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TECHNOLOGY IN THE AMERICAN HOUSEHOLD

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A Letter from the Chairman

The Times Mirror Center for The People & The Press was established and is funded by The Times Mirror Company to conduct research in the public interest in keeping with our mission to help people gain the knowledge they need to work, live and govern themselves. The Center's principal function is to study the relationship between the media, the American people, and the formation of public policy.

The recent explosion of information technology has been compared to the invention of the printing press in its potential impact. Against this background, the Times Mirror Center undertook an extensive study of the extent to which this technology is already used, and how it is being employed. The study also examines the impact of this technology on the American public.

We believe that the findings of Technology in the American Household are so significant that they should be shared as widely as possible, particularly with the information providers of the country.

Robert F. Erburu
Chairman & Chief Executive Officer

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INTRODUCTION

The *INFORMATION SUPERHIGHWAY* is a relatively new phrase in the American political and social vocabulary. It embraces a cluster of technologies, notably the computer, television and telephone, and a broad range of concepts and behaviors -- digital communication that brings information and entertainment into the home on demand; on-line computer users who discuss politics, religion, and hobbies; "tele-commuters" who work in their homes instead of traveling to a central office; and more.

Technology in the American Household is the latest in a series of *Times Mirror* studies that examines a cutting edge issue in American society. The I-Way, as it is now sometimes known, promises revolutionary change "comparable to or exceeding the effects of any technological revolution in history, including invention of the printing press, the invention of the steam engine, or perhaps even the invention of written communication," Vice President Al Gore has said.

Whatever the future holds, some of the technology is here now, and it is this current state of the public's use of technology that our study addresses. It examines the many vehicles on the I-Way -- computers, modems, on-line information services, faxes, ATM cards, cable television, satellite dishes -- and the passengers who ride them.

Our report begins by describing the extent to which the various new technologies have penetrated American households, and examines peoples' attitudes towards technology.

Chapter II looks at what is arguably the most fundamental technological change in the American household over the last decade -- the arrival of the personal computer. It describes who has computers in their homes and how they are used. It examines the new departure, the combination of computers and the home offices in which Americans are increasingly employed, either part or full time. It explores how the new forms of technology have made possible this transformation of the American workplace and economy. It also looks at where children are using computers, at home and at school, and for what purposes.

We extend the exploration of computer behavior in Chapter III to the vanguard on the information superhighway -- the electronic community of modem and on-line (or bulletin board) users. Millions of Americans now subscribe to informational services, or can simply dial-up other users to chat. We examine who is using which services for what purposes.

Riders on the I-way are more broadly profiled next (in Chapter IV), with documentation on the differences between those who have and those who have not integrated a variety of these new technologies into their everyday lives. The impact of these new technologies on "old" behavior patterns, such as reading, attention to current events, and social activities, is covered in Chapter V.

Finally, we examine the television set, "The Basic Box," as we call it, which is still the dominant electronic technology in American society. It is the focus of more leisure hours of Americans than any activity other than sleeping. But while the box still looks much as it did 10 years ago, it is in reality a much different creature and one that is put to many more uses than simple viewing. We examine how satisfied people are with the variety of programming available to them, and how people watch television -- tuning out commercials and "channel surfing" with the remote control. The deep penetration of cable and its effect on America's satisfaction with television programs is discussed. VCR ownership and use are examined, as are other "gadgets" that can be hooked to the TV set, such

as video games.

Project participants included Cliff Zukin and Scott Keeter as survey analysts; Robert C. Toth, editor; Russell Neuman, consultant; and Carol Bowman, research director.

Andrew Kohut
Director

OVERVIEW

The Role of Technology in American Life

11 MILLION HOMES ALREADY EQUIPPED TO RIDE INFORMATION SUPERHIGHWAY

While the building of an Information Superhighway may take years to complete, millions of Americans are already using the latest electronic technology to change the way they work, manage their homes and financial affairs, and entertain themselves. A special nationwide Times Mirror Survey of over 4,000 households reveals that:

With the aid of a computer or fax machine, 21 million Americans worked at home at least one day a week last winter. Nearly 4 million Americans run home-based businesses that are supported by these electronic machines.

Nearly one in three households contains a personal computer, and approximately 23 million adults (13% of respondents) use a home computer about every day. A majority of employed people (55%) use a computer at the workplace.

Today's children are the real pc generation: 28% use a computer at home for school work or to play educational games. Among teenagers, 46% have a home computer; 36% use one at least occasionally.

More than one out of ten households (12%) has a modem-equipped computer. As many as 6% of all Americans, or 11 million people, go "on-line," with half that number connecting to commercial information services, such as Prodigy, or to electronic bulletin boards.

As many as 47% of American adults have an ATM card, and approximately 13 million pay at least some of their bills electronically.

One out of six Americans has watched a movie, concert, or sporting event in the home via a pay-per-view service offered by a cable company.

Satellite dishes are now providing television for nearly 4 million households nationwide.

Not only have computers entered tens of millions of American homes, but they have become indispensable tools for people who own them. Two out of three computer users (65%) said they would miss their personal computer "a lot" if they no longer had it. This is comparable to the percentage who said they would miss cable TV (64%) or newspapers (67%) if these regular features of daily life were no longer available.

The polling found surprisingly few techno-phobes in modern America. By a 65% to 30% margin, people said they like rather than dislike computers and technology. And by a wide margin, they believe computers and technology give people more rather than less control over their lives (42% vs. 17%).

There is a clear generation gap with regard to computers and technology. People under 50 like and use computers considerably more than older people. But the only significant misgivings about technology were expressed by people 65 years old and older (39% disliked or had mixed feelings about computers), but 93% of them do not use computers.

Americans of all ages divide sharply, however, on whether computers and other technologies are being used to invade their personal privacy. A 55% majority expressed concern in this regard. Surprisingly, perhaps, the sophisticated computer users voiced worry about privacy less often (47%) than people who never use a computer (57%).

News Junkies

The survey, which examined extensively the impact of technology on people's lives, found that hi-tech Americans are also voracious consumers of information. They read more, follow the news more, and know more about the world than people who are not as technologically experienced. Home computer users spend more time reading newspapers and magazines and watching serious news shows than non-computer users. They also spend less time watching entertainment television, including tabloid and news magazine TV shows. In a typical day, the average home computer user reads 11 minutes more and watches 20 minutes less entertainment television than the average person without a home PC.

	Computer User	Modem User	Not A Computer User
Average Minutes Reading Yesterday	58 mins.	60 mins	47 mins.
Average Minutes Watched TV Yesterday	2 hrs.	2 hrs.	2.5 hrs.
Percent Who Read Newspaper Yesterday	65	63	56
Percent Who Watched 3 or more hours of Entertainment Television Yesterday	20	16	28
Percent Who Read a Book Yesterday	38	36	29

The findings of the survey indicate that people with access to new information formats do not forsake traditional sources of news and information. Compared to others of similar backgrounds, they are heavier consumers of all types of hard news sources such as C-Span, CNN, and National Public Radio. Those who use computers in their home on a regular basis, or use modems to "go on-line," are as likely to read books and newspapers as people from similar backgrounds who have not taken up computer technology.

	Computer User	Modem User	Modem Non-User Demographic Equivalent¹
Average Minutes Reading Yesterday	58	60	51
Percent Who Read A Book	38	36	33
Percent Who Read Newspaper	65	63	62
<u>Regularly:</u>			
Reads News Magazines	25	30	21
Watches CNN	39	44	34
Listens to NPR	14	18	12
Enjoys Reading A Lot	65	65	57

An Information Elite

In keeping with their news consumption and media use profile, Americans with hi-tech devices at home know much more about world events than the public at large and than Americans from comparable demographic backgrounds without access to advanced technology in their homes. For example, 63% of on-line users scored high on a current events quiz administered in the survey, compared to 50% of respondents from comparable backgrounds who do not use a modem from their home and 28% of those who do not use computers.

The pattern of using technology to better manage their lives rather than increasing their entertainment options is pronounced among regular users of home computers and users who go on-line from home PCs. While they are much more likely than their low-tech counterparts to use ATM machines, bank electronically, have a video camera or fax machine, and somewhat more likely to subscribe to cable, they are *not* more likely to have bought a pay per-view event or to use a home video game.

¹For comparative purposes, non-users were statistically adjusted to match the sex, age, education, income and regional profiles of technology users.

	Modem User	Non-User Demographic Equivalent
<u>Political Knowledge Index:</u>		
None or One Question Correct	8	13
Two or Three Questions Correct	29	37
Four or Five Questions Correct	63	50
Satisfied with Things on TV	50	56
Satisfied with Movies on TV	43	51
Has a Fax Machine	21	8
Uses ATM Card	78	63
Banks Electronically	19	10
Subscribes to Cable TV	83	74
Ordered Pay-per-View Program	39	39
Has a Home Video Game System	49	44

Nerds They Are Not

The survey debunks the stereotype that paints technologically advanced people as less outgoing, socially skilled or athletic than average. Americans who use a computer at home regularly or go online were as likely as low-tech people from similar backgrounds to say they go out "a lot" or take part in athletics. Further, they were more likely than their less technologically experienced counterparts to be club or association members and also more likely to describe their personalities as outgoing.

	Modem User	Non-User Demographic Equivalent
Had vigorous exercise yesterday	27	32
Had a visit with a friend or family yesterday	58	57
Member of a club or group	49	42
Wrote a letter in past week	37	27
An outgoing person	57	53
Goes out a lot in free time	34	35

Information Haves and Have Nots

Times Mirror Center found that the spread of technology through American society is quite

uneven. While most Americans have some advanced technological products in their homes, very few have a wide variety of hi-tech equipment. Only 2% of survey respondents owned four devices: a personal computer, fax machine, video camera, and an ATM card. But as many as 67% had at least one of them. Ownership patterns reflect the ability to afford the new technology, personal skills to manage it, and an inclination to use it as an information source rather than as a new form of entertainment. Whatever their bases, these patterns could have profound effects on society in view of the "empowering" capabilities of computers and technology.

Family income and level of education largely determine the ability to own technology, and these factors strongly influence the kinds of technological choices people make. Better educated and affluent people are more likely than less well educated and poorer people to own all types of electronic technology. But the disparity is greatest with regard to computers and on-line capability. A college graduate with a family income of \$50,000 a year is three times more likely to own a video camera than a non-graduate who earns less than \$30,000. The gap is nearly *five to one* for personal computer ownership and an enormous *10 to 1* for on-line capability within the home.

***Prevalence of Technology in the Home
By Education and Family Income***

	<i>\$50,000+</i>		<i>\$30,000 - \$49,000</i>		<i><\$30,000</i>	
	<i>College Grad</i>	<i>Non Grad</i>	<i>College Grad</i>	<i>Non Grad</i>	<i>College Grad</i>	<i>Non Grad</i>
Has a PC in Home	68	48	47	30	30	15
Uses a Modem	21	12	14	4	10	2
Subscribes to Cable Television	76	74	61	64	50	57
Has a Video Camera	45	51	28	33	20	17

The impact of these patterns on educational opportunities of children are evident. Among college graduates with children, almost half (49%) reported that the child was a user of a personal computer. Among those with a high school education or less, only 17% reported that children used a home PC.

Among PC owning households, 75% of adults reported that children of all ages in the home often or sometimes used their computers for school work, compared to 64% who said the children played games. A special sub-sample of teenage computer users gave much the same answers as adults about their computer time: 85% said for school, 59% said personal activities, and 14% said a job.

The survey found that while large socio-economic differences existed in children's access to home computers, there were virtually no socio-economic differences in how often and for what purposes children used computers if present in the home. In that regard, teenagers were nearly twice as likely to own a video game system as a personal computer. However, unlike computers, video games were found almost as often in lower socio-economic homes, as in homes where the parent earned \$50,000 or more, or was a college graduate.

The surveys of adults about children and of teenagers about themselves suggest that the huge

gender gap in computer usage among adults could diminish if not disappear with the next generation. The gender gap among children using home PCs today is modest by both measures. Adults reported that 53% of users were boys and 47% girls. Among teenage users, 40% were boys and 32% were girls.

Patterns of Computer Use

Virtually all computer users of both sexes and all ages used their home PC for personal uses (83%), but two-thirds (67%) said they use it for their jobs and 46% for school-related activities. The poll also found that home PCs have:

- Multiple users. More than one family member uses the PC, at least occasionally, in the vast majority (85%) of homes.
- Frequent use. Forty-two percent of respondents said they used their personal computer "every day" or "most days."
- Multiple uses. While most often used for word processing, financial record-keeping and game playing, other home PC uses include keeping track of genealogy, pursuing hobbies, creating artistic designs, and maintaining mailing lists.

Work At Home Americans

Technology is clearly facilitating the work-at-home trend. Millions of Americans are running home-based businesses that are supported by electronic technology, and large percentages of the work force choose to work at home some of the time. The survey also found:

- Almost one in five Americans (18%) is self-employed at least part of the time. Nearly half of them own home-based businesses, and half of those businesses employ computers and/or fax machines.
- 45% of all employed respondents said they worked at home "often" or "sometimes," or had a home-based business.
- 27% of all respondents said they worked at home at least part of one day in the past week, including 7% who stayed at home entirely that day.
- 40% of those who worked at home at least one day in the past week used a computer at home to help them, and 13% used a fax machine.

The Access Ramp To The Information Superhighway

As much as computers themselves, the ability to go on-line via modem from home is having a dramatic effect upon the ability, and perhaps the propensity, to work at home. No fewer than 60% of frequent on-line users worked at home one day or more in the week preceding the survey

interview, compared to 42% among PC users who do not have an on-line capability and 20% among respondents without computers. Nearly half of the specially augmented sample of 546 modem users interviewed by the Times Mirror Center said they often (25%) or occasionally (22%) connect with computers at work or school.

These modem users go on-line even more frequently to another destination: *computer bulletin boards*. More than half said they dial-up bulletin boards often or occasionally (25% often, 28% sometimes).

A third common destination for modem users is the commercial information services, including Prodigy, CompuServe, America Online, and Genie. Nearly half of these respondents said they subscribe to one or more of these services; of them, about half (or 23% of all modem users) say they dial-up the services often; about one-third of subscribers (17% of all modem users) dial-up sometimes. Once on-line, modem users usually collect information and communicate with others, as the following table shows. Sub-groups sometimes stand out in this regard; among those who have businesses at home, for example, 24% said they dial-up often for financial information.

WHAT MODEM USERS DO WITH THEIR MODEMS
Activities While On-line
N=546 (all modem users)

	<u>Often</u>	<u>Sometimes</u>	<u>Hardly Ever</u>	<u>Never</u>
Do research for work or school; communication with people at work or school	31	32	11	27
Send and receive electronic mail	29	24	22	24
Participate in on-line forums, chat groups, discussion lists	12	20	26	41
Men	12			34
Women	15			56
Get news, weather, or sports	11	17	17	54
Get information for hobbies, entertainment	8	21	18	53
Get financial information, conduct transactions	14	10	15	60
Get travel information	3	15	18	65
Play games	5	12	15	68

Home Entertainment and Electronic Technology

The basic television set is the most flexible technological device in modern homes. For decades, it received only over-the-air broadcasts, usually from a handful of stations. Since the mid-1970s, however, it has evolved as the basic building block for a variety of devices, usually for entertainment. The effect has been to expand its scope and versatility enormously, such that today, it is as qualitatively different from its ancestor as the Taurus is from the Model T Ford.

Today, in only 7% of American households does television simply provide broadcast reception. In the rest, the set is loaded with one or more supplementary services or attachments: cable (with or without premium service), VCRs, and Video Game systems such as Nintendo or Sega.

WHAT'S CONNECTED TO THE TV

7%		Nothing--TV Set Only
26%		The Basic Box--No Cable
15		TV with VCR only
1		TV with Game System only
10		TV with VCR and a Game System
35%		The Enhanced Box--Basic Cable Service or Satellite Dish
4		Enhanced Box and Nothing Else
20		Cable with VCR only
11		Cable with VCR and a Game System
32%		The Premium Box--Cable with Premium Service
2		Premium Box and Nothing Else
13		Premium with VCR only
17		Premium with VCR and a Game System

But Are They More Satisfied?

The Times Mirror Center survey found a remarkably weak correlation, however, between consumer satisfaction with "what's on TV" and the number of channels available.

Only 57% of respondents said they are satisfied with their "choice of things to see" on television as a whole; 14% said *very* satisfied, and 43% *fairly* satisfied. Fully 40% were dissatisfied.

Subscribers to a basic cable service are *moderately more* satisfied with their viewing choices than those with just broadcast television, but not *extremely so* (16% of cable subscribers said very satisfied vs. 10% of viewers who receive only broadcast TV).

Those who subscribe to premium cable channels are essentially no more satisfied with their choices than those who get basic cable. This result echoes another finding of the survey: only 29% of subscribers to a premium channel said they would miss the service a lot if it were no longer available.

Satisfaction With Choice Of Things On Television

Has:	Very Satisfied	Fairly Satisfied	Not Too Satisfied	Not At All Satisfied	DK
Broadcast TV Only	10	39	32	16	3
Basic Cable	16	46	27	9	2
Premium Channels	17	49	24	8	2
Has Ordered Pay-Per-View	17	50	23	7	3

Portending 500 Channels

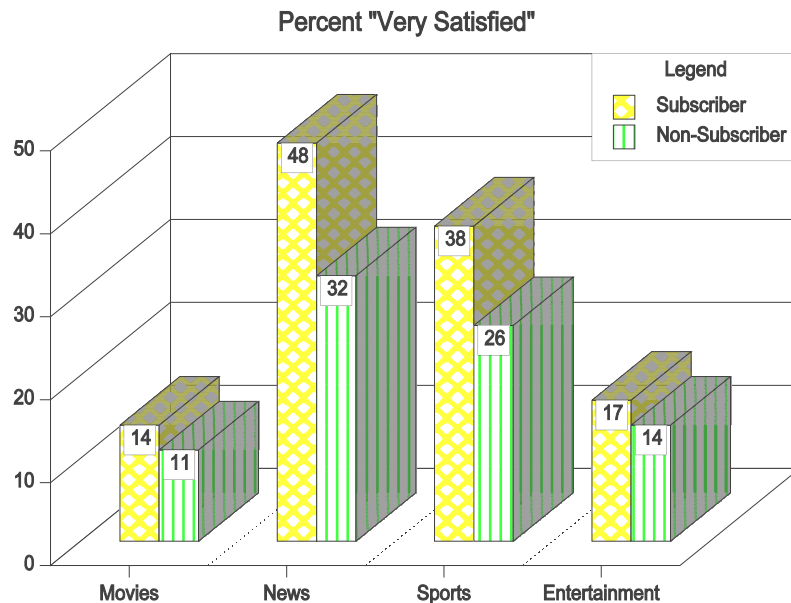
The small number of people in the survey who had satellite dishes were the only group who stood out as much more satisfied with their TV viewing choices than the public at large. Fully **46%** of owners said they were very satisfied, which is significantly higher than the 29% of VCR owners who said they were very satisfied with the ease of finding something to see in the video store, and the 24% of premium cable subscribers who said they were very satisfied with the choice of movies on their channels.

Satisfaction With Each Service Among Subscribers/Owners

	Very Satisfied	Fairly Satisfied	Not Too Satisfied	Not At All Satisfied	DK
Ease of Finding Video In Store	29	42	15	5	9
Movies/Programs On Premium Channel	24	47	20	8	1
Choice of Programs On Satellite Dish	46	24	18	8	4

The public is much more satisfied with the choice of news and sports on television than with the choice of movies or entertainment programs. As many as 43% of respondents said they are very satisfied with the choice of news programs and 33% with the choice of sporting events, roughly twice the level for movie or entertainment choices on TV. Cable TV, compared to broadcast TV, makes a huge difference in satisfaction with sports and news, but not very much of a difference with regard to entertainment shows or movies.

VIEWERS OF CABLE VS. BROADCAST



Watch At Home, But Get It At A Video Store

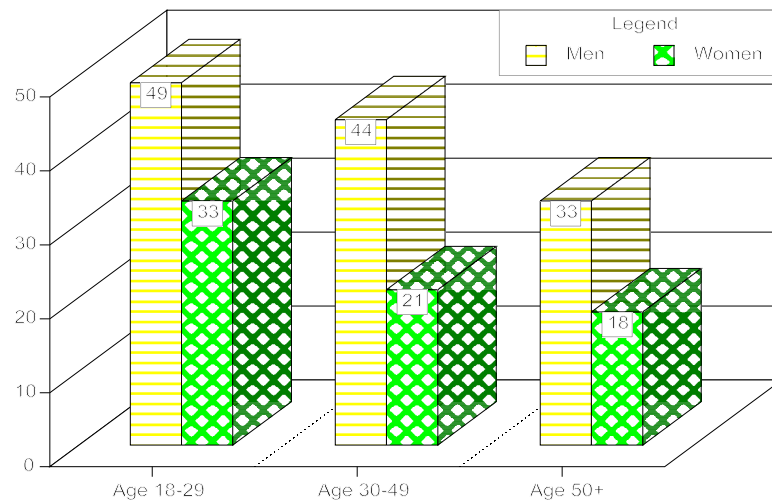
Most Americans prefer to watch a rented movie at home rather than go out to a theater. By a 67% to 27% margin, respondents said they would rather see a movie at home than in a theater. The video store is the preferred source of movies, even in cable-subscribing households. Only those who go to the movies once a week or more express a clear preference for theater viewing (63%). Respondents who pay for a premium channel divide evenly between those preferring a video store or cable TV for their movie. Only 6% of consumers who have ever bought a pay-per-view event prefer that option over a video store for a movie.

Gender, Generation, And The Remote Control

One of the simplest and most widely used forms of home technology, the remote control, has had a major impact on viewing habits. While the vast majority of Americans said they tune in for specific programs and don't change channels frequently, a significant minority under 50 years of age described themselves as "channel surfers" who switch often in search of a program to watch. Men said they control the remote more often than women (54% vs. 33%), and also surf more often. The "surfing" also differs by age groups among men under 50; for example, nearly half (43%) flit around the channels, compared to only 27% of those 50 years and older, who are the generation that began watching television before the remote control era.

SWITCH CHANNELS FREQUENTLY

Percent Saying "Yes"



B u t

majorities of people of all ages and both sexes said that they use their remote controls when commercials come on. Just 35% of TV viewers said they usually watch commercials. Only among poorer and less well educated people do significant percentages say they watch the commercials rather than switch channels. Similarly, high school graduates watch a home shopping network more often than college graduates (33% vs. 19%).

I. AMERICANS AND TECHNOLOGY

Who Has What

With the television set turned on for more than six hours a day in the average American household, it is hardly surprising that the two associated technologies -- Video Cassette Recorders and Cable TV -- have achieved widespread penetration levels. ***Fully 85% of all households report having a VCR in their homes.*** This device should have afforded viewers more control over their time, i.e., when they watch a program; however, this has occurred to only a limited extent (as discussed in Chapter VI).

