

AN EXAMINATION OF STUDENT INTERNET USAGE  
AT OKLAHOMA STATE UNIVERSITY

By

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CHAPTER I  
INTRODUCTION

General

The purpose of this study was to determine what Oklahoma State University students were getting out of their Internet experiences. While access to the Internet at OSU is something most people want and recognize as having educational merit, recently some problems have arisen.<sup>1</sup> By administering a descriptive and attitudinal questionnaire to a representative random sample of OSU students, the study gained greater insight into the usage habits of those paying for campus computing services in light of those problems.

Background

General

The term "Internet" applies to today's global connection of millions of computers. Two or more connected computers form a network, and each of these networks may in turn connect to other networks. Experiments to join computers began in the 1950s according to the vision of a team of engineers at the Advanced Research Projects Agency. Given the specific mandates of bypassing all existing computer technologies and creating a secure information system that could keep running in the event of a nuclear strike, the team eventually produced the ARPA Network. ARPA engineers continued their work through the 1970s, bringing key universities and think-tanks onto ARPANET. They were assisted by Xerox's Palo Alto Research Center, the institution responsible for the first generation of compact, powerful, and inexpensive computers. In the mid 1980s, the National Science Foundation began funding five supercomputer centers and linked them



as ARPANET had done. The speed with which NSFNET transmitted packets of information between its centers tantalized many of the institutions funded by NSF, and within a few years the number of computer networks both in the United States and abroad had skyrocketed. As more global citizens clamored to come aboard, NSF dropped its management status and gave birth to the newly unregulated Internet.<sup>2</sup>

According to Dan Carlile, assistant director of Client Services for OSU's Computing & Information Services Department, student access to the Internet grew out of the need to improve both the university's network and its long-standing connection with NSFNET. A study by IBM submitted to the university in December 1992 outlined the improvements OSU would need to make in the area of academic computing, foremost of which were greater networking capabilities in student computing labs. Among other rationale, the report reasoned that connecting computers in student labs would alleviate problems such as long printing delays.<sup>3</sup> In its report IBM generally espoused a policy of "more and better academic computing facilities."<sup>4</sup>

In August 1993, computing consultant corporation KPMG Peat Marwick submitted a report to the university calling for OSU to complete the campus' area network. Although that report mostly accentuated the need for improvements in administrators' computing facilities, finishing the campus network meant taking steps to ensure that all willing OSU students could have access to OSU's network—and, by extension, the Internet.<sup>5</sup>

By 1994, OSU's administration took action on those recommendations with a step toward getting students onto the Internet. In that summer Interim Provost Dr. Marvin Keener empowered the Technology Fee Planning Committee to investigate possibilities for improving Internet access through the assessment of a student technology fee. He also empowered several oversight committees

from each college at OSU. Keener charged the Tech Fee Planning Committee with creating a workable system for the fee.<sup>6</sup> At about the same time, OSU's Faculty Council created the Academic Computing Advisory Committee to address concerns about role of campus computers in learning and to "suggest possible solutions to problems."<sup>7</sup> Speaking late in 1994 as OSU's newly instated President, Dr. James Halligan before the Fall General Faculty Meeting reinforced the positioning of the Internet for educational purposes on campus: "OSU will continue to be the national leader in the use of information technology to provide access to education."<sup>8</sup>

Sentiments such as these were echoed simultaneously at other universities and in *The Chronicle of Higher Education*, which generally took a technophilic approach to the Internet. From July to October 1994, the *Chronicle* reported on such areas as virtual classrooms and libraries, online journals, and the educational potential of the World Wide Web.<sup>9</sup>

As the novelty of joining a larger online community began to fade—not only at OSU but also around the world—people began to see that it remains far from perfect.<sup>10</sup> As with any other two-way communications device, the Internet has been recast by some as a tool now capable of assisting in behaviors traditionally regarded as antisocial. Among others, these behaviors include stalking, harassment, access to pornography, increased pronouncement of racist views, and the controversial "Internet addiction."<sup>11</sup> On the local level, the student newspaper began to note some of these Internet troubles—mostly through the lens of gender—roughly one year after it hailed OSU's march onto the worldwide computer network: "Computer labs not sexual playgrounds"; "New Internet-porn policy to halt sexual harassment"; "Lab voyeurs make studying hard"; "Costly Internet addiction consuming time, lives."<sup>12</sup>

Although they may not have known it at the time, OSU students needed

to qualify and to quantify their needs, desires, habits, and hopes with respect to the Internet beyond the technophilic or technophobic extremes previously expressed. They also needed to communicate them effectively to the University's administration.

## Theoretical Framework

### Diffusion of Innovations

Everett Rogers defines "diffusion" as "the process by which an innovation is communicated through certain channels over time among members of a social system." Rogers' four-part breakdown of the diffusion process—knowledge, persuasion, decision, and confirmation—suggests that adopting a new technology takes place in stages. Certain kinds of people fall into those stages earlier or later on in the process depending on their disposition to the idea, their personal attributes, their placement within the adopting organization, and their exposure to "opinion leaders" (those who externally communicate the qualities of an innovation through group norms).<sup>13</sup>

In a chapter titled "What Are the New Technologies?" in a 1986 book, Rogers makes suppositions about computer-mediated communications and adoption of this specific new communications technology, namely: (1) on a continuum of interactivity, computer communications rank high, beyond Teletext (moderate interactivity) and well past press, radio, TV, and film (low interactivity); (2) the terms "interactivity" and "user-friendly" seem to share a proportional symbiocity; (3) every group of networked computer users has some underlying social structure; (4) new technologies bring about new research problems; and (5) new media allow researchers better and more appropriate tools for collecting data, especially when the subject has to do with a new medium.<sup>14</sup>

Diffusion studies are useful for several reasons when tracing information

about an innovation like the Internet. First, according to Singletary and Stone, initial introduction of an innovation seems to the public to emerge from nowhere. Second, media outlets are often responsible for the introduction and explanation of innovations. Finally,

the pattern of public recognition and of possible acceptance of the information or new product can be highly similar. So theorists have borrowed from diffusion of innovation research to establish conditions for acceptance of a new product or idea and have argued that similar conditions might apply to the recognition and acceptance of . . . information.<sup>15</sup>

### Cultivation Analysis Theory

Cultivation analysis is a broad approach that, in part, answers the question, "What do media do to us?" Although its focus has primarily been on television's effects on audiences, it is still useful in a study of new media. The third element in a research paradigm called Cultural Indicators, cultivation analysis looks at three factors: (1) the process of media production; (2) reflections of society in mediated content; and (3) "relationships between exposure to...messages and audience beliefs and behaviors."<sup>16</sup>

First recognized by George Gerbner, cultivation is said to be a gradual, individual process that takes place without the message recipient's intent to cultivate as a necessary contributor. However, cultivation *is* an active process in that it requires the recipient's involvement to occur.<sup>17</sup>

Cultivation analysis has found through two modes of inquiry that those who more often expose themselves to media—and, by extension, continuous exposure to a kind of message (for example, that the world is violent)—are more likely to believe that the situation portrayed in that media message is true in real life.<sup>8</sup> Cultivation analysis, then, becomes of importance to the Internet, because as

Gerbner has written, "The Internet offers a unique sample of students the opportunity to

Always touted as the dawning of new freedoms, new technologies typically penetrate new markets and eventually concentrate money, power, and choices. To that extent, they may intensify rather than dilute the central thrust of the cultivation process.<sup>19</sup>

### Uses-and-Gratifications Theory

One practical theory of media, that of media uses-and-gratifications, simply asks what people do with mass media rather than what effect media is having on people. The theory operates on the assumption that "people have needs and desires they can meet by using the media." In order to satisfy those needs and desires, media owners and managers must first know what they are. Applying the uses-and-gratifications theory, then, means determining what people want in order to to see what they do with the information they get.<sup>20</sup>

Katz, Gurevitch, and Hass demonstrate that certain gratifications are specific to certain media; for example, print media are generally used to locate information while broadcast media are used for entertainment.<sup>21</sup>

While no uses-and-gratifications studies thus far have specifically elicited opinions about the Internet usage (what people get out of the new medium), the pragmatic sense with which uses-and-gratifications approaches media studies provides a perfect theoretical starting point for such research.<sup>22</sup>

### Statement of the Problem

The study was designed to fill in gaps in existing knowledge concerning students' interaction with, and reaction to, the Internet. In particular, the study sought to fill those gaps at OSU, where Internet research was just beginning. OSU's high-priority Internet services had not been rated by students; nor had students comprehensively told OSU's administration what it was doing with the

Internet. This study gave a representative sample of students the opportunity to do those things.

### Purpose of Study

This study inquired at several levels about student Internet usage at OSU, looking in particular at Internet usage habits with respect to frequency and kind of use, and respondents' attitudes about the Internet.

### Methodology

#### General

To learn what students are doing with and getting out of the Internet, a questionnaire was designed to ask specific questions about Internet usage habits and opinions about the new medium. The questionnaire was distributed to 400 randomly selected OSU students by mail during the spring 1996 semester. After data collection, analysis—mostly of a statistical nature—followed to match answers to the research questions as enumerated in this and the third chapters.

#### Research Questions

Each item on the questionnaire could be generally classified into one of three patterns according to the type of information requested: descriptive, correlational, and attitudinal.

##### 1. Descriptive

a. Demographic: What were the proportions of males to females? U.S. citizens to non-U.S. citizens? How did respondents break down according to classification in school?

b. Internet Related: What was the proportion of Internet users to non-users? How many students had active Internet accounts at OSU versus those

who did not, and among those who did, how long had they been using them? What was the proportion of those who subscribed to a commercial online service versus those who did not? How much time in hours did students say they typically spent on the Internet in a week? In what Internet activities did students take part, and how much time did they spend doing them?

2. Correlational: What was the relationship between gender and Internet usage? Between gender and Internet usage when classification in school was considered? Between Internet usage and national citizenship? Between a person's gender and the length of time that person had been active on the Internet? Between national citizenship status and time spent on the Internet? Between gender and time spent on the Internet?

3. Attitudinal: What reasons were given by those who subscribed to a commercial online service for doing so? What did students see as the benefits of using the Internet? Did students feel that participation in Internet activities had had an effect on their social lives? How did students feel about the integration of Internet activities into their teachers' curricula? About the issue of gender in their Internet travels? Did students feel the Internet was helping them to do better in school?

