

Clarion Review ★★★★

SCIENCE

The Matrix Has you

Thomas Ousterhout

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Thomas Ousterhout, a psychologist and member the Association of Computing Machinery, the largest computing society in the world, has compiled a startling array of information about advances in computer technology, robotics, surveillance, artificial intelligence, and brain–computer interfaces in The Matrix Has You. Especially chilling—or exciting, depending upon one's point of view—is the fact that his book is in present tense; these technological, medical, entertainment, and military discoveries are already beginning to impact daily life, a fact that may not be widely known, but certainly should be.

The book opens with a discussion of virtual reality and its applications. Created in 1971 for the military to provide highly realistic and casualty-free battlefield and aerial training experiences, the technology became available for recreational purposes in 1990. Although current interactive virtual reality systems can provide a "fully sensual immersive and interactive virtual experience," Ousterhout notes that one's mind is still aware that the experiences are caused by an external device. Until recently, there was a missing ingredient—technology that interacts directly with the brain.

With the ability of science and technology to understand the functions and activities of neurons in the brain, applications have been developed that allowed silicon nanowires to be connected directly to individual neurons, giving movement to prosthetic limbs; further research has created applications that allow users to control robots with their minds. Ousterhout writes, "With more precision and diversity in all types of mobility, along with advanced noninvasive neural detection technologies, this system of technology will allow for perfect neural interaction."

From wearable exo-skeletons capable of surpassing human abilities to lifelike robotic replicas of humans able to learn from their experiences (at times without their designers knowing how they did so), the advanced state of the technologies the author presents will amaze readers.

The possibility of a world very much like that portrayed in the film, The Matrix, in which humans are unknowingly immersed in a virtual world and enslaved by the technology they created, is not so far fetched, according to Ousterhout. That there is a dark side to these new technologies, including the development of robots that are able to hunt living things and digest them to produce their own energy supply, may not come as a surprise, but the current advanced state of such technologies just might. The author gives fair warning that a future in which machines could conceivably enslave humans for their own purposes is possible.

Ousterhout's clear, readable, and prophetic wake-up call is based on both popular and scientific information, making it accessible and engaging. The cover design and illustrations that quote from The Matrix add emotional appeal and enhance the warnings given in the text. Careful editing could easily correct the few typographical errors present.

KRISTINE MORRIS (July 1, 2010)