Cable TV has become almost universally available to Americans. The vast majority of households (64%) subscribe in order to receive more channels and clearer reception than regular broadcast stations (over-the-air signals) provide. "Premium" cable, however -- the expanded service which carries specialty movie or sporting channels -- has yet to demonstrate broad appeal. Just over one-quarter of all households (28%) subscribe to such premium services. A small number, 4%, also report having satellite dishes at home.

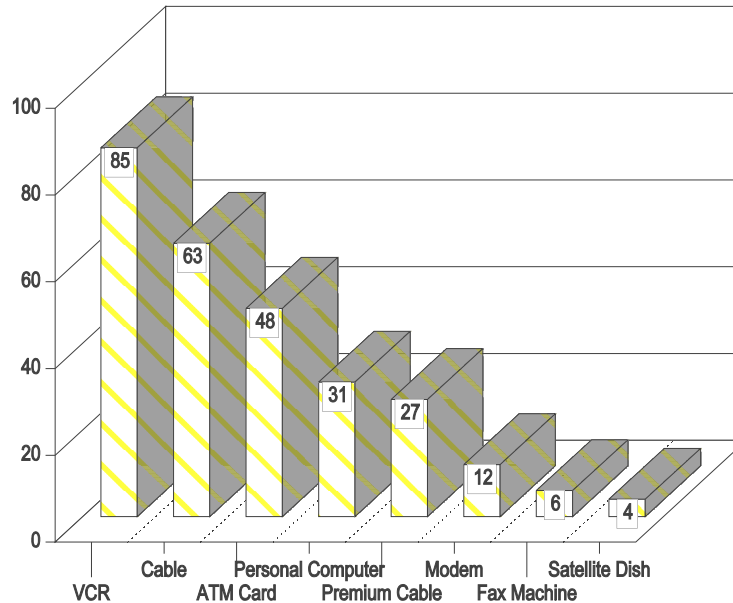
Two other recent technological innovations -- the ATM card and the personal computer -- also have penetrated significantly into American society. Almost half (48%) of all Americans have an Automatic Teller Machine card which allows them to bank without interacting with a teller during regular banking hours.

And although they have existed for little more than a decade, personal computers (PCs) are in almost one-third (31%) of all American households. Moreover, more than one-in-three (12%) also have "modems" -- devices that allow them to communicate with other PCs, whether in homes or offices, as well as with on-line information services. These modems are the main "access ramps" to the information superhighway, and we will look more closely at modem users and modem uses later in this report.

The other new technology device about which the survey asked is the fax machine. We found that while fax machines have become a staple of the office environment, they are still relatively rare in homes (6%).

A graphic presentation of the penetration of all of these technologies is shown below.

AMERICANS WHO HAVE OR USE



Attachment to the New Technologies

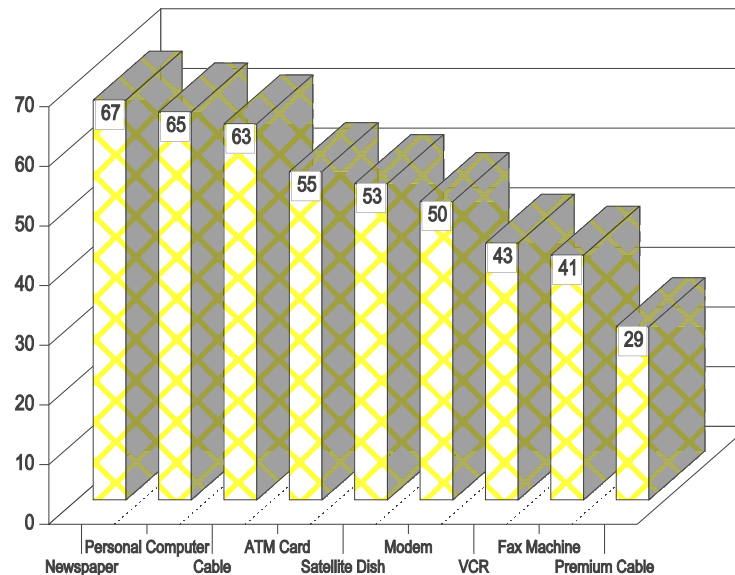
In addition to determining the number of Americans who use these technologies, we examined penetration by asking how attached people are to them on an everyday basis, i.e., how much they would be missed if no longer available.

The oldest of the information technologies -- "the newspaper" -- would be missed most. Among the 70% who report reading a newspaper on a regular basis, 67% said they would miss it "a lot" if they no longer had it. In terms of endearment, this is rivaled among the new-comers by the personal computer and basic cable TV systems; 65% and 63%, respectively, of respondents who have access to these technologies said they would miss each of them "a lot."

On a similar basis, at least half of Americans said they would miss their ATM cards (55%), satellite dishes (53%) and modems for their computers (50%) by "a lot." Somewhat fewer users would miss their VCRs (43%) or Fax machine (41%) to the same degree. The technology that Americans could give up the most readily is premium cable. Only 29% of those who subscribe said they would miss premium cable "a lot" if deprived of it.

PERCENT WHO WOULD MISS "A LOT"

Based On Americans Who Have or Use



Attitudes Towards Computers and Technology

Americans are generally friendly toward computers and other new technologies. The vast majority (65%) said they like "computers and technology," compared to a mere 5% who dislike them and 25% who have mixed feelings. Similarly, far more feel that computers and other technology affords them more control over their lives than say it gives them less control (42% vs. 17%), with one-third (34%) saying no difference. ***But Americans are sharply divided on whether computers and other technologies are being used to invade their personal privacy.*** Surprisingly, perhaps, the most sophisticated computer users are ***least*** worried about this possibility.

Clear generational and educational splits emerge in attitudes toward computers and technology, as well as expected differences that correlate with the degree of familiarity with the devices.

Among respondents under 50 years of age, computers and technology are welcomed with open arms. "Likes" outnumber "dislikes" by 72% to 3%, with the remaining quarter offering no clear attitude. Among those over 50, however, a bare majority of 52% say they like computers and technology. Somewhat surprisingly, little difference was found between the generation ***raised*** with computers as part of their lives, and the next older generation which had to ***adjust*** as adults to their presence in the workplace and home. Three-quarters (75%) of those between 18 and 29 say they like computers, compared to 70% of those between 30 and 49 years of age. Educational differences, if more predictable, are nonetheless stark; 48% of those with less than a high school education said they like computers, compared to 62% of high school graduates, 70% of those who have attended college, and to 77% of those who have graduated college.

Also as expected, those most comfortable with computers and technology are those most familiar with their use. Over half (57%) of those who do not use a computer at home say they like computers

and technology, but this figure jumps to 81% among those who use a computer at least occasionally, and to 94% of those who use one at home on a daily basis. About eight-in-ten of those who use home fax machines (83%) or ATM cards (80%) also report liking computers and technology.

The public is slightly more ambivalent about whether computers and technology afford people more control over their lives. Overall, Americans by more than two to one feel that computers and technology give people more control over their lives (42% vs. 17%), although a rather large proportion said computers make no difference (34%) or offered no opinion (7%).

Again, age and educational differences emerge clearly. The younger and better educated are more convinced that computers and technology offer people more control over their lives. The clearest difference in opinion on this score depends on computer familiarity. Just 37% of those never having used a computer feel that computers and other technology give people more control, compared to 47% of those who use them on at least an occasional basis, and to 61% of those who use a personal computer at home on a daily basis. Nearly two-thirds of those who subscribe to some sort of computer on-line information service (63%) feel that computers give people more control over their lives.

Privacy Concerns

The *Times Mirror* study found that a substantial portion of American society has some significant degree of concern that computers and technology are being used to invade their privacy. Overall, one-quarter of respondents expressed "a lot" of concern in this respect (25%), with another 30% saying they have at least "some" concern in this area. Some 18% say they worry "not much" about computers invading their privacy, and one-quarter (24%) say they worry "not at all" about this possibility. Significantly, those who use computers most are the least concerned about an invasion of their privacy.

Those found to be broadly concerned about privacy ("a lot" plus "some") differ by age, education, and familiarity with computers from those relatively unconcerned ("not much" and "not at all"). The correlation with familiarity shows an interesting pattern: for those who do not use a home computer, concerned citizens outnumber unconcerned by a wide margin of 57% to 39%; among occasional home computer users, more say they are *concerned* (51%) than unconcerned (47%); but among everyday computer users, slightly more are *unconcerned* (52%) than concerned (47%) about privacy. Among those most familiar with computer technology -- those who dial up on-line information services through their computer modems -- concern is at its lowest level: 44% concerned, 53% unconcerned. Also notable is that satellite dish owners, by more than two-to-one, are concerned (66%) rather than unconcerned (32%) about their privacy.

FEELINGS ABOUT COMPUTERS & TECHNOLOGY

	<i>Like</i>	<i>Dislike</i>	<i>Mixed</i>	<i>Don't Know</i>	<i>N</i>
<i>Total</i>	65	5	25	5=100	3667
<i>Age</i>					
18-49	72	3	22	3=100	2399
50+	52	8	30	10=100	1219
<i>Education</i>					
College Grad.	77	1	21	1=100	1309
Some College	70	3	23	4=100	965
High School Grad.	62	5	27	6=100	1073
< High School	48	9	31	12=100	304
<i>Computer Use</i>					
Never	57	6	30	7=100	2429
Rarely/					
Occasionally	82	1	17	*=100	613
Most Every Day	94	*	6	*=100	625
On-line Often	94	1	5	*=100	163
<i>Other Technology Use</i>					
Fax Often	83	1	16	*=100	103
ATM Often	80	2	16	2=100	1026
Satellite Dish	65	7	25	3=100	119

Question: How do you feel about computers and technology, do you like them, dislike them, or do you have mixed feelings about them?

TECHNOLOGY AND CONTROL OVER LIFE

	<i>More</i>	<i>Less</i>	<i>No Difference</i>	<i>Don't Know</i>	<i>N</i>
<i>Total</i>	42	17	34	7=100	3667
<i>Age</i>					
18-49	46	13	37	4=100	2399
50+	35	24	28	13=100	1219
<i>Education</i>					
College Grad.	54	11	30	5=100	1309
Some College	45	16	33	6=100	965
High School Grad.	35	20	37	8=100	1073
< High School	34	19	34	13=100	304
<i>Computer Use</i>					
Never	37	19	35	9=100	2429
Rarely/					
Occasionally	47	14	36	3=100	613
Most Every Day	62	7	27	4=100	625
On-line Often	63	6	28	3=100	163
Info. Service					
Subscriber	67	3	28	2=100	161
<i>Other Technology Use</i>					
Fax Often	54	11	34	1=100	103
ATM Often	10	33	5=100	1026	
Satellite Dish	37	23	35	5=100	119

Question: Do you think that computers and technology give people more or less control over their lives, or doesn't it make any difference?

CONCERN ABOUT TECHNOLOGY INVADING PRIVACY

	<u>Invades Privacy:</u>				<i>Don't Know</i>	<i>N</i>
	<i>A Lot</i>	<i>Some</i>	<i>Not Much</i>	<i>Not At All</i>		
<i>Total</i>	25	30	18	24	3=100	3667
<i>Age</i>						
18-49	20	32	21	25	2=100	2399
50+	33	26	13	22	6=100	1219
<i>Education</i>						
College Grad.	18	34	20	26	2=100	1309
Some College	23	32	17	26	2=100	965
High School Grad.	28	29	21	20	2=100	1073
< High School	34	24	13	22	7=100	304
<i>Computer Use</i>						
Never	28	29	17	22	4=100	2429
Rarely/						
Occasionally	17	34	22	25	2=100	613
Most Every Day	16	32	19	32	1=100	625
On-line Often	15	29	16	37	3=100	163
<i>Other Technology Use</i>						
Fax Often	27	18	23	29	3=100	103
ATM Often	18	31	20	28	3=100	1026
Satellite Dish	40	26	16	16	2=100	119

Question: How much do you worry that computers and technology are being used to invade your privacy?

II. PERSONAL COMPUTERS IN THE HOME

Not only are personal computers found in U.S. households in growing numbers. They are also being used broadly, by more than one member of the home, and frequently for more than just one purpose. Nearly one-quarter (24%) of respondents to the Times Mirror survey said they use a personal computer at home at least "occasionally," and 13% use one "every day" or "most days." In 85% of PC households with more than one person, someone other than the respondent used the computer at least occasionally.

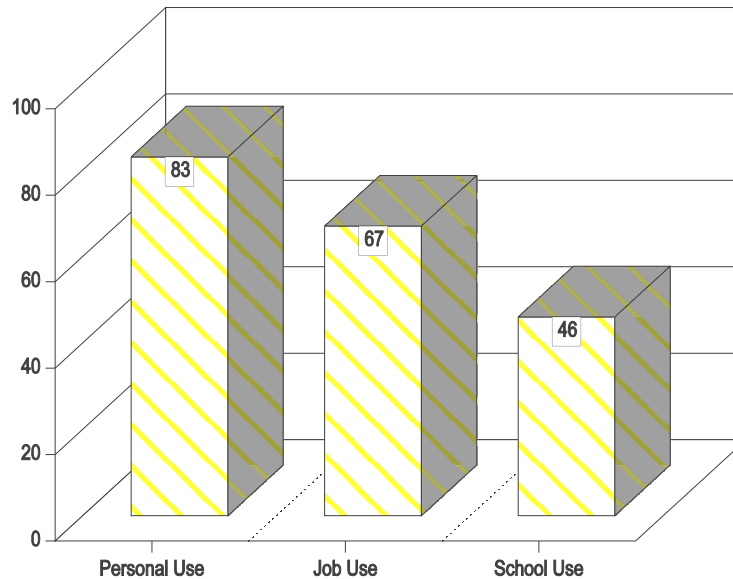
How Do People Use Their Home Computer?

A large majority of users (64%) employ their PC for some combination of work, school, and personal activities. Fully 30% said they use it for all three.

Eighty-three percent of home PC users said they make some personal use of the machine. But only about one-fifth (21%) said they use it *solely* for personal matters. Two-thirds (67%) use it for their jobs; but only 9% said it was solely for job matters. Some 46% used the PC for school-related activities; 5% only for school matters.

USE OF HOME PERSONAL COMPUTER

Among Adults



The high level of personal use of personal computers varied very little by age, sex, income, or education; however, job-related use of PCs was more common among college educated and upper income categories.

School-related use of PCs was most common among the youngest and lowest income

respondents -- 65% among those aged 18-29 as well as those earning under \$20,000. Yet even among respondents aged 50 to 65, over a third (34%) said they used their PC for school work. No gender difference was found for PC use of this type.

Within these broad applications of the computer, PCs were used most often as word processors (83%; 56% said "often," 27% "sometimes"). More than half of respondents kept household or financial records (55%; 33% "often"). Almost half played educational or other games on their PCs (49%; 24% "often"). And 26% of PC users connect via modem to bulletin boards or information services (12% "often"). Overall, 80% of PC users often engage in at least one of these activities; one-third (35%) often did more than one activity.

Game playing is almost as common among occasional PC users as among those who use their machines more frequently, and is just as common among women as among men. Indeed, among PC users in their 30s, women were 12 percentage points more likely than men to play PC games at least sometimes. Perhaps not surprisingly, PC users in households with children were quite a bit more likely to report playing PC games at least sometimes than were those in households without kids (57% vs. 40%). College educated PC users are about half as likely as those with less education to be frequent game players, but even among the well-educated, 43% said they played computer games at least sometimes.

In addition to the common uses discussed thus far, which were specifically asked of respondents, the survey also inquired about any other purposes to which PCs were put. The large variety of responses are tabulated below. Although the percentages reporting some activities are small, the broad (and growing) user base of home PCs means that hundreds of thousands of U.S. homes (and in some cases, over a million) are engaging in these activities.

<i>OTHER ACTIVITIES WITH THE PC</i>	
(among those who use a home PC at least "occasionally")	
	<u>%</u>
Keeping business records	7
Graphs, charts	6
Keeping records for hobbies	5
Programming	4
Desktop publishing	3
Working at home	3
Pictures or art	3
Genealogy; family trees	3
Keeping mailing lists	3
Educational activities	2
Music	2
Clubs; organizations	1
Children's activities	1
Help for disabled person	1
Keeping databases	1
Interior design	1
Spreadsheets	1
Other miscellaneous activities	7

"Open Collar Workers": Technology And Working At Home

One of the most significant social trends of recent years is the increase in the number of people working at home, either in a home-based business or as a "telecommuter." According to one national estimate, the percentage of the U.S. work force working part or full time at home grew from 21% in 1988 to 33% last year.² Various explanations are offered, including rising commuter costs, ecological impact of commuting, and recent worker lay-offs that have encouraged starts of home businesses. Computers and fax machines have enhanced these factors by offering home-based workers the tools for their job and the means to stay in touch with their office or with clients.

The Times Mirror survey found that 45% of employed respondents (29% of all households) either had a home-based business or reported that they worked at home "often" or "sometimes". Another 6% of households included someone other than the respondent who sometimes worked at home. Altogether, 34% of households reported having someone who worked at home at least "sometimes."

Among employed persons, men and women were equally likely to report working at home at least sometimes. College graduates (64%) were more likely than those with less education to do so (42% among those with some college, and 35% among those with no college).

These generalized responses about home-based work were confirmed when respondents were asked whether they had worked at home "in the past week." Twenty-seven percent of respondents said they had worked at home at least one day during the past week.

TECHNOLOGY AND WORKING AT HOME

- 34% of households reported that someone worked at home at least "sometimes"
- 45% of all employed respondents said they worked at home "often" or "sometimes," or had a home-based business
- 27% of all respondents said they worked at home at least part of one day in the past week.
- 40% of those who worked at home at least one day in the past week used a computer at home to help them, and 13% used a fax machine
- Two-thirds of regular PC users use their computer to help them work at home

Nearly half (49%) of those who work at home part or full time own a home PC, and most of them use it for their jobs. Thirteen percent use a fax machine. Among the subset of these individuals who have a business based at home, 40% use a computer and 20% use a fax. Men were somewhat more likely than women (40% vs. 34%) to use a PC for work at home, and those with higher education were much more likely to do so than the less educated (55% among those with college

² LINK Resources Corp., cited in the Washington Post, Oct. 22, 1993, pB1.

degrees vs. 17% among those with less than a high school diploma).

The survey suggests that not only do PCs facilitate working at home, but also that regular PC users are more likely to have jobs that allow them to work at home. Certainly regular users of home PCs are much more likely than other people to work at home. In the sample as a whole, 27% worked at home at least one day in the past week, but among regular PC users, 57% did so. Two-thirds (67%) of regular PC users say they use their computer to help them work at home.

A follow up survey found that many Americans who work at home are not simply working at nights and weekends, but are working at home instead of going to their regular workplace. Among employed respondents, 38% worked at home in the week prior to the survey. This included 5% who have a home-based business, 22% who worked at home in addition to going to their regular workplace, and 11% who worked at home at least one day instead of going to their regular workplace. Thus, of those who worked at home at least one day, a third substituted work at home for going to the office.

BASED ON FOLLOW-UP SURVEY:	ALL RESPONDENTS	EMPLOYED RESPONDENTS
Worked at home at least one day in past week in addition to going to regular workplace	13	22
Worked at home at least one day in past week INSTEAD of going to regular workplace	7	11
Has home-based business	3	5
Did not work at home in past week	38	62
Not employed	39	-

Use Of Computers At Work

The spread of home computers is undoubtedly boosted by the growing experience of Americans with computers in the workplace. The follow-up survey found that over half of respondents employed outside their home (55%) used a computer at their workplace. Moreover, computer use at work tends to be frequent: 43% use a computer at work every day or most days. Women were more likely than men to use a computer at work (62% to 49%). Over three-fourths of college educated respondents (78%) said they used a computer at work, compared with only 18% among those who did not finish high school.

The Next Generation: Children And Computers

Households with children were more likely than those without kids to own a personal computer (39% vs. 26%). Where there are kids and computers, kids are very likely to be using the computers. Among all households in the survey with a PC and a child, 75% reported that one or more of the children used the computer at least occasionally.³ This was only slightly lower than the 79% percentage of adult respondents in PC households who said they themselves used the PC at least occasionally.

Kids also ranked nearly as high as adults in use frequency: 72% of children who used the computer at least occasionally reported engaging "often" in at least one of several types of computing activities. By comparison, 80% of adults did so.

Information about the use of home computers by children comes from both the adult survey and the teenagers' survey. In the adult survey, respondents with PCs and children in the household were asked about use of computers by the children. When the home included more than one child computer user, information was gathered about the child who most frequently used the computer. In the teenagers' survey, children aged 13-17 were asked about their own use of the home computer.

³ In at least some PC households with kids but no child among computer users, the child or children might be very young. However, as noted later, many respondents reported that even their children under 5 years of age were using the computer.

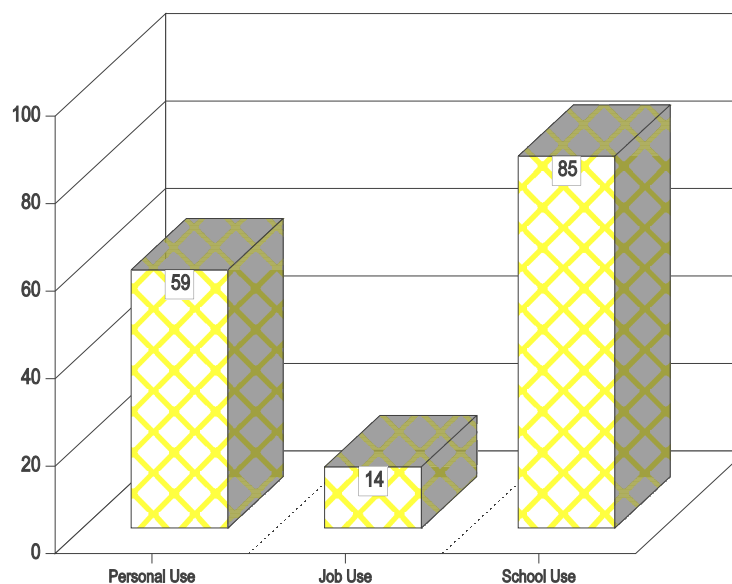
The two surveys asked many of the same questions, but because the populations were so different — adults reporting on children of all ages vs. teenagers (aged 13-17) reporting on themselves — the data will be reported separately.

What Kids Do With Computers

The survey found that kids (and adults) play games with their computers, but games were not the most common PC activity of children. School work is more frequent. Asked their main reasons for using a home computer, 85% of the teenagers said school-related tasks, 59% said personal matters, and 14% said job-related. This breakdown was confirmed, at least in part, by the types of applications kids reported. Consistent with heavy use for school, 42% of pc users said they "often" used the PC for word processing, and another 41% said they did so "sometimes."

