CPSR's Norbert Wiener Award:

A Fitting Legacy for the First Cyber-Activist

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***Abstract*—Norbert Wiener was perhaps the first person to think deeply and write trenchantly about the effect of computing on human society. He insisted that human beings retained the moral responsibility for deciding when technological progress was a step backwards for society. For over two decades, Computer Professionals for Social Responsibility presented an annual award for social responsibility in computing, the Norbert Wiener Award. The Award was presented twenty-one times, to individuals and organizations that embodied the practical applications of Dr. Wiener's concerns. Taken as a group, the winners are a fitting tribute to the memory of Dr. Wiener and his pioneering vision and concerns.**

Keywords—appropriate technology; computer applications; computer errors; cyberspace; ethics; internet governance; military computing; peace technology; privacy; software quality; software reliability; software safety; technology social factors; universal access

I. Introduction

"No matter how innocent he may be in his inner soul and in his motivation, the effective mathematician is likely to be a powerful factor in changing the face of society. Thus he is really dangerous as a potential armorer of the new scientific war of the future. He may hate this, but he does less than his full duty if he does not face these facts." – Norbert Wiener

Besides helping to invent the science of computing, Norbert Wiener was also the first person to think deeply and write trenchantly about the effect of computing on human society. His book, "The Human Use of Human Beings," was the first serious book on the topic, and many more have followed in its wake. In that book, he recognized that, "The simple faith in progress is not a conviction belonging to strength, but one belonging to acquiescence and hence to weakness." He insisted that human beings retain the moral responsibility for deciding when technological progress was a step backwards for society.

When Computer Professionals for Social Responsibility (CPSR) decided to present an annual award for social responsibility in computing, the obvious name, the one that instantly conveyed the intent, was the Norbert Wiener Award. Dr Wiener's long shadow encompassed the very existence of CPSR, and many members were explicitly aware of their debt to him. As CPSR's first president, Terry Winograd, said, "In his analysis and activities around social concerns, he anticipated almost the entire program of CPSR by about forty years."

The award was presented 21 times, to individuals and organizations that embodied the practical applications of Dr. Wiener's concerns. With a few exceptions, they can be divided into four categories:

Those who worked on publicizing and mitigating some of the dangers that our digital world has created;

Those who worked to ensure that computing technology would be used for the benefit of all of humanity;

Those who worked to advance the cause of privacy in the digital age; and

Those who worked to ensure that the rules of cyberspace would serve the public interest rather than narrow private ones.

Additionally, the award was presented three times to individuals who were activists in several of these areas.

II. First, Do No Harm

That the computer might have as much potential for harm as for good was something Dr Wiener realized long ago. While others chased fame and fortune by using computers to create new capabilities, a few people have pursued the less glamorous or lucrative goal of preventing computers from doing great harm.

A. David Parnas (1987)

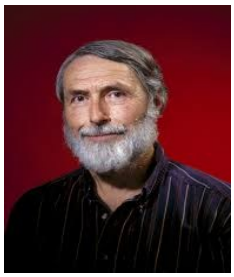
In 1987, the very first Norbert Wiener Award was presented to David Parnas who, as a consultant to the U.S. Defense Department, raised his voice to make the larger community aware of the risks involved in the Strategic Defense Initiative (SDI). SDI presumed software complexity far beyond even our current abilities, where the cost of failure could literally be the extinction of the human race.

978-1-4799-4562-7/14/$31.00 ©2014 IEEE

B. Daniel D. McCracken (1989)

Daniel McCracken received the Award in 1989 for his work in the 1960's to prevent the deployment of Antiballistic Missile (ABM) systems. This was in an era when, we later learned, the U.S. nearly went to war after its computers confused a flock of birds with Soviet missiles.

C. Peter Neumann (1997)



In 1997, the award was given to Peter Neumann, the decades-long editor of the RISKS Digest, an online and printed newsletter which publicized thousands of computer flaws and dangers.

D. Nira Schwartz and Theodore Postol (2001)

Nira Schwartz and Theodore Postol received the award jointly in 2001, for their role as "whistleblowers" in yet another effort to push for the deployment of missile defenses that weren't ready to work reliably as claimed. Schwartz and Postol revealed that the national debate was being fed by falsified test results from the defense industry.

III. Putting People First

Dr Wiener made his feelings about the relations between humans and computers quite clear in his book, "The Human Use of Human Beings." The award was given seven times to individuals (and one organization) who advanced our understanding that computers should serve people, rather than the other way around.

A. Joseph Weizenbaum (1988)

Joseph Weizenbaum received the Wiener award in 1988, for the social commentary that began with his book, "Computer Power and Human Reason." Weizenbaum was perhaps the first to recognize how easily people could be fooled into thinking a computer program was intelligent, and even to regard it as an equal or superior.

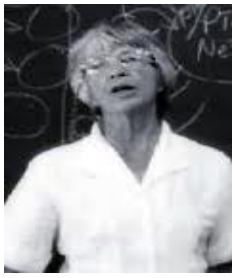
B. Kristen Nygaard (1990)

In 1990 the award went to Kristen Nygaard, co-inventor of object-oriented programming and the SIMULA language, and the pioneer of participatory design. In contrast to traditional design, participatory design involves the future users of a technology from the earliest stages, thus yielding a result more likely to serve the needs of its users.

C. Institute for Global Communications (1993)

The 1993 award was given to an organization, the Institute for Global Communications. IGC was an early Internet Service Provider, giving non-profit organizations access to the Internet even before it was opened to commercial use. Later, IGC evolved into a home for activist groups on the web, such as PeaceNet, EcoNet, and many more.

