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INTERNET AND MASS MEDIA: A PRELIMINARY REPORT

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ABSTRACT

Revolutionary information technology has the potential to affect usage of other media and other ways of spending time. Using data from a national random sample of 4113 adults, it is found that the more respondents report using the Internet, the more they report reductions in their time watching TV, reading newspapers, shopping in stores and driving in traffic—and the more time they spend working both at home and the office. The changes are greater for those using the Internet progressively more.

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Over the last five years, the revolution in information technology (IT) has resulted in innovations that are having increasingly visible effects on the life of the average American. These developments affect not only how people work, but also where they work, how much they work, or with whom they interact face to face or electronically. Will it reduce the hours people work, or increase them by infusing work into every sphere of life, devouring leisure-time and family-life? And how will the Internet affect the role and use of the traditional media?

These same IT innovations are revolutionizing information and entertainment delivery, affecting their production and consumption, transforming our social life and behavior, even our political institutions and the role of citizens within them. Some argue that the new technology of email, online discussions, on-demand information, and Web-powered information diffusion and interest aggregation will lead to a more informed, engaged and influential mass public. Will we live in a better informed, connected, more engaged and participatory society? The human meaning of these changes remains unclear at present.

SURVEY METHODOLOGY

The study is based on data collected using a revolutionary new methodology developed by *Knowledge Networks* (nee *InterSurvey*) to conduct surveys over the Internet. Unlike surveys of Internet users or households, which suffer obvious sample distortions and preclude generalizing results, this new survey methodology is based on a panel of households recruited as a genuine random telephone sample of the U.S. population. In order to use the Internet for the purpose of efficient multi-channel data collection, each household in the sample—with or without prior Internet connection—is equipped with a *WebTV* set-top box, with free Internet access and e-mail accounts.

The data for the study were collected in December 1999, from a national random sample of 4113 individuals in 2689 panel households, as a baseline for a continuing research program. Questionnaires were completed independently by each member of a panel household using their television and their *WebTV* controls to answer the questions displayed on the screen. To avoid contamination of results caused by conducting the study over the Internet (all sample households have Internet access, as a result of having been equipped with *WebTV*), the results on Internet use presented in this study are based only on the responses of participants who had Internet access (at home or elsewhere) prior to and independent of the *WebTV* access installed by *Knowledge Networks*. The margin of sampling error is about 1.5% for results from the complete survey, and about 2.5% for the subset of Internet users.

RESULTS

Some 43% of American households are connected to the Internet, with 38% of Americans over 18 having access to the Internet at home, 34% access the Internet elsewhere (17% exclusively, 17% in both places); thus, 55% of the population currently have access to the Internet. Length of use correlates with amount of use. The longer people have been Web users the more hours and the more activities they report engaging in. While self-selection may be playing a role with early adopters, the data, along with generational data, strongly suggest a model of social change with not only a growing number of Internet users, but with Web users doing more and more things on the Internet in the future.

More importantly, the more time people spend using the Internet, the more they reduce time on the traditional media. Chart 1 shows this effect increases proportionally with hours of Internet use: for every additional hour on the Net, people report further decreases in time spent with traditional media, reaching 65 percent for those spending more than 10 hours a week on the Net. Clearly the media are competing with the Internet for time, especially with television, where with as little as two hours/week on the Net, a quarter of Internet users report decreases in TV viewing. It looks difficult for users to surf the Web and watch TV at the same time. For newspapers, the same effect is less dramatic and may also reflect the fact that people could substitute reading the news on the Web for reading the paper.

The more Internet use, the more time users spend working at home—and at the office, as shown in Chart 2. Even with fewer than 5 hours/week of Internet use, about 15 percent of full-time or part-time workers report an increase in time spent working at home. And as their amount of Internet use rises above 5 hours/week, a growing number—up to an additional 12 percent—even report spending more time working at the office, as well as at home. For heavy Internet users with regular jobs, a substantial portion of their total Internet use is likely to take place at the office to begin with—and it seems to be keeping them there for longer hours, in addition to invading their homes. There are at present *no* indications suggesting the beginnings of telecommuting.