USE OF HOME PERSONAL COMPUTER

Among Teenagers



These numbers were echoed by parents in the adult survey: 36% said their children who used a pc "often" did word processing, and 33% said they did so "sometimes."⁴ More generally, 40% of parents said their children used the computer to help with school work "often," and 35% said they did so "sometimes."

WHAT KIDS ARE DOING WITH COMPUTERS (among those who use a PC at least occasionally)

⁴ Word processing was relatively common even among younger children. Among computer users aged 5 to 12, for example, 23% were reported to do word processing "often," and another 36% "sometimes."

	Of- ten	Some- times	Hard- ly Ever	Never	DK
(Reported By Adults in General Population Survey: N=528)					
Help with school work	40	35	10	14	1
Word processing	36	33	12	20	1
Non-educational games	36	34	14	15	-
Educational games	34	31	13	22	1
Drawing pictures or art	24	32	19	26	-
(Reported By Kids In Teenagers' Survey: N=177)					
Playing games	43	25	17	14	1
Word processing	42	41	14	3	0
Drawing pictures or art	15	27	30	27	1

More than one-third of parents said their children "often" played educational games (34%) as well as other kinds of games (36%). (Forty-three percent of teenagers reported playing games "often".) And about one-fourth of parents (24%) said their children "often" drew pictures or drew art with the home PC (and 15% of teenagers said they did so). From these results, game playing and drawing pictures appear to be much more common among younger kids than among teenagers.

Characteristics Of Kids Using Computers

Not surprisingly, the social and economic characteristics of children who use home computers mirror those of adults. In nearly half of households (49%) where the respondent was a college graduate, a child was using a PC, compared with only 15% among those with less than a high school diploma. Nearly half of households (48%) with family income of \$50,000 or more had a child using a PC, while only 7% did so among homes with incomes below \$20,000. Almost a third of white households (32%) had a child using a PC, compared with 18% in black households. PC use by kids was lower in the south than in other regions.

Yet usage by children is almost entirely a function of whether there is a PC at home. Among households with PCs, only modest differences were found across racial or income groups in use of

computers by children.

The teenagers' survey echoed these findings. Half of white teenagers (50%) said they had a home PC, compared with only 30% for blacks. Only a third of those whose mother's education was limited to high school reported having a computer, compared to 59% in households where the mother was a college graduate⁵. Those who said that their family owned their home were 7 percentage points⁶ more likely to own a PC than those who rented. Where the sample sizes permitted a comparison, the data suggested that these social characteristics were relatively unrelated to use frequency in households that had a computer.

The ages of kid users given by parents in the adult survey indicated a tendency to cite older children more often, but younger children were amply represented. Of all children aged 6 through 17 mentioned as the most frequent computer user, those aged 6 to 11 constituted 35% of the sample, compared with 65% for those aged 12 to 17 (covering the same number of years of age). The mean (average) age of kid users reported in the survey was 12.

A Closing Gender Gap?

Among adults, 18% of men, but only 9% of women, use a PC at home "every day" or "most days." But among children, the sex difference is small.

⁵ Mother's education is a commonly-used measure of social and economic status in children's surveys.

⁶ Percentage points represent the difference between two percentages.

GENDER AND PC USE AMONG KIDS

		Boys	Girls
FROM ADULTS' SURVEY			
(Children who use PC at least occasionally)			
Child who most frequently uses computer	100% =	53	47
Often uses computer to ...			
Help with school work		35	46
Do word processing		31	42
Draw pictures or art		24	22
Play educational games		35	33
Play other kinds of games		47	24
FROM TEENAGERS' SURVEY (among PC users)			
Uses home PC for school		75	98
Uses home PC for personal activities		58	62
Uses home PC for a job		17	10

Of all the children described by adult respondents as users of home computers, 53% were boys and 47% girls. In the teenagers' survey, 40% of boys and 32% of girls described themselves as at least occasional users of a home PC; however, girls were 6 percentage points less likely to report that their household had a PC. Among households where kids have access to a PC, there is very little difference between boys and girls in the likelihood that the PC will be used, or in the extent of that use.

Indeed, the adults survey suggests that girls may be heavier users of PCs than boys, at least for certain types of applications. In households where a child uses the computer at least occasionally, 46% of girls "often" used the PC to help with their school work, compared with 35% of boys. Forty-two percent of girls used the computer "often" to do word processing, compared with 31% of boys. Boys and girls were about equally likely to be frequent users of educational games (35% for boys, 33% for girls) and to draw pictures or art (24% for boys, 22% for girls). The one area on the survey where boys outpaced girls in frequent computer use was for playing non-educational games: 47% of boys were reported to do so often, compared with 24% of girls.

Again, the teenagers' survey confirms much of the parents' report cards. Nearly all (98%) of the

girls who used a PC at home at least occasionally said at least one purpose was school-related, compared to 75% of boys. Regarding specific applications among kids who said they used a home PC at least occasionally, 44% of girls said they did word processing "often," compared with 40% of boys. Boys and girls were equally likely to report playing games often (43%). Boys were much more likely to say they "often" drew pictures or art (22%, vs. 6% for girls), but girls were much more likely to say they did it "sometimes" (37% vs. 20% for boys). Taking "often" and "sometimes" together, there was no gender difference in this activity. Boys were much more likely than girls to report that their home PC had a modem (49% to 31%), but among those with modems, there was no significant gender difference in modem use by the children.

Each survey asked respondents to compare their own comfort with computers with that of their children or parents, respectively. The lack of gender differences in perceived comfort levels was striking. Adults said 50% of boys — and 49% of girls — were more comfortable than the respondent. Twelve percent of boys, and 14% of girls, were said to be less comfortable.⁷ In the teenagers' survey, 31% of girls said they were more comfortable than their parents, compared with 29% of boys. However, boys were more likely than girls to say their parents were less comfortable with computers (33% of boys said this, compared with 23% of girls).

A final significant gender difference among teenagers concerned attachment to computers. Fifty-one percent of girls in the teenage sample said they would miss their PC "a lot" if it were no longer accessible; among boys, only 35% said this. Among adult respondents who used a home PC at least occasionally, there was no significant gender difference.

KIDS VERSUS ADULTS: WHO'S MORE COMFORTABLE WITH COMPUTERS?

ADULTS' SURVEY

"In general, do you think this child [who uses the home PC at least occasionally] is more comfortable using computers than you are, less comfortable, or is there no difference?"

Child more comfortable	49%
Less comfortable	13%
No difference	37%
Don't know	1%

TEENAGERS' SURVEY

In general, do you think your parents are more comfortable using computers than you are, less comfortable, or is there no difference?"

Parents more comfortable	29%
Less comfortable	27%
No difference	37%
Don't know	7%

⁷ Female adult respondents were quite a bit more likely than males to say their child was more comfortable with computers than they were, but notably, females were slightly more likely to ascribe that high comfort level to a female than a male child. Male adult respondents were just the opposite.

III. THE ELECTRONIC COMMUNITY

The principal technology today for going on-line is the modem, which links the PC to a telephone line and thus to computers in distant locations.⁸ Over one-in-ten U.S. households (12%) now has a PC with a modem, and most of these are making use of the modems. The survey found that about two-thirds of households with modems -- 8% of all homes -- report that someone goes on-line. This chapter will examine the modem users: who they are and what they do on-line.

A total of 339 modem users were found in the general population survey and another 207 modem users were located through a special additional survey that screened randomly selected households. The 546 modem users in this survey constitute perhaps the largest such sample yet assembled and questioned.

Who Are The Modem Users?

In this report, modem users are defined as individuals who said that they ever use their modem to connect to any computer bulletin board, information service such as Prodigy or CompuServe, or other computers outside the home. As a group, they are very well educated. More than half (53%) have at least a four-year college degree (compared with 21% in the general public). One-fourth have some post-graduate education (compared with 8% in the public). Only 3% of the modem users have not completed high school, compared with 17% among the general public.

Consistent with their high education levels, modem users are also much more affluent than the average citizen. Fifty-three percent of the modem user sample reported family incomes of \$50,000 and over, compared with 23% in the public. They are also much younger than average. Only 17% of modem users are over 50, compared with 35% in the general public; 29% are under 30, compared with 23% in the general public.

Most modem users (69%) are male, though among users, men and women were about equal in frequency of modem use. Males were usually the only modem user in the household (68% said this), whereas most females said others used the modem as well (60%).

Compared with the general public, modem users were nearly twice as likely to report "often" doing work for their job at home (35% to 19%). Among the general public, 44% said they never work at home, while among modem users only 14% say this. Among the self-employed, too, modem users stand out. They base their business at home much more often (64%) than the self-employed in general (47%).

African-Americans constituted 5% of the modem user sample, compared with about 10% among the public as a whole.

Modem Users And Computers

Not surprisingly, modem users use their PCs more frequently than others. Nearly half (48%)

⁸ Computers in many businesses and schools are connected directly to high speed computer networks, allowing users to "go online" without dialing up another computer through the local telephone system. Cable television companies in some localities are beginning to offer direct connections to computer networks in addition to traditional cable TV service. This type of connection is likely to become much more common in the future.

report using their PCs every day, and another 30% say they do so "most days." In contrast, among non-modem users, who ever use a computer, 23% use their PC daily, 27% most days, and 42% occasionally. Male modem users were considerably more active than women in their general use of personal computers at home, with 55% of males reporting daily use compared with 31% of females.

USE OF HOME PERSONAL COMPUTERS

Use home PC...	Modem Users			Non-Modem Users Who Ever Use a Home Computer
	All	Men	Women	
Every day	48	55	31	23
Most days	30	29	33	27
Occasionally	21	15	32	42
Rarely	2	1	4	8

In addition to the greater frequency, modem users employ their PCs for more purposes than do non-modem users. Thirty-eight percent report using their home computers for all three major activities: school, job, and personal reasons (vs. 26% among non-modem users).

HOW PCs ARE USED

Uses PC for...	Modem Users	All PC Users
Job	78	67
School	52	46
Personal activities	88	83

In keeping with the pattern seen for other types of computer use, it was not uncommon for more than one person in a household to be a modem user. In households with more than one person, 45% of the modem users said that others in the household also went on-line.

What Do Modem Users Do On-line?

Respondents were asked about several different types of computers to which they might connect, and a wide range of activities they might engage in once on-line. For each one they were asked if they did it often, sometimes, hardly ever, or never. Across the range of items discussed, 57% of modem users reported doing at least one type of activity "often."

Modem users are connecting to three major types of computers when they dial up. The most common destination is the computer bulletin board. According to *Online Access* magazine, there are over 40,000 publicly accessible bulletin boards across the U.S., both commercial and noncommercial, catering to a broad range of interests⁹. One fourth of modem users say they dial up bulletin boards often, and 28% say they do so sometimes.

⁹ Personal communication with magazine editor, Kathryn McCabe.

Computers at work or at school are almost as common as bulletin boards as a destination for modem users. Twenty-five percent say they dial up work or school computers often, and 22% do so sometimes.

A third destination for modem users are the commercial information services, including Prodigy, CompuServe, America Online and Genie. These services typically cost a monthly subscription fee, plus additional charges for certain services while on-line. Nearly half (48%) of those who ever use their modem say they subscribe to one or more of these commercial information services. Of these users, about half (or 23% of all modem users) say they dial up the services often; a little over a third of the subscribers (17% of all modem users) dial up "sometimes."

Current Destinations and On-line Activities

Of all modem users in the survey, only 16% said they did not contact one of the three major destinations at least "sometimes." In contrast, 10% said they contacted all three destinations at least sometimes, 35% contacted two, and 40% of modem users contacted one.

Apart from where they are going, what do modem users do when they get there? The survey asked about eight different activities people can do on-line. Across the eight activities, modem users reported engaging in an average of between two and three activities at least "sometimes" (the mean was 2.6). Fifty-seven percent reported doing at least one thing "often," and over a third (35%) did more than one thing "often."

On-line activities can be divided roughly into three categories. Two are relatively distinct -- communicating with other people and gathering information. The third is more diffuse, including playing games and exchanging hobby and recreational data. The distinctions blur often, however, because frequent modem users engage in many activities on-line.

The survey found that while a great deal of information-seeking occurs on-line, of potentially equal significance to society is the quieter revolution of computers facilitating communication between people, including electronic forums, in which users post and respond to commentary about issues of mutual interest, and "chat groups," in which people communicate with everyone else in a group simultaneously — in "real time."

The most common activity reported in the survey was one that straddles the communication/information divide: dialing up for job or school-related work and communication. Nearly a third of modem users (31%) said they do this "often," and another third (32%) do it "sometimes." These modem users were much more likely to be regular readers of business magazines: half of those who "often" dialed up for work or school read business magazines regularly (compared with 25% among modem users overall, and 7% in the general public).

Not surprisingly, modem users are more likely than non-modem users to say they use their computer and particularly a fax machine to help them work at home. Two-thirds (67%) of all modem users report using their home PC to help them work at home, compared to 44% of PC users without modems. Twenty-three percent use a fax machine, compared to 8% of PC users without modems. And 22% use both computers and fax in this respect.

The second most common on-line activity is sending and receiving electronic mail — so-called "e-mail." Twenty-nine percent of modem users say they do this "often," and about a fourth (24%) "sometimes" do it. E-mail activity is common on all three types of dial-up destinations, suggesting

that it is coming to rival regular mail to communicate with friends, family, colleagues, teachers, public officials, businesses, or anyone else who has an e-mail address.¹⁰ Frequent e-mail users were more likely than other modem users to describe themselves as "outgoing" (68% who often send e-mail said this, compared with 48% among those who never did so).

Another communication application is the third most common on-line activity: participating in on-line forums, "chat" groups, and discussion lists. One-third of modem users say they do this at least "sometimes," 13% do it "often." Not surprisingly, frequent participants in on-line discussions were considerably more likely to describe themselves as "outgoing" (70%, compared with 57% of modem users as a whole).

Most Are Information Gatherers

Most of the other on-line activities included in the survey involved gathering information of one type or another. Twenty-nine percent of modem users said they dialed up to get news, weather, or sports information at least "sometimes" and 11% "often" did so. Thirty-four percent had dialed up for news, 24% for weather, and 16% for sports. Frequent on-line seekers of news were omnivorous in their consumption. Over three-fourths (76%) of those who dial-up "often" to get news said they enjoy keeping up with the news "a lot" (compared with 52% of modem users who never dial-up for news). They are also much *less* likely to say they feel overwhelmed by information overload, and are much *more* likely than the average modem user to be an "early adopter" — someone who likes to be the first to buy or try a new product.

Twenty-nine percent said they went on-line at least sometimes to get information for entertainment purposes, including hobbies, restaurant or movie reviews, and pictures and graphics. Eight percent said they did this "often."

Nearly one-fourth (24%) dialed up to get financial information or to conduct transactions; 14% did so "often". Nearly three-fourths (73%) of these respondents described themselves as outgoing, and they are a politically well-informed group that keeps up with the news (84% say they enjoy keeping up with the news "a lot," compared with only 53% among those who never dial-up for this purpose). Among the self-employed, 23% dialed up "often" for financial information or transactions.

Many commercial information services provide travel information, including the ability to connect with airline reservation information. Eighteen percent of modem users — but 29% of those who use commercial information services — said they dial-up for travel information at least sometimes.

A final type of on-line activity is game playing. Many bulletin boards and information services have a variety of computer games available, including multi-person games that allow on-line users to compete with one another. Seventeen percent of modem users in the survey said they dialed up to play games at least sometimes.

¹⁰ In recent months, national television networks and major newspapers have begun providing e-mail addresses to their viewers and readers in order to solicit feedback and ideas about the news.

WHAT MODEM USERS DO WITH THEIR MODEMS

N=546 (all modem users)	Often	Sometimes	Hardly Ever	Never	Don't Know
DESTINATIONS					
Commercial information services	23	17	7	1 + 52% who don't subscribe	-
Bulletin boards	25	28	23	24	-
Computer at work and/or school	25	22	7	44	2
ACTIVITIES WHILE On-line					
Do research for work or school; communicate with people at work or school	31	32	11	27	-
Send and receive electronic mail	29	24	22	24	1
Participate in on-line forums, chat groups, discussion lists	12 Men=12 Women=15	20	26	41 Men=34 Women=56	1
Get news, weather, or sports	11	17	17	54	-
Get information for hobbies, entertainment	8	21	18	53	0
Get financial information, conduct transactions	14	10	15	60	-
Get travel information	3	15	18	65	-
Play games	5	12	15	68	0

IV. A PROFILE OF TECHNOLOGY USERS

The cost of technology, and therefore income, is an important determinant of who has what. But money is not the only factor. Life cycle influences, such as the presence of children, are also very important predictors of receptivity to, and presence of, certain types of technology in the home. Education is also a significant independent factor, as is the locality of the household.

COMPUTER, BUSINESS, AND FINANCIAL TECHNOLOGIES

Home Personal Computers

Nearly a third of U.S. households report owning a personal computer. Ownership is highly related to socio-economic status and educational attainment. Only 11% of the least affluent households (income under \$20,000) has a PC, and an identical 11% of homes in which the respondent had not finished high school has a PC. In contrast, over half (56%) of households with a family income above \$50,000 has one, as do almost two-thirds (65%) of respondents with at least some post-graduate training. Both education and income independently affect the likelihood of having a PC, as can be seen when income and education levels are compared at the same time:

PERCENTAGE OF HOUSEHOLDS WITH A PERSONAL COMPUTER

	Not a college graduate	College graduate
Family income \$30,000-\$49,999	30%	47%
Family income \$50,000 and over	48%	68%

Among individuals at the same income level, graduating from college accounted for about the same increase in PC ownership as rising to a higher income bracket did among those in the same education category.

Life cycle factors were also important influences. Computer ownership varied little across most age groups, but it was quite low (10%) among individuals aged 65 and older. Households with children were much more likely than those without kids (39% vs. 25%) to have a PC, but this greater likelihood was dependent upon the income level of the household. Among the least affluent households (income under \$20,000), the presence of children was unrelated to the likelihood of owning a computer; the presumption is that a PC is unaffordable for most such families. At income levels above \$20,000, children in the home bring a greater likelihood of having a PC. The income correlation weakens again among the most affluent group (income \$50,000 and over), where PC ownership is much more common.

PERCENTAGE OF HOUSEHOLDS WITH A PERSONAL COMPUTER

	Under \$20,000	\$20,000-\$29,999	\$30,000-\$49,999	\$50,000 and over
No children	11%	20%	25%	53%
Children	11%	28%	45%	60%

Among individuals living in households with personal computers, demographic factors were a little less strongly related to frequent PC use than to ownership. Still, the predictable differences in overall usage patterns did emerge. Only 31% of high school graduates used their home PC every day or "most days," compared with 53% among college graduates. And males were more than twice as likely as females (26% vs. 12%) to say they used the home PC everyday.

Modems and On-line Activities

As the ownership of personal computers has expanded, so has the ownership of modems. Prices for high speed modems have declined dramatically, and most PCs sold today probably contain modems. The survey found that 12% of U.S. households have PCs with modems. As with PC ownership in general, the better educated and more affluent Americans are much more likely than others to have modems. Over one-fourth (27%) of households with incomes above \$50,000 have a modem, as do about one-third (32%) of respondents with some post-graduate education.

Fax Machines

The fax machine, which is now virtually universal in U.S. offices, is also found in millions of American homes. Six percent of respondents to the survey said there was a fax machine in their home.¹¹ Given its principal function as a tool of work-related communication, fax machines tend to be found in households where someone needs to keep in touch with the office or with clients.

Fax machines are found in 14% of households with family incomes over \$50,000. Fifteen percent of self-employed respondents have a fax (and 18% of those with a home-based business do so). Thirteen percent of those who reported working at home at least one day in the past week have a fax machine. Among the small group in the sample (6%) who say they regularly read business magazines, 26% report having a fax at home.

Technology and Personal Finances

One familiar application of modern computing and communications technology is the automatic teller machine. Another is "electronic banking," providing users with the ability to inquire about balances and conduct transactions by touch-tone telephone or computer. The use of ATM cards has become quite widespread; nearly half (46%) of respondents said they have used one, 23% saying they often do so. Electronic banking is less common; only 10% of those respondents who pay bills for the family reported having "banked from home."

The use of both types of finance-related technology is much more common among better

¹¹ Many modems in home PCs provide fax transmission and reception capability, and indeed, many modem users reported that they use their PCs for this purpose.

educated and more affluent respondents. Forty-six percent of respondents with at least some post-graduate education say they "often" use an ATM card (compared with 8% among those who did not finish high school). Only 10% of those with incomes under \$20,000 use an ATM card often, while 37% of those with incomes of \$50,000 or more do so. Younger respondents are also more likely to be frequent users (29% among those 18-29 years old), compared to the oldest cohort (those 65 and older), among whom only 7% often used an ATM card. ATM use is also less common in rural areas and small towns.

Attitudes toward technology were also important influences on whether and how much an individual used an ATM card. People who said they liked computers and technology were more than twice as likely to use an ATM card regularly.

Electronic banking was not as strongly related to demographic characteristics as was ATM use. Older, less-educated, less affluent, and rural/small town respondents were marginally less likely than others to bank electronically.

Newspaper Information Services by Phone

A sizable number of news organizations in the U.S. offer prerecorded information on a range of topics by telephone. These systems typically provide callers with information on such subjects as mortgage rates, weather conditions, sports scores, community calendars, and the like. Overall, 32% of the survey's respondents said they were aware of the availability of such a service in their community, while 31% said it was not available and the rest were unsure. Residents of cities and suburbs were more likely than others to know about such a service. Men were more likely than women to be aware of a phone service, but there was no difference between men and women in likelihood of having used one. Better educated respondents tended to be more aware of the services and slightly more likely to have used them.

TECHNOLOGIES RELATED TO TELEVISION

Several television-related technologies are available to American consumers: cable TV and associated services, VCRs, satellite "dish" antenna for receiving TV signals, video cameras, and video games that connect to a television set.

Cable TV

Cable TV is in 64% of American homes. More affluent respondents were somewhat more likely than others to have cable service available; among homes with family incomes of \$50,000 or greater, 75% subscribed, compared with 55% among those with incomes under \$20,000. Otherwise, there was little demographic difference, including by race: 11% of whites, compared with 7% of blacks and 6% of those of other races, said cable service was non-accessible. The most striking difference in availability was by locale: 38% of rural residents said they could not get cable TV.

Cable subscribers are little different from those who don't subscribe in terms of reading habits (except they are 12% more likely to say they read a newspaper regularly) and in overall political knowledge.

Subscribers can also receive one or more "premium channels," for which an extra monthly charge is typically assessed. Among those who have cable, 44% report getting premium channels, or 28%

of all homes. Households with children were 9 percentage points more likely to subscribe than those without children (34% vs. 25%). Respondents aged 65 and older were much less likely than the average to subscribe (17% vs. 28%). Upper-income households were more likely than those in other income categories to get premium channels, while individuals with a college education were a bit less likely than average to subscribe.