D. Antonia Stone (1994)



Antonia Stone received the award in 1994, for her work in founding the Playing To Win organization, which has since evolved into CTCNet. These organizations brought technology and training to the underprivileged, starting with prison inmates and expanding from there.

E. Tom Grundner (1995)

In 1995, Tom Grundner received the award. He created the Cleveland Free-Net to provide anyone with access to network technology, and was President of the National Public Telecomputing Network, an umbrella organization for similar groups.

F. Mitch Kapor (2003)

Mitch Kapor was honored with the award in 2003, for his role in founding the Electronic Frontier Foundation (EFF), his service to the Mozilla Foundation and many other worthy relevant efforts. and for providing a generation of technologists with a role model who demonstrated that one need not sacrifice one's principles to be wildly successful in the computer industry.

G. Douglas Engelbart (2005)

Douglas Engelbart received the award in 2005 for being a pioneer of human-computer interface technology, including the invention of the mouse, and for his long-term vision regarding the social impacts of computing.

IV. Protecting People's Data

Four of the Wiener award winners worked in the area of protecting privacy in the digital age. Although this battle seems endless, we would have even less privacy today were it not for the efforts of activists like these.

A. Phil Zimmermann (1996)

The 1996 award was given to Phil Zimmermann. By writing the PGP (Pretty Good Privacy) program and giving it away freely, he brought secure encryption technology into the hands of any individuals that wanted it – an action so radical that the Clinton Administration spent three years trying to build a criminal case against him.

B. Marc Rotenberg (2000)

Marc Rotenberg received the award in 2000. He was a long-time privacy activist, working independently, with CPSR and many other organizations, and ultimately as the founder and President of EPIC, the Electronic Privacy Information Center.

C. Barry Steinhardt (2004)

In 2004 the award went to Barry Steinhardt. His career centered around the protection of privacy, a tireless speaker on behalf of the cause, and served as Associate Director of the ACLU, as President of EFF, and as Trustee of Privacy International.

D. Bruce Schneier (2008)

Finally, Bruce Schneier received the award in 2008 for his passionate advocacy for privacy, security, and civil liberties. He has been one of the most influential people in the world on matters of privacy and security, through his writing, speaking, and testimony.

V. The Rules of Cyberspace

Three times, the Wiener award was given for service in making the digital world the fairest possible playing field, open to all without prejudice. Because of the complexity of this topic, it is perhaps unsurprising that two of these awards went to groups of people rather than individuals.

A. Internet Engineering Task Force (1998)

In 1998, the award went to the Internet Engineering Task Force (IETF). The IETF is responsible for nearly all of the standards that the Internet runs on, and has consistently worked to make them evenhanded, open, and free from undue corporate advantage.

B. Free Software and Open Source Movement (1999)

The 1999 award went to the amorphous free software and open source movements. This movement raised the general quality of software and provided a voluntary and collaborative alternative to proprietary software development.

C. Karl Auerbach (2002)

In 2002 the award went to Karl Auerbach for his work on ensuring that the evolving Internet would be governed in an open and democratic manner. He served as a voice for individuals as a board member of the Internet Corporation for Assigned Names and Numbers (ICANN).

VI. Jacks (and Jills) of All Trades

Three times, the Norbert Wiener award was given to individuals whose contributions could not be confined to any of the previous categories.

A. *Severo Ornstein and Laura Gould (1991)*

The 1991 award was shared by Severo Ornstein and Laura Gould. They were indispensable to CPSR in its early years, and active on countless campaigns.

B. *Barbara Simons (1992)*

In 1992, Barbara Simons received the award for her work on human rights, on promoting careers for women in computing, and in alerting the public to the dangers of electronic and Internet voting.

C. *Gary Chapman (2013)*

Gary Chapman was the first Executive Director of CPSR, and worked on numerous relevant causes while building an organization. He received the final Wiener award in 2013.

VII. Dr. Wiener and the Winners

Taken as a group, the twenty-one winners are a fitting tribute to the memory of Dr. Wiener and his pioneering vision and concerns. While Dr. Wiener might not have agreed with every single cause to which the Wiener Award winners devoted their efforts, the work of these people and organizations represents the ongoing flowering of the concerns Dr. Wiener first expressed in his 1950 book, "The Human Use of Human Beings."

In 2014, the need for information professionals to be concerned about the effects of technology is greater than ever. Massive computing power has enabled disturbingly indiscriminate surveillance in the US and other countries. Near-microscopic cameras and wearable computing threaten to be the final nail in privacy's coffin. And we are not yet safe from such threats as unsafe weapon systems, electronic voting, and more.

The Wiener Award winners' work shows us what can and should be done, and also what still needs to be done, to ensure that the Information Age benefits our society and enhances our humanity. The demise of CPSR is lamentable, but the loss of the Wiener Award is particularly unfortunate. There are plenty of people who continue to work towards these goals, and they are generally motivated by deeper concerns than public recognition. Nonetheless, such recognition is often deserved, and a way to revive the award should be sought by all who treasure the memory of Dr. Norbert Wiener.

Author's Biography

Nathaniel Borenstein is a past President and long-time Board Member of Computer Professionals for Social Responsibility, and a former Board Member of the Institute for Global Communications and of Peace Action. He received the NYU Olive Branch Prize for writing about peace. He is currently Chief Scientist at Mimecast.

He is best known as the co-creator of the Multipurpose Internet Mail Extensions (MIME) standard and the developer of metamail, AMS, and other software systems. He is the author of three books and numerous technical articles. He co-founded First Virtual Holdings, recognized by the Smithsonian as the first Internet payment system, and NetPOS.com, the first Internet-centric point of sale system.