boggling, but Leonhard says these scenarios are not only real; they are on the near horizon. In the new book [\*Navigating the Digital Age, Second Edition\*](#), published by Palo Alto Networks, Leonhard says the next 20 years will bring more change than the previous 300.

## **An Ethics Manifesto**

What types of ethical considerations should we be thinking about in exploring the impact of digital technology and cybersecurity on our future?

Leonhard offers a framework for what he calls a global “ethics in technology” manifesto. He says it is important, in creating this model, to focus on human rights in an era when machines will be taking on more human-like characteristics.

Leonhard's proposed manifesto focuses on five specific human rights that he believes could be endangered if we don't have an ethical framework by which to guide us. These are:

**1. The right to remain natural ,i.e., biological.** This means we can be employed, use public services, buy things and function in society without a requirement to deploy technology on or inside our bodies.

**2. The right to be inefficient if and where it defines our basic humanities.** We must be able to make the choice to be slower than technology and not make efficiency more important than humanity.

**3. The right to disconnect.** We must retain the right to switch off connectivity, go dark on the network and pause communications, tracking and monitoring.

**4. The right to be anonymous.** We must retain the option of not being identified and tracked, such as when using a digital application or platform when it doesn't pose a risk or impose itself on others.

**5. The right to employ or involve people instead of machines.** We should not allow companies or employers to be disadvantaged if they choose to use people instead of machines—even if it's more expensive and less efficient.

## **Conclusion**

When you look at where technology stands today, many of these “rights” may seem self-evident or unnecessary. That's because the technology is not widely available yet to take either grant them or, more importantly, to take them away.

What happens, however, when the technology *is* available? That is the point Leonhard stresses: We must look at tomorrow's possibilities before it is too late. As he notes in his chapter in *Navigating the Digital Age, Second Edition*.

“Technology does not have ethics, but societies depend on them. Let us remind ourselves that civilizations are driven by their technologies and defined by their humanity. Technology is not *what* we seek, but *how* we seek.”