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Rhetorical Analysis of Technical and Non-Technical Articles on Computer Security

In the following rhetorical analysis, I will compare Peter G. Neumann=s article ACComputer Insecurity@ from *Issues in Science and Technology* (Fall 1994) and Michael Meyer=s article AStop! Cyberthief!@ from *Newsweek* (February 6, 1995). These articles address the recent rise of computer-related crime in distinctly separate ways due to their differing audiences. This analysis will outline differences in each article=s target audience, visual layout, topical focus, and desired reader response. I will provide specific examples of these variations and explain their result on the effectiveness of both articles. This report will distinguish how each article=s audience affects its rhetoric, as well as detail the ways in which the article informs its reader with regard to this subject.

Before analyzing the specific variations in each article, I will first provide an overview of the audience of each publication. The journal *Issues in Science and Technology* provides specific discussions of science-related topics to approximately 15,000 readers on a quarterly basis. The sponsors of *IIS&T* include the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. Because of its relatively small circulation, *IIS&T* directs its information to a very narrow range of readers in scientific and technological fields. The popular newsmagazine *Newsweek*, on the other hand, disseminates a wide variety of information to millions of readers with very diverse interests and disciplines. Recently, *Newsweek* has responded to their readers= increased use of technology by providing new features dedicated to computer issues. For example, every issue of *Newsweek* now contains a page called ACyberscope,@ which includes several small articles about recent issues and debates in computers and the Internet. Despite its appeal to a wide range of readers, therefore, *Newsweek* has altered its rhetoric in response to its evolving audience. Having explained each publication=s audience, I will now describe the individual differences in the articles I have selected for my analysis.

By merely glancing at both articles, the reader notices stark differences in each article=s appearance. Neumann=s article in *Issues in Science and Technology* follows a rigid two-column format and includes no illustrations whatsoever. The only outstanding characteristics of the article are a handful of boldfaced subheadings and three key quotes arranged in the margins. The reader of this article gains an initial impression of professionalism and conformity from the article=s largely text-based features. In contrast, Meyer=s article frames an ominous blue-tinted picture of a bandit holding a sack over his shoulder and aiming a handgun at a surreal wall of circuitry. Next to this illustration, a black text box warns the reader that AThe Internet is >the Wild West. No one owns it. It has no rules=@ (37). These visual features provide the reader with a more mass-appeal, cops-and-robbers atmosphere. Also included in the *Newsweek* article is series of mug shots, of convicted Ahackers@ under the heading ATHE GREATEST HITS OF HACKING.@ Here, Meyer gives the reader a number of smug faces to associate with the individual crimes detailed in the article. Neumann=s article, meanwhile, provides no such photographs; he only mention one hacker and does not even name him. In fact, Neumann states that Athe stories that appear in the [popular] press . . . about prankster hackers . . . focus more on the skill of the culprit than the harm done@ (50) rather than on measures

to combat computer crime. Neumann therefore demonstrates his preference to focus upon the general problem of computer crime, while Meyer=s work in *Newsweek* sensationalizes the rogues of cybercrime=s past. This disparity illustrates *IIS&T*=s decision to emphasize the issue to encourage critical thinking and *Newsweek*=s focus on the individuals involved in the topic being discussed.

These articles also differ in terms of topical focus. Neumann describes a wide range of examples of cybercrime, including the interception and fabrication of electronic mail, theft of passwords, and potential problems caused by viruses. However, he generally limits his discussion of these topics to general statements about the vulnerability of systems to such crimes. Meyer=s article, by contrast, initially provides a brief overview of computer crime, but soon bombards the reader with numerous examples of electronic pilfering and fraud. This difference in focus exemplifies *Newsweek*=s popular-press practice of highlighting individual cases to maintain the reader=s interest and a professional theoretical emphasis. Also, the *Newsweek* article addresses one cybercrime issue that does not appear in *IIS&T*: the emergence of on-line pedophiles and child pornographers. A police officer quoted in the article warns parents to Ainstruct kids never to meet alone with anyone they=ve encountered on-line, or respond to sexually explicit e-mail@ (38). This divergence from the issues in Neumann=s article illustrates a difference in each article=s audience: the *IIS&T* article is more concerned with computer users and system administrators who wish to improve security and less with parents who are concerned about their children encountering electronic sex offenders. Despite these differences in topics, both articles are effective in relating relevant warnings their respective audiences.

Above all these articles differ the most in their desired reader response. Meyer=s article simply informs the reader that the recent technology boom Ais coming to resemble the real worldCwith all its diversity and problems@ (36). Meyer even states that Athere=s no reason for hysteria. Cybercrime isn=t epidemic@ (36). *Newsweek* thus downplays a clearly disturbing trend. Instead, Neumann issues a stern warning to his readers. The *IIS&T* article stresses severe security inadequacies and Athe increased potential for harm@ as a result of the Internet=s expansion. He constantly reiterates that few people who fully realize the magnitude of damage that electronic break-ins can cause. Most important, Neumann ends his article by providing his readers with six concrete measures of Acollective action@ that must be fulfilled in order to improve computer security. While these recommendations involve a collaborative effort of system developers, system evaluators (i.e., governmental and private), the U.S. government, legislators, and law enforcement agencies, Neumann outlines solutions to the problems he raises earlier in the article. Meyer, on the other hand, conveniently generalizes his answer to the problem of cybercrime through the following: A[Regulators of every stripe] have got some catching up to do, but so what? Cybercrooks, in the end, aren=t that different from plain old crooks@ (38). After finishing the *Newsweek* article, the reader might likely consider the staggering problem of today=s Aplain old crooks@ and wonder if cybercrime will follow a similar route. Due to its recognition of the severity of cybercrime and its presentation of specific ways to counter such activity, Neumann=s article informs its readers of not only a problem, but more importantly, how to begin to *solve* that problem.

In comparing a pair of articles dealing with computer crime, this rhetorical analysis has highlighted three key differences between them: target audience, visual layout, topical focus, and desired reader response. Whereas Meyer=s *Newsweek* article centered around an image of fictitious burglar, Neumann=s article from *IIS&T* relied upon typographical emphasis. With regard to topical focus, Meyer and Neumann provided their respective audiences with appropriate information and advice.

Finally, Neumann=s Acollective action@ measures gave the readers of *IIS&T* tangible ways to improve computer security, while Meyer did not even address methods to combat cybercrime. Through this analysis, I have also distinguished the effect of these variations upon the article=s rhetoric. In general, I have informed you of the current rise of cybercrime and the ways in which a pair of articles chose to address the issue. The variations in each piece demonstrate how articles that discuss the same topic can significantly differ when presented to two separate audiences.