Category 15: Cybernetics and Artificial Intelligence
Kybernetik und Künstliche Intelligenz
as of February 26, 2003

MA: Everyone knows that computers and computer science are continuing to mushroom, but few really know just how much and with what impact. The reality is astonishing in some ways and overblown in others. Industrialized civilizations of the planet are now so dependent upon computerized systems of commerce and communication that they are close to being "at the mercy" of the computer scientist, whose responsibility it is to "make the things work" - and, incidentally, to set parameters for human enterprise by taking computer design in one direction or another.

Books for this reading list, many of them computer-prepared themselves, were located, ordered, and shipped by computers ... after which the reading list was typed on a computer [originally 1976 on a PolyMorphic #8813 and now on a Macintosh], printed on a computer-controlled laser-printer, duplicated on a computer-controlled copy machine, and delivered to you with the assistance of computer-maintained address-list/labels read in turn by computer Zip-code scanners at the post office ... with updates available on the Temple's electronic database, Glinda.

Obviously a computer-dominated society is hyperefficient in some ways, hypervulnerable in others. At the very least the magician must know enough about the field so that he is sensitive to the ways in which it influences him - and the ways in which he may use it to influence others.

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DW: The digital world offers vast amounts of information, amazing abilities to communicate, and tremendous amounts of political freedom of assembly. It is likewise an addictive drug, a place that hastens the decline of civility, and an immense source of powerlessness. The magician must decide. The best of all possible worlds scenario is a learned Setian who buys the tools that are best for person needs, can pull anything off the Web with ease, has fun on Internet mailing lists of choice, and keeps a "victory garden" going in case it all goes south. The reading list does not include books on software, hardware, or the Internet; these are obsolete when they are printed.

15A. *Future Shock* by Alvin Toffler. NY: Random House, 1970. [Deutschland: *Der Zukunftsschock*, Deutscher Bücherbund, Stuttgart, 1970] (TOS-3) MA: "Strictly speaking, this is a study of accelerated styles of living rather than of computers per se. It is included in this section because it illustrates the environment in which computers have become increasingly indispensable. It is also important to consider the directions in which this environment may proceed, and the impact of related phenomena. *Future Shock* has been around for a long time now, but its propositions are no less valid today than they were when the book was first published."

15B. *God & Golem, Inc.: A Comment on Certain Points where Cybernetics Impinges on Religion* by Norbert Wiener. Cambridge: MIT Press, 1964. [Deutschland: *Gott & Golem, Inc.*, Econ-Verlag, Düsseldorf, 1965 (WU: 15/2465)] (TOS-3) MA: "Wiener, who coined the term 'cybernetics' in 1948, later went on to consider the ultimate implications of artificial intelligence. A series of his lectures was consolidated into this 100-page volume, which won the National Book Award. The argument is one of ethics rather than of technology."

15C. *Being Digital* by Nicholas Negroponte. NY: Knopf, 1995. (TOS-1) DW: "This book, by the Founding Director of the Media Lab at MIT, tells you where the digital world from TV to computers is going, what's hype, what's going to be possible, and what social forces are working against the media revolution. The predictions he makes about the type of new interfaces with the digital world may be taken as accurate. 'By the year 2020 the largest employer in the developed world will be "self".' Much of this book appeared as a series of essays in *Wired* magazine. Easy to read, and a great source of learned excitement."

15D. *I, Robot* by Isaac Asimov. NY: Doubleday, 1950. [Deutschland: *Ich, der Robot*, Verlag Weiss, Berlin-Schoeneberg, 1958 (WU: 8c/1801)] (TOS-3) 4E: "A classic of science not-so-fiction, exploring the implications of artificial intelligence. Famed for the 'three laws of robotics', the concept of robopsychology, and the positronic brain. The reality of this book is closer than you think/compute..."

15E. *As Man Becomes Machine: The Next Step in Evolution* by David Rorvik. NY: Pocket Books #0-671-82230-6, 1978. (TOS-3) MA: "An anthology [in layman's terms] of the research towards the evolution of the cyborg - first the gradual replacement of various organic components of the human body with inorganic machinery, then the transference of consciousness from the organic brain to an inorganic computer. Various hypotheses from this book are illustrated in the character of Lorin Xanpol the Pantechnikon in #21I."

15F. *Machines Who Think: A Personal Inquiry into the History and Prospects of Artificial Intelligence* by Pamela McCorduck. San Francisco: W.H. Freeman, 1979. [Deutschland: WU: 30/5440] (TOS-3) MA: "This is **the** book on artificial intelligence. Over the years I have examined and rejected many books on this subject as being either too elementary or too technical. McCorduck is a reporter, not a computer scientist, but she's got a first-rate [organic] brain of her own and a writing style that turns this potentially confusing subject into an exciting adventure. From the book: 'I like to think of artificial intelligence as the scientific apotheosis of a venerable cultural tradition, the proper successor to golden girls and brazen heads, disreputable but visionary geniuses and crackpots, and fantastical laboratories during stormy November nights. Its heritage is singularly rich and varied, with legacies from myth and literature; philosophy and art; mathematics, science, and engineering; warfare, commerce, and even quackery. I've spoken of roads or routes, but in fact it is all more like a web, the woven connectedness of all human enterprise.'"

15H. *Computers and the Imagination* by Clifford A. Pickover. NY: St. Martin's Press, 1991. (TOS-3) DW: "Pickover's books are generally recommended because his greatest desire is to make you excited-in-love-crazy with math. This book is about using existing and evolving computer technologies as ways to expand the mind and give new arenas to creativity."

15I. *Life on the Screen* by Sherry Turkle. NY: Simon & Schuster, 1995. (TOS-3) DW: "Dr. Turkle, Professor of Sociology of Science at MIT and a licensed clinical psychologist, looks at the question of 'self' in the digital world, where one can change gender, play in fantasies, have AI companions, and spend hours alone typing in front of glowing screens. This is a book about how computers are changing the hearts and minds of people; the magician is alerted to dangers and opportunities."

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P15A. *Wired* (ISSN: 1059-1028), Wired Ventures Ltd; 520 3rd St. - 4th Floor; San Francisco, CA 94107. Tel: (415) 211-6200. Email: info@wired.com. WWW: http://www.hotwired.com. Monthly. Alex Burns II°: "Sirius and Bruce Sterling, this glossy magazine personifies both the best and worst of its field. Get past the 12 pages of advertisments just to find the contents and the sometimes excessive technophillia/info-Utopianism, and you'll discover that *Wired* has some of the most intelligent and up-to-date commentary on futurism, technology, computers, the Internet, and social trends available in a single volume."

P15B. *21*C: Scanning The Future* (ISSN: 1035-6754), Gordon and Breach Science Publishers SA; PO Box 95; Prahran, Victoria; Australia. Tel: +61 (0) 3 9827-5499. Fax: +61 (0) 3 9827-5281. Email: ed21c@peg.apc.org. WWW: http://www.21c.com.au. Quarterly. Alex Burns II°: "Described to me recently as '*Wired* with a social conscience', this magazine features leading cyberculture theorists like McKenzie Wark, Mark Dery, R.U. Sirius, and Kathy Acker, while avoiding the excesses of *Wired*. Features a balanced but critical survey of cyberculture, information technology, and sociological impact."