Pay-Per-View

Pay-per-view service, which offers special programs, movies, and sporting events for an extra charge, is available to 51% of U.S. households, according to the survey. Respondents in the eastern region (61%) were more likely than those living elsewhere to say they could get pay-per-view. Overall, only 15% of respondents reported having ordered a program through pay-per-view. In general, more affluent respondents were more likely than those with lower incomes to have access to pay-per-view and to have used the service. But African-American respondents were more likely than whites (27% vs. 13%) to report having done so.

Video Cassette Recorders

One of the most popular technologies is the video cassette recorder, which is found in 85% of U.S. homes. Family income affects the likelihood of having a VCR, but even among the least affluent — those with incomes under \$20,000 — 70% report having a VCR. Among those with incomes of \$50,000 and above, 97% did so. Life cycle influences were apparent as well: households with children were 13 percentage points more likely than those without kids to have a VCR (93% vs. 80%), and respondents aged 65 and older were 24 percentage points less likely than the average to have one.

As will be discussed in more detail in Chapter VI, VCRs tend to be used most often as video cassette players rather than recorders. Among VCR owners, 43% say they play videos "often," and 35% say they do so "sometimes." In contrast, only 23% say they often record TV programs off the air for later viewing, and 26% sometimes do this. In the sample as a whole, 36% of respondents reported using the VCR often to play rented or purchased tapes; 20% overall use their VCR often to record TV programs. Life cycle influences on playing videos are quite strong, with the youngest category of respondents being over five times as likely as the oldest (49% vs. 9%) to report often doing so. And, not surprisingly, households with children are twice as likely as those without children (52% vs. 26%) to often play videos on their VCR. In contrast, there were few notable demographic differences in the likelihood of using the VCR to record TV programs.

Video Game Systems

Forty percent of the survey's respondents said there was a video game system attached to the television in their household. Younger respondents and those with children were far more likely to have a video game system than were others; 68% of respondents with children reported having a system compared to only 9% of respondents aged 65 and older. Non-whites were more likely than whites to own a system, and except for the least affluent respondents, family income was only weakly related to having a video game.

Within households with a video game system, 12% of respondents reported "often" playing with

the game, while 17% said they did so "sometimes." Age was the strongest predictor of who would play: over one-fourth (27%) of those aged 18 to 29 said they played with a home system either sometimes or often, compared with less than 1% among those aged 65 and older.

Video Cameras

The home video camera is a ubiquitous guest at weddings, tourist sites, graduation ceremonies, and the like. It has also played a role in significant social and political events, most notably the furor over the beating of motorist Rodney King by members of the Los Angeles police department. Over one-fourth (28%) of American households now has a video camera, according to the survey.

Given their high cost, it is not surprising that the strongest predictor of ownership of video cameras is family income. Nearly half of households with incomes of \$50,000 and above (48%) have a camera, with the proportion declining steadily to only 13% among those with incomes under \$20,000. Life cycle factors are important as well: 41% of households with children have a camera, compared with 20% among those without kids. Consistent with this pattern, only 11% of respondents aged 65 and older said they own a video camera.

Television Satellite Antenna

The final television-related technology discussed in the survey was the "satellite dish" -- outdoor antennas that permit owners to receive television programming from one of several satellites that are used for the transmission of TV signals between originators (e.g., the networks) and distributors (e.g., broadcast stations).

Owing perhaps to the broad availability of cable television, and to the "scrambling" of satellite TV signals that prevents dish owners from receiving many channels for free, satellite dish ownership is rare: only 4% of respondents possess one. The most notable demographic factor in dish ownership is living in rural areas where access to cable TV is much lower. Thirteen percent of rural respondents said they had a dish, compared with up to 3% elsewhere.

Home Shopping Via Television

Home shopping programs are popular fare among American viewers, and are watched by people of all ages and income levels. Overall, 29% of the survey's respondents said they have seen a home shopping channel, and 10% said they bought merchandise this way. Twelve percent of the sample said they had bought products advertised through so-called "infomercials" -- programs that describe a product in great detail and provide a toll-free number for purchase.

Home shopping channels are a little more popular among women than men (31% vs. 26% report having watched), and women were slightly more likely than men to have bought from one. African-American respondents were much more likely than whites to say they have watched the shows (47% versus 26%), but there was nearly no difference between blacks and whites in the likelihood of having made a purchase. Similarly, less educated respondents were more likely to have watched a home shopping channel, but not more likely to have bought an item.

CABLE SUBSCRIBERS

	<i>Cable TV</i>	<i>Premium Channels</i>	<i>Pay-Per-View Available</i>	<i>Ordered From Pay-per-View</i>	<i>N</i>
<i>Total</i>	64	28	51	15	3667
<i>Sex</i>					
Male	65	29	55	16	1769
Female	63	27	48	14	1898
<i>Race</i>					
White	64	26	51	13	3239
Black	62	45	56	27	208
Hispanic	66	35	56	21	161
<i>Age</i>					
Under 30	61	31	53	18	763
30-49	64	30	53	17	1636
50-64	66	29	53	13	695
65+	63	17	44	6	524
<i>Education</i>					
College Grad.+	67	26	55	15	1309
Some College	67	31	54	15	965
High School Grad.	62	27	50	16	1073
< H.S. grad. 57	28	44	13	304	
<i>Family Income</i>					
\$50,000+	75	38	64	19	1196
\$30,000-\$49,999	63	27	51	15	834
\$20,000-\$29,999	58	26	50	14	543
< \$20,000 55	22	42	12	575	
<i>Region</i>					
East	72	32	61	22	957
Midwest	61	27	48	11	993
South	65	29	52	14	1195
West	55	25	45	14	522
<i>Community</i>					
City	68	33	59	19	1222
Small town	71	29	53	12	918
Suburb	69	33	61	20	985
Rural area	37	13	25	6	522
<i>Household</i>					
No kids	63	24	50	12	2235
Kids	65	34	54	19	1432

VCRS, VIDEO GAMES AND CAMERAS

	<i>Often Plays Videos</i>	<i>Often Records TV Programs</i>	<i>Often Plays Video Game System</i>	<i>Owns Video Camera</i>	<i>N</i>
Total	36	20	5	28	3667
Sex					
Male	36	18	6	30	1769
Female	36	21	3	27	1898
Race					
White	36	19	4	29	3239
Black	36	24	10	21	208
Hispanic	45	18	3	38	161
Age					
Under 30	49	21	12	27	763
30-49	44	22	4	37	1636
50-64	27	21	1	26	695
65+	9	10	-	11	524
Education					
College Grad.+	34	21	3	35	1309
Some College	41	24	5	30	965
High School Grad.	38	19	4	28	1073
< H.S. grad. 28	12	7	20	304	
Family Income					
\$50,000+	42	22	5	48	1196
\$30,000-\$49,999	43	22	3	32	834
\$20,000-\$29,999	41	22	5	22	543
< \$20,000 28	16	6	13	575	
Region					
East	31	20	5	28	957
Midwest	37	20	5	26	993
South	38	20	6	28	1195
West	38	18	2	31	522
Community					
City	38	21	7	26	1222
Small town	35	21	5	24	918
Suburb	38	20	2	37	985
Rural area	33	16	3	30	522
Household					
No kids	26	19	3	20	2235
Kids	52	21	7	41	1432

SATELLITE DISHES & HOME SHOPPING

	<i>Owns Satellite Dish</i>	<i>Watched Home Shopping Channel</i>	<i>Purchased From Home Shopping Channel</i>	<i>Purchased From Infomercial</i>	<i>N</i>
<i>Total</i>	4	29	10	12	3667
<i>Sex</i>					
Male	5	26	8	10	1769
Female	4	31	12	14	1898
<i>Race</i>					
White	4	26	10	12	3239
Black	5	47	12	14	208
Hispanic	3	41	15	17	161
<i>Age</i>					
Under 30	4	22	5	8	763
30-49	5	29	12	13	1636
50-64	6	33	12	15	695
65+	2	32	8	13	524
<i>Education</i>					
College Grad.+	4	19	7	13	1309
Some College	5	25	12	13	965
High School Grad.	4	33	12	11	1073
< H.S. grad.	5	7	13	304	
<i>Family Income</i>					
\$50,000+	5	24	11	13	1196
\$30,000-\$49,999	5	31	14	14	834
\$20,000-\$29,999	5	27	9	10	543
< \$20,000	3	34	6	10	575
<i>Region</i>					
East	2	33	12	13	957
Midwest	4	26	10	12	993
South	6	31	9	12	1195
West	5	23	9	13	522
<i>Community</i>					
City	2	30	12	10	1222
Small town	2	31	10	15	918
Suburb	3	26	9	13	985
Rural area	13	25	8	13	522
<i>Household</i>					
No kids	4	28	10	12	2235
Kids	5	29	11	13	1432

PERSONAL COMPUTER OWNERSHIP AND USE

*Has A Personal
Computer In Home:
(Among Households With A PC):*

Uses Home PC

	<u>Yes</u>	<u>No</u>	<u>Every Day</u>	<u>Most Days</u>	<u>Occasionally</u>	<u>Rarely</u>	<u>No/ Never</u>
Total	31	69	19	23	36	7	15
Sex							
Male	35	65	26	24	32	6	13
Female	27	73	12	22	41	8	17
Race							
White	32	68	19	24	36	7	14
Black	18	82	16	16	34	4	30
Hispanic	28	72	26	21	35	6	12
Age							
Under 30	32	68	19	27	35	8	12
30-49	38	62	20	25	37	6	12
50-64	31	69	20	15	33	8	24
65+	10	90	17	11	42	3	28
Education							
College Grad.+	55	45	24	29	33	5	10
Some College	39	61	17	22	39	9	13
High School Grad. < H.S. grad. 11	20	80	14	17	38	8	24
	89	20	19	38	5	18	
Family Income							
\$50,000+	56	44	23	25	33	7	11
\$30,000-\$49,999	34	66	17	28	35	6	14
\$20,000-\$29,999	23	77	17	12	47	2	22
< \$20,000 11	89	16	22	34	5	23	
Region							
East	35	65	19	23	36	3	19
Midwest	28	72	17	25	39	7	12
South	27	73	20	22	36	8	14
West	37	63	21	22	34	8	14
Community							
City	31	69	20	21	37	7	15
Small town	26	74	20	25	33	7	15
Suburb	42	58	20	24	36	7	14
Rural area	28	72	18	23	39	5	15
Household							
No kids	25	75	20	21	38	7	15
Kids	39	61	19	25	35	7	15

MODEM OWNERSHIP AND USE

	<i>Home Computer Has A Modem:</i>		<i>Modem Use (Among Households With A PC & Modem):</i>			
	<u>Yes</u>	<u>No</u>	<u>Often</u>	<u>Some- times</u>	<u>Hardly Ever</u>	<u>Never</u>
Total	12	88	50	34	11	5
Sex						
Male	15	85	52	34	10	5
Female	9	91	47	33	14	6
Race						
White	12	88	50	34	12	4
Black	5	95	*	*	*	*
Hispanic	8	92	*	*	*	*
Age						
Under 30	13	87	60	24	15	2
30-49	16	84	45	37	10	8
50-64	9	91	49	39	10	2
65+	3	97	*	*	*	*
Education						
College Grad.+	25	75	52	33	11	4
Some College	15	85	49	33	11	7
High School Grad.	5	95	41	42	10	7
< H.S. grad. 3	97	*	*	*	*	*
Family Income						
\$50,000+	27	73	55	28	10	8
\$30,000-\$49,999	11	89	33	52	15	-
\$20,000-\$29,999	7	93	*	*	*	*
< \$20,000 3	97	*	*	*	*	*
Region						
East	13	87	61	25	11	3
Midwest	9	91	41	41	9	8
South	12	88	49	30	14	7
West	14	86	50	38	11	1
Community						
City	12	88	57	31	6	6
Small town	10	90	44	39	17	-
Suburb	17	83	50	28	15	7
Rural area	9	91	41	42	7	10
Household						
No kids	10	90	51	32	11	6
Kids	14	86	49	36	12	4

ATM CARDS AND ELECTRONIC BANKING

	<i>Has ATM Card</i>	<i>Never Used ATM Card</i>	<i>Uses Electronic Banking (Among Bill Payers)</i>
<i>Total</i>	47	54	10
<i>Sex</i>			
Male	51	51	9
Female	44	57	11
<i>Race</i>			
White	47	55	10
Black	49	52	13
Hispanic	48	53	9
<i>Age</i>			
Under 30	59	42	12
30-49	57	45	12
50-64	38	63	9
65+	19	84	7
<i>Education</i>			
College Grad.+	66	36	16
Some College	57	44	16
High School Grad.	39	62	8
< H.S. grad. 25	76	-	
<i>Family Income</i>			
\$50,000+	64	38	15
\$30,000-\$49,999	60	42	13
\$20,000-\$29,999	45	55	10
< \$20,000 30	71	7	
<i>Region</i>			
East	51	50	10
Midwest	39	61	8
South	46	56	9
West	55	46	17
<i>Community</i>			
City	53	49	13
Small town	41	60	9
Suburb	58	43	11
Rural area	38	65	7

NEWSPAPER PHONE SERVICES

	<i>Local Newspaper Offers Telephone Services</i>			<i>Ever Used Newspaper Telephone Service</i>		<i>N</i>
	<u>Yes</u>	<u>No</u>	<u>Don't Know</u>	<u>Yes</u>	<u>No/No Answer</u>	
<i>Total</i>	32	31	37	7	93	3667
<i>Sex</i>						
Male	37	30	33	8	92	1769
Female	27	31	41	6	94	1898
<i>Race</i>						
White	31	32	37	7	93	3239
Black	34	24	41	7	93	208
Hispanic	31	28	41	8	92	161
<i>Age</i>						
Under 30	32	28	39	8	92	763
30-49	33	33	34	8	92	1636
50-64	30	31	38	6	94	695
65+	30	29	41	5	95	524
<i>Education</i>						
College Grad.+	38	30	32	10	90	1309
Some College	33	32	35	8	92	965
High School Grad.	29	32	39	6	94	1073
< H.S. grad. 30	27	43	5	95	304	
<i>Family Income</i>						
\$50,000+	37	29	34	8	92	1196
\$30,000-\$49,999	30	37	33	7	93	834
\$20,000-\$29,999	31	34	35	8	92	543
< \$20,000 30	30	40	7	93	575	
<i>Region</i>						
East	31	28	41	5	95	957
Midwest	30	34	37	7	93	993
South	35	30	35	9	91	1195
West	30	33	37	8	92	522
<i>Community</i>						
City	37	26	37	9	91	1222
Small town	26	35	39	5	95	918
Suburb	39	24	37	10	90	985
Rural area	24	41	35	4	96	522
<i>Household</i>						
No kids	31	31	38	8	92	2235
Kids	33	31	36	7	93	1432

V. NEW TECHNOLOGIES VERSUS OLD WAYS

Comparing Information Technology Users And Non-Users

As shown in the previous chapters, substantial demographic differences exist between information technology users and non-users. Users tend to be more affluent, better educated, and somewhat younger than non-users. Many personal and social characteristics and media use behaviors are also related to these factors, however.

In an effort to distinguish between the impact of technology usage and of demographics, a comparison group or "control sample" was created for each of two important technology groups in the study: those respondents who have used a home personal computer, and those who have used a modem on a home PC to "go on-line." The demographic equivalents (i.e., "control sample") consisted of respondents who did not use a PC or a modem. These samples were then statistically adjusted to match the profile of user groups on the important demographic characteristics of income, education, age, sex, race and region.¹²

Attitudes And Orientations Of Technology Users And Non-Users

As noted earlier, computer and modem users are much more likely than non-users to say they like computers and technology, to be interested in science and math, and to say that computers give people more control over their lives. Notably, all of these differences persist -- if somewhat less dramatically -- when users are compared with the demographically comparable non-users.

Computer and modem users are far more likely than their demographic equivalents to say they like computers and technology, and also considerably more likely to say that computers give people more control over their lives. Computer and modem users are considerably more likely than their demographic equivalents to report being interested in science and math. Users are somewhat less likely than their demographic counterparts to worry about computers invading their privacy. Modem users were somewhat more likely to describe themselves as "someone who is one of the first people to buy a new product."

Computer and modem users are somewhat less likely than their demographic equivalents to report being satisfied with the choice of entertainment programs, sports, and movies on television. However, there is little difference in satisfaction with television news.

¹² See Methodology section for discussion of control samples.

ATTITUDES & ORIENTATIONS

	Computer Users	Modem Users	Non-User Demographic Equivalent
Like computers and technology	89	94	64
Feel computers give people more control	55	64	45
Worry a lot about computers and privacy	16	15	22
Feels overloaded with information	34	30	37
Enjoys reading a lot	65	65	55
One of the first to buy a new product	18	22	15
Interested in science and math	69	79	57
Describes self as "outgoing"	57	57	52
Satisfied with Entertainment TV	51	53	57
Satisfied with sporting events on TV	69	65	75
Satisfied with choice of movies on TV	48	43	53
Satisfied with choice of TV programs	49	50	59

Computer Users Aren't Nerds Or Recluses

The stereotype of the computer user as awkward and anti-social may always have been something of a myth, but it is certainly not accurate today as a description of typical home PC and modem users. In terms of social contact and involvement with the world outside the home, such users are more outgoing and active than their demographic equivalents as well as the non-users found in the survey. And in terms of the activities of day-to-day life, users are very similar to their demographic equivalents and to non-users on most measures.

Users are little different from the demographic equivalents and from all non-users in terms of personal activities, by most measures: going shopping for something other than food or medicine,

eating a meal with one's family, taking a walk, or getting some type of vigorous exercise. There are two exceptions, however: napping and praying. Modem users were somewhat less likely than their demographic equivalent, and significantly less likely (17 percentage points difference) than all modem non-users, to say they prayed yesterday. Both the computer and modem users were somewhat less likely than the demographic equivalents to say they took a nap yesterday (and 11-13 percentage points less likely than all non-users to do so.)¹³

Users report more contact with and engagement in the outside world. They are considerably more likely than the demographic equivalents to have written a personal letter in the past week, and are comparable to the demographic equivalents in the likelihood of having called a friend or visited with family or friends yesterday. Users are just as likely as the demographic equivalents (and a little more likely than all non-users) to say they "go out a lot" in their free time. And computer and modem users were somewhat more likely than the demographic equivalents to go out to the movies at least once a month.

More Work at Home

Computers and modems are facilitating a rapid growth in the number of people who work part- or full-time at home. Computer and modem users are much more likely than non-users to work at home "often." Some of this difference is undoubtedly a function of the education and income level of the users. But comparisons with the demographic equivalents show clearly that most of the difference is a result of the technology itself, and the attitudes and orientations that go with it. Home computer and modem users are 13 percentage points more likely than the demographic equivalents to work at home "often." Even more striking is the much higher incidence of home-based businesses among self-employed technology users. Self-employed home computer users are 21 percentage points more likely to say that their business is based at home than are the self-employed among the demographic equivalent group (58% vs. 37%).

Aside from working at home, the largest difference between the users and the demographic equivalents is in reported engagement in groups and organizations: so-called "secondary associations" that observers of American culture since Tocqueville have seen as a key part of civic life. Computer and modem users are considerably more likely than the demographic equivalents to belong to a group in which they regularly participate. In addition, users belong to *more* groups than do the demographic equivalents, and are more likely to have worked for or attended a meeting of a group in the past week. Moreover, heavy users of home PCs are, in general, *more* active in their groups than are those who use their PCs less often. These differences provide strong evidence that time spent in the home with new information technologies does not come at the expense of involvement in the outside world.

LIFESTYLE AND SOCIAL BEHAVIORS

¹³ These differences in napping between the users and the demographic equivalents are not especially large, but they are significant in that the groups are balanced in terms of age, which is the strongest predictor of napping.

	Computer Users	Modem Users	Non-User Demographic Equivalent
Participates in clubs or organizations	48	49	38
Often works at home	30	35	17
Shopped for something other than food or medicine yesterday	25	27	24
Took a nap yesterday	18	15	23
Prayed yesterday	49	41	50
Exercised yesterday	29	27	30
Took a walk yesterday	34	33	33
Visited with family or friends yesterday	60	58	57
Called a friend to talk yesterday	62	57	61
Ate a meal with family yesterday	68	67	66
Wrote a personal letter in past week	34	37	27
Goes to movies once a month or more	41	47	37

Information Seeking By Users And Non-Users

Computer and modem users are hungry for news and information. They are somewhat more likely than demographically comparable non-users to say they enjoy keeping up with the news, and their news seeking behavior bears this out.

Spending time with an electronic tool in the household has not supplanted the "low tech" medium of reading. Both computer and modem users are much more active readers than are the demographic equivalents or all non-users. Compared with all non-users, frequent users of home PCs report spending nearly 15 more minutes a day reading. Compared with the demographic equivalents, computer users are considerably more likely to report reading a book yesterday, and somewhat more likely to have read a newspaper and a magazine. Computer and modem users' tastes in magazines show them to be news oriented, but at the same time not averse to more popular fare. Compared with the demographic equivalents, computer and modem users are much more likely to read a news magazine regularly, but differed little from the demographic equivalents in their likelihood of reading

personality magazines such as *People*. Notably, modem users were 14 percentage points more likely than their demographic equivalents to report reading business magazines regularly.

Still Watching, Too

Computer and modem users have not turned away from television as an information source either. Indeed, TV news is just as important to these technologically advanced citizens as it is to others. They are a little more likely than their demographic equivalents to report having viewed TV news "yesterday," but quite a bit more likely to be viewers of CNN. And consistent with their psychological profile as "ordinary Americans," they were similar to the demographic equivalents in terms of watching MTV, "A Current Affair," and entertainment TV in general. Compared with all non-users, however, the computer and modem users were less likely to be heavy watchers of entertainment TV.

Radio news is a popular source of information for technology users, with over 60% saying they listen to radio news regularly. Compared with the demographic equivalents, computer and modem users are 9 and 6 percentage points more likely to report being regular listeners. They are also 5 and 6 percentage points more likely to be regular listeners to National Public Radio.

The consequence of the high level of news gathering effort on the part of technology users is, not surprisingly, that they are much better informed about what's going on in the world than are other citizens. Compared with all non-users, computer users were 24 percentage points more likely to achieve a "high" rating on the survey's political knowledge index, correctly answering four or five of the five factual questions asked about current politics, and were 9 percentage points more likely than the demographic equivalents to do so. The modem user group was 13 percentage points more likely to rate "high" on the knowledge index than was the demographic equivalents and 35 percentage points more likely than all non-users to do so. Users of advanced information technologies in the home are simply more engaged in and attentive to the outside world than are non-users.