### Research Objectives

The specific goals for the study were as follows.

1. Determine what kind of student did and did not take advantage of OSU's Internet access. The study qualified "kind of student" by the characteristics of gender, classification in school, and national citizenship.

2. Determine the proportion of students that did use their Internet access versus those that did not, and learn how long students that did use Internet access had been using it.

3. Determine what proportion of students subscribed to an online service and why.
4. Determine how much time, on average, students spent on the Internet in a week as well as how they spent that time.
5. Determine the benefits, if any, students saw of using the Internet.
6. Gauge student opinion on several Internet related issues.

### Significance of the Study

The Internet provides fertile ground for research into new technologies and the ways in which they are used. Furthermore, Internet studies have many applications for augmenting existing knowledge of mass communications theories and practices. In time the Internet will likely be broadly regarded as a commonplace but relevant medium with its own legitimate society.<sup>23</sup>

Studies of the Internet can advance the cause of mass communication theories as previously mentioned. For example, understanding what students are getting out of their time on the Internet correlates to the theory of media uses-and-gratifications as described by Katz, Gurevitch, and Hass.<sup>24</sup> Other theories of import to this study include cultivation analysis (looking for the subtle effects of enculturation in cybersociety) and diffusion of innovations (what kind of student is most likely to have adopted the Internet into his or her regular schedule?).<sup>25</sup> Therefore, a thesis on this topic sought to help begin dialogue over the issue at OSU.

### Scope and Limitations

In its sampling procedures, the study assumed that at least 95 percent of the time the answers received would not be due to chance but rather due to random, scientific selection of subjects. The study further assumed that students



answered questions on the questionnaire honestly and with a clear understanding of what was asked of them.

Student composition limited the study in that the resulting data could make inferences only about Oklahoma State University students. OSU's Internet setup naturally varies in comparison to that of other universities, which may have greater or less Internet access.

The study was somewhat limited in its method of requesting information. Because of the need to keep the questionnaire short, the creator of the instrument assumed that, for example, students using the Internet would know what certain terms such as "browsing the World Wide Web" meant. Finally, the dynamic nature of the Internet means that students may have signed up for Internet access within weeks of completing a questionnaire, and that therefore the long-term implications of their answers would have been nullified.

### Organization of the Study

The remainder of the study is divided into traditional thesis study areas. Chapter II will concentrate on the development of the Internet and OSU's involvement in it, problems inherent in Internet usage by college students, and the relevant theoretical underpinnings needed to better understand Internet usage habits. Chapter III will provide an in-depth explanation of the methodological framework used in the study and will justify the use of the chosen statistics. Chapter IV will present the results of the questionnaire both graphically and textually. Chapter V will provide general observations through substantive discussion of the methodology and findings and will offer recommendations for action by appropriate entities.

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## CHAPTER II *Internet in the 1970s, bringing key*

### LITERATURE REVIEW *the 1970s, bringing key*

#### Introduction *the 1970s, bringing key*

This chapter will begin with a brief history of the Internet and how, as it came into being, Oklahoma State University's involvement grew along with it. Next, it will focus on how and why societies are formed in cyberspace and how virtual communities have come to have their own problems which are often technological takes on the real world. Next, it will examine the rising cyberspace issues of relevance to college students: gendered identity and changing technologies; the perceived effects of the Internet on college-aged persons; and the perceived benefits of Internet usage. The chapter will then move into previous Internet related research efforts on college students and discover how some of them have been short-sighted in scope. Finally, this chapter will examine three mass communication theories with appropriate ties to Internet usage among college students, and a summary of this chapter will be presented.

#### Background of the Internet and OSU's Role in It

##### ARPANET, NSFNET, and Internet

The term "Internet" applies to today's global connection of millions of computers. Two or more connected computers form a network, and each of these networks may in turn connect to other networks. Experiments to join computers began in the 1950s according to the vision of a team of engineers at the Advanced Research Projects Agency. Given the specific mandates of bypassing all existing computer technologies and creating a secure information system that could keep running in the event of a nuclear strike, the team eventually produced the ARPA

Network. ARPA engineers continued their work through the 1970s, bringing key universities and think-tanks onto ARPANET. They were assisted by Xerox's Palo Alto Research Center, the institution responsible for the first generation of compact, powerful, and inexpensive computers.<sup>1</sup>

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### Changes at OSU

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steps to ensure that all willing OSU students could have access to OSU's network—and, by extension, the Internet.<sup>5</sup>

By 1994, OSU's administration took action on the consultants' recommendations with a step that would eventually lead students to the Internet. In that summer Interim Provost Dr. Marvin Keener empowered the Technology Fee Planning Committee to investigate possibilities for improving Internet access through the assessment of a student technology fee. He also empowered several oversight committees from each college at OSU. Keener charged the Tech Fee Planning Committee with creating a workable system for the fee.<sup>6</sup> At about the same time, OSU's Faculty Council created the Academic Computing Advisory Committee to address concerns about the role of campus computers in learning and to "suggest possible solutions to problems."<sup>7</sup> Speaking late in 1994 as OSU's newly instated President, Dr. James Halligan before the Fall General Faculty Meeting reinforced positioning the Internet as educational tool: "OSU will continue to be the national leader in the use of information technology to provide access to education."<sup>8</sup>

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With a system in place for assessing student technology fees (\$3 per credit hour), and with those monies allocated to improve network computing resources, more OSU students began to take advantage of the university's Internet offerings in the first academic year of the fee's existence, 1995-96. According to the Tech Fee Committee, the average stay in a computing lab with Internet access became three-and-a-half hours. Computer labs with Internet access had 80 to 87

percent occupancy during peak hours. Each student had an address automatically assigned to him or her for sending and receiving electronic mail messages.<sup>10</sup> And, in a move by the university's Student Government Association, all students could register to have home pages on the World Wide Web (the rapidly growing graphical portion of the Internet). Within the first few months of SGA's inauguration of the service, several hundred students had registered for Web pages.<sup>11</sup>

The confluence of literally thousands of colleges and universities—millions of students and educators—at the Internet meant that some problems would arise. These problems were rarely technical in nature but rather the product of whole societies of Internet users being quickly constructed.

### Cyber Societies

In 1964, Marshall McLuhan, then at the University of Toronto, published a collection of essays on technology and media titled *Understanding Media*. In it he argued that new technologies brought on new societies, or relationships among human beings, and that the forthcoming society would be a "global village" that would disperse learning and human interaction to a borderless degree of communication. McLuhan's vision extended beyond well beyond current trends.

Departmental sovereignties have melted away as rapidly as national sovereignties under conditions of electric speed. Obsession with the older patterns of mechanical, one-way expansion from centers to margins is no longer relevant to our electric world. Electricity does not centralize, but decentralizes.<sup>12</sup>

...with electricity and automation, the technology of fragmented processes suddenly fused with the human dialogue and the need for overall consideration of human unity. Men are suddenly nomadic gatherers of knowledge, nomadic as never before, informed as never before, free from fragmentary specialism as never before—but also involved in the total social process as never before; since with electricity we extend our central nervous system globally, instantly interrelating every human experience.<sup>13</sup>



Many scholars have come to view McLuhan as a herald of the Internet experience. Douglas Kellner, professor of philosophy at the University of Texas-Austin and author of *Media Culture*, sees McLuhan's work as the baseline statement for emerging cyberspace communities. Kellner argues that since role and gender models, values, and ideas are all mediated through media, the "coming synthesis of computer and media systems" will shift the focus of social experience increasingly toward computer-mediated communications (CMC).<sup>14</sup>

Howard Rheingold's 1993 book *The Virtual Community* showcases one small facet of the Internet, a subscription-based service called the Whole Earth 'Lectronic Link (WELL), as a thriving computer society. Rheingold demonstrates how members of the WELL who have had significant happenings in their personal lives communicate the details of those events to other members, and how those members feel compelled to respond—sometimes with greater generosity and understanding than immediate family or friends. He recalls some of the first ruminations in the 1950s about electronically joined persons—"communities not of common location, but of common interest"—and lays the foundation of what is traditionally considered community over the new medium.<sup>15</sup>

We now know something about the ways previous generations of communications technologies changed the way people lived. We need to understand why and how so many social experiments are coevolving today with the prototypes of the newest communications technologies. My direct observations of online behavior around the world over the past ten years have led me to conclude that whenever CMC technology becomes available to people anywhere, they inevitably build virtual communities with it, just as microorganisms inevitably create colonies.<sup>16</sup>

"The Emergence of Community in Computer-Mediated Communication" by Nancy K. Bayam uses the example of a Usenet newsgroup, rec.arts.tv.soaps (r.a.t.s.), to identify "the distinct cultures" that arise in a group of participants with the same interests. Bayam shows how "the creation of forms of expressive

communication, identity, relationships, and norms" in CMC is critical to forming an online community. R.a.t.s. participants, she writes, transfer "social information and. . .create and codify group-specific meanings, socially negotiate group-specific identities, form relationships. . .and create norms which serve to organize interaction and to maintain desirable social climates."<sup>17</sup>

Agreeing that members of online groups can interact socially, Steven G. Jones nevertheless disagrees with applying the terminology of "community." It is unfortunate, he argues, that even the best fitting conceptions of community do not sync with those who communicate only out of a sense of "common interest."<sup>18</sup>

Regardless of the exact words used to describe the scores of people who have formed tribes through the Internet, those tribes, importantly, are able to foster community. Suggesting the decay of America's real life communities, and recalling the argument of Kellner, Steven E. Miller concludes that the future of today's real societies rests with those now forming online societies. Virtual communities are not only existent, he maintains, they are also of utmost importance to the continuation of social order and contract.<sup>19</sup> How virtual communities form in light of rapidly evolving problems in computer-mediated communication is another matter. Two examples follow.

### Two Student-Specific Issues of Relevance to the Internet

#### Gender: Identity in a High-Tech Age

According to Barbara M. Montgomery, where "dyads, groups, and societies meet," social being happens on many levels. Montgomery's look at couples through the lens of culture as they try to mold their identities through one another reveals that in the realms of both "autonomy and connection," the messages of couples and cultures become identifiable as having certain patterns.