The more Internet use, the less time users spend shopping in stores and commuting in traffic. Chart 3 shows this effect grows with the number of Internet hours/week, and, as might be expected, stands out particularly clearly for people who use the Web for researching product information or for actually making purchases online, thus saving trips to the store. However, it does not affect time spent commuting in traffic, which decreases with the number of Internet hours for the *non-working* population only, whether or not they shop on the Web—working Internet users drive to work just as much as before.

Chart 1:
INTERNET USERS DESERT THE MASS MEDIA

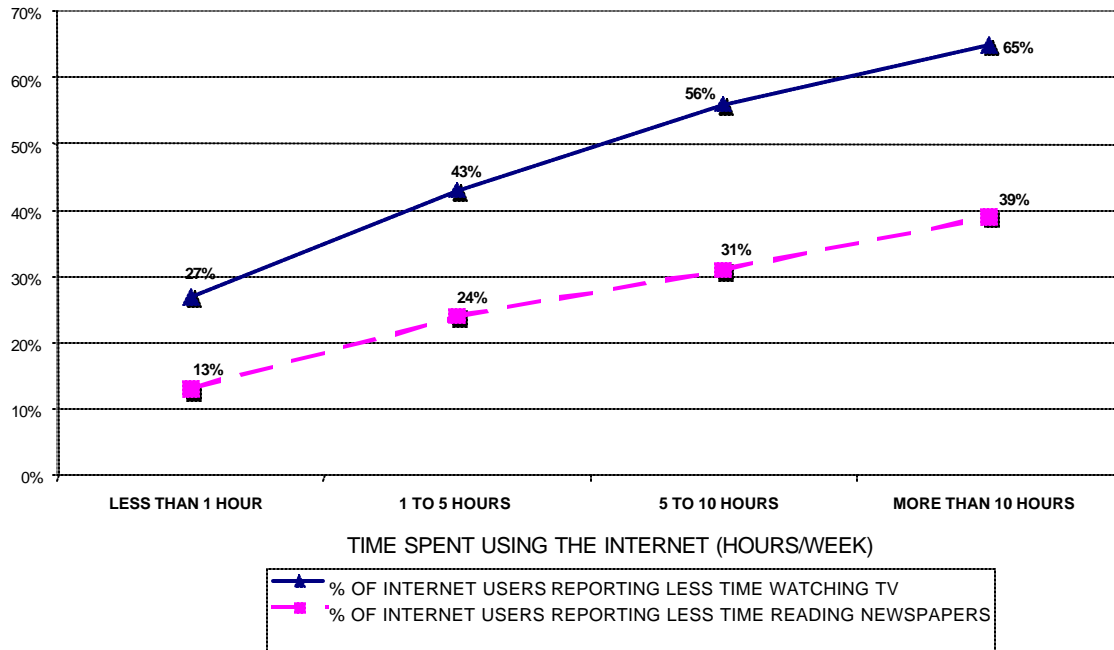


Chart 2:
WORK INVADES HOME AND INCREASES AT THE OFFICE

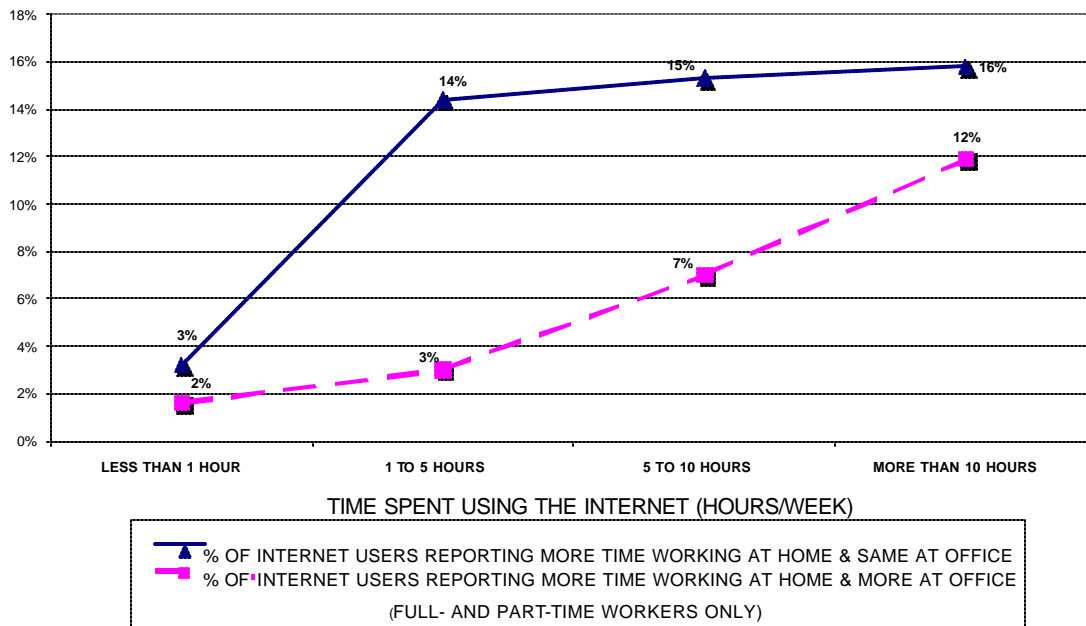
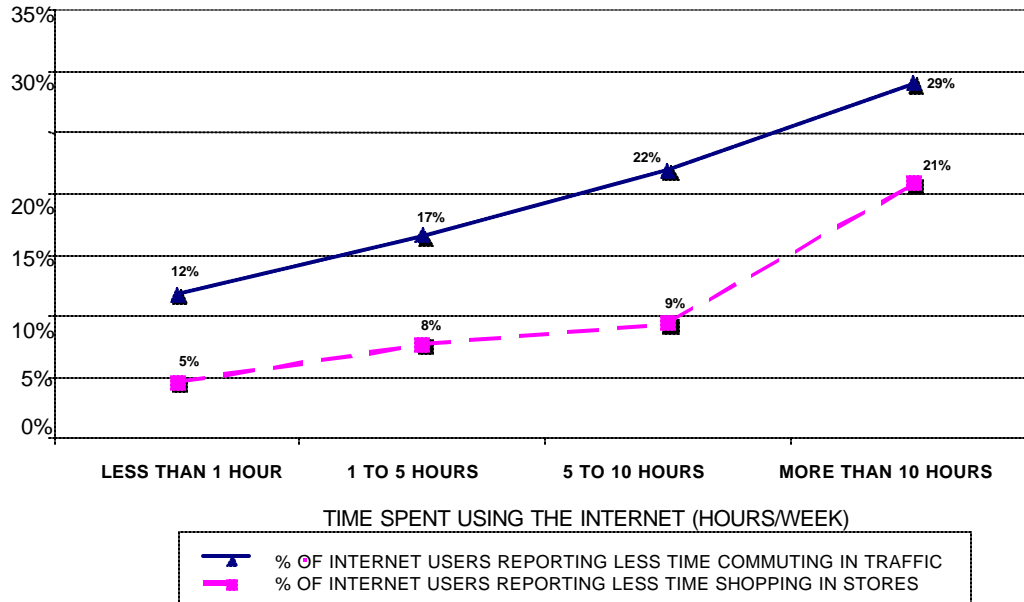


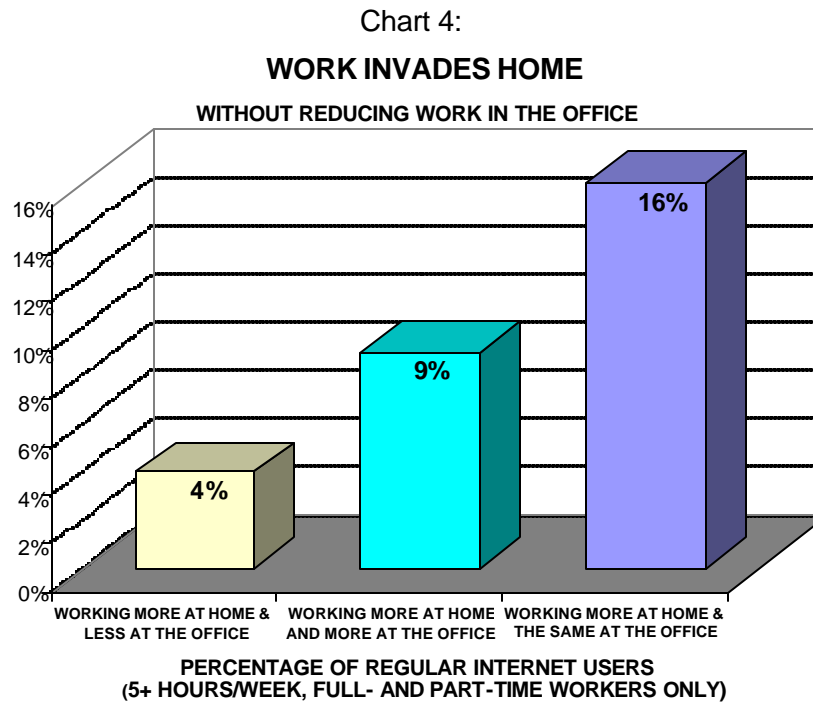
Chart 3:
INTERNET USERS CHANGE SHOPPING & DRIVING HABITS