INFORMATION SEEKING BEHAVIOR

	Computer Users	Modem Users	Non-User Demographic Equivalent
"High" political knowledge level	52	63	43
Read a Book yesterday	38	36	31
Read a Newspaper yesterday	65	63	60
Read Newspaper regularly	78	78	74
Watched TV News yesterday	72	72	70
Watched TV News Regularly	82	82	82
Listened to Radio News regularly	62	65	54
Read a Magazine yesterday	39	49	35
Read personality magazine regularly	8	7	9
Read news magazines regularly	25	30	18
Read business magazines regularly	14	25	8
Watched TV News Magazines regularly	43	37	45
Watched MTV regularly	10	12	8
Watched MacNeil Lehrer regularly	10	10	6
Watched "A Current Affair" regularly	13	12	16
Listen to NPR regularly	14	19	9
Watched CNN regularly	39	44	31
Watched CSPAN regularly	10	11	7

Use Of Other Technology By Computer And Modem Users

Consistent with their generally favorable opinion of technology and their cultural and financial

standing, computer and modem users are quite likely to make use of other home technologies. They stand out as aficionados of all things electronic in both entertainment and business or personal activities. Compared with their demographic equivalent, modem users are much more likely to have a video camera, to subscribe to cable TV, and somewhat more likely to have a home video game (though a little *less* likely to use it themselves). Modem and computer users are little different from the demographic equivalents in the likelihood of having a satellite TV antenna system, however, or in ordering pay-per-view programs from their cable system.

More striking is the difference between users and the demographic equivalents with respect to technologies of business and personal finance. Modem users are far more likely to use an ATM card "often," and computer users were somewhat more likely to do so. Computer users were also 10 percentage points more likely to have a fax machine.

USE OF OTHER TECHNOLOGY

	Computer Users	Modem Users	Non-User Demographic Equivalent
Often uses ATM card	37	52	30
Does electronic banking: among bill payers	15	24	12
Has home video game	45	49	42
Has fax machine	15	21	5
Has video camera	42	45	33
Has satellite dish	5	3	4
Got a movie from pay-per-view	20	18	17
Got entertainment program from pay-per-view	5	6	3
Got sporting event from pay-per-view	18	15	18
Subscriber to Cable TV	69	83	68

VI. THE BASIC BOX

While the main goal of this study is to explore how Americans are integrating "new" technologies into everyday life, it is impossible to ignore the dominance of the primary technology -- television -- that brings entertainment and information into the home. Americans spend more of their time watching television than engaging in any other leisure time activity. However the "basic box" itself has been radically transformed over the past decade by cable TV systems (basic and premium channels) and such add-ons as VCRs, remote controls, and game systems like Nintendo.

But has this made any difference in how Americans watch television? This chapter describes what the television set now offers Americans, how satisfied they are with the fare, how they actually watch (and don't watch) television programs and commercials, and how they use VCRs and cable systems. To provide greater depth to the material, a special sample of youngsters between the ages of 13 and 17 was surveyed in addition to adults.

The Face Of Television In The 90s

The "plain vanilla" television with which most Americans grew up essentially no longer exists. Almost everybody over 30 recalls when the only choices were usually three stations -- the local ABC, CBS or NBC affiliate -- with perhaps a PBS or independent channel in the major metropolitan areas. Today, the Times Mirror survey found that merely 7% of American households are limited to this pre-1980 fare. The overwhelming majority have one or more of the services and devices available. Following is a tabulation of household ownership of four "attachments" -- a VCR, a Cable channel, a Premium Cable service, and a Game System:

Number of Television "Attachments" Owned Of 4 Mentioned

7%	No Attachments (Only broadcast TV)
20%	One Attachment
34%	Two Attachments
24%	Three Attachments
15%	All Four Attachments
100%	Total: All Households

The survey found that the televisions in almost three-quarters (73%) of all American homes have at least two different features attached, and about four-in-ten (39%) have at least three of the four attachments. The television set has grown much more powerful and more flexible over the past decade until it should be seen in computer-like terms: as the terminal for a wide spectrum of input options.

The options are tied to ability to pay. Of the households earning under \$20,000 a year, 28% have 3 or 4 of the features, compared to 54% -- almost twice as many -- of those earning over \$50,000. Differences by education are not nearly as great, suggesting that money more than desire determines the attachments to and output from the television set today.

Generational differences may also affect choice of options, however. Older Americans (50 years of age and over) add fewer bells and whistles to their TV sets than their younger cohorts. At the other end of the age spectrum, the youngest cohort (under 18) probably push parents to get features they might not otherwise buy. Fully 55% of homes with a child still at home have three or all four attachments, compared to 29% of those without a child (under 18) at home.

Satisfaction With Television

Despite the proliferation of channels that cable has brought and the rise of new networks and services, there is considerable dissatisfaction with the choice of programs on TV. A majority of 57% reported being satisfied overall, 14% "very" satisfied and 43% "fairly" satisfied. But fully 40% were broadly dissatisfied, including 29% "not too satisfied" and 11% "not at all" satisfied.¹⁴

The overall satisfaction level with programming masks important differences in evaluations of particular types of programming, however. The public is very happy with the choice of news and sport shows available to them, but less so with movies and other entertainment programs.

Satisfaction with the choice of news shows topped dissatisfaction by almost eight to one (86% to 11%) and sporting events almost four to one (67% to 17%). Entertainment programs were rated lower, with 57% satisfied and 39% dissatisfied. Movies were judged harshest, although a majority still reported being satisfied (52%) rather than dissatisfied (43%). Although the public was basically satisfied with entertainment and movie programs, it seemed to lack enthusiasm for those menus: only 16% reported being "very satisfied" with entertainment TV, and 12% "very satisfied" with the movie selections compared to 43% for news and 33% for sports programs.

Choice Of Programs Available

Cable has indeed worked to improve public satisfaction with "the choice of things" people can see on television, but it provides only a marginal increase in that satisfaction. Whereas just half (49%) of homes without cable said they are satisfied with the choice of programs available to them, 62% of those subscribing to cable and 66% of those with premium cable service reported overall satisfaction. Only 10% of those receiving regular TV broadcasts (i.e., were without cable) said they were "very satisfied" with their TV programming, compared to 16% who received basic cable, and 17% who were subscribers to premium cable.

The younger audience is more satisfied with television overall than their elders. Some 68% of respondents between 18 and 29 years of age were satisfied, compared to 56% between 30 and 49, and 52% over 50. African Americans also reported greater satisfaction (75%) than Hispanics (62%) or whites (55%).

¹⁴ Kids seem to be slightly more satisfied. Among 13 to 17 year olds, 21% were "very satisfied," 55% "fairly satisfied;" 19% were "not too satisfied" and 4% "not at all satisfied."

News Programming

The high level of overall satisfaction with the choice of *news* programs available cuts across all lines and groups of society. The level of those who were "very satisfied" in general (43%) jumps considerably for regular viewers of more specialized newscasts, such as CNN (55%) and the MacNeil/Lehrer News Hour (53%). Cable has more than a marginal impact on viewer satisfaction in this program category. Almost half of those with cable (48%) report being "very satisfied" with news programming, compared to about one-third (32%) of those without cable.

Movies

As noted earlier, Americans are not overjoyed with the choice of movies available to them on television -- on average 52% are satisfied, 43% not satisfied. But most of the dissatisfaction lies with those receiving only broadcast TV. Cable subscribers are twice as happy with their choice of movies. Specifically, satisfaction was voiced by 37% of households without cable, 59% of basic cable subscribers, and fully 71% of subscribers to premium cable service. Less impressive, however, is the increase in "very satisfied" ratings of the three services: 11% without cable, 14% with basic cable, 17% with premium cable.

Demographically, a higher proportion of respondents under 30 (61%) said they were satisfied with their movies than those between 30 and 49 years of age (54%) and those over 50 (44%). Blacks and Hispanics report a greater degree of satisfaction than do whites (75% and 70%, respectively, vs. 49%).

Cable and VCRs have had a massive impact on the place where Americans prefer to view movies, however. When asked for their favorite way to watch a movie -- to go out to a theater or to watch at home -- the vast majority (67%) chose watching at home compared to 27% who preferred a theater. Among those having cable and a VCR, 53% preferred to rent a movie from a video store while 43% chose to watch a movie on TV, cable or on pay-per-view. Youngsters are far more likely than adults to go out to a movie. Adults divide 67% to 27% in preferring home to a theater, while youngsters are evenly split, 47% and 49%. And when youngsters do watch at home, they are far more likely to disregard the offerings of over-the-air or cable TV in favor of a video rental. Whereas 53% of adults say they prefer a rental movie to those on television, 81% of teenagers do so.

Sporting Events

Satisfaction with the choice of sporting events and programs, a male-dominated dominion, is also an area that has been enhanced by cable. Overall, 77% of men and 59% of women report being satisfied with the choice of programming offered in this area. Six-in-ten of those without cable say they are satisfied with sports options offered to them compared to three-quarters of those with cable.

Entertainment Programs

Satisfaction with TV entertainment choices (excluding movies, news and sports) is also influenced by cable. As noted earlier, 57% of respondents overall report satisfaction, but a substantial 39% are "not too" or "not at all" satisfied with the entertainment menu. Cable enlarges that menu, and the survey found greater satisfaction among its subscribers.

Non-cable households are barely satisfied (51%, vs. 45% dissatisfied, a 6 percentage point

spread) with their entertainment choices. Among homes with basic cable, satisfaction increases significantly (59%, vs. 37% dissatisfied, a 22-point spread). Among the premium cable households, satisfaction rises further (65%, vs. 32% dissatisfied, a 33-point spread).

However, the same pattern of marginal rather than qualitative increase in satisfaction with cable TV is apparent. Those "very satisfied" with entertainment TV rises only from 14% in non-cable households, to 17% of cable households, to 19% of premium cable households. Cable appears to bring greater broad contentment with programming but fails to generate enthusiasm for those choices.

How People Watch Television

By a margin of about two-to-one, more people say that their TV viewing is purposive -- that they generally tune in to watch a specific show (61%) rather than passively turn on the set and dial around to sample what's on (30%). Women are far more likely than men to tune in for a specific show (70% to 51%) rather than dialing around. Similarly, 70% of those over 50 said they turn on for a particular show, compared to 56% of their younger counterparts.

"Remote control" devices have become virtually universal -- 90% of all respondents (96% of those with cable) had at least one television set controlled remotely. Males seem to dominate the controls by a wide margin, although the issue is somewhat controversial. Among male respondents in households with more than one person, 54% said they usually control the remote, 13% said their wives do, 22% said they share, and 10% said another person holds the controls. Among women respondents, however, 33% said they control the remote, 35% said their husband, 17% share, and 14% said someone else.

Remote controls appears to have brought a significant change in the way Americans watch television. Nearly one-third (32%) of respondents said they "switch channels frequently." Again, a strong gender difference appears: 42% of men said they "channel surf," almost twice as many as women (23%). More than 40% of respondents under 30 years of age surf, compared to one-third of those between 30 and 49, and to one-quarter of those over 50 years. Viewers who subscribe to basic (36%) and premium (39%) cable are also more likely than those without cable (24%) to watch TV in this impatient fashion.

Probably the biggest losers to the remote control are advertisers. The Times Mirror study found that only one-third (35%) of Americans say they actually watch commercials. Most (54%) do other things, including switch channels (29%), leave the room (18%), or mute the sound (7%).

Advertisers are reaching not only a smaller audience but a less desirable one as well. Viewers with the largest incomes (i.e., those with most consumer power) report being the least likely to watch commercials. More than one-quarter (28%) of households with \$50,000 incomes said they usually watch commercials, compared to 35% earning between \$20,000 and \$50,000, and 42% of those earning under \$20,000. Similarly, the best educated were least likely to sit through advertisements.

Cable Television In The Household

Cable TV, as described earlier, is available to 89% of the U.S. public, and of these, 71% subscribe. Thus cable reaches almost two-thirds (64%) of all Americans and has become ingrained

in the social fabric. The survey found that 64% of subscribers said they would miss cable "a lot" if it was no longer available, and 18% said they would miss it to "some" degree.

Cable TV: The Basic Numbers¹⁵

64%	Subscribe to Cable
28%	Subscribe to a Premium Service
15%	Have Ordered a Pay-Per-View Event
10%	Have Ordered Something From a Home Shopping Channel

Premium channels, however, have yet to demonstrate widespread appeal. Only 44% of cable households purchase more than the basic service. Of those who subscribe to premium channels, only 29% said they would miss this service "a lot." And as noted earlier, cable and even premium channels have not qualitatively raised the level of satisfaction with movies and entertainment programs on television.

The presence of children in a household is probably the main impetus to subscribing to premium channels. Some 52% of homes with children under 18 subscribe, compared to 39% of cable households without children.

A more recent service being offered by many cable stations is "pay-per-view." Subscribers pay on a per-program basis to see a movie or special event. About four-fifths of cable households report having pay-per-view services available, and three-in-ten (29%) of them have used it to view special programs (4%), or most commonly, sporting events (17%) or movies (17%). Of those who have pay-per-view available but have not used it, half explained that they are not interested in the service, while another quarter (27%) said pay-per-view is too expensive or not worth the cost.

VCRs In The Household

The VCR is a fixture in virtually every home with children. Fully 96% of the 13 to 17 year olds interviewed report having a VCR in their house.

The devices are at least partially misnamed since they are far more often used as a Video Cassette Player than a Video Cassette Recorder. Over three-fourths (78%) of those with a VCR say they either "often" or "sometimes" rent videos, compared to just about half (49%) who say they often or sometimes use their VCR to record programs broadcast on the air. But use it they do. Among the 85% of respondents who own a VCR, 53% said they use it "often" either to play a tape or record a

¹⁵ The numbers in this table are survey estimates based on all American households, not just those with cable television.

program; this translates into 45% of all American households. Respondents showed less attachment to VCRs than basic cable but more than to premium cable.

VCRs have also made a striking difference in the viewing habits of those who have children. Among VCR households with a child under 18, a staggering 87% say they regularly use the VCR to play a tape they have rented or purchased, with 56% saying they do so "often." Among VCR households without a child under 18 at home, only 32% said they do this "often." Half of homes with teenagers use their VCR "often" for this purpose, as do 60% of those with children between 5 and 12 years of age.

A generation gap was also found in use of VCRs for watching rented videos. A significant majority (56%) of those between 18 and 29 use VCRs "often" to play a movie, as do 47% of those between 30 and 49. This rate falls off sharply to 31% of those between 50 and 64, and to merely 15% of those over 65. These figures suggest a continued growth in this use of VCRs as with time, the present younger, high user groups replace the older, low user groups. One of the selling points of VCRs when they were introduced was that it would give viewers more control over their TV schedules; they could view programs when they chose, not necessarily when they aired. This effect has occurred only to a limited extent. Fewer than one-quarter of those with VCRs (23%), translating to about one-in-five of all American households, report "often" using their VCR to record programs as they air. Households with and without children are equally likely to use (or not use) this feature. Similarly, this use of VCRs varies little by age groups except that those over 65 years are least likely to do it.

One of the reasons VCRs play videos more frequently than they record TV programs is the ease (or lack of ease) with which those functions can be used. More than 70% of VCR owners said they can "very easily" or "fairly easily" find a rental they are interested in watching at home. But fully one-in-three admitted that they do not know how to program their VCR to record over the air telecasts. Of these, almost twice as many are women than men (41% vs. 24%) and more than twice as many are 50 years old or older (55% of those over 65 and 45% of those between 50 and 64, vs. 25% of those under 50).

SATISFACTION WITH CHOICE OF THINGS ON TV

	<i>Satisfied</i>	<i>Dissatisfied</i>	<i>No Opinion</i>	<i>N</i>
<i>Total</i>	57	40	3	3667
<i>Sex</i>				
Male	58	40	2	1769
Female	57	40	3	1898
<i>Race</i>				
White	55	42	3	3239
Black	75	24	1	208
Hispanic	62	35	3	161
<i>Age</i>				
13-17	75	24	1	400
18-29	68	30	2	763
30-49	56	41	3	1636
50+	52	45	3	1219
<i>Education</i>				
College Grad.	50	48	2	1309
Some College	57	40	3	965
High School Grad.	61	36	3	1073
< H.S. grad.	58	5	304	
<i>Television Status</i>				
No Cable	50	48	2	919
Basic Cable Only	62	36	2	2485
Premium Cable	66	32	2	1079

Question: Generally, how satisfied are you with the choice of things you can see on television these days?

HOW PEOPLE WATCH TELEVISION

	<i>Tune In For Specific Show</i>	<i>Watches Commercials</i>	<i>Switch Channels Frequently</i>	<i>N</i>
<i>Total</i>	61	35	32	3667
<i>Sex</i>				
Male	51	34	42	1769
Female	70	36	23	1898
<i>Age</i>				
Under 30	52	33	41	763
30-49	58	34	33	1636
50+	70	38	24	1219
<i>Education</i>				
College Grad.	63	26	34	1309
Some College	60	33	31	965
High School Grad.	61	39	31	1073
< H.S. grad.	59 42	29	304	
<i>Family Income</i>				
\$50,000+	59	28	37	1196
\$30,000-\$49,999	59	34	32	834
\$20,000-\$29,999	63	36	32	543
< \$20,000	64 42	26	575	
<i>Television Status</i>				
No Cable	64	39	24	919
Basic Cable Only	59	33	36	2485
Premium Cable	58	35	39	1079

SURVEY METHODOLOGY

ABOUT THE SURVEY

The Times Mirror Survey of Technology results are based on telephone interviews conducted under the direction of Princeton Survey Research Associates among a nationwide sample of 3,667 adults, 18 years of age or older, 400 children aged 13 to 17 years of age, and an oversample of 207 adult modem users, during January and February of 1994. For results based on the total adult sample (N=3667), one can say with 95% confidence that the error attributable to sampling and other random effects is plus or minus 2 percentage points. For results based on the teenager sample (N=400), the margin of error is plus or minus 6 percentage points. For results based on computer users (N=1137), the margin of error is plus or minus 4 percentage points, and for results based on modem users (N=546), the margin of error is plus or minus 5 percentage points.

SURVEY SAMPLE DESIGN

Questionnaire Design

The survey instruments for this survey were developed by Times Mirror in consultation with a wide range of specialists in emerging technologies, the mass media, and consumer behavior. An extensive review of past surveys on technology was also made. In an effort to gauge the incidence of key behaviors prior to finalizing the instrument, questions on the use of a number of technologies were administered to a national sample on a regularly scheduled omnibus survey.

The general public technology survey questionnaire was given an extensive multi-stage pretest with over 100 respondents. This questionnaire was modified for use in the teenagers' survey, and was also pretested prior to its administration.

Sample Design

Questions to measure the incidence of various technologies in the home were asked on a general population adult sample omnibus survey before the design of the sample. The results from this omnibus survey were used to design a sample that would provide a sufficient number of respondents in the final sample with different technologies in their home.

The designed sample is a disproportionate income stratified random sample. The income stratified sample was designed to be representative of all population subgroups, yet efficient in locating high income households and consequently increasing the number of respondents who are "users" of the various technologies being explored. These competing goals are met by selecting random telephone numbers from exchanges such that a disproportionately large sample of telephone numbers is selected from high income telephone exchanges and a disproportionately small sample is selected from other (lower income) telephone exchanges. Thus, the incidence of high income households is increased over their incidence in a sample design where the selection probabilities are proportionate.

The resulting sample is unbiased because all telephone households have an opportunity of being included in the sample, regardless of the average income of their exchanges and regardless of whether their telephone number are listed or unlisted (the actual telephone numbers are randomly generated). The sample becomes representative after weights are applied to eliminate the disproportionately in selection probabilities related to the average income of households in the telephone exchange.

All telephone exchanges are ranked according to their average estimated household income. Estimated income is calculated through a formula that combines information from the U.S. Census Bureau about the income of Census tracts with information from automobile registrations lists (only available in certain states) and from a large scale (20,000 households) national survey. The tract, list and survey information is linked to telephone exchange on the basis of the rough geographic boundaries of the exchange. For households with listed telephone numbers, automobile registration information can be exactly linked to a telephone exchange.

With average household income estimated for each telephone exchange, sample can be drawn with selection probabilities related to the rank of the exchange, i.e., the higher the rank of the exchange, the greater the probability of selecting a number from that exchange.

The high income sample for this project was designed as follows:

<u>Income Stratum of Telephone Exchange</u>	<u>Percent of Sampled Telephone Number</u>
Top 20% of exchanges	45%
Next 40% of exchanges	40%
Bottom 40% of exchanges	15%

Telephone numbers are selected randomly within each exchange. The selection method ensures that the number of telephone numbers sampled within a county is proportional to the county's share of all telephone households in the stratum. Also the number of telephone numbers generated within each telephone exchange in the sample is proportional to the exchange's share of the listed numbers in the stratum. The requirement of proportionality of counties and exchanges improves the sample by providing a crude geographic stratification for each income stratum.

The random digit aspect of the sample is used to avoid "listing" bias. According to the most recent estimates from the Bureau of the Census, there are approximately 95 million households in the United States, and just over 93% of them contain one or more telephones. Telephone directories only list about 74% of such "telephone households" and numerous studies have shown that households with unlisted telephone numbers are different in several important ways from listed households. Moreover, nearly 15% of listed telephone numbers are "discontinued" due to household mobility and directory publishing lag, and it is reasonable to assume that a roughly equal number are working residential numbers too new to be found in published directories.

In order to avoid these various sources of bias, a random digit procedure designed to provide representation of both listed and unlisted (including not-yet-listed) numbers is used. The design of the sample ensures this representation by random generation of the last two digits of telephone numbers selected on the basis of their area code, telephone exchange (the first three digits of a seven digit telephone number), and bank number (the fourth and fifth digits).

The selection procedure produces a sample that is superior to random selection from a frame of listed telephone households, and the superiority is greater to the degree that the assignment of telephone numbers to households is made independently of their publication status in the directory. That is, if unlisted numbers tend to be found in the same telephone banks as listed numbers and if, in general, banks containing relatively few listed numbers also contain relatively few unlisted numbers, then the sample that results from the procedure described below will represent unlisted telephone households fully as well as it represents listed households. Random number selection within banks ensures that all numbers within a particular bank (whether listed or unlisted) have the same likelihood of inclusion in the sample, and that the sample so generated will represent listed and unlisted telephone households in the appropriate proportions.

The first eight digits of the sample telephone numbers (area code, telephone exchange, and bank number) are selected so that they are proportionately stratified by state, county, and telephone exchange within county. That is, the number of telephone numbers randomly sampled from within a given exchange is proportional to that exchange's share of listed telephone households in the set

of exchanges from which the sample is drawn.

Only working banks of telephone numbers are selected. A working bank is defined as 100 contiguous telephone numbers containing three or more residential listings. By eliminating non-working banks of numbers from the sample, the likelihood that any sampled telephone number will be associated with a residence increases from only 20% (where all banks of numbers are sampled) to between 60% and 70%.