Ultimately, "the nature of the person-to-person interface is intimately tied to the nature of the couple-to-culture interface."<sup>20</sup>

Gender, especially as seen in the notion of person-to-person and couple-to-culture "interfaces," has become an inescapable aspect of daily life in cyberspace. The oft-cited truism that anyone can be anything on the Internet<sup>21</sup> of course cannot change a user's physical identity and, according to Haraway, one of the last aspects of identity to become visible to other users over the Internet is the user's gender.<sup>22</sup> Still, understanding that the Internet is dominated by a strongly male presence, and that gender is one of the top issues in computer-mediated communication today, provides context for some of the gender-related issues dealt with in this thesis.<sup>23</sup>

In "Gender And The Web," Keng Chua argues that the new technologies of the Internet and the World Wide Web tend to dissolve gender and discipline boundaries, enabling information and knowledge to become de-territorialized. Chua locates the gender discourses surrounding the Web and explores issues relating to the "design, organization, control and use of the Web as a gendered space and facility," particularly in light of Barthes, Derrida, and Wittgenstein.<sup>24</sup>

*Gender and Technology in the Making* provides an excellent detailed history presenting the role of gender in the development of a technological device, the microwave oven, in the United Kingdom. Women employed as Test Kitchen economists were asked only to provide relevant information in the construction of a clean, soft microwave interface; however, only males served as engineers to implement (some of) those changes. Certain aspects of the project, such as the completion of a cookbook, were therefore never carried out. Cockburn and Ormrod maintain that gender plays a part in the construction of technology; that social identities are arrived at through both individual characteristics and cultural formations; and that technology can have an impact on gender in much the

same way that the opposite is true. They furthermore define technology as making, doing, or producing as opposed to a more accepted notion of processes and knowledge used in engineering.<sup>25</sup>

J.C. Herz's *Surfing on the Internet* is a conglomeration of thought processes bound for all points technological, but it is deeply important in that it is the first recorded stepping-out of a female into cyberspace. While the book serves as an album for many smaller snapshots of life in cyberspace, it does take the reader to "places" where men overtly rule the social structure; however, Herz revels in the challenge of standing up to male domination, even when it is expressed in electronic terms not limited by time or space.<sup>26</sup>

Herz's "Pigs in (Cyber) Space" was one of the first articles to articulate a specifically female point of view in relation to the male-female dynamic on electronic chat groups. She perceives the Internet as largely a male-dominated medium where she is capable of holding her own ground despite sexually oriented roadblocks thrown up by males. Braving the advances of mostly teenage boys now is akin to cutting a swath for the other females to follow her, she says.<sup>27</sup>

Sherry Turkle's task in *The Second Self* is to understand what continuous exposure to computers does to people. With her research taking place early enough to look at the first generation of home computer users, Turkle delineates between stages of self identification and thinking about computers, especially in light of gender. She defines these stages as "metaphysical" (early in life), where children are concerned about whether the computer is actually alive; "mastery" (seven to eight years old), where children are consumed with understanding and manipulating computers; and "polarization" (teenaged), in which adolescents use computers as objects with which to think about themselves. Within the stage of mastery, gender differences are observable as "girls are trying to forge relationships with the computer that bypass objectivity altogether." This type of com-

puter master—the “soft master”—is the reflection of gendered values: negotiating, anthropomorphic, relational, “sensuous rather than abstract.” Turkle then argues that the world of the soft master is not merely one for children but in point of fact is the case for gendered computer use overall.<sup>28</sup>

In “Women and the Telephone: The Gendering of a Communications Technology,” Lana Rakow notes that the telephone was originally intended for business purposes but was turned into an everyday tool of social utility by women who brought it into the home. The telephone, Rakow writes, is a good example of a new technology that originally had the opportunity to become “the great social leveler” but which nevertheless ended up reinforcing traditional patriarchal hierarchy.<sup>29</sup>

“Chatting on a Feminist Computer Network” by Smith and Balka sheds light on the “feminization” of computer networks as an unfolding process that occurs around “chatting.” They note that such a feminization would probably rely on the increasingly available alternative networks such as computer bulletin boards while also incorporating artifacts and designs like “old wives’ tales, midwifery, motherwit. . . and moral uplift movements.”<sup>30</sup>

Zimmerman’s *The Technological Woman* is a collection of essays written just prior to the revolution in personal computing. *The Technological Woman* attempts to uncover anti-feminist underpinnings in theoretical as well as practical elements of society. Several essays illuminate the need to redefine technology from a more feminist perspective.<sup>31</sup>

Applying a reader-response commentary to a previous article by Sue Jansen on the emerging international culture in the same volume, John J. Pauly in “Communication Technology as a Metaphor of Power” asserts that elites—media elites, to be sure—construct and maintain social order through focusing on communications technology. He relies heavily on James Carey’s (1990) argument that

"communication technology is perhaps the root metaphor of modern societies, a very totem of social order."<sup>32</sup>

In what is perhaps most telling about male Internet behavior, *Sassy* published in 1995 a quick guide for young girls who decide to join Internet communities. Titled "Net Safety," the article describes the danger of anonymity on the Internet. Erin Culley tells how to avoid harassment and gives advice for females who wish to initiate online romance.<sup>33</sup>

"Women learning verbal thugs travel Internet" appeared at the top of the front page of the *Chicago Tribune* in early February 1995. In the story Nathaniel Sheppard quotes several female student Internet users, some of whom log onto chat groups with male or gender-neutral pseudonyms to avoid harassment. "In the absence of hassle-free Net destinations for women," he writes, "exploration remains risky."<sup>34</sup>

At OSU, gender and the Internet are topics explored on occasion by the campus newspaper, *The Daily O'Collegian*. For example, in September 1995 OSU adopted a campus-wide policy stating that its "computing and electronic communication facilities and services. . . are primarily intended for teaching, educational, research and administrative purposes." The policy, according to an *O'Collegian* story by Rocky Salim, is intended to curb the potential for sexual harassment that could be inferred when one student (presumably female) sees another (presumably male) looking at sexually graphic images culled from the Internet. According to then-SGA President Sonya Beck, "When we have people waiting in line to use the computers for classes, it is a shame to have the computers being used for something like pornography."<sup>35</sup>

An editorial that appeared in the *O'Collegian* shortly after the adoption of the policy extols it as a good first step on the way to ridding OSU's labs of pornographic material distributed over the Internet. However, deriding the policy's

ambiguity in terms of what constitutes pornography, the piece goes on to state the editorial board's general goal: to rid campus computing facilities of any "hostile working environment, whether (the offended person) is male or female."<sup>36</sup> Subsequent opinion pieces, both by female writers, conversely portrayed the Internet as a place to access information, be entertained, and meet people,<sup>37</sup> and as a resource for students' "sick desires to be fulfilled."<sup>38</sup>

### Loss of Social Interaction

In a tour of virtual life subtitled *The Naked Truth About Internet Culture*, Dinty W. Moore sets forth a premise to be found in much of the literature concerning how the Internet touches people.

Falling in love over the Internet is one thing, but falling in love *with* the Internet is yet another. Tales of addiction and obsession, of people, almost always young men, who take digital bytes of information directly into their veins, who spend fifteen, eighteen, even twenty hours a day "logged on" to the Net, have been often reported by both zealots and skeptics, as proof of how wonderful this innovation can be, and as proof of its danger.<sup>39</sup>

Moore writes of an experience with Rob Dale, then an underclassman at the University of Pittsburgh, who posted a message to the Usenet newsgroup alt.cyberspace: "I am totally addicted to 'Cyberspace.'" Dale was kicked out of the University's computing facilities his freshman year because he monopolized computers with Internet access while playing interactive games. Referring to cases such as Dale's, Moore cites Dr. Michelle Weil, a California psychologist: "The underlying danger: the more time you spend facing the screen, the less time you spend doing other things."<sup>40</sup>

Indeed, a noticeable loss of social interaction can occur when a student becomes too involved in Internet activities.<sup>41</sup> At OSU, where Internet access, according to one *O'Collegian* article is "cheap and easy," reports of a malady

dubbed "Internet addiction" increased in the Spring 1996 semester. Patrick Murphy, director of OSU's Counseling Services, said in a February *O'Collegian* article that he had "noticed a problem of excessive Internet use among students."<sup>42</sup> According to the story, those who suffer from addiction to the Internet display their compulsion by repeatedly checking electronic mail accounts, letting hours slip by while online, undergoing weight gain, falling through on personal relationships, and failing classes. However, the story also cites OSU faculty members who disagree with applying a terminology of addiction in that the Internet is not physiologically harmful.<sup>43</sup>

Thomas DeLoughry's article, "Snared by the Internet," in the March 1, 1996, issue of the *Chronicle of Higher Education*, tells of some personal contact with a student whose story resembles Rob Dale's. Hours spent in front of the screen led "Mary" to almost total isolation from her outside surroundings, eventually bringing her to hope that the "fascination" she felt for the endless expanse would someday fade away. DeLoughry cites five university administrators from around the United States—either in computing or counseling fields—who express varying levels of concern over "Internet addiction." "The bottom line" for one researcher, Michael Raulin of the State University of New York, "is that psychologists and psychiatrists need to compile more data on people believed to be suffering from computer addiction."<sup>44</sup>

### Theoretical Considerations

#### Diffusion of Innovation Theory

Everett Rogers defines "diffusion" as "the process by which an innovation is communicated through certain channels over time among members of a social system."