About two-thirds of those surveyed who have Internet access say they spend fewer than five hours a week on the Internet, and most of them did not report large changes in their day-to-day behavior. But the other 36 percent, who use the Internet five or more hours a week, do report significant changes in their lives. The largest changes are reported by those who spend more than 10 hours a week on the Net—individuals who currently account for only 15 percent of all Internet users but who are likely to be a much larger fraction in the future. While today, heavy Internet users are still a small fraction of the total population, time spent on the Net also grows with the number of years a person has been connected.

On the other hand, those who use the Internet most also report spending fewer hours caught in traffic, fewer hours in shopping malls, and especially, less time watching television. E-commerce may soon change land use for bricks-and-mortar retail, and eventually one may start to see some cap on the growth of traffic gridlock.

One surprise was the degree to which people said that they are working at home on the Internet for their employers. As shown in Chart 4, only 4 percent of regular Internet users working full- or part-time said they had cut back their hours at work since gaining Internet access. However, a much larger number—16 percent of employed regular Internet users—said they were working more hours at home since gaining Internet access without cutting back at the office,



with 9 percent actually reporting increases in time spent working both at home and at the office. In effect, more than a quarter of full or part-time workers who use the Internet more than 5 hours a week said the Internet has increased the amount of time spent working at home without decreasing the amount of time spent working in the office.

CONCLUSIONS

The study confirms suspicions that Internet use comes partly at the expense of television viewing. Some 60 percent of those who use the Internet more than five hours a week say those hours are coming from their TV time. Even among those who spend only a few hours a week on the Net, a quarter say it cuts into their TV viewing. This trend is likely to have a major impact on the economics of the media industry and, as recent developments suggest, it may lead to further integration of media and information delivery technologies.

Internet users also report spending less time reading newspapers, which may mean that they are reading news on the Web, so that they do not read hard copy any more. Television has consumed a much bigger chunk of people's time than newspapers, however, so it is in greater competition with Internet for time. If one spends two or three hours a day on the Net, those are two or three hours one can't spend watching television. In the near future, people may be able to view a television program on the same screen where they are working on the Internet simultaneously. It's too early to tell if people will do this sort of multi-

tasking as part of their daily routine, but even if they do, their attention will be fragmented, because Internet use demands more concentration.

For the most part, the Internet today is a giant public library with a decidedly commercial tilt. The most widespread use of the Internet today is as an information search utility for products, travel, hobbies and general information. Virtually all users interviewed responded that they engaged in one or more of these information gathering activities. A little over a third of all Internet users report using the Web to engage in entertainment such as computer games (such as online chess, role games, and the like). Thus, the current Internet is also emerging as an entertainment utility.

APPENDIX A
KNOWLEDGE NETWORKS (NEE INTERSURVEY)
QUESTIONNAIRE AND FREQUENCIES

19. Has using the Internet changed the amount of time you spend...

Activity	Increased	Unchanged	Decreased
Working at the office	8%	87%	5%=100%
Working at home	20	73	7
Shopping in stores	3	78	19
Commuting in traffic	1	89	10
Reading newspapers	6	68	26
Watching television	4	50	46
Spending time with your family	6	85	9
Spending time with your friends	4	87	9
Attending events	4	91	5

FOLLOW-UP QUESTIONNAIRE

Q1. On average, about how many hours a week do you spend using the Internet?

None	2%
Less than one hour	15%
One to five hours	48%
Five to ten hours	22%
Ten to twenty hours	9%
More than twenty hours	<u>4%</u>
	100%