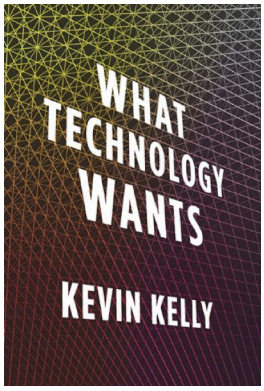
SPACE JAPAN BOOK REVIEW

From a satcom researcher point of view

Reviewer: Takashi Iida, Editorial Advisor



http://www.amazon.com

Kevin Kelly: "What Technology Wants", Viking Adult, 2010.

This book has no relation to the satellite communications. But, this book discusses on the broader technology. The editors of the Space Japan Review are interested in the science and technology policy including technology innovation. This book is thought to be appropriate to this column, because the reader of this book review may be interested. This book review is based on Japanese translation version.

Kevin Kelly, the author of this book (titles abbreviated, hereinafter the same), has been a writer, photographer, conservationist, and student of Asian and digital culture [1]. He was born in 1952. After he attended the University of Rhode Island for one year, he traveled extensively backpacking in Asia for near 10 years and he was able to experience that removed the cover of technology. He was hired in 1983 by Whole Earth [2][3] founder Stewart Brand [2] to edit some of the later editions of the Whole Earth Catalog. He was to be inaugurated as editor-in-chief of the magazine "Wired" which is said to be representative magazine of the network culture [1] in 1992. He is the author of books including "Out of Control" (Addison Wesley 1994) and "New Rules for the New Economy" (Penguin, 1999).

Well, what is the Technium? The author of this book means the Technium as the system of technology that is tied to each other on a large scale in global. It contains all kinds of culture beyond the hardware category, art, social organization, all of the intellectual creation. That is, it is a word that contains software, law, even such as philosophical concept.

Even if the above expression of meaning of the Technium is given and I read the book review in the Nikkei Shimbun newspaper [4], I could not somehow smoothly understand what the Technium is. I could not read to organize this book, since this book seemed to me somewhat abstract description until its first half. I felt this book to be difficult to understand due to my poor reading comprehension, since it describes the sentence without dividing by sections in each chapter which is consisted of about 30 pages. However, when I read up the middle, I came to understand what is written in the hereafter by understanding as follows. I was able to read through interesting in its own way. My understanding is to consider that this book describes the following things: In the natural world the biology has gotten the evolutionary road without limit since ancient times. The scientists have recognized that its essence is not in the substance such as DNA, organization or muscle, but the organization of information and energy in the system of substance. Following this consideration, argument of this book is felt to be clear when considered that the Technium evolves naturally, since it shows the total form of technology is the information itself.

At first, this book describes the magnitude of the role of invention of language for the technology development. The technology had not evolved in the era of ancient human of short life and no language. However, when the language was invented 50,000 years ago, intelligence of the human race was piled up contemplation with a purpose and it was changed to allow invention. Furthermore, the language allowed communication and coordination and accelerated learning and creation. Now technology is accumulated, and is inherited over the generation by extended life. Then the evolution began in technology. When evolution was initiated, it has been continued without stopping. The language is just its origin. It is said that there is no one in history that led to the leap and importance over the invention of the language in relation to the development of mankind intelligence. It is the initial singularity of human development.

Technology has advanced in the never before rate since 200 years ago. Steam engine allows mass production and industrialization, the use of electricity begins, telegraph and telephone form a global communications network, locomotives and automobiles allow the high-speed movement, the energy of the atom is unleashed, a structure elucidation of DNA develops biotechnology, air routes are developed, the manned spacecraft reaches to moon, now the internet realizes an environment that can talk at any time with a total stranger in the back global. The scale of the current technology

is beyond the human race control and had reached the level to change the global environment by nuclear weapons to allow mass destruction and the advent of industrial systems that produce large amounts of carbon dioxide and harmful substances.

As optimism of technology, in the 1980s when phone was commercialized soon, John J. Carty, AT&T Chief Engineer, foretold, "if we had someday global telephone system, all of the people would come out need to use the same language or understand it, and people on earth would be like everyone else brothers". Also, Orville Wright who was the younger brother of the Wright brothers in 1917 predicted "I think that airplane will have a tendency to make war impossible in the future."

Thus technology gives a dream for human beings. However, troubles occur, because the new technology causes more problems than it solves. That is because Technium becomes to require more complex reaction that exceeds the human intellect, when technology increases the complexity. It is almost impossible for the newly invented technology to predict whether or not it results in harm. Serious secondary effects possessed by the new technology is not presented in the exact experimental and faithful simulation on a small scale. Technology must be evaluated in real-time actual use. In other words, the individual risk of technology must be identified in the real world with trial and error.

The following is mentioned in this book as such an example. Three to five hundred million people are infected with malaria every year in the world, and two million people are dead. The malaria infection was reduced by 70% with the widespread use of DDT insecticides. However, the production and use of DDT was banned in 1972 in the United States, because it was accused by "Silent Spring" [5]. When the DDT has not been used, the spread of malaria has returned to previous critical condition in Asia and Africa.

In this book, there are many cited as a reference to "The Nature of Technology" by W.Brian Arthur [6] that was picked up in the previous Space Japan Book Review [7]. Technology has always caused problem. If there were problems, solutions would be born. The phenomenon that a problem gives another problem again does not seem to change all the time in future either. This book seems to have discussed the technology at almost the same point of view, but a majestic vision of Technium is introduced in this book. I understood that the discussion in the wider meaning than technology is performed. In addition, it is interesting that the author of this book said at the final part that Technium is the incessant self-creation and the locus of Technium is moving exactly toward God, if God exists.

In addition, some examples of the above-mentioned technology optimism and newly invented technology that is not understood initially are described in this book.

References

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