It is a special type of communication, in that the messages are concerned with new ideas. Communication is a process in which participants create and share information with one another in order to reach a mutual understanding. . . . Diffusion is a special type of communication, in which the messages are concerned with a new idea. It is the newness of the idea in the message content of communication that gives diffusion its special character.<sup>45</sup>

Rogers' four-part breakdown of the diffusion process—knowledge, persuasion, decision, and confirmation—suggests that adopting a new technology takes place in stages. Certain kinds of people fall into those stages earlier or later on in the process depending on their disposition to the idea, their personal attributes, their placement within the adopting organization, and their exposure to “opinion leaders” (those who externally communicate the qualities of an innovation through group norms).<sup>46</sup>

In a chapter titled “What Are the New Technologies?” in a 1986 book, Rogers quickly traces the rise of the computer chip from Lee DeForest in 1912 to the manufacture of a 256 Kilobyte computer memory chip in 1986 (date of the book's publication). He goes on to make suppositions about computer mediated communications and adoption of this specific new communications technology, namely: (1) on a continuum of interactivity, computer communications rank high, beyond Teletext (moderate interactivity) and well past press, radio, TV, and film (low interactivity); (2) the terms “interactivity” and “user-friendly” seem to share a proportional symbiocity; (3) every group of networked computer users has some underlying social structure; (4) new technologies bring about new research problems; and (5) new media allow researchers better and more appropriate tools for collecting data, especially when the subject has to do with a new medium.<sup>47</sup>

Diffusion studies are useful for several reasons when tracing information about an innovation like the Internet. First, according to Singletary and Stone, initial introduction of an innovation seems to the public to emerge from nowhere.

Second, media outlets are often responsible for the introduction and explanation of innovations. Finally,

the pattern of public recognition and of possible acceptance of the information or new product can be highly similar. So theorists have borrowed from diffusion of innovation research to establish conditions for acceptance of a new product or idea and have argued that similar conditions might apply to the recognition and acceptance of . . . information.<sup>48</sup>

### Cultivation Analysis Theory

Cultivation analysis is a broad approach that, in part, answers the question, "What do media do to us?" Although its focus has primarily been on television's effects on audiences, it is still useful in a study of new media. The third element in a research paradigm called Cultural Indicators, cultivation analysis looks at three factors: (1) the process of media production; (2) reflections of society in mediated content; and (3) "relationships between exposure to...messages and audience beliefs and behaviors."<sup>49</sup>

First recognized by George Gerbner of the Annenberg School of Communication at the University of Pennsylvania, cultivation is said to be a gradual, individual process that takes place without the message recipient's intent to cultivate as a necessary contributor. However, cultivation *is* an active process in that it requires the recipient's involvement to occur.<sup>50</sup>

Cultivation analysis has found through two modes of inquiry that those who more often expose themselves to media—and, by extension, continuous exposure to a kind of message (for example, that the world is violent)—are more likely to believe that the situation portrayed that media message is true in real life.<sup>51</sup> Cultivation analysis, then, becomes of importance to the Internet, because as Gerbner has written,

Always touted as the dawning of new freedoms, new technologies typically penetrate new markets and eventually concentrate money, power, and choices. To that extent, they may intensify rather than dilute the central thrust of the cultivation process.<sup>52</sup>

### Uses-and-Gratifications Theory

One practical theory of media, that of media uses-and-gratifications, simply asks what people do with mass media rather than what effect media is having on people. The theory operates on the assumption that "people have needs and desires they can meet by using the media." In order to satisfy those needs and desires, media owners and managers must first know what they are. Applying the uses-and-gratifications theory, then, means determining what people want in order to see what they do with the information they get.<sup>53</sup>

Katz, Gurevitch, and Hass demonstrate that certain gratifications are specific to certain media; for example, print media are generally used to locate information while broadcast media are used for entertainment.<sup>54</sup>

While no uses-and-gratifications studies thus far have specifically elicited opinions about the Internet usage (what people get out of the new medium), the pragmatic sense with which uses-and-gratifications approaches media studies provides a perfect theoretical starting point for such research.<sup>55</sup>

### Summary

The literature presented in this chapter generally regarded the Internet as a developing medium that has increasingly complicated issues associated with it. However, the literature failed to address the essential question posed by this thesis: How were OSU students integrating the Internet into their lives, if indeed they were at all, during the time of its growing acceptance? The literature also failed to ask about overall student attitudes, choosing instead to examine indi-

vidual-level cases of apparent significance. Finally, literature produced at a level of local consumption—mostly *O'Collegian* stories—tended to uniformly ignore the need for in-depth examination of Internet issues.

In short, a research project was needed to give the OSU community a true picture of the Internet usage habits of its student population.

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## CHAPTER III

### METHODOLOGY

#### General

To learn what students are doing with and getting out of the Internet, a questionnaire was designed to ask specific questions about Internet usage habits and opinions concerning the new medium. The questionnaire was distributed to 400 randomly selected Oklahoma State University students by mail during the spring 1996 semester. After data collection, analysis followed to match answers to the research questions as stated in this chapter.

#### Purpose of the Study

The purpose was to determine whether OSU students are using the university's Internet access, what students are getting out of their Internet experiences, and finally what they are doing while on the Internet.

While access to the Internet at OSU is something most people want and recognize as having educational merit, only recently have some problems arisen.<sup>1</sup> By administering an attitude inventory to a representative random sample of OSU students, the study sought to gain greater insight into the usage habits of those paying for campus computing services.

#### Research Approach

The method involved the administration of a questionnaire (Appendix) to randomly selected OSU students. Such a sample was intended to statistically represent OSU students as a whole.<sup>2</sup>

To enhance participation, questionnaires were mailed to students with

business reply envelopes and signed letters copied onto School of Journalism and Broadcasting letterhead (Appendix). A small incentive—a stick of gum—was included in each survey.<sup>3</sup> In the second round of questionnaires (those sent to students who previously had not responded), a signed cover letter urging participation was included (Appendix).

### Research Questions & Variables

Each item on the questionnaire could be generally classified into one of three patterns according to the type of information requested: descriptive, correlational, and attitudinal.

#### 1. Descriptive

a. *Demographic:* What were the proportions of males to females? U.S. citizens to non-U.S. citizens? How did respondents break down according to classification in school?

b. *Internet Related:* What was the proportion of Internet users to non-users? How many students had active Internet accounts at OSU versus those who did not, and among those who did, how long had they been using them? What was the proportion of those who subscribed to a commercial online service versus those who did not? How much time in hours did students say they typically spent on the Internet in a week? In what Internet activities did students take part, and how much time did they spend doing them?

2. *Correlational:* What was the relationship between gender and Internet usage? Between gender and Internet usage when classification in school was considered? Between Internet usage and national citizenship? Between a person's gender and the length of time that person had been active on the Internet? Between national citizenship status and time spent on the Internet? Between gender and time spent on the Internet?

3. Attitudinal: What reasons were given by those who subscribed to a commercial online service for doing so? What did students see as the benefits of using the Internet? Did students feel that participation in Internet activities had had an effect on their social lives? How did students feel about the integration of Internet activities into their teachers' curricula? About the issue of gender in their Internet travels? Did students feel the Internet was helping them to do better in school?

The following variables involved in the study are accompanied by operational definitions.

Gender: Defined as either male or female.

Classification in school: For the purpose of this survey's administration, defined as freshman, sophomore, junior, senior, or graduate student at OSU. In the undergraduate strata, classification is determined by adding the number of credit hours a person has completed and comparing them against a previously defined scale. OSU considers any student currently enrolled in a master's or doctoral program of study a graduate student.

Internet: Defined as the computer-connected network of networks. "Internet" provides an umbrella terminology for the of millions of computer users that represent the enterprises of government, education, commerce, and various organizations in addition to the customers of companies that specialize in Internet access.<sup>4</sup>

OSU Internet account: Defined as an agreement, usually in writing, between OSU's Computing & Information Services department and an OSU student. The agreement provides the student with Internet access.

Commercial online service: Defined as a for-profit business venture that provides electronic information not necessarily available elsewhere on the Internet and, sometimes, information that is. Examples of commercial online

services include America Online, CompuServe, and the thousands of Bulletin Board Systems throughout the world.<sup>5</sup>

**Time spent on the Internet:** Defined as taking part in one of the Internet activities (defined below) according categories of time increments in one week: 0 to 59 minutes, 1 to 3 hours, 4 to 6 hours, 7 to 9 hours, 10 to 12 hours, or 13 or more hours per week.

**Internet Activities:** Defined as the following: browsing the World Wide Web, sending/reading e-mail; downloading files; uploading files/building Web pages; participating in real-time chat forums; reading/posting to Usenet newsgroups or listservs; and participating in network games. These activities constitute OSU's Internet capabilities today.

**Time spent in individual Internet activities:** Defined as a self-reported categorical indication of average hours spent per week in Internet activities (defined above) as listed on the questionnaire.

**National Citizenship:** Defined as having one's official citizenship in either the U.S. or some other country.

### Research Objectives

The objectives for the study, broadly, were as follows.

1. Determine what kind of student did and did not take advantage of OSU's Internet access. The study qualified "kind of student" by the characteristics of gender, classification in school, and national citizenship.
2. Determine the proportion of students that did use their Internet access versus those that did not, and learn how long students that did use Internet access had been using it.
3. Determine what proportion of students subscribed to an online service and why.

4. Determine the amount of time, on average, students spent on the Internet in a week as well as how they spent that time.
5. Determine the benefits, if any, students saw of using the Internet.
6. Gauge student opinion on several Internet related issues, including: students' social lives and the Internet; the role of gender in Internet computing; the advancement of an Internet curriculum; and the overall value of the Internet in students' intellectual growth.

The physical output of the study consisted of completed questionnaires, the data from which was turned into more meaningful statistics. These in turn were interpreted according to standard analysis techniques. Ultimately, the study sought to use data analysis and interpretation methods to find answers to the objectives as previously listed (and as more specifically enumerated in the "Research Questions" section).

### Sampling Plan

The overall population from which the sample was drawn was all the students enrolled at OSU at the time the sample was taken. A computer database at the Department of Computing and Information Services that kept all current students' names and mailing addresses served as the sample frame while a single student was assumed to be the sample unit. The computer on which the database resides used an algorithm to generate numbers that corresponded to student names. Four hundred names were randomly selected from the entire list of students in this manner. Both the computer database, which is updated regularly, and its process of selecting names, have been used in countless previous sampling procedures. Thus the sampling process followed the principle of scientific, random selection of sample units.

The name and mailing address of each student was printed by CIS onto

mailing labels. Before labels were attached to envelopes, they were copied onto regular letter-sized paper. On the photocopy each student name and address received a number according to its logical sequence ("001," "002," etc.). The same number was then copied onto the questionnaire going into that student's envelope. Under this system it was possible to tell who had and had not sent the questionnaire back when planning for a second mailing to those who had not yet responded.

