ETHICS AND COMPUTERS: THE "OIL AND WATER" MIX OF THE COMPUTER WORLD?

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Abstract
This paper deals with the need, the difficulty, and the present direction of determining what is and is not ethical in dealing with the creation and exchange of materials to be used on computers. First the need is presented, based on the supposition that the majority of American industry utilizes computers. Next a definition of ethics is given. Following the definition, specific problems confronted by computer users in determining what is ethical are presented. Finally, several examples concerning the present trends in computer ethics are given, with a call for continued efforts for full protection under the law for computer hardware, software, and courseware.

Can a fair, legal and practical standard of ethics be developed for application to computer hardware, software and courseware? John Naisbit, author of Megatrends and chairman of the Naisbitt Group, states that the work force is composed of 62 percent information-knowledge workers, and that computers are the center of the information-knowledge industry. (See "Restructuring of America' - When, Where, How and Why." U. S. News & World Report.) If this is true, the above question may be the single most critical social and economic issue for the courts, industry and education to confront the 1980s.

Webster defines ethics as "the study of standards of conduct and moral judgement" and "the system or code of morals of a particular . . . group, profession, etc."; moral is defined as "relating to, dealing with, or capable of making the distinction between, right and wrong in conduct" (Webster’s New World Dictionary of the American Language, Second College Edition. David B. Guralnik, Editor in Chief. New York: Simon and Schuster, 1982). In order to develop a "code of ethics" for the computer industry, and specifically for the interchange of ideas which must take place among educational institutions, it may be assumed that all interested parties, including the national and international courts, must come to a conclusion as to what is "right and wrong" when dealing with computers.

There are several different issues at hand when we speak of computer ethics. The major ones are listed below:
A. Theft of money, goods or property using he computer as a "tool" to such ends.
B. Taking information from computer memory, which information is then used in detriment to the parent entity and/or the benefit of the thief.
C. Utilization of computer time without authorization.
D. Utilization of hardware, software or courseware designs which are identical or nearly identical to those of another person or entity, and from which person or entity those designs originated.

The Courts have already determined, as have the computer industry as a whole, that cases A, B and C are crimes punishable under already existing laws. Case D, however, presents the dilemma of the decade, and the dilemma seems to revolve around the concept of "originality." This term immediately brings to mind the laws that protect patent owners of inventions and copyright holders of literary works and films. These laws essentially state that an individual’s or entity’s work cannot be duplicated without permission from that individual or entity, if such coping will be of financial detriment to the original owner.

The problem then becomes one of 1) determining who developed an idea first, 2) how loose to the original can a "second concept "come before it is considered a copy; or conversely, how dissimilar must a "second concept' be from an original before it is considered original, and 3) to what extent is the "second concept" infringing on the rights of the owner of the original, if it is found to be a copy?

Over the years, legal and industry-specific guidelines have been developed as an aid in developing sound "moral judgement" concerning these issues in relation to machines,
literature and films. Thus, computer hardware design is generally protected under these laws, except when the line between hardware and software or courseware becomes fuzzy, such as when dealing with micro storage devices such as chips, or when memory retrieval is dependent on specific hardware configurations. Then the application of the laws becomes difficult.

Software on the other hand is difficult to protect under literary laws because it doesn't look like literature since it doesn't read as easily as Milton or Asimov! and its function is not considered "literary" by some detractors. (See American Software Firm Alleges Program Piracy.” Japan Times, November 18, 1982)

Courseware is difficult to protect, because it isn't in book form. The idea that software produces courseware, and courseware appears on a screen has led may to feel that perhaps computer software and courseware can be protected under laws similar to those for the film industry. While this idea is being considered, vast differences between the industries seem to be causing major roadblocks to such an idea.

There are encouraging signs that the courts and the computer industry as a whole are coming to grips with the problem. In Japan, a recent Tokyo District Court ruling stated that "computer-related software such as microcomputer programs for video game machine's should be considered literary work subject to protection under Copyright Law" (“Copyright Law Applies To Software, Court Rules.” Japan Times, December 7, 1982). As part of that ruling, the judge stated that "the microcomputer program … consists of diverse information and orders that embodies the programmers' original and creative concept." (Ibid.) This ruling will hopefully set an important precedent for other courts throughout the world.

At the Second International Video Game Manufacturer Conference held in October of 1981 in Tokyo, where copyright problems were discussed in relation to video games, it was concluded that "while the 'idea' of the game is not protectable under existing copyright laws, the 'expression' of the game on the screen with distinct sounds is protectable" (“2nd International Video Games Manufacturer Conference Tackles Copyright Problem.” Tokyo: Cash Box, November 28, 1981, p. 7). At this same conference, Professor Terri Do from the legal department of Waseda University in Japan indicated that "the computer program is a copyrightable work because the courts have ruled that he final product is in the program….the music or sound, the game and the ROM should be protected in the same way as a motion picture." (Ibid.) If such were the case, designers and developers of computer materials would indeed enjoy the legal protection required. Since games are becoming an integral part of computer education, the efforts of this international video games organization will definitely have an impact on the language teaching community. (Refer to John Higgins’ talks "Approaches to CALL for English as a Foreign Language: Artificial Intelligence," presented at the TESOL '83 Convention, for examples of research being done in the area of language games. See below for other TESOL involvement.)

At the 1983 International TESOL (Teachers of English to Speakers of Other Languages) Conference held in Toronto, Canada March 15-27, a Special Interest Group dedicated to enhancing the use of computers in second-language education was formed. One of the principal issues to be addressed by CALICO and this organization will be the ethics and standards governing the exchange of information and materials between educational institutions.

Hopefully proceedings, court ruling and organized efforts on this order will help us develop sound "moral judgement" in dealing with the development and exchange of computer materials as we all drive to enhance the quality of computer aided teaching materials, and strive to "mix" the "oil and water" of the computer industry.