Survey Procedures

The sample was released for interviewing in replicates for each of the three income strata. Using replicates to control the release of sample to the field ensures that the complete call procedures are followed for the entire sample and ensures an appropriate number of completed interviews from each strata. Again, this works to increase the representativeness of the final sample.

At least five attempts are made to complete an interview at every sampled telephone number. The calls are staggered over times of day and days of the week to maximize the chances of making a contact with a respondent. In each contacted household in the general population adult sample, interviewers asked to speak with the "youngest male 18 or older who is at home". If there was no eligible man at home, interviewers asked to speak with "the oldest woman 18 or older who lives in the household".

For the children's sample, interviewers asked to speak to the youngest child between 13 and 17.

For the modem users sample, interviewers used the general adult sample introduction and then took the respondent through a screening interview to determine if the respondent was a modem user.

Weighting

Non-response in telephone interview surveys produces some known biases in survey-derived estimates because participation tends to vary for different subgroups of the population, and these subgroups are likely to vary also on questions of substantive interest. For example, men are more difficult than women to reach at home by telephone, and people with relatively low educational attainment are less likely than others to agree to participate in telephone surveys.

A more important source of bias in survey estimates for this survey is the explicit oversampling that was done to increase the representation of certain types of respondents in the final sample. In order to compensate for these known sources of bias, the sample data for this survey are weighted in analysis.

In addition to the income stratum weighting necessary to compensate for the disproportionate sample selection, demographic weighting was used to bring the characteristics of each of the samples into alignment with the demographic characteristics of the relevant population.

Adult Sample Weighting

The income strata weighting done for this sample involves weighting the income strata distribution of the final sample back to the known income strata distribution.

The demographic weighting parameters for this sample are derived from a special analysis of the most recently available Census Bureau Annual Demographic File (from the March 1992 Current Population Survey). This analysis produced population parameters for the demographic

characteristics of Continental US telephone households with adults 18 or older, which are then compared with the sample characteristics to construct sample weights. The sample is weighted on the distributions of age by sex, education by sex, age by education, race and region.

The weights are derived using an iterative technique that simultaneously balances the distributions of all weighting parameters.

Children's Sample Weighting

For the children's sample, the weighting to eliminate the selection disproportionalities is based on information collected in the course of screening households for respondents age 13 to 17. The incidence of households with a child 13 to 17 is computed separately for each of the sampling strata and is used, together with information about the number of telephone households in each stratum, to re-proportionalize the sample of completed interviews.

The demographic weighting parameters for the children's sample are derived from a special analysis of the most recently available Census Bureau Annual Demographic File (from the March 1992 Current Population Survey). This analysis produced population parameters for the demographic characteristics of children 13 to 17 living in Continental US telephone households, which are then compared with the sample characteristics to construct sample weights in the same way as the adult sample weighting. The demographics used as weighting parameters for the children's sample are age, sex, race, and region.

Modem User's Weighting

For the modem user's oversample, the weighting to eliminate the selection disproportionalities is based on information collected in the course of screening households for respondents who use a modem. The incidence of households with such a respondent is computed separately for each of the sampling strata and is used, together with information about the number of telephone households in each stratum, to re-proportionalize the sample of completed interviews.

The demographic weighting parameters used for the modem users oversample are the demographics of the *weighted* modem users in the general population adult sample. The demographics used were age, sex, race, education, and region.

The weighted oversample of modem users was then combined with the weighted modem users from the general population adults sample with one final adjustment to ensure that the general population modem users and the oversample modem users were in their correct proportion relative to one another.

STATISTICAL ANALYSES

Computer Users versus Non-Users Analysis

Computer users and non-users differ on several dimensions such as social involvement, time spent in various activities and political knowledge. However, differences between users and non-users are also evident for numerous demographics - users tend to be higher income, higher education, more likely to be male and more likely to be young. A special analysis was conducted to compare these two groups (users and non-users) while holding constant the effects of demographic differences between them. The analyses was designed to answer the question, if non-users looked,

demographically, like users would there still be differences between the two groups on the other dimensions listed above or would these differences disappear when the two groups were demographically balanced?

The analyses involved the calculation of a second stage weight. The non-users (weighted as described above) were additionally weighted to bring their demographics into alignment with the demographics of the computer users (also weighted as described above). The variables used in this weighting were age, sex, race, education, income and region.

The effect of this second stage weight was to demographically balance these two groups to remove the effects of certain demographic differences between them.

Modem Users versus Non Users Analysis

A similar analysis to the one described above for computer users and non users was conducted for modem users and non users. The demographics of the total sample of modem users (the general population group of modem users and the oversample of modem users) weighted as described above were used as weighting parameters for the non users. The non users, weighted as described above, were additionally weighted to the demographics of the weighted modem users. The variables used in this weighting were age, sex, race, education, income and region.

As with the computer users analysis, the effect of this second stage weight was to demographically balance these two groups to remove the effects of certain demographic differences between them.

ADULT QUESTIONNAIRE

TIMES MIRROR CENTER FOR THE PEOPLE AND THE PRESS
 TECHNOLOGY IN THE HOME
 FINAL TOPLINE- ADULT VERSION
 N = 3,667
 January 4 - February 17, 1994

INTRODUCTION: Hello, I am _____ calling for the Princeton Survey Research Associates from Princeton, New Jersey. We are conducting a telephone opinion survey for leading newspapers and tv stations around the country. I'd like to ask a few questions of the youngest male, 18 years of age or older, who is now at home (IF NO MALE, ASK: May I please speak with the oldest female, 18 years of age or older, who is now at home?)

SECTION I - OLD BEHAVIORS
MY FIRST QUESTION IS...

Q.1 Do you happen to read any daily newspaper or newspapers regularly, or not?

		<u>Jan</u> <u>1994</u>	<u>June</u> <u>1992</u>	<u>July</u> <u>1991</u>	<u>May</u> <u>1991</u>	<u>Jan</u> <u>1991</u>	<u>Nov</u> <u>1990</u>	<u>Oct</u> <u>1990</u>	<u>July</u> <u>1990</u>	<u>May</u> <u>1990</u>
70	Yes	71	75	73	70	72	74	72	71	71
30	No	29	25	27	30	27	26	28	29	29
<u>0</u> <u>100</u>	Don't know	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>1</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>

Q.2 Do you happen to watch any TV news programs regularly, or not?

		<u>Jan</u> <u>1994</u>	<u>June</u> <u>1992</u>	<u>July</u> <u>1991</u>	<u>May</u> <u>1991</u>	<u>Jan</u> <u>1991</u>	<u>Nov</u> <u>1990</u>	<u>Oct</u> <u>1990</u>	<u>July</u> <u>1990</u>	<u>May</u> <u>1990</u>
84	Yes	71	75	73	70	72	74	72	71	71
16	No	29	25	27	30	27	26	28	29	29
<u>0</u> <u>100</u>	Don't know	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>1</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>

Q.3 Do you listen to the news on the radio regularly or not?

		<u>Jan</u> <u>1994</u>	<u>June</u> <u>1992</u>	<u>July</u> <u>1991</u>	<u>May</u> <u>1991</u>	<u>Jan</u> <u>1991</u>	<u>Nov</u> <u>1990</u>	<u>Oct</u> <u>1990</u>	<u>July</u> <u>1990</u>	<u>May</u> <u>1990</u>
53	Yes	52	54	53	53	55	55	54	55	56
47	No	48	46	47	47	45	45	46	45	44
<u>0</u> <u>100</u>	Don't know	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>	<u>*</u> <u>100</u>

Q.4 How often if ever do you go out to the movies? (DO NOT READ CHOICES ... PROBE FOR APPROPRIATE CATEGORY)

- 6 About once a week, or more often
- 9 About once every few weeks
- 16 About once a month
- 17 About once every few months
- 11 Less often
- 41 Hardly ever or never

 * Don't know
100

I'd like to ask you a few questions about how you spent your day yesterday ...
INTERVIEWER NOTE: FOR QUESTIONS Q.5 and Q.5a PLEASE DETERMINE WHAT DAY OF THE WEEK IT IS. IF THE DAY OF THE WEEK IS SUNDAY, PLEASE READ "FRIDAY". IF THE DAY IS NOT SUNDAY, READ "YESTERDAY".

Q.5 Did you get a chance to read a daily newspaper yesterday or not?
IF RESPONDENT ANSWERED '1' YES, READ NEWSPAPER IN Q.5 ASK:

Q.5a About how much time did you spend reading a daily newspaper yesterday?
(DO NOT READ)

- 58 Read paper
 - 1 Less than five minutes
 - 2 Five to less than ten minutes
 - 4 Ten to less than fifteen minutes
 - 7 Fifteen to less than twenty minutes
 - 8 Twenty to less than thirty minutes
 - 21 Thirty minutes to less than one hour
 - 14 One hour or more
 - 1 Don't know

42 Didn't read paper **SKIP TO Q.6**

 0 Don't know **SKIP TO Q.6**
100

Q.6 Did you watch the news or a news program on television yesterday or not? (DO NOT READ)

IF RESPONDENT ANSWERED '1' YES, WATCHED IN Q.6 ASK:

Q.6a About how much time did you spend watching the news or any news programs on TV yesterday?

74 Watched TV news

- * Less than five minutes
- 1 Five to less than ten minutes
- 2 Ten to less than fifteen minutes
- 4 Fifteen to less than twenty minutes
- 4 Twenty to less than thirty minutes
- 25 Thirty minutes to less than one hour
- 37 One hour or more
- 1 Don't know

26 Did not watch **SKIP TO Q.7**

0 Don't know **SKIP TO Q.7**
100

Q.7 Apart from news did you watch anything else on television yesterday or not? (DO NOT READ)

IF RESPONDENT ANSWERED '1' YES, WATCHED IN Q.7 ASK:

Q.7a About how much time did you spend watching TV yesterday, not including the news?

69 Yes

- 2 A half hour or less
- 3 Thirty minutes to less than one hour
- 11 About an hour or more
- 7 More than one hour but less than two hours
- 19 Two hours to less than three hours
- 12 Three hours to less than four hours
- 14 Four or more hours
- 1 Don't know how long

31 Did not watch **SKIP TO Q.8**

0 Don't know
SKIP TO Q.8
100

Q.8 About how much time, if any, did you spend listening to any news on the radio yesterday or didn't you happen to listen to the news on the radio yesterday?

- 3 Less than five minutes
- 5 Five to less than ten minutes
- 6 Ten to less than fifteen minutes
- 7 Fifteen to less than twenty minutes
- 4 Twenty to less than thirty minutes
- 9 Thirty minutes to less than one hour
- 13 One hour or more
- 52 Didn't listen
- $\frac{1}{100}$ Don't know

Q.9 Again thinking about yesterday ... did you spend anytime reading a magazine?

IF RESPONDENT ANSWERED '1' YES, READ Magazine IN Q.9 ASK:

Q.9a About how much time did you spend reading magazines yesterday? (**DO NOT READ**)

- 33 Yes
 - 1 Less than five minutes
 - 2 Five to less than ten minutes
 - 2 Ten to less than fifteen minutes
 - 5 Fifteen to less than twenty minutes
 - 4 Twenty to less than thirty minutes
 - 10 Thirty minutes to less than one hour
 - 9 One hour or more
 - * Don't know
- 67 No **SKIP TO Q.10**
- $\frac{0}{100}$ Don't know/Refused **SKIP TO Q.10**

Q.10 Not including school or work related books, did you spend anytime reading a book yesterday? [IF YES: Was it a work of fiction or non-fiction?]

IF RESPONDENT ANSWERED '1' YES, READ books IN Q.10 ASK:

Q.10a About how much time did you spend reading books yesterday? (DO NOT READ)

31 Yes

Subject

14 Fiction

17 Non-fiction

* Both

Time

* Less than five minutes

1 Five to less than ten minutes

1 Ten to less than fifteen minutes

1 Fifteen to less than twenty minutes

2 Twenty to less than thirty minutes

9 Thirty minutes to less than one hour

17 One hour or more

* Don't know

69 No

0 Don't know/Refused

100

Q.11 As I read from a list tell me if you did this yesterday or not...
Yesterday did you:

	<u>Yes</u>	<u>No</u>	<u>DK/NA</u>
a. Visit with family or friends;	57	43	*=100
b. Take a walk;	35	65	*=100
c. Get some kind of vigorous exercise such as jogging, working out at a gym, or playing a racquet sport;	26	74	*=100
d. Take a nap;	26	74	*=100
e. Use a personal computer at home;	14	86	0=100
g. Call a friend or relative just to talk;	63	37	*=100
h. Have a family meal together;	64	36	*=100
i. Pray;	56	44	*=100
j. Go shopping for something other than food or medicine;	23	77	*=100

Q.12a Do you happen to belong to any groups or organizations in which you regularly participate -- by groups or organizations I mean service clubs, fraternal groups, hobby or garden clubs, church clubs, and the like?

38 Yes **ASK Q.12b**
 62 No **SKIP TO Q.13**
 * Don't know **SKIP TO Q.13**
 100

BASED ON GROUP MEMBERS

Q.12b How many clubs or groups do you belong to that you participate in regularly?

42 One
 33 Two
 15 Three
 9 Four and up (to seven)
 1 Don't know/Refused
 100
 (N=1586)

Q.12c And during the past seven days did you attend a meeting or do any work for a group that you belong to?

22 Yes

16 No

0 Don't know/Refused

Q.13 When, as nearly as you can recall, was the last time you wrote a personal letter or don't you write personal letters? **(DO NOT READ)**

28 Past week

21 Past month

7 Two or three months ago

3 Four to six months ago

1 Seven to eleven months ago

3 A year ago

7 More than a year ago

27 Don't write

3
100 Can't say

Q.14 I'd like to know how often, if ever, you read certain types of publications. For each that I read tell me if you read them regularly, sometimes, hardly ever or never. (READ AND ROTATE) NOTE: SOME ITEMS ARE SPLIT FORM

	<u>Regularly</u>	<u>Sometimes</u>	<u>Hardly Ever</u>	<u>Never</u>	<u>Don't Know</u>
Form A (N=1822)					
a. Personality magazines					
such as People or US	9	22	22	47	*=100
May, 1993	12	25	19	44	*=100
May-June, 1992	8	28	25	39	*=100
July, 1990	9	25	18	48	*=100
June, 1990	10	28	19	43	*=100
May, 1990	7	24	19	50	*=100
April, 1990	9	25	20	46	*=100
March, 1990	8	25	20	47	*=100
February, 1990	8	24	19	49	*=100
January, 1990	9	23	19	49	0=100
b. News magazines such as					
Time, U.S. News and World Report or Newsweek	16	31	23	30	*=100
May, 1993	24	39	14	23	*=100
May-June, 1992	20	39	18	23	*=100
July, 1990	18	34	18	30	*=100
June, 1990	21	39	16	24	*=100
May, 1990	17	34	19	30	*=100
April, 1990	20	35	16	29	*=100
March, 1990	16	35	19	30	*=100
February, 1990	17	36	18	29	0=100
January, 1990	18	34	17	31	0=100
c. Magazines such as The Atlantic, Harpers, The New Yorker					
May-June, 1992	2	6	14	78	*=100
July, 1990	2	9	16	73	*=100
June, 1990	2	8	11	79	*=100
May, 1990	2	8	13	77	*=100
April, 1990	2	7	12	79	*=100
March, 1990	2	6	12	80	*=100
February, 1990	2	7	13	78	0=100
January, 1990	2	7	10	81	*=100
	2	7	11	80	0=100
Form B (N=1845)					
d. Business magazines such as Fortune and Forbes					
May-June, 1992	6	15	17	62	*=100
July, 1990	5	17	21	57	*=100
June, 1990	5	15	14	66	*=100
May, 1990	6	16	16	62	*=100
April, 1990	4	14	15	67	*=100
March, 1990	5	15	14	66	*=100
February, 1990	5	14	14	67	0=100
January, 1990	4	12	14	70	*=100
	5	13	14	68	0=100

Q.15 *How often do you watch or listen to the following programs? For each that I read, tell me if you watch or listen to it regularly, sometimes, hardly ever or never. How often do you watch or listen to (READ AND ROTATE)

	<u>Regularly</u>	<u>Sometimes</u>	<u>Hardly Ever</u>	<u>Never</u>	<u>Don't Know</u>
Form A (N=1822)					
a. News magazine shows such as 60 minutes or 20/20	45	36	11	8	0=100
May, 1993	52	37	6	5	0=100
February, 1993	49	32	11	8	*=100
May-June, 1992	46	40	8	6	*=100
July, 1990	46	38	8	8	*=100
June, 1990	50	36	6	8	*=100
May, 1990	45	37	8	10	*=100
April, 1990	47	37	7	9	*=100
March, 1990	41	42	7	10	*=100
February, 1990	39	41	10	10	0=100
January, 1990	43	40	8	9	*=100
Form B (N=1845)					
b. MTV or VH1	9	18	12	60	1=100
February, 1993	5	14	15	61	5=100
c. MacNeil Lehrer	6	16	11	66	1=100
May, 1993	10	24	14	51	1=100
May-June, 1992	6	19	17	56	2=100
July, 1990	7	16	11	66	*=100
June, 1990	7	16	12	64	1=100
May, 1990	8	15	11	65	1=100
April, 1990	6	16	11	66	1=100
March, 1990	5	19	12	63	1=100
February, 1990	5	15	11	69	0=100
January, 1990	6	15	12	67	*=100
d. A Current Affair	19	34	18	29	*=100
May-June, 1992	19	35	16	29	1=100
April, 1990	19	28	13	40	*=100
March, 1990	17	27	14	41	1=100
February, 1990	17	29	12	42	*=100
January, 1990	18	28	12	42	*=100
e. Programs on National Public Radio such as Morning Edition or All Things Considered	9	13	12	65	1=100
May, 1993	15	20	15	49	1=100
May-June, 1992	7	16	17	59	1=100
July, 1990	9	13	8	70	*=100
June, 1990	9	10	11	69	1=100
May, 1990	7	11	10	72	*=100
April, 1990	7	12	9	71	1=100
March, 1990	7	9	10	74	*=100
February, 1990	8	10	8	74	*=100
January, 1990	5	10	7	78	*=100

Q.15 con't ...

	<u>Regularly</u>	<u>Sometimes</u>	<u>Hardly Ever</u>	<u>Never</u>	<u>Don't Know</u>
g. Cable News Network (CNN)	31	32	8	29	*=100
May, 1993	35	34	7	24	*=100
May-June, 1992	30	32	10	27	1=100
July, 1990	27	28	8	36	1=100
June, 1990	30	27	6	37	*=100
May, 1990	27	25	7	40	1=100
April, 1990	26	29	7	37	1=100
March, 1990	22	28	8	41	1=100
February, 1990	23	29	8	40	0=100
January, 1990	26	25	7	41	1=100
h. C-Span	7	20	15	56	2=100
May, 1993	11	25	13	48	3=100
February, 1993	7	18	14	45	16=100
May-June, 1992	6	19	18	54	3=100

SECTION II POLITICAL KNOWLEDGE

Now I would like to ask you a few questions about some things that have been in the news. Not everyone will have heard about them.

Q.16 *What is the name of the current vice president of the United States?

70 Al Gore; Gore

30 Incorrect/Don't know
100

Q.17 As far as you know, does the Clinton health care reform plan require businesses to provide health insurance to their workers or does it not require this?

70 Requires businesses to provide insurance

30 Incorrect/Don't know
100

Q.18 Do you happen to know which political party has a majority in the U.S. House of Representatives?

	<u>Sept 1992</u>	<u>June 1992</u>	<u>May 1992</u>
58 Democrat	57	52	55
<u>42</u> Republican/ Don't know	<u>43</u>	<u>48</u>	<u>45</u>
100	100	100	100

Q.19 Do you happen to know the name of the ethnic group that has conquered much of Bosnia and has surrounded the city of Sarajevo?

		Jan 1994	Sept 1993	Jan 1993	Sept 1992
27	Serbs	28	25	21	20
$\frac{73}{100}$	Croats/Other/ Don't know/Refused	$\frac{72}{100}$	$\frac{75}{100}$	$\frac{79}{100}$	$\frac{80}{100}$

Q.20 *What is the name of the President of Russia?

		Jan <u>1994</u>
47	Boris Yeltsin	50
53	Other (SPECIFY)	2
$\frac{*}{100}$	Don't know/refused	$\frac{48}{100}$

SECTION III - ATTITUDES

Now a few questions about yourself ...

Q.22 Do you think of yourself as an outgoing person, or as a shy person, or as neither in particular?

		Computer User <u>Most Everyday</u>	Computer Occasionally <u>Rare</u>	Not A Computer <u>User</u>	On Line <u>Often</u>
50	Outgoing	59	54	48	64
15	Shy	8	12	16	9
34	Neither	33	34	35	27
$\frac{1}{100}$	DK/Refused	$\frac{*}{100}$	$\frac{*}{100}$	$\frac{1}{100}$	$\frac{0}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

Q.23 Are you interested in science and math subjects or isn't this an interest of yours?

		Computer User <u>Most Everyday</u>	Computer Occasionally <u>Rare</u>	Not A Computer <u>User</u>	On Line <u>Often</u>
55	Interested	76	58	51	81
44	No, not	24	41	48	19
$\frac{1}{100}$	DK/Refused	$\frac{*}{100}$	$\frac{1}{100}$	$\frac{1}{100}$	$\frac{0}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

Q.24 Are you someone who goes out a lot in your free time, or are you more someone who enjoys staying home?

		Computer User <u>Most Everyday</u>	Computer Occasionally <u>Rare</u>	Not A Computer <u>User</u>	On Line <u>Often</u>
31	Out a lot	36	32	31	38
54	Stay at Home	47	55	55	41
14	Neither in particular	17	13	13	21
$\frac{1}{100}$	DK/Refused	$\frac{0}{100}$	$\frac{*}{100}$	$\frac{1}{100}$	$\frac{0}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

Q.25 Are you someone who is one of the first people to buy a new product, or do you like to wait a while before you buy a new product?

		Computer User <u>Most Everyday</u>	Computer Occasionally <u>Rare</u>	Not A Computer <u>User</u>	On Line <u>Often</u>
16	First	19	16	15	21
78	Wait	74	76	79	74
$\frac{6}{100}$	DK/Refused	$\frac{7}{100}$	$\frac{8}{100}$	$\frac{6}{100}$	$\frac{5}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

Q.26 How much do you enjoy reading? **(READ CATEGORIES)**

		Computer User <u>Most Everyday</u>	Computer Occasionally <u>Rare</u>	Not A Computer <u>User</u>	On Line <u>Often</u>
53	A lot	66	62	50	74
32	Some	27	30	33	22
10	Not much	5	6	12	3
4	Not at all	2	2	4	1
$\frac{1}{100}$	DK/Refused	$\frac{0}{100}$	$\frac{*}{100}$	$\frac{1}{100}$	$\frac{0}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

Q.27 How much do you enjoy keeping up with the news? (**READ CATEGORIES**)

		<u>Computer User Most Everyday</u>	<u>Computer Occasionally Rare</u>	<u>Not A Computer User</u>	<u>On Line Often</u>
53	A lot	57	54	52	64
35	Some	35	36	36	30
9	Not much	7	9	9	5
2	Not at all	1	1	2	1
$\frac{1}{100}$	DK/Refused	$\frac{*}{100}$	$\frac{*}{100}$	$\frac{1}{100}$	$\frac{0}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

Q.28 Are there so many TV news shows, magazines, and newspapers these days that you feel overloaded with information, or don't you feel that way?

