Joseph Carvalko

Medical technology now verges on incorporating directly into our anatomy processors with the computational power of the famous Watson IBM computer and Internet-like communications. As the size of computers spiral downward, their wholesale use (as well as RFID-type technology) will extend lifetimes, enhance our intelligence, and assist in controlling technology outside the body via digital I/O and thought. This includes the eventual merging of synthetic DNA and artificial intelligence that together will bring new diagnostics, medical treatment and smart nano-prosthetics well within the horizon of the next generation. A prosthetic genome hastens the day when enhanced life forms, such as human organs, can be made entirely from a fusion of living organisms and non-living materials. I have written extensively about this, in Law, Science and Technology (a course book), its textbook version to be published by ABA Publications (2013), and in my recent publication: the Techno-Human Shell-A Jump in the Evolutionary Gap, http://www.amazon.com/The-Techno-Human-Shell-Evolutionary-ebook/dp/B00AW53NCK.

As a patent attorney, former researcher and adjunct Professor of Law, Science and Technology, I wish to present a paper on the implications of the proliferation of in-the-body technologies, specifically how this technological expansion will change how we view each other to how we fashion policy and law to confront problems in economic justice. We risk creating a world of "haves" that can afford and "have nots," that cannot afford enhanced intellect and longevity. Commercial interests might also jeopardize our well-being through device patent monopolies or market forces that squeeze out efficiencies at the expense of performance and reliability, or for instance, those who would dare to unleash digital viruses into a world filled with anatomically installed biomedical devices receptive to Internet-style communications.

Overtime artificially altered and controlled metabolisms may begin to alter the progression of natural biological evolution. At what point does the widespread application of cyborg-assisted-life change our attitudes about what the notion of "human" means. As I deal with policy, I also focus on the moral implications of the new technology, its influence on culture, personal identity and autonomy, and why we need to begin a national conversation so that we can prepare for what inevitably lies ahead.

I am a member of the Community Bioethics Forum, Yale School of Medicine and a member of the Yale Technology and Ethics working group. I am past member of the editorial board for SciTech, a publication of the ABA, Section on Science and Technology. In the late 1980s I held the position of Chairman of the Behavioral Sciences Committee of the Section on Science and Technology. In the course of 30 years, I have represented hundreds of inventors, and prior to law was a research associate in biomedical engineering, designing and programming cellular automata computers for A.I. cytological pattern recognition, and afterward worked extensively developing computers and telecommunications. I hold ten patents and have a record of professional and academic publications. I hold a Bachelor Science Electrical Engineering and Master Fine Arts writing, both from Fairfield University; and Juris Doctor Law, from Quinnipiac University.