Also into each envelope went a cover letter (Appendix) explaining the purpose of the questionnaire as well as the numbering system (that anonymity would be upheld in the reporting of results); a #9 size business reply envelope; and a stick of gum as incentive. In the second mailing of questionnaires targeting previous nonresponders, a new letter was included using a humorous approach that would hopefully boost response (Appendix).

#### Schedule for Conducting the Research

Prior to April 8, 1996, approval was attained from the thesis committee and the University's Internal Review Board before beginning. The questionnaire was informally tested among student workers at the Office of University Research Services. On April 8, the first round of questionnaires was sent out.

On April 15 a check was conducted to compare the number of questionnaires received against number needed (73/384); thus, preparation for the second round of questionnaires began by ordering more envelopes, revising and copying the cover letter as mentioned above, and making additional copies of the questionnaire.

The second round of questionnaires was sent on April 17 with due date of April 25. Because as of April 24 only 144 questionnaires, or 37.5 percent of the total sent, had been returned, it was assumed that more time would be needed

before officially closing the data collection portion of the study. Therefore, the processes of tabulating data and running statistical tests as outlined in this chapter did not commence until well into May when it was assumed that most all questionnaires would have already been returned.

### Data Collection

The data collection instrument for this study was a student questionnaire developed over the period of a few months by both the student investigator and the graduate faculty in the School of Journalism and Broadcasting. Asking questions of both a factual and attitudinal nature, the instrument broadly sought information in several categories: What was the demographic makeup of the student respondent? Did the student use the University's Internet services? If so, how often and what for? Did a student's participation in Internet activities affect his or her social life? Had students noticed whether teachers had yet integrated the new technology into their curriculum? Did students' gender play a role in how active they were on the Internet? Finally, had the Internet enhanced the intellectual development of students? These questions combine some of the more practical questions that need immediate attention but have not been answered—who is using the Internet, and how much and for what—with questions naturally arising from current issues as defined in the literature review in the second chapter of this thesis.

The usage of the questionnaire itself as a research instrument is easily justifiable in the context of a study on Internet usage. According to Wimmer and Dominick, students may feel freer to answer questions more honestly than in a face-to-face situation where an interviewer is physically present. Second, the cost of a questionnaire and its associated mailings and incentives is much less than that of a telephone survey, personal interview, or group administration. Finally,



questionnaires can ask for large amounts of information in a relatively compact space.<sup>6</sup>

Several students at OSU's Office of University Research Services were chosen to pretest the questionnaire. They were asked informally to answer the questionnaire as though they had received it in the mail. After each student had completed the questionnaire, he or she was asked to provide feedback concerning: (1) how clearly instructions and questions were worded; (2) if some relevant choice had been left off of ranked items; (3) whether there was sufficient space to fully answer all questions; and (4) if there were any other items that needed improvement. Their feedback changed the questionnaire both visually and textually in some respects. For example, more space was included to accommodate longer answers; directions were more clearly separated from questions; and some better answer choices were included in questions requiring ranked choices.

### Data Analysis

First, descriptive statistics told what demographics took part in the study. Numbers and proportions of men and women were noted along with school classifications, Internet usage statistics, and national citizenship status.

Tallies for answers "yes" and "no" on question 1 were tallied and tested with Chi Square to determine whether the difference between them, if any, was significant. (All statistics assumed at least a confidence level of 95 percent.)<sup>7</sup>

The study reported descriptive statistics for question 2 as a histogram.<sup>8</sup> If a high number of answers fell into a few categories, especially "0 to 4 Months" or "3 or More Years," speculation about the source of the answers was deemed appropriate for discussion in the final chapter of this thesis.

For the question dealing with commercial online services, those answering either the first 5 possible answers or "I don't currently subscribe" were tallied

according to either category (use or non-use) and tested with Chi Square to determine whether the difference, if any, between them was statistically significant.<sup>9</sup> Ranked data was tested with the t-test for differences among several means.<sup>10</sup>

For question 5, a distribution table depicted the results.<sup>11</sup> Giving numbers for answers overall, it listed the average number of hours respondents indicated that they spent in each activity.

For question 6, data were tested with the t-test for differences among several means.<sup>12</sup>

For statements 7a through 7p, a large table depicted the averages for both categories of gender—women and men—and each possible category of school classification—freshman, sophomore, etc. For example, for the statement “I would rather go out with friends than spend time on the Internet,” average scores of agreement were listed for women and men, and opinions overall.

### Assumptions and Limitations

In its sampling procedures, the study assumed that at least 95 percent of the time the answers received would not be due to chance but rather due to random, scientific selection of subjects. The study further assumed that students answered questions on the questionnaire honestly and with a clear understanding of what was asked of them.

Student composition limited the study in that the resulting data can make inferences only about Oklahoma State University students. OSU’s Internet setup naturally varies in comparison to that of other universities, which may have greater or less Internet access.

The study was somewhat limited in its method of requesting information. Because of the need to keep the questionnaire short, the creator of the instrument

assumed that students using the Internet would know what certain terms such as "browsing the World Wide Web" meant. Because of the need to ask for information on only two occasions and to request immediate feedback, the questionnaire came to students under varying states of mind who answered questions in the context of immediate knowledge. The dynamic nature of the Internet means that students may have signed up for Internet access within weeks of completing a questionnaire, and that therefore the long-term implications of their answers would have been nullified.

## Endnotes

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## CHAPTER IV

### FINDINGS AND ANALYSIS

#### General

The purpose of this study was to determine to what extent Oklahoma State University students are using the university's Internet access, what they are doing while on the Internet, and finally what students are getting out of their Internet experiences.

Four hundred current OSU students, whose names were randomly selected from a computer database, were mailed questionnaires asking about Internet usage habits and opinions during the spring 1996 semester.

Of the 400 students in the initial sample, 181—45.25%—responded by returning usable questionnaires (two more were returned but could not be integrated into the statistics due to incompleteness). The percentage of student respondents from the original desired number of 384 is 47.13%.

#### Findings

Results of questions 1, 8, 9, and 10, dealing with demographics, are depicted in Table I. The table shows that the numbers of male and female respondents were almost equal. Also noteworthy is the small number of non-U.S. citizen respondents (16) against 165 U.S. citizens. Places of origin listed by students with national status outside the U.S. were Malaysia, India, Thailand, Sweden, Iceland, Sri-Lanka, Pakistan, and Asia.

Chi-square analysis revealed that the number of Internet users—111—was

TABLE I  
DEMOGRAPHICS OF STUDENT RESPONDENTS

	MALE STUDENTS		TOTAL
	U.S. CITIZENS	NON-U.S. CITIZENS	
<i>Internet Users</i>			
Freshmen	7	0	7
Sophomores	12	1	13
Juniors	8	2	10
Seniors	16	2	18
Graduate	10	6	16
<i>Total</i>	53	11	64
<i>Internet Non-Users</i>			
Freshmen	4	0	4
Sophomores	1	0	1
Juniors	3	0	3
Seniors	5	0	5
Graduate	13	0	13
<i>Total</i>	26	0	26
<i>Categorical Total</i>	79	11	90
<b>FEMALE STUDENTS</b>			
<i>Internet Users</i>			
Freshmen	6	0	6
Sophomores	1	1	1
Juniors	8	0	8
Seniors	9	1	9
Graduate	19	2	21
<i>Total</i>	43	4	47
<i>Internet Non-Users</i>			
Freshmen	3	0	3
Sophomores	3	0	3
Juniors	9	1	10
Seniors	7	0	7
Graduate	21	0	21
<i>Total</i>	43	1	44
<i>Categorical Total</i>	86	5	91
<i>Overall Total</i>	165	16	181

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significantly higher than the number of non-users—70—with a level of confidence at 99.5% ( $\chi^2=9.286$ ). Also genuinely higher was the number of female non-users (44) over male non-users (26). Chi-square for this test is 4.628 at a 95% level of confidence.

Results of question 2, “How long have you been using your (Internet) account?” are depicted in Figure 1, “Time in Months on Internet.” The table shows that among U.S. citizens, the highest category of usage in months was from five to nine months. In fact, according to Chi-square analysis, the overall number of those using Internet accounts for five to nine months (39) was significantly higher than for any other category, at least at the 95% level of confidence and often beyond it. Among students of other countries, the number of students who had been on the Internet for 0-4 months was higher than those who had been on the Internet for 3 or more years ( $\chi^2=6$  at the 98% level of confidence).

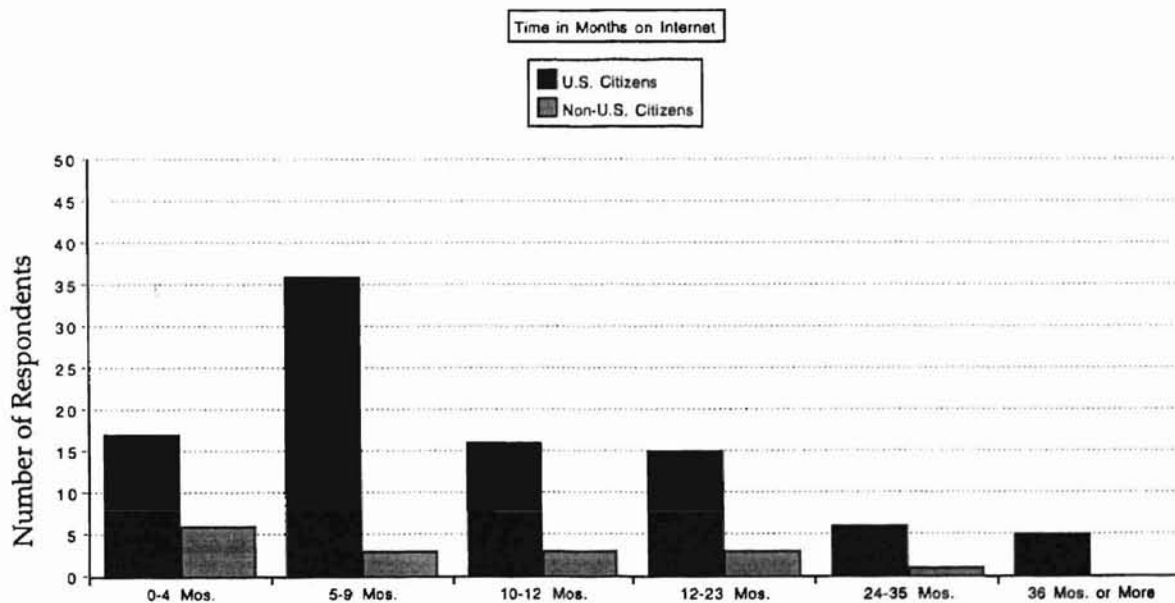


Figure 1. OSU Student Internet Account Usage, Characterized in Monthly Increments for Both U.S. and Non-U.S. Citizens



One hundred and twenty-six students indicated on question 3 that they did not subscribe to a commercial online service other than what OSU offers. This is a genuinely higher number than those stating that they did subscribe (38). Chi-square for the statistic is 47.218 with a level of confidence at more than 99.9%.