		<u>Computer User Most Everyday</u>	<u>Computer Occasionally Rare</u>	<u>Not A Computer User</u>	<u>On Line Often</u>
37	Yes	36	33	38	32
59	No	62	64	57	68
$\frac{4}{100}$	DK/Refused	$\frac{2}{100}$	$\frac{3}{100}$	$\frac{5}{100}$	$\frac{*}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

DROP Q.28a

Q.29 How do you feel about computers and technology ... do you like them, dislike them, or do you have mixed feelings about them?

		<u>Computer User Most Everyday</u>	<u>Computer Occasionally Rare</u>	<u>Not A Computer User</u>	<u>On Line Often</u>
65	Like	94	81	57	94
5	Dislike	*	2	6	1
25	Mixed feelings	6	17	30	5
$\frac{5}{100}$	DK/Refused	$\frac{*}{100}$	$\frac{*}{100}$	$\frac{7}{100}$	$\frac{*}{100}$
		(N=625)	(N=613)	(N=2429)	(N=163)

ROTATE Q.30 AND Q.31

Q.30 How much do you worry that computers and technology are being used to invade your privacy? **(READ CATEGORIES)**

		<u>Computer User Most Everyday</u>	<u>Computer Occasionally Rare</u>	<u>Not A Computer User</u>	<u>On Line Often</u>
25	A lot	16	17	28	15
30	Some	31	34	29	29
18	Not much	20	22	17	16
24	Not at all	32	25	22	37
<u>3</u> 100	DK/Refused	<u>1</u> 100	<u>2</u> 100	<u>4</u> 100	<u>3</u> 100
		(N=625)	(N=613)	(N=2429)	(N=163)

Q.31 Do you think that computers and technology give people more control over their life, less control over their life, or don't you think it makes any difference?

		<u>Computer User Most Everyday</u>	<u>Computer Occasionally Rare</u>	<u>Not A Computer User</u>	<u>On Line Often</u>
42	More	61	47	37	63
17	Less	7	14	19	6
34	No difference	28	36	35	28
<u>7</u> 100	DK/Refused	<u>4</u> 100	<u>3</u> 100	<u>9</u> 100	<u>3</u> 100
		(N=625)	(N=613)	(N=2429)	(N=163)

A FEW MORE QUESTIONS ABOUT NEWSPAPERS ...

IF RESPONDENT READS DAILY NEWSPAPER ('1' YES IN Q.1) ASK:

Q.32 How much would you miss reading the newspaper, if newspapers were no longer available? **(READ CATEGORIES)**

67	A Lot
21	Some
8	Not much
4	Not at all
<u>*</u> 100	Don't know/Refused
	(N=2705)

ASK ALL:

Q.33 Some newspapers now offer special services such as being able to call on the telephone for the latest sports scores, stock market quotes or community events. Do you know if your local newspaper offers this type of service?

- 32 Yes, they offer it **ASK Q.33a**
- 68 No, they don't **SKIP TO Q.34**
- $\frac{0}{100}$ Don't know if they do **SKIP TO Q.34**

Q.33a Have you ever used this service?

- 7 Yes **ASK Q.33b**
- 25 No **SKIP TO Q.34**
- 0 Don't know/Refused **SKIP TO Q.34**

Q.33b What kinds of information have you gotten? **(DO NOT READ CHOICES)**
CODE ALL MENTIONED

- 4 Sports scores or information
- 1 Stock market information
- 1 News stories
- 1 Soap opera or TV information
- * Mortgage or interest rates
- 1 Community information (recycling, etc.)
- 1 Calendar of events
- 4 Other **(SPECIFY)**
- * Don't know/Refused

ASK ALL:

Q.34 There are many other phone services that offer information about astrology, sports, soap operas, spiritual matters, and the like. Have you ever called one of these services?

- 6 Yes **ASK Q.34a**
- 94 No **SKIP TO Q.35**
- $\frac{0}{100}$ Don't know/Refused **SKIP TO Q.35**

Q.34a And what types of phone services have you called? (DO NOT READ CHOICES)

- 2 Sports
- 3 Astrology
- 1 Soap operas or TV
- 4 Other (SPECIFY)
- * Don't know/Refused

SECTION VII - COMPUTERS

Q.36 Do you have any type of personal computer, including laptops -- such as an IBM PC or a Macintosh in your home? These do not include game machines such as Nintendo or Sega.

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
31	Yes ASK Q.37	49	47
69	No GO TO Q.70 (tv module)	51	53
$\frac{0}{100}$	Refused GO TO Q.70 (tv module)	$\frac{0}{100}$	$\frac{0}{100}$
		(N=1172)	(N=210)

Q.37 Do you yourself use the home personal computer on at least an occasional basis? (IF YES, PROBE: Is this everyday, most days, occasionally or rarely?)

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
6	Everyday	13	15
7	Most days	14	14
11	Occasionally	15	12
2	Rarely	3	2
5	No/Never GO TO Q.61	4	3
69	No computer	51	53
$\frac{*}{100}$	DK/Refused GO TO Q.61	$\frac{*}{100}$	$\frac{1}{100}$
		(N=1172)	(N=210)

Q.38 Do you use your home computer in connection with your job, for school, for personal use, or some combination of these?

- 17 Uses For Job
- 12 Uses For School
- 21 Uses For Personal
- 74 No Computer Use/DK

BASED ON RESPONDENTS WHO USE COMPUTER AT LEAST OCCASIONALLY

Q.39 How much would you miss your home computer, if you no longer had one?
(READ CATEGORIES)

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
65	A Lot	73	77
23	Some	18	16
8	Not much	6	3
4	Not at all	3	4
<u>*</u> 100 (N=1137)	Don't know/Refused	<u>*</u> 100 (N=567)	<u>0</u> 100 (N=105)

Q.40 Now I'd like to ask you about some of the kinds of things people do with their home computers. First of all, how often, if ever, do you use your computer at home to do word processing ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
56	Often	61	49
27	Sometimes	26	33
9	Hardly ever	7	5
8	Never	6	13
<u>*</u> 100 (N=1137)	Don't know/Refused	<u>0</u> 100 (N=567)	<u>0</u> 100 (N=105)

Q.41 And how often, if ever, do you use your computer at home for keeping household or financial records ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
33	Often	38	58
22	Sometimes	21	11
12	Hardly ever	11	10
33	Never	29	21
<u>* 100</u>	Don't know/Refused	<u>1 100</u>	<u>0 100</u>
(N=1137)		(N=567)	(N=105)

Q.42 How often, if ever, do you use your computer at home to play games ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
24	Often	19	23
25	Sometimes	26	23
21	Hardly ever	22	26
30	Never	33	28
<u>0 100</u>	Don't know/Refused	<u>0 100</u>	<u>0 100</u>
(N=1137)		(N=567)	(N=105)

SKIP Q.43, a.k.a. Q.79

SECTION VIII - ON LINE

Q.44 Does the/Do any of the personal computers have a modem that allows you to connect to other computers through the telephone lines?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
12	Yes	23	21
14	No GO TO Q.60a	22	20
*	Don't know/Refused GO TO Q.60a	*	2
<u>74 100</u>	No computer/DK	<u>55 100</u>	<u>57 100</u>

RESPONSES TO Q.45-60 BASED ON THOSE WHO ANSWERED '1' YES IN Q.44:

Q.45 Do you or anyone in your household ever use the modem to connect to any computer bulletin boards, information services such as Compuserve or Prodigy, or other computers at other locations? (IF YES, PROBE: Is that you, someone else, or both?)

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
0	No SKIP TO Q.60a	0	0
59	Respondent only	62	64
41	Respondent and other	38	36
0	Other only SKIP TO Q.60a	0	0
0	No Computer/Don't Use Computer/Modem	0	0
<u>0</u> 100 (N=546)	Don't know/Refused SKIP TO Q.60a	<u>0</u> 100 (N=325)	<u>0</u> 100 (N=59)

Q.46 Do you belong to any of the commercial information services such as Compuserve, Prodigy, America Online, or Genie?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
48	Yes	47	56
52	No SKIP TO Q.48	53	44
0	No Computer/Don't Use Computer/Modem	0	0
<u>*</u> 100 (N=546)	Don't know/Refused SKIP TO Q.48	<u>0</u> 100 (N=325)	<u>0</u> 100 (N=59)

Q.47 How often do you dial up one of these services ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
23	Often	25	25
17	Sometimes	14	15
7	Hardly ever	6	12
1	Never	2	4
52	No Computer/Don't Use Computer/Modem	53	44
<u>*</u> 100 (N=546)	Don't know/Refused	<u>*</u> 100 (N=325)	<u>0</u> 100 (N=59)

Q.48 How often, if ever, do you use the modem to dial up any computer bulletin boards ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
25	Often	25	16
28	Sometimes	31	38
23	Hardly ever	22	34
24	Never	22	12
<u>*</u>	Don't know/Refused	<u>0</u>	<u>0</u>
100		100	100
(N=546)		(N=325)	(N=59)

Q.49 Do you ever use the modem to dial up a computer that's located at work or at school?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
42	Yes, at work	52	42
10	Yes, at school	6	2
5	Yes, both	6	5
43	No SKIP TO Q.51	36	51
<u>*</u>	Don't know/Refused SKIP TO Q.51	<u>0</u>	<u>0</u>
100		100	100
(N=546)		(N=325)	(N=59)

BASED ON THOSE WHO USE A COMPUTER AT LEAST OCCASIONALLY AND USE A MODEM TO DIAL COMPUTER AT WORK, SCHOOL OR BOTH:

Q.50 How often do you dial up a computer at [work] [school] [work or school] ... often, sometimes, or hardly ever?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
44	Often	47	40
39	Sometimes	40	56
13	Hardly ever	9	4
<u>4</u>	Don't know/Refused	<u>4</u>	<u>0</u>
100		100	100
(N=302)		(N=203)	(N=25)

ASK ALL MODEM USERS:

Q.51 I'd like to ask you a few questions about what you do when you use the modem to dial up another computer. How often, if ever, do you send or receive electronic mail ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
29	Often	34	30
24	Sometimes	23	22
22	Hardly ever	20	26
24	Never	23	22
<u>1</u> 100 (N=546)	Don't know/Refused	<u>*</u> 100 (N=325)	<u>0</u> 100 (N=59)

Q.52 How often, if ever, do you communicate with other people through on-line forums, discussion lists, or "chat groups" ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
12	Often	12	9
20	Sometimes	20	28
26	Hardly ever	29	19
41	Never	39	44
<u>1</u> 100 (N=546)	Don't know/Refused	<u>*</u> 100 (N=325)	<u>0</u> 100 (N=59)

Q.53 How often, if ever, do you dial up in order to get news, weather, or sports information ... often, sometimes, hardly ever, or never

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
11	Often	10	12
17	Sometimes	16	28
17	Hardly ever	19	17
55	Never GO TO Q.55	55	43
<u>*</u> 100 (N=546)	Don't know/Refused GO TO Q.55	<u>0</u> 100 (N=325)	<u>0</u> 100 (N=59)

BASED ON THOSE WHO USE A COMPUTER AT LEAST OCCASIONALLY AND USE A MODEM TO DIAL UP FOR NEWS, WEATHER OR SPORTS INFORMATION:

Q.54 Which types of information do you get -- news, weather, sports? [ENTER ALL THAT APPLY]

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
75	News	72	81
53	Weather	54	51
36	Sports	37	21
6	Don't know	8	2
(N=241)		(N=142)	(N=27)

ASK ALL MODEM USERS:

Q.55 How often, if ever, do you dial up in order to get financial information such as stock quotes, corporate information, or to do your banking ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
14	Often	14	21
10	Sometimes	11	8
15	Hardly ever	18	28
61	Never	57	43
<u>*</u> 100	Don't know/Refused	<u>*</u> 100	<u>0</u> 100
(N=546)		(N=325)	(N=59)

Q.56 How often, if ever, do you dial up in order to do research for work or school, or to communicate with someone at work or school ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
31	Often	39	35
32	Sometimes	34	24
10	Hardly ever	10	9
27	Never	17	32
<u>*</u> 100	Don't know/Refused	<u>*</u> 100	<u>0</u> 100
(N=546)		(N=325)	(N=59)

Q.57 How often, if ever, do you dial up in order to get travel information or services ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
3	Often	3	1
14	Sometimes	15	10
18	Hardly ever	20	30
65	Never	62	59
<u>*</u> <u>100</u>	Don't know/Refused	<u>0</u> <u>100</u>	<u>0</u> <u>100</u>
(N=546)		(N=325)	(N=59)

Q.58 How often, if ever, do you dial up to play games ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
5	Often	5	*
12	Sometimes	8	3
15	Hardly ever	14	27
68	Never	73	70
<u>0</u> <u>100</u>	Don't know/Refused	<u>0</u> <u>100</u>	<u>0</u> <u>100</u>
(N=546)		(N=325)	(N=59)

Q.59 How often, if ever, do you dial up to get information about hobbies, movies, restaurant reviews, graphics, pictures, or other entertainment-related activities ... often, sometimes, hardly ever, or never?

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
8	Often	10	16
21	Sometimes	18	6
18	Hardly ever	16	26
53	Never	56	52
<u>0</u> <u>100</u>	Don't know/Refused	<u>0</u> <u>100</u>	<u>0</u> <u>100</u>
(N=546)		(N=325)	(N=59)

Q.59a *Do you use your modem for any other activities besides those we've talked about? [RECORD ALL MENTIONS]

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
78	None/No others	71	54
7	Faxing	10	20
5	Personal use (taxes)	6	9
5	Work related/Working at home	8	15
2	Downloading files	1	0
2	Connect to other noncommercial	2	1
3	Other	5	6
	(N=546)	(N=325)	(N=59)

Q.60 How much would you miss using your modem to connect to other computers if you could no longer do this? (READ CATEGORIES)

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
55	A Lot	59	64
24	Some	23	14
13	Not much	12	20
8	Not at all	6	1
<u>*</u>	Don't know/Refused	<u>*</u>	<u>1</u>
100		100	100
	(N=546)	(N=325)	(N=59)

ASK ALL:

Q.60a *Do you use your home computer for any other activities besides those we've talked about? (DO NOT READ LIST. CODE ALL MENTIONED.)

		<u>1+ Days Last Week</u>	<u>Business At Home</u>
7	Keeping business records, inventory, etc.	10	10
4	Programming	5	3
5	Keeping records for hobbies (e.g., sewing, ham radio, etc.)	4	1
3	Genealogy, family trees	4	1
1	Help for disabled person	1	0
6	Graphs, charts	7	5
3	Mailing lists	3	5
1	Interior design	1	0
2	Music	3	5
3	Pictures/art	3	1
3	Desktop publishing	4	3
19	Other	25	31
67	No other uses/nothing else	60	51
5	Don't know/Refused (N=1137)	<u>8</u>	<u>13</u>

ASK IF HH SIZE >1 IN Q.35

Q.61 How many other people in your household use the home computer on at least an occasional basis?

14	Zero
39	One
22	Two
24	Three or more
<u>1</u>	Don't know/No answer
100	
(N=4318)	

IF NUMBER > 0 AND IF ANYONE IN HH UNDER 18 (1 IN Q.35a) CONTINUE IF Q.61=0, OR
Q.35a=2 OR 3, SKIP TO Q.70 TV QUEX

Q.62 How many of those people are under the age of 18?

Base: Households with kids under 18

6 None
15 One
15 Two or more
* None/Don't know
64 No kids/Not computer user
100
(N=375)

Q.63b Now I'd like for you to think about the child in the household who is
the most frequent user of the computer. Is that child a boy or girl?

53 Boy
46 Girl
1 No answer
100
(N=528)

Q.64 We are interested in the kinds of things kids are doing with computers
these days. How often, if ever, does this child use the computer to
help with school work ... often, sometimes, hardly ever, or never?

40 Often
35 Sometimes
10 Hardly ever
14 Never
1 (DO NOT READ) Not in school
* Don't know/Refused
100
(N=528)

Q.64a How often, if ever, does this child use the computer to do word processing or writing ... often, sometimes, hardly ever, or never?

36 Often

33 Sometimes

11 Hardly ever

20 Never

 * Don't know/Refused

100

(N=528)

Q.65 How often, if ever, does he/she use the computer to draw pictures or art ... often, sometimes, hardly ever, or never?

24 Often

31 Sometimes

19 Hardly ever

26 Never

 * Don't know/Refused

100

(N=528)

Q.66 And how often, if ever, does he/she use the computer to play any type of educational games such as Math Blaster or Carmen Sandiego ... often, sometimes, hardly ever, or never?

33 Often

31 Sometimes

13 Hardly ever

22 Never

 1 Don't know/Refused

100

(N=528)

Q.67 And how often, if ever, does he/she use the computer to play any other type of computer game ... often, sometimes, hardly ever, or never?

36 Often
34 Sometimes
14 Hardly ever
15 Never
1 Don't know/Refused
100
(N=528)

Q.67a Does he/she use the computer at home for any other activities that we haven't talked about? **[RECORD ALL MENTIONS]**

48 None/No other
3 Educational/School use
3 Entertainment/Play
2 Word processing/Letters
1 Music
1 Encyclopedias
2 Other
42 DK/No answer
(N=528)

Q.68 Sometimes it's said that kids are more comfortable with computers than their parents are. In general, do you think this child is more comfortable using computers than you are, less comfortable, or is there no difference?

49 More comfortable
13 Less comfortable
37 No difference
1 Don't know/Refused
100
(N=528)

Q.69 And how old is the child who most frequently uses the computer?

5 Under five
 45 Five to twelve
 49 Thirteen to seventeen
 $\frac{1}{100}$ DK
 (N=528)

SECTION IV - TV VIEWING

ASK OF ALL RESPONDENTS: A Few Questions about Television ...

Q.70 Generally, how satisfied are you with the choice of things you can see on television these days? Are you ...

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
14	Very Satisfied	16	17	17
43	Fairly Satisfied	46	49	50
29	Not Too Satisfied	26	24	23
11	Not At All Satisfied	9	8	7
2	(DO NOT READ) Does not apply/ Irrelevant/Don't care	2	1	2
$\frac{1}{100}$	Don't know/Refused	$\frac{1}{100}$	$\frac{1}{100}$	$\frac{1}{100}$
		(N=2485)	(N=1079)	(N=588)

FORM A:

Q.71 How about movies on TV: how satisfied are you with the choice of movies available to you on television these days? Are you ...

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
12	Very Satisfied	14	17	17
40	Fairly Satisfied	45	54	49
30	Not Too Satisfied	27	20	22
13	Not At All Satisfied	11	7	11
4	(DO NOT READ) Does not apply/irrelevant/ don't care	2	1	1
$\frac{1}{100}$	Don't know/Refused	$\frac{1}{100}$	$\frac{1}{100}$	$\frac{0}{100}$
		(N=1214)	(N=516)	(N=293)

FORM B:

Q.72 And how satisfied are you with the choice of news programs available to you on TV these days? Are you ...

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
43	Very Satisfied	48	50	53
43	Fairly Satisfied	41	38	38
7	Not Too Satisfied	6	5	4
4	Not At All Satisfied	3	5	2
	(DO NOT READ) Does not apply/irrelevant/ don't care	1	1	3
$\frac{1}{100}$	Don't know/Refused	$\frac{1}{100}$	$\frac{1}{100}$	$\frac{*}{100}$
(N=1845)		(N=1271)	(N=563)	(N=295)

FORM A:

Q.73 How satisfied are you with the choice of sporting events and programs available to you on TV these days? Are you ...

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
33	Very Satisfied	38	36	37
34	Fairly Satisfied	35	37	40
9	Not Too Satisfied	7	8	6
8	Not At All Satisfied	6	6	7
	(DO NOT READ) Does not apply/irrelevant/ don't care	13	12	9
$\frac{1}{100}$	Don't know/Refused	$\frac{1}{100}$	$\frac{1}{100}$	$\frac{1}{100}$
(N=1822)		(N=1214)	(N=516)	(N=293)

FORM B:

Q.74 And how satisfied are you with the choice of entertainment programs other than movies, news, or sports available to you on TV these days? Are you ...

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
16	Very Satisfied	17	19	17
41	Fairly Satisfied	42	46	46
28	Not Too Satisfied	29	25	25
11	Not At All Satisfied	8	7	8
3	Does not apply/irrelevant/ don't care	3	2	3
<u>1</u> 100	Don't know/Refused	<u>1</u> 100	<u>1</u> 100	<u>1</u> 100
	(N=1845)	(N=1271)	(N=563)	(N=295)

Q.75 Generally speaking, which is more common for you: At first, do you just decide to watch TV and then dial around to see what is on, or do you tune in to see a specific program that you know is on at a set time? (**IF BOTH, PROBE:** But which would you say you do most often?)

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
30	Just watch tv, dial around	32	35	38
61	Tune in for specific program	59	58	55
7	Both	8	7	6
<u>2</u> 100	Don't know/Refused	<u>1</u> 100	<u>*</u> 100	<u>1</u> 100
		(N=2485)	(N=1079)	(N=586)

Q.76 Do you have a remote control for any of your television sets?

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
90	Yes ASK TO Q.76a	96	98	99
10	No GO TO Q.77	4	2	1
<u>0</u> 100	Don't know GO TO Q.77	<u>0</u> 100	<u>0</u> 100	<u>0</u> 100
		(N=2485)	(N=1079)	(N=588)

ASK OF THOSE WHO HAVE REMOTES AND WHOSE HOUSEHOLD SIZE > 1 IN Q.35

Q.76a Thinking about the times when you are watching TV with other people in the household, do you generally control the remote or does someone else usually control it? **IF SOMEONE ELSE:** Who is that? (**PROBE FOR GENDER OF PERSON**)

		<u>Male</u>	<u>Female</u>
43	R controls remote	54	33
24	Spouse/partner	13	35
3	Male child	2	4
2	Female child	1	2
2	Male parent or male grandparent	2	2
1	Female parent or female grandparent	1	1
5	Other	4	5
19	Shared	22	17
<u>1</u>	Don't know/Refused	<u>1</u>	<u>1</u>
100		100	100
	(N=2843)	(N=1410)	(N=1433)

Q.77 What generally happens when commercials come on. Do you generally watch the commercial or do you usually switch channels, or do you do something else? (**IF MORE THAN ONE RESPONSE, PROBE:** What do you do most often?)

