## **Viruses Are Not Speech**

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In the early years of the last decade, a rogue publisher caused a ruckus in some quarters by publishing a textbook with detailed code for a number of viruses. I felt that it would be a good thing to see the publisher prosecuted for public mischief, if no other laws were found to apply. However, some people who hate viruses and despise virus writers nonetheless felt strongly that no one should be prevented from publishing virus code in any form. For example, the slippery-slope argument was invoked by one prominent member of the anti-virus community, who said: "My concern is that if we can justify the suppression of information as 'undesirable' or 'potentially dangerous', is it that much further a jump to ... suppression of other 'information'?"

The problem became more difficult a few years later because of the International Traffic in Arms Regulations (ITAR) of the United States. These stupid regulations restricted exports of CD-ROMs or diskettes containing source code for strong cryptographic algorithms. Among the arguments used to attack this bizarre notion were claims that the ITAR infringed the authors' rights to free speech.

I don't think that computer programs, let alone virus code, should be considered speech at all.

Consider a wire-board controlling a card sorter. Is the wire-board speech? Not in any sense most people would use the word. How about a paper punch tape controlling a machine tool? What about a useful computer program expressed as machine language codes? What about the more understandable FORTRAN? Or the even more English-like COBOL or PASCAL? And what of fourth-generation languages that strive to accept input such as "SEARCH EMPLOYEE FILE USING KEY=ID FOR ID=2345"?

In my opinion it's irrelevant to the argument over viruses how we *represent* computer programs. A program is the instructions themselves, not the medium in which they're coded. A program in assembler is a program whether it resides on a hard disk, a floppy diskette, or a portion of a memory array. Indeed, that sequence of computer instructions would be the program itself even were it written on a papyrus, chiselled in stone, signalled by semaphore or printed in a book.

Why should we accept an excessively broad definition of speech that includes self-replicating code that hides in people's computer systems and destroys data, violates confidentiality, or sends out forged e-mail in the victim's name?

And does the fact that some viruses use speech (usually writing) in their payload mean that they should be considered as somehow privileged? I don't think so, any more than I believe that the scrawled graffiti illegally painted by vandals on private property could ever be considered protected speech.

So the next time we debate the advisability (or even the theoretical possibility) of defining laws making virus-writing illegal, I hope we can brush aside any claim that punishing virus writers is

somehow an infringement of their civil liberties.

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