Among the 38 respondents stating they subscribed to a commercial online service, the t-test for differences among means, testing between all categories, found which reasons were more preferred than others. Students' selections of the options "Features such as e-mail are automatically built in" and "Other" were tied for first place. Rationale listed under "Other" were the following:

"Free 10 hours."

"More convenient at home."

"A call to OSU is long distance for me."

"Easier access: I don't have to wait in line and the lines/service are never busy."

"Access time."

"Can use at home with ease of use."

"Entertainment."

"My husband uses another service for his work."

"Difficult to be connected by OSU."

"Business."

"Aviation weather."

"Easier access."

"Work requirement."

"Easier PPP Access."

"Second place" rationale for subscribing to an online service outside OSU, as determined by the t-test for differences among means, were the tied reasons

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“Easier to navigate than services offered by OSU” and “Access to certain news services or magazines not available elsewhere.” In last place was the reason “Access to famous people like movie stars who conduct online conferences,” which was not chosen by any respondent.

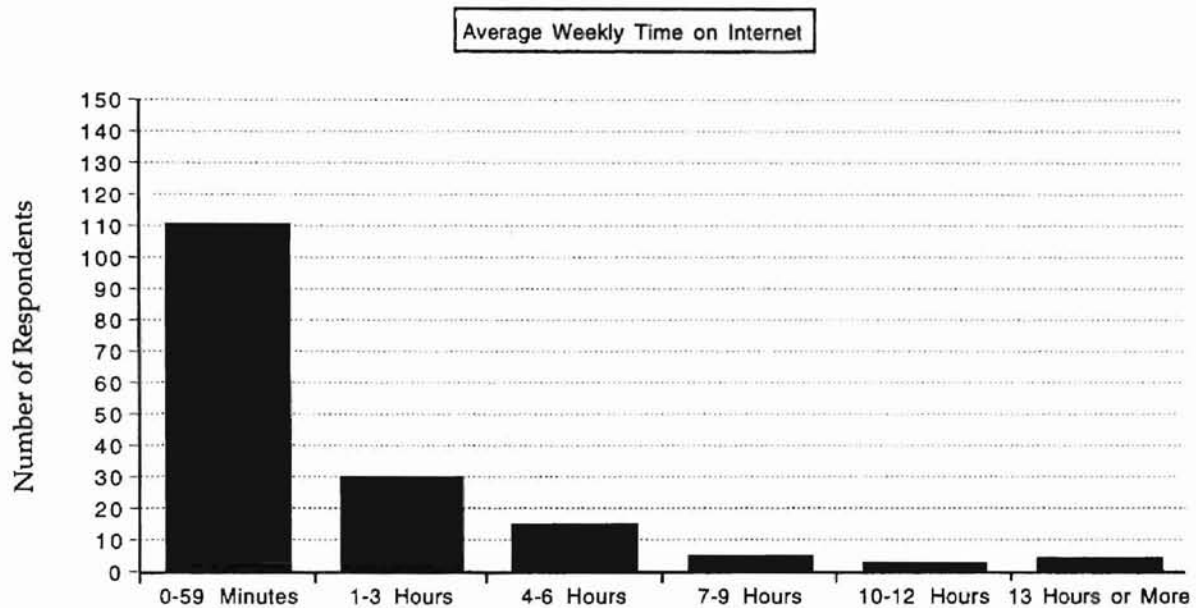


Figure 2. Average Weekly OSU Student Internet Consumption, Characterized by Hour Increments

Results of question 4, “How much time do you typically spend in a week on the Internet?”, are depicted in Figure 2, “Average Weekly Time on Internet.”

In all instances, Chi-square analysis found the group of 111 students stating that they spent 0-59 minutes on the Internet per week to be statistically higher than any other group. The level of confidence for such statistics was always found to be greater than 99.9%.

Results for question 5, dealing with individual Internet activities, are depicted in Table II, “Student Internet Activities.” The activities most preferred by students were “Browsing the World Wide Web,” with 54 responses, and “Sending/reading e-mail,” with 56. Activities that took the most time were

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TABLE II  
STUDENT INTERNET ACTIVITIES

ACTIVITY TYPE	NUMBER OF RESPONDENTS	AVERAGE HOURS LISTED
Sending/reading e-mail	56	1.75
Browsing the World Wide Web	54	2.13
Downloading files	22	1.75
Reading/posting to Usenet/listservs	19	1.13
Participating in real-time chat forums	10	3.55
Uploading files	7	4.71
Other	3	1.25
Participating in network games	2	1.12

"Uploading files/building Web pages," the average number of hours for which was 4.7, and "Participating in real-time chat forums," which averaged 3.5 hours. Activities listed under "Other" were: "Finding information on grad school and undergraduate internships," "Literature search in library," and "Business research."

On question 6, students were asked to rank their top three benefits of Internet usage. As with question 3, responses were tested with the t-test for differences among several means to determine the "winner." The benefit students

chose most often was "Accessing information," followed in descending order by "Communication quickly," "Making new acquaintances," and "Acquiring new job skills for the future." Tied for last were "Learning about other cultures" and "Other." Benefits listed under "Other" were the following:

"Getting shareware"

"Entertainment/fun" (4 responses)

"Scientific facts"

"Looking for jobs"

"Cheap way to write e-mail" (2 responses"

"Computer/Software usage"

"Accessing music (guitar tablature)"

"Wasting time"

"Discussing issues with other teachers"

"Free form of communication"

"Larger perspective because of huge number of participants"

"Update news"

"Downloading tests off of Netscape"

One respondent indicated under "Other" that there were no benefits of using Internet services.

Average student responses, broken down according to gender, depict the results of the Likert-type statements from question 7 in Table III. For the first four statements—those emphasizing the social effects of Internet usage—responses indicated little association with the kinds of social effects discussed in Chapter 2. Data from the next four statements, looking at the integration of Internet usage into the university curriculum, found that students had little agreement or disagreement to any one statement. The next four statements, looking at gender based Internet issues, found few differences between male and female responses.

TABLE III

MEAN STUDENT RESPONSES TO OPINION STATEMENTS  
 CONCERNING THE INTERNET  
 (WHERE "1"="STRONGLY DISAGREE" AND "5"="STRONGLY AGREE")

STATEMENT	MALE*	FEMALE*	OVERALL
I spend too much time on the Internet.	1.756 (86)	1.573 (82)	1.667 (168)
I have more friends in cyberspace than I do at OSU.	1.348 (89)	1.220 (82)	1.287 (171)
I would rather go out with friends than spend time on line.	4.207 (87)	4.305 (82)	4.254 (169)
I would skip a class to participate in Internet activities.	1.477 (88)	1.293 (82)	1.388 (170)
Some of my teachers are assigning work that requires Internet knowledge to complete.	2.759 (87)	2.549 (82)	2.657 (169)
I know more about the Internet than most of my teachers do.	2.625 (88)	2.305 (82)	2.471 (170)
An understanding of the Internet is important to my major field of study.	3.273 (88)	2.827 (81)	3.059 (169)
So far, I have not had an assignment that required me to retrieve information from an on-line source.	3.000 (86)	3.383 (81)	3.186 (167)

\*CATEGORICAL MEAN OF RESPONSES. NUMBERS IN PARENTHESES INDICATE THE NUMBER OF RESPONSES.

If the process of finding information over the Internet gets complicated, I go to another source instead.	3.169 (89)	3.415 (82)	3.287 (171)
So far I have not seen any material on the Internet of a sexual nature.	2.356 (87)	3.073 (82)	2.704 (169)
There are some computer labs I stay away from because of problems with pornography accessed over the Internet.	2.000 (88)	2.463 (82)	2.224 (170)
I have never been harassed over the Internet.	3.989 (87)	3.829 (82)	3.911 (169)
I have more respect for people in other countries now than I did before joining cyberspace.	2.851 (87)	2.744 (82)	2.799 (169)
I usually look to the Internet when I want to entertain myself.	2.739 (87)	2.268 (82)	2.325 (169)
So far, using the Internet has not helped me to become a better student.	3.011 (88)	3.272 (81)	3.136 (169)
The Internet is mostly a source of entertainment for me.	2.875 (88)	2.878 (82)	2.876 (170)

The largest gap between male and female answers occurred for 7j, "So far I have not seen material on the Internet of a sexual nature," where males disagreed with the statement by seven-tenths of a point more than females. Finally, data from the last four statements, relating to the use of the Internet in educational enhancement, again generally found students in neither agreement nor disagreement. A possible exception occurred with statement 7n, "I usually look to the Internet

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when I want to entertain myself," for which the average was 2.325 (characterized as mild disagreement). In all cases, no significant differences were found between any categorical means for each Likert statement.



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

General

This chapter will begin with brief summaries of both the methods used to gather data for the study and the results of the data after collection, statistical analysis, and interpretation. Next, it will provide general observations through substantive discussion of the methodology and findings. The chapter will then offer recommendations for action by the OSU community, and, on a larger scale, the research community. Finally, the thesis will terminate with a few concluding thoughts.

Summary of Methodology

In the spring 1996 semester at OSU, the names and mailing addresses of 400 current students were randomly selected using a computer database at the University's department of Computing & Information Sciences. Each of the 400 students was mailed a questionnaire with an explanatory letter, a return envelope, and a small incentive for participation—a stick of chewing gum. At an appropriate date after the deadline for returning questionnaires, another round of letters and questionnaires was sent to those not initially responding.