		<u>Male</u>	<u>Female</u>
35	Watch the commercial	34	36
29	Switch channels	33	25
6	Both (VOLUNTEERED)	7	5
7	Mute the sound (VOLUNTEERED)	8	7
18	Leave the room (VOLUNTEERED)	12	22
<u>5</u>	Don't know	<u>6</u>	<u>5</u>
100		100	100
		(N=1769)	(N=1898)

Q.78 Some people like to switch channels frequently with their remote controls as they watch television ... does this describe the way you watch television or not?

		<u>Male</u>	<u>Female</u>
32	Yes	42	23
66	No	55	76
$\frac{2}{100}$	Don't know/Refused	$\frac{3}{100}$	$\frac{1}{100}$
		(N=1769)	(N=1898)

SECTION V - HOME VIDEO/CABLE

Q.79 Do you have a VCR or Video Cassette Recorder, in your household?

85	Yes	
15	No	GO TO Q.85
$\frac{*}{100}$	Don't know/Refused	GO TO Q.85

Q.80 How often, if ever, do you use your VCR to play videos you have rented or purchased ... often, sometimes, hardly ever, or never?

43	Often
35	Sometimes
17	Hardly ever
5	Never
$\frac{*}{100}$	Don't know/Refused
	(N=3267)

Q.81 Generally, how easy is it for you to find something in the video store that you are interested in watching at home? Is it ...

29	Very Easy
42	Fairly Easy
15	Not Too Easy
5	Not At All Easy
7	Don't have a store/don't use a store
$\frac{2}{100}$	Don't know/Refused
	(N=3267)

Q.82 How often, if ever, do you use your VCR to record television programs ... often, sometimes, hardly ever, or never?

23 Often

26 Sometimes

28 Hardly ever

23 Never

 * Don't know/Refused

100

(N=3267)

Q.83 Do you, yourself, know how to set the timer on your VCR to automatically record a program that will be televised in the future?

66 Yes

33 No

 1 Don't know/Refused

100

(N=3267)

Q.84 How much would you miss your VCR, if you no longer had one? (**READ CATEGORIES**)

43 A Lot

26 Some

18 Not much

13 Not at all

 * Don't know/Refused

100

(N=3267)

Q.85 *Do you currently live in an area where you could get Cable TV if you wanted it?

89 Yes

10 No **SKIP TO Q.92**

 1 Don't know/Refused **SKIP TO Q.92**

100

- Q.86 Do you currently subscribe to Cable TV?
- | | | |
|-----------|--------------------|------------------------------|
| 64 | Yes | ASK Cable Series Q.87 |
| 25 | No | GO TO Q.92 |
| * | Don't know/Refused | GO TO Q.92 |
| <u>11</u> | No cable access | |
| 100 | | |
- Q.87 How much would you miss cable tv, if you no longer had it? **(READ CATEGORIES)**
- | | | |
|-----------------|--------------------|--|
| 64 | A Lot | |
| 18 | Some | |
| 11 | Not much | |
| 7 | Not at all | |
| * | Don't know/Refused | |
| <u>100</u> | | |
| (N=2485) | | |
- Q.88 Do you get any of the premium channels on cable for which you have to pay extra such as HBO, Showtime or the Disney Channel?
- | | | |
|-----------------|--------------------|-------------------|
| 44 | Yes | ASK Q.89 |
| 56 | No | GO TO Q.91 |
| * | Don't know/Refused | GO TO Q.91 |
| <u>100</u> | | |
| (N=2485) | | |
- Q.89 Generally, how satisfied are you with the selection of movies and programs available on your premium channel?
- | | | |
|-----------------|----------------------|--|
| 24 | Very Satisfied | |
| 47 | Fairly Satisfied | |
| 20 | Not Too Satisfied | |
| 8 | Not At All Satisfied | |
| <u>1</u> | Don't know/Refused | |
| 100 | | |
| (N=1079) | | |

Q.90 How much would you miss your premium cable channels, if you no longer had them? (**READ CATEGORIES**)

29 A Lot

29 Some

21 Not much

21 Not at all

 * Don't know/Refused

100

(**N=1079**)

Q.91 *Does your cable system offer movies, sporting events or live shows on a pay-per-view basis--that is where subscribers order a particular program and pay extra for it.

81 Yes **ASK Q.91a**

14 No **GO TO Q.92**

 5 Don't know/Refused **GO TO Q.92**

100

(**N=2485**)

IF RESPONDENT ANSWERED '1', YES, IN Q.91, ASK:

Q.91a Have you ever ordered a movie, sporting event, or special program from pay-per-view?

17 Yes - Movie **SKIP TO Q.92**

17 Yes - Sports event **SKIP TO Q.92**

4 Yes - Special program **SKIP TO Q.92**

1 Don't know/Refused **SKIP TO Q.92**

70 No; Never **GO TO Q.91b**

(**N=2069**)

Q.91b Why haven't you done this? (DO NOT READ LIST)

- 1 Rather go to movies/See live event
 - 19 Too expensive
 - 2 Watch pay-per-view somewhere else
 - 2 Don't want to rent the box/equipment
 - 8 Not worth the money
 - 6 Enough on regular TV
 - 3 Too difficult or complicated to use
 - 8 Don't know/Refused
 - 50 Not Interested in Pay-Per-View
 - 1 Other
- 100
(N=1456)

ASK ALL:

Q.92 All things being equal what's your favorite way to watch a movie: would you prefer to go out to a theater or would you prefer to watch at home?

- 27 Go out to a theater
 - 67 Watch at home
 - 4 (DO NOT READ) Depends on movie
 - 2 Don't know
- 100

IF RESPONDENT DOES NOT HAVE CABLE AND VCR GO TO Q.94;

IF RESPONDENT HAS CABLE, VCR AND PV, ASK Q.93PV;

IF PAY PER VIEW IS NOT AVAILABLE OR HAS NEVER BEEN USED, ASK Q.93NPV:

Q.93PV What's your favorite way to get a movie to watch at home: from a video store, from Pay Per View or watching what's on Cable or regular TV?

		<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
53	Video store	53	45	
52				
6	Pay per View	6	6	
6				
37	Watch Cable/Regular TV	37	45	
38				
<u>4</u>	Don't know/Refused	<u>4</u>	<u>4</u>	
<u>4</u>				
100		100	100	
100				
(N=575)		(N=575)	(N=366)	(

N=557)

Q.93NPV What's your favorite way to get a movie to watch at home: from a video store, or watching what's on Cable or regular TV?

	<u>Cable</u>	<u>Premium</u>	<u>Pay-per-view</u>
53 Video store	53	45	
0			
43 Watch Cable/Regular TV	44	51	
0			
<u>4</u> Don't know/Refused	<u>3</u>	<u>4</u>	
<u>0</u>			
100	100	100	
-			
(N=1726)	(N=1726)	(N=658)	

Q.94 Do you ever watch any of the home shopping channels or not?

29 Yes **ASK Q.94a**

71 No **GO TO Q.95**

* Don't know/Refused **GO TO Q.95**

100

Q.94a Have you ever purchased merchandise from a home shopping channel or not?

10 Yes

19 No

71 Never watch home shopping network

0 Don't know/Refused

100

ASK ALL:

Q.95 Have you ever purchased any products or services that were offered through special half-hour television programs that told about these products or services?

12 Yes

87 No

1 Don't know/Refused

100

SECTION VI - OTHER GADGETS

I am going to ask you some questions about various pieces of equipment that are less often found in people's houses. (We are trying to find out how many Americans own such things.)

Q.96 Is there a video game system such as Sega or Nintendo that can be hooked up to a TV set in your household?

40 Yes ASK Q.96a

60 No GO TO Q.97

 * Don't know/Refused GO TO Q.97
100

Q.96a How often, if ever, do you yourself play with this video game system ... often, sometimes, hardly ever, or never?

5 Often

7 Sometimes

12 Hardly ever

16 Never

60 No video game system

 * Don't know/Refused
100

ASK ALL:

Q.97 Do you have a satellite dish that is hooked up to your TV? **(READ IF NECESSARY: "This is different than cable TV. It allows you to get reception directly from satellites.")**

4 Yes ASK Q.97a

96 No GO TO Q.98

 * Don't know/Refused GO TO Q.98
100

IF RESPONDENT ANSWERED 1 "YES" IN Q.97, ASK:

Q.97a Generally, how satisfied are you with the choice of programs you are able to get with your satellite dish?

46 Very Satisfied

24 Fairly Satisfied

18 Not Too Satisfied

8 Not At All Satisfied

 4 Don't know/Refused
100
(N=119)

Q.97b How much would you miss your satellite dish, if you no longer had one? **(READ CATEGORIES)**

53 A Lot

20 Some

11 Not much

16 Not at all

0 Don't know/Refused

100

(N=119)

ASK ALL:

Q.98 Does anyone in your household own a video camera? **(READ IF NECESSARY:** "Something that can record on tape or film and be played back on your TV set.")

28 Yes

72 No

* Don't know/Refused

100

Q.99 Does anyone in your household have a "fax" machine, separate from a computer? **(READ IF NECESSARY:** "Something that allows you to send and receive documents through the telephone lines.")

6 Yes **ASK Q.99a**

94 No **GO TO Q.100**

* Don't know/Refused **GO TO Q.100**

100

Q.99a How often, if ever, do you yourself send or receive faxes from home ... often, sometimes, hardly ever, or never?

2 Often

2 Sometimes

1 Hardly ever

1 Never

94 No fax

0 Don't know/Refused

100

Q.99b How much would you miss your fax machine, if you no longer had one? **(READ CATEGORIES)**

41 A Lot

17 Some

18 Not much

24 Not at all

 * Don't know/Refused

100

(N=280)

Q.100 Do you use an ATM--or automatic teller machine card? **(READ IF NECESSARY: "It allows you to do banking through a machine without having to use a teller.")**

48 Yes **ASK Q.100a**

52 No **GO TO Q.101**

 * Don't know/Refused **GO TO Q.101**

100

IF RESPONDENT ANSWERED '1' YES IN Q.100, ASK:

Q.100a How often, if ever, do you use your ATM card ... often, sometimes, hardly ever, or never?

23 Often

15 Sometimes

8 Hardly ever

1 Never

53 Do not use ATM

 * Don't know/Refused

100

Q.100b How much would you miss your ATM card if you no longer had one? **(READ CATEGORIES)**

55 A Lot

18 Some

14 Not much

13 Not at all

 * Don't know/Refused

100

(N=1967)

Q.101 Are you the person or one of the persons who generally pays the bills for this household?

83 Yes ASK Q.101a

17 No GO TO Q.102 (employment module)

$\frac{*}{100}$ Don't know/Refused GO TO Q.102 (employment module)

Q.101a Do you ever do "electronic banking" from home--that is use a computer or the telephone to pay bills or move money from one account to another?

9 Yes

74 No

17 Not responsible for bills

$\frac{*}{100}$ Don't know/Refused

SECTION IX - WORK

Q.102 Are you self-employed, do you work for someone else, do you do both, or aren't you employed right now?

11 Self-employed GO TO Q.103

47 Work for someone else GO TO Q.104

7 Both GO TO Q.104

34 Not employed GO TO Q.D2

$\frac{1}{100}$ Don't know/Refused GO TO Q.D2

IF RESPONDENT IS SELF-EMPLOYED, ASK:

Q.103 What is the principal location of your business - is it in your home or is it elsewhere?

47 Home GO TO Q.105

52 Elsewhere GO TO Q.104

$\frac{1}{100}$ Don't know/Refused GO TO Q.D2
(N=454)

IF BUSINESS IS ELSEWHERE, WORKS FOR SOMEONE ELSE, OR BOTH, ASK:

*Q.104 How often, if ever, do you do work for your job at home? Would you say often, sometimes, hardly ever, or never?

19 Often - **CONTINUE**

21 Sometimes - **CONTINUE**

16 Hardly ever - **CONTINUE**

44 Never - **GO TO Q.107**

* (VOL) Always - **CONTINUE**

* Don't know/Refused - **CONTINUE**

100

(N=2329)

IF BUSINESS IS HOME, ASK:

Q.105 How many days in the past week did you work at home?

28 None

16 One

14 Two

11 Three

5 Four

8 Five

4 Six

13 Seven

1 Don't know/No answer

100

(N=1666)

Q.106 Do you ever use a computer or fax machine to help you work at home?

11 Yes, use a computer

1 Yes, use a fax machine

3 Yes, use both

24 No

61 Does not work at home

* Don't know/Refused

100

ASK IF HOUSEHOLD SIZE >1 AND IF RESPONDENT NEVER WORKS AT HOME: [Q.104= 3 NEVER]. ALSO SKIP IF Q.103 = 1 [BUSINESS BASED AT HOME].

Q.107 Does anyone else in your household who is employed sometimes do their job at home?

25 Yes

75 No

 * Don't know/Refused
100
(N=730)

TIMES MIRROR CENTER FOR THE PEOPLE AND THE PRESS
TECHNOLOGY IN THE HOME
SPECIAL FOLLOW-UP SURVEY
April 20 - 24, 1994
N = 1,001

Q3. How many days in the past week did you work at home?

10	None
5	One
4	Two
4	Three
1	Four
2	Five
1	Six
2	Seven
<u>71</u>	Don't know/Refused/Not Applicable [SKIP TO Q.4a]
100	
	(N=1001)

IF 1 DAY AT HOME:

Q.3a Was that a regular workday on which you worked at home INSTEAD of going to your workplace?

24	Yes [SKIP TO Q.4a]
76	No [SKIP TO Q.4a]
-	Don't know/Refused [SKIP TO Q.4a]
<u>100</u>	
	(N=58)

IF > 1 AT HOME:

Q.3b How many of those (# FROM Q.3) days were regular workdays on which you worked at home INSTEAD of going to your workplace?

9	Zero
1	One
2	Two
1	Three
-	Four
1	Five
-	Six
1	Seven
<u>85</u>	Not applicable/Don't know/Refused [SKIP TO Q.4a]
100	
	(N=1001)

SUMMARY: Q.3b

<u>Total Sample</u>		<u>Employed</u>
13	Worked at home at least one day in past week in addition to going to work;	22
11	7 Worked at home instead of going to work place;	
	3 Has home based business	5
62	38 Did not work at home in past week	
<u>39</u>	Not employed	<u>-</u>
100		100

IF EMPLOYED (EITHER SELF EMPLOYED AT OTHER LOCATION OR WORKS FOR SOMEONE ELSE)

Q.6a Do you use a computer at your workplace on at least an occasional basis? By computer I mean a PC, mainframe, or minicomputer. This would **NOT** include items such as checkout scanners or terminals used for routine transactions, etc.

55	Yes [CONTINUE]
45	No
<u>-</u>	Don't know/Refused
100	

(N=603)

KIDS QUESTIONNAIRE

TIMES MIRROR CENTER FOR THE PEOPLE AND THE PRESS
TECHNOLOGY IN THE HOME
Topline - Kids Version
 January 4 - February 17, 1994
 N = 400

INTRODUCTION: Hello, I am _____ calling for the Princeton Survey Research Associates from Princeton, New Jersey. We are conducting a telephone opinion survey for leading newspapers and tv stations around the country. I'd like to ask a few questions about what young people think of things like television, newspapers, and other information media. I need to interview someone between the ages of 13 and 17. Is there a 13 to 17 year old living in this household? **[IF MORE THAN ONE 13-17 YEAR OLD: May I speak with the oldest child between the ages of 13 and 17?]**

DISPO CODES TO ADD:

- HH contains no 13-17 Yr old
- Parent Refusal
- Kid Refusal
- 2nd Parent Refusal
- 2nd Kid Refusal

Sex:

- 1 Male
- 2 Female **QUOTAS: 50/50 male female, no Form 1/2**

D14. **CHECK THE DAY OF THE WEEK INTERVIEW WAS COMPLETED.**

- 1 Mon 2 Tues 3 Wed 4 Thurs 5 Fri 6 Sat 7 Sun

MY FIRST QUESTION IS ...

Q.1 Do you happen to read any daily newspaper or newspapers regularly, or not?

<u>KIDS</u>	<u>ADULTS</u>
47 Yes	70
53 No	30
<u>0</u> Don't know	<u>0</u>
100	100

Q.2 Do you happen to watch any TV news programs regularly, or not?

<u>KIDS</u>		<u>ADULTS</u>
72	Yes	84
28	No	16
$\frac{0}{100}$	Don't know	$\frac{0}{100}$

Q.3 Do you listen to the news on the radio regularly or not?

<u>KIDS</u>		<u>ADULTS</u>
38	Yes	53
62	No	47
$\frac{0}{100}$	Don't know	$\frac{0}{100}$

Q.4 How often if ever do you go out to the movies? (***DO NOT READ CHOICES. PROBE FOR APPROPRIATE CATEGORY.**)

<u>KIDS</u>		
<u>ADULTS</u>		
22	About once a week, or more often	6
31	About once every few weeks	9
24	About once a month	16
12	About once every few months	17
3	Less often	11
8	Hardly ever or never	41
*	Don't know/No answer	*

INTERVIEWER NOTE: FOR QUESTIONS Q.5 AND Q.5a, PLEASE DETERMINE WHAT DAY OF THE WEEK IT IS. IF THE DAY OF THE WEEK IS SUNDAY, PLEASE READ "FRIDAY." IF THE DAY IS NOT SUNDAY, READ "YESTERDAY."

I'D LIKE TO ASK YOU A FEW QUESTIONS ABOUT HOW YOU SPENT YOUR DAY YESTERDAY ...

Q.5 Did you get a chance to read a daily newspaper yesterday or not?

<u>KIDS</u>		<u>ADULTS</u>
35	Read paper	58
65	Didn't read paper	42
$\frac{0}{100}$	Don't know	$\frac{0}{100}$

Q.6 Did you watch the news or a news program on television yesterday or not? **(DO NOT READ)**

<u>KIDS</u>		<u>ADULTS</u>
55	Watched TV news	74
45	Did not watch	26
$\frac{0}{100}$	Don't know	$\frac{0}{100}$

Q.7 Apart from news did you watch anything else on television yesterday or not? **(DO NOT READ)**

<u>KIDS</u>		<u>ADULTS</u>
73	Yes	69
27	Did not watch	31
$\frac{0}{100}$	Don't know	$\frac{0}{100}$

Q.8 About how much time, if any, did you spend listening to any news on the radio yesterday or didn't you happen to listen to the news on the radio yesterday?

KIDS

ADULTS

38	Listened yesterday	47
4	Less than five minutes	3
10	Five to less than ten minutes	5
6	Ten to less than fifteen minutes	6
3	Fifteen to less than twenty minutes	7
3	Twenty to less than thirty minutes	4
7	Thirty minutes to less than one hour	9
5	One hour or more	13
*	Don't know how long	*
62	Didn't listen	52
<u>0</u>	Don't know	<u>1</u>
100		100

Q.10 Not including school or work related books, did you spend anytime reading a book yesterday? **IF YES:** Was it a work of fiction or non-fiction?

KIDS

ADULTS

40	Read a book yesterday	31
	<u>Subject</u>	
25	Yes, fiction	14
16	Yes, non-fiction	17
2	Yes, both	*
1	Yes, Don't know which	*
60	No	69
<u>*</u>	Don't know/Refused	<u>0</u>
100		100

Q.11 As I read from a list tell me if you did this yesterday or not?

<u>Yesterday did you:</u>	<u>Yes</u>	<u>No</u>	<u>DK/NA</u>
a. Visit with family or friends			
Kids	80	20	0=100
Adults	57	43	*=100
c. Get some kind of vigorous exercise such as jogging, working out at a gym, or playing a racquet sport			
Kids	63	36	1=100
Adults	26	74	*=100
e. Use a personal computer at home			
Kids	19	81	0=100
Adults	14	86	0=100
g. Call a friend or relative just to talk			
Kids	82	17	1=100
Adults	63	37	*=100
h. Have a family meal together			
Kids	65	34	1=100
Adults	64	36	*=100
i. Pray			
Kids	48	52	0=100
Adults	56	44	*=100

SECTION II - POLITICAL KNOWLEDGE

NOW I WOULD LIKE TO ASK YOU A FEW QUESTIONS ABOUT SOME THINGS THAT HAVE BEEN IN THE NEWS. NOT EVERYONE WILL HAVE HEARD ABOUT THEM.

Q.16 *What is the name of the current vice president of the United States?

<u>KIDS</u>		<u>ADULTS</u>
63	Al Gore; Gore	70
<u>37</u> 100	Incorrect/Don't know	<u>30</u> 100

Q.18 Do you happen to know which political party has a majority in the U.S. House of Representatives?

<u>KIDS</u>		<u>ADULTS</u>
34	Democrat	58
$\frac{66}{100}$	Republican/Don't know	$\frac{42}{100}$

Q.20 *What is the name of the President of Russia?

<u>KIDS</u>		<u>ADULTS</u>
33	Boris Yeltsin; Yeltsin	47
$\frac{67}{100}$	Incorrect/Don't know	$\frac{53}{100}$

SECTION III - ATTITUDES

NOW A FEW QUESTIONS ABOUT YOURSELF ...

Q.22 Do you think of yourself as an outgoing person, or as a shy person, or as neither in particular?

<u>KIDS</u>		<u>ADULTS</u>
57	Outgoing	50
14	Shy	15
28	Neither	34
$\frac{1}{100}$	Don't know/Refused	$\frac{1}{100}$

Q.23 Are you interested in science and math subjects or isn't this an interest of yours?

<u>KIDS</u>		<u>ADULTS</u>
68	Interested	55
32	No, not interested	44
$\frac{0}{100}$	Don't know/Refused	$\frac{1}{100}$

Q.29 How do you feel about computers and technology ... do you like them, dislike them, or do you have mixed feelings about them?

<u>KIDS</u>		<u>ADULTS</u>
65	Like	65
7	Dislike	5
28	Mixed feelings	25
$\frac{0}{100}$	Don't know/Refused	$\frac{5}{100}$

Q.34 There are many phone services that offer information about astrology, sports, soap operas, spiritual matters, and the like. Have you ever called one of these services?

Q.34a And what types of phone services have you called? (**DO NOT READ CHOICES**)

<u>KIDS</u>		<u>ADULTS</u>
10	Yes - ASK Q.34a	6
3	Sports	2
3	Astrology	3
3	Soap operas or TV	1
4	Other (SPECIFY)	4
90	No - SKIP TO Q.35	94
$\frac{0}{100}$	Don't know/Refused - SKIP TO Q.35	$\frac{0}{100}$

ASK ALL:

MY NEXT QUESTIONS ARE ABOUT YOUR HOUSEHOLD'S USE OF OTHER THINGS. BUT FIRST, I NEED TO KNOW A LITTLE BIT ABOUT YOUR HOUSEHOLD.

Q.35 How many people live in your household?

KIDS

8 Two

22 