The questionnaire made inquiry into general interest areas concerning the Internet: whether students used OSU's Internet services; if so, for how long; how much time they typically spent in a week doing Internet activities and what those activities were; and what they thought the benefits of Internet usage were. Also included were Likert-type statements about current Internet issues for which students indicated the level of their agreement. Finally, the questionnaire posed

raised in the second chapter of this study. In general, students: (1) had not encountered the social effects of excessive Internet usage; (2) had no visibly strong opinions about the integration of the Internet into their studies; (3) did not divide by gender with respect to statements that could possibly polarize male and female answers; and (4) had no perceptibly strong opinions about the role of the Internet in their intellectual development.

### Discussion of Methodology

The methodology for this study employed the use of a questionnaire—an instrument classically regarded for certain advantages as enumerated in the third chapter. However, the low response rate of about 47% required further investigation, especially if the methods used here were ever replicated.

According to Wimmer and Dominick, studies using questionnaires usually have less data to work with than other, more intrusive studies because they generate fewer responses.<sup>1</sup> Furthermore, persons who have some interest in the study at hand—in this case, students already engaged in Internet activities—are more likely to respond than those who hold no interest in the subject.<sup>2</sup> Other rationale existed for the low response rate that were not borne by the mere existence of the questionnaire. For example, students were asked to respond to the questionnaire late in the spring semester. The administration of the instrument should have occurred earlier in the semester. Furthermore, no incentive for return was provided in the second round of mailings as happened with the first (a second-round incentive of a Life Saver candy proved too bulky for carrying by regular mail methods at the last moment). Indeed, incentives should have been provided at all stages. Also, no written prenotifications or follow-ups occurred before or after questionnaire administration—a change that should be made if the study is to be replicated. Finally—and, perhaps, most disturbingly—students

simply did not appear to care very much about the issues presented in the survey. However, such attitudes might dissipate with time as the Internet continues to gain prominence.

### Discussion of Findings

The findings as presented above and in the fourth chapter were, of course, indicative of the students at the time they responded. Also, since the numbers of male and female participants were almost equal, the survey probably did paint an accurate picture of the small gender differences noted. However, no other inferences could be drawn to a larger demographic. A 50% response rate meant that the survey did not reflect the opinions of OSU students as a whole and certainly could not speak for college students everywhere. Likewise, the survey results included but 16 citizens of countries other than the United States, so that group was not well represented.

The most important findings of the study were that, as of the study's closing, students did not use the Internet with high frequency and did not seem to care too much about it as an educational tool. Certainly the collected data supported such a finding. Of those students with Internet accounts, most had had them for from five to nine months. Most students spent less than an hour per week doing Internet activities. The Internet on average had had no impact on students' social lives. Few students subscribed to commercial online services. No division appeared between scores of males and females on statements regarding Internet issues that could have divided those groups. Students on average had no opinions about the role of the Internet in their intellectual growth. Finally, each of these results was taken with the understanding that usually the more interested parties are the ones who complete and return questionnaires.

While the results of the study should not have been taken as strictly pejo-

rative findings, the apathy of some responses, particularly on Likert items, suggested most students were not yet committed to a medium they may soon have had to know about and incorporate into their lives. It is appropriate, then, to provide some words of guidance to both the student and administrative bodies of the OSU community.

## Theoretical Conclusions

### Diffusion of Innovation Theory

Results that indicate passivity and indifference toward a new medium are not necessarily meant to be interpreted as pejorative findings. The study, after all, merely sought to describe students' Internet usage and opinions without seeking to advance any particular agenda. And the newness of the Internet, applied to the writings of Rogers, places it before the point of apogee on the adoption curve. In other words, many students at the time of the study were still in the diffusion stages of knowledge, persuasion, and decision—learning about the Internet, getting used to hearing about it and being persuaded by opinion leaders, and deciding to sign up for an Internet account. The process of those users' confirming the innovation of the Internet—using it with regularity and coming to rely on it—could be forthcoming. Given that underclassmen are assumed to be more technophilic than upperclassmen and graduate students, the results of the same questionnaire administered during the Fall 1996 semester might have produced significantly different results in some cases.<sup>3</sup>

### Cultivation Analysis Theory

Neither of the modes of inquiry for locating cultivation analysis necessarily finds evidence of cultivation in this case. However, other factors persist that may yet verify this theory as an operator in the new research world of the

Internet.

The first mode, which seeks to locate the cultivation of a media message more prominently in the minds of heavy media users than light media users, bears little fruit within this study only because such was not the focus. Attempting to remain descriptive on a broad level, this study did not seek to concentrate on any particular group of student. The second mode, which looks for cultivation as a product of moderate change, was also not a factor in the construction of the study because its methodology was not longitudinal.<sup>4</sup>

Although these modes can be discounted for the methodological purposes of this investigation, they remain offshoots of a stronger base of thought: "The mass media will be responsible for subtle shifts in attitude over time."<sup>5</sup> However, in order to do Internet related research from this point of view, one must realize that virtually any piece of information can now be found on the Internet and that no consistent agenda of messages exists to enculturate users; that users are in greater control of their Internet environments and, as always, are likely to seek out those messages that are in concert with their interests; and that many parts of the Internet tend to defy classification in terms of whether they promote strong messages.

### Uses-and-Gratifications Theory

This study dealt primarily with the question of what OSU students are getting out of their Internet experiences. At its essence, the question was rooted in uses-and-gratifications since it asked about end use rather than entirely focusing on effects of Internet usage.

Researchers have found through "why" type questions that people generally will provide expected responses as to why they use certain media. For example, if regular viewers of television news were to be asked about the nature of

their use, they might respond that they watch in order to remain "caught up" on news events. While this question and answer is, on its face, a legitimate probe, it provides the kind of answer the respondent expects the questioner to be looking for and may therefore lack either the truth or the depth the researcher seeks. More appropriate and less leading questions, then, are those that ask about the benefits or risks of using certain media—a device used in this study.<sup>6</sup>

Student respondents generally leaned in a direction of using the Internet for entertainment purposes. "Browsing the World Wide Web" and "Sending/Reading E-Mail," two of the most popular responses as to how students spent their time, may be construed as not being engaged constructively as they regard Internet usage since many students said they use the time doing those activities to entertain themselves. Usage will probably continue in this trend at OSU for some time before the Internet is accepted for the powerful communications possibilities it offers.

### Recommendations for OSU Students

The present is the best time to become personally and professionally involved with the Internet or be left behind in its wake. Getting online means more than just having an Internet account one uses sparingly; it has to do with regular, substantive usage that seeks to serve a student's needs broadly. Becoming a part of the Internet is also about becoming a part of a virtual community as envisioned several years ago by McLuhan and as recently presented by Rheingold and others.<sup>7</sup>

Of course, as Aristotelian ethics imply, students ought to seek the "middle way," or the way between overdoing and underdoing, in their responsible usage of the Internet.<sup>8</sup> Certainly students should seek out a niche in the new medium and learn its intricacies; they should seek to be more than amateurs in a commu-

nications revolution bound to sweep them up. But they should also beware the traps discussed in the second chapter concerning addiction, loss of social interaction, and violent extremes in gender discourse.

### Recommendations for the University

No part of the University is immune to either the students it serves or the Internet. Administrators, faculty, and many staff members have different but equally challenging tasks that meet students' highly technical needs. Therefore, those who develop the role of each employee and department should not overlook the increasing power of the Internet to change lives.

OSU's Counseling Services should continue to remain aware of problems associated with the Internet—issues such as harassment, pornography, and addiction mentioned in the second chapter. As problems become more widespread in the coming years concerning these and other Internet related topics, new and better information will continue to circulate throughout psychiatric circles. Through both understanding the literature and keeping in constant contact with students, University counselors should seek to give aid to students suffering such problems through appropriate forums and counseling techniques.

The University's Computing & Information Services department should continue its steady service with respect to quick student Internet connection, but it should also consider options that make both access and usage easier. Better access is an area for improvement suggested by several students who use commercial online services to bypass OSU's setup. CIS should also consider more frequently publicizing its many and varied abilities to connect students to the Internet, making them more aware of their options. Finally, CIS should consider ways of stressing the importance of learning to navigate the Internet now rather than in the distant future.

All groups should recognize that students will probably grow into the technology despite the findings of this study. As students do grow into it, OSU at large should take appropriate steps to ensure students are dealing with the Internet in a positive and effective manner.

#### Recommendations for Further Research

Another researcher should replicate the study after such time as the new medium of the Internet has become more diffused. Not only will the passage of time likely reveal increased interest in the subject, but the response rate for such a study should also increase.

Future researchers ought to consider the recommendations made in the "discussion of methodology" section in this chapter to enhance the reliability and scope of results. Furthermore, researchers should not rely solely on the questionnaire in this study from which to draw questions. For example, presently unheard-of innovations in networking will, in all likelihood, have arisen by that time to be counted as "Internet activities"; also, new Likert type items should be considered in light of current issues in Internet culture. Researchers should also consider incorporating another method to questionnaire development and administration such as focus groups to determine relevant Internet trends. They should furthermore look to secure funding from interested departments such as CIS so as to lighten the financial burden imposed by mail costs.

Finally, researchers should consider fine-tuning the study with qualitative field observations of students using the Internet. If chosen as an appropriate method, this should be done with tact and with an ethical conscience, possibly requiring student permissions through the Institutional Review Board and preset guidelines for what is permissible to write about in the thesis project. It would furthermore serve the researcher to know how aspects of the Internet, such as



chatting in real-time forums, work before attempting to write about them and about how students took part in them.

Those who use this study as a basis in part for their own should consider digging into the deeper, underlying rationale of Internet usage not explored in this study. This thesis sought to identify and describe a segment of students, yet as a beginning point it raised as many questions as it put to rest. For example: Why is access to information a more important benefit of Internet usage than any other? In what ways has the Internet helped students educationally, if it has at all? Why do students seem reticent about integrating the new medium into their lives even though its adoption has already started to take place?

There are other descriptive factors not covered in this study that, if available for consumption, would empower OSU's hierarchy to do its job more effectively. For example: What points on campus are most popular for students accessing the Internet (dorm rooms, library, computer labs)? How many times on average will a student attempt to access the Internet before quitting? Are student Web pages offered by the Student Government Association meeting their intended purpose?

Several areas for improvement—especially in the areas of improving methodology, identifying new issues, and finding data to answer questions beyond superficial description—await the researcher, both nascent and experienced. Since the Internet is a burgeoning but rapidly expanding medium, it begs for more substantive probing.

### Concluding Comment

A French aviator wrote in 1939, "The machine does not isolate man from the great problems of nature but plunges him more deeply into them."<sup>9</sup> And his words have rung true to an extent in the world of the computer and the new

medium of the Internet. Having taken the first few steps down a promised Superinformation Highway, we see the Internet through this study as little more than a dirt road laden with unknowable benefits and snags. Human nature undoubtedly has and will continue to shape that road on its way to becoming the Highway. For now, at least, we have the path.

More research and the passage of time are required to more substantially understand the Internet and college students' interaction with it, but one fact is clear. Both the student and the university must reach a place of harmonious use with the new aspect of the machine or experience its pitfalls firsthand.

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2. Thomas W. Mangione, *Mail Surveys: Improving the Quality* (Thousand Oaks, Calif.: Sage Publications, 1995).
3. Hillary Rosner, "Trapping Students in the Web," *Brandweek* 15 April 1996, 50. According to one survey cited in the story, incoming freshmen helped raise the percentage of students owning computers by 11% over one year, and the percentage owning modems by 14% in the same time period.
4. Michael W. Singletary and Gerald Stone, *Communication Theory & Research Applications* (Ames, Iowa: Iowa State University Press, 1988), 90-91.
5. Ibid.
6. Ibid., 96-97.
7. Marshall McLuhan, *Understanding Media*, (New York: McGraw Hill Book Company, 1964). Also, Howard Rheingold, *The Virtual Community*. (New York: HarperPerennial, 1993); Steven G. Jones, "Understanding Community in the Information Age" in *CyberSociety*, Steven G. Jones, ed. (Thousand Oaks, Calif.: Sage Publications, 1995); and Steven E. Miller, *Civilizing Cyberspace* (New York: Addison -Wesley Publishing Co., 1996).
8. Louis A. Day, *Ethics in Media Communications* (Belmont, Calif: Wadsworth Publishing Co., 1991), 49.
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with the following information provided by Agent B. 1996 to Tereu  
the name of the person who submitted the documents for publication

## APPENDICES

Please take a moment to complete this survey and return it in the envelope provided by April 8, 1996 to Torey Lightcap, 206 Paul Miller Bldg., OSU Campus. Your complete anonymity is assured; the answers you give will be used to tabulate data for this study only. Thank you for your time.

For each item, check the line next to the appropriate answer.

1. Do you have a user account with OSU that allows you to have access to the Internet?

- Yes
- No

2. If you answered "Yes," how long have you been using your account?

- 0 to 4 Months
- 5 to 9 Months
- 10 Months to Almost 1 Year
- 1 Year to Almost 2 Years
- 2 Years to Almost 3 Years
- 3 or More Years

3. If you subscribe to a commercial online service other than what OSU offers, for what reasons do you subscribe? Rank your top three choices.

- Access to certain news services or magazines not available elsewhere
- Easier to navigate than other services offered by OSU
- Access to famous people like movie stars who conduct online conferences
- Features such as e-mail are automatically built in
- Other: Please list \_\_\_\_\_

I don't currently subscribe to an online service

4. How much time do you typically spend in a week on the Internet?

- 0 to 59 Minutes
- 1 to 3 Hours
- 4 to 6 Hours
- 7 to 9 Hours
- 10 to 12 Hours
- 13 Or more hours

If you answered "0 to 59 Minutes," proceed to question 6.

5. What Internet activities do you regularly spend time doing in a week? Check all that apply and, in the second column, note the approximate amount of time in hours that you would spend doing those activities in a week.

<u>Activities (check all that apply)</u>	<u>Hours Spent Per Week</u>
<input type="checkbox"/> Browsing the World Wide Web	_____
<input type="checkbox"/> Sending/reading e-mail	_____
<input type="checkbox"/> Downloading files	_____
<input type="checkbox"/> Uploading files/Building Web pages	_____
<input type="checkbox"/> Participating in real-time chat forums	_____
<input type="checkbox"/> Reading/posting to Usenet newsgroups or listservs	_____
<input type="checkbox"/> Participating in network games	_____
<input type="checkbox"/> Other: Please list _____	_____

6. What to you are the benefits of using the Internet? Rank your top three choices.

- Accessing information
- Communicating quickly
- Learning about other cultures
- Making new acquaintances
- Acquiring job skills for the future
- Other: Please list \_\_\_\_\_

OVER

7. Now indicate your feelings about some basic statements concerning Internet usage. Check the box next to each item that best indicates your attitude about the statements.

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
a. I spend too much time on the Internet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. I have more friends in cyberspace than I do at OSU.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I would rather go out with friends than spend time on line.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. I would skip a class to participate in Internet activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Some of my teachers are assigning work that requires Internet knowledge to complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. I know more about the Internet than most of my teachers do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. An understanding of the Internet is important to my major field of study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. So far, I have not had an assignment that required me to retrieve information from an on-line source.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. If the process of finding information over the Internet gets complicated, I go to another source instead.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. So far I have not seen any material on the Internet of a sexual nature.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. There are some computer labs I stay away from because of problems with pornography accessed over the Internet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. I have never been harassed over the Internet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. I have more respect for people in other countries now than I did before joining cyberspace.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. I usually look to the Internet when I want to entertain myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. So far, using the Internet has not helped me to become a better student.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. The Internet is mostly a source of entertainment for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What is your gender?

- Male  
 Female

10. Are you a U.S. citizen?

- Yes  
 No: Country of Origin \_\_\_\_\_

9. What is your classification?

- Freshman  
 Sophomore  
 Junior  
 Senior  
 Graduate Student

*Thank you again for your time. Now, please place this form in the envelope and put it in campus mail as soon as you can.*



College of Arts and Sciences  
School of Journalism and Broadcasting  
206 Paul Miller  
Stillwater, Oklahoma 74078-4053  
405-744-6354

April 8, 1996

Dear OSU student,

I am a graduate student at OSU in mass communication. As part of my master's thesis research, I am conducting a survey about students' Internet usage and would appreciate your help.

Would you please complete the brief questionnaire enclosed with this letter? It should only take a few moments but will allow me to learn a great deal about Internet usage on campus.

You may notice a handwritten number on your questionnaire. This number serves only to indicate to me who has responded in the event that a second mailing is warranted. Please be aware that your complete anonymity is assured in the reporting of all results.

For your convenience, a return envelope has been included for you to return the questionnaire. Wherever possible, return yours in any of the many mail slots throughout the campus (including all dorms and the Student Union) by April 12, 1996, so that I can graduate on time!

If you have any questions, please feel free to contact me at 624-8442 by phone, or in writing at 843 W. Franklin Lane in Stillwater. Thank you very much for your consideration and for cooperation in my study of Internet issues.

Sincerely,

A handwritten signature in cursive script that reads "Torey L. Lightcap".

Torey L. Lightcap  
Graduate Student

Maureen Nemecek  
Graduate Adviser



College of Arts and Sciences  
School of Journalism and Broadcasting  
206 Paul Miller  
Stillwater, Oklahoma 74078-4053  
405-744-6354

April 17, 1996

Dear OSU student,

About a week ago I asked for your help in my master's level thesis project. To entice you to participate, I included a stick of gum.

Since I have not heard from you, and since your opinions are extremely important to me, I'll make you a promise:

**If you will fill out and return the enclosed survey,  
I will personally arrange for classes  
to be cancelled for one week sometime next March!\***

**\*(If this should happen to coincide with Spring Break, well. . .)**

Seriously, I do need to know your feelings about the Internet, so could you please complete the brief questionnaire enclosed with this letter? It should only take a few moments. You'd be a real Life Saver (no kidding—look inside the envelope)!

You may notice a handwritten number on your questionnaire. This number serves to indicate *to me only* who has responded. I can assure your complete anonymity in the reporting of all results.

A return envelope marked has been included for you to return the questionnaire. Wherever possible, return yours in any of the many mail slots throughout the campus (including all dorms and the Student Union). Please respond at your earliest convenience—but definitely before April 25, 1996!

If you have any questions, please feel free to contact me at 624-8442 by phone, or in writing at 843 W. Franklin Lane in Stillwater. Thanks for your consideration and cooperation.

Sincerely,

Torey L. Lightcap  
Graduate Student

Maureen Nemecek  
Graduate Adviser

OKLAHOMA STATE UNIVERSITY  
LIBRARY  
2

VITA

Torey Lynn Lightcap

Candidate for the Degree of

Master of Science

Thesis: AN EXAMINATION OF STUDENT INTERNET USAGE AT  
OKLAHOMA STATE UNIVERSITY

Major Field: Mass Communications

Biographical:

Personal Data: Born in Weatherford, Oklahoma, on July 4, 1972, the son of Leland Lynn Lightcap and Lura Sue East Lightcap (Morris). Married to Jacqueline Denise Whitney Lightcap since January 9, 1993.

Education: Graduated from Weatherford High School in May 1990; received Bachelor of Arts degree in Journalism from Oklahoma Baptist University in May 1994. Completed the requirements for the Master of Science degree with a major in Mass Communications at Oklahoma State University in December 1996.

Experience: Currently employed as an Internet site marketer and manager for the American Water Works Association, Denver, Colorado; served as Information Specialist for Oklahoma State University's Environmental Institute; employed by Mobil Chemical Co., *The Weatherford Daily News*, Oklahoma Baptist University, and Oklahoma State University as a writer, editor, and photographer.

Professional Memberships: Popular Culture Association, Oklahoma Speech Theater Association, Omicron Delta Kappa.

**OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD  
HUMAN SUBJECTS REVIEW**

**Date:** 03-22-96

**IRB#:** AS-96-061

**Proposal Title:** AN EXAMINATION OF STUDENT INTERNET USAGE AT  
OKLAHOMA STATE UNIVERSITY

**Principal Investigator(s):** Maureen Nemecek, Torey L. Lightcap

**Reviewed and Processed as:** Exempt

**Approval Status Recommended by Reviewer(s):** Approved

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Chair of Institutional Review Board

Date: April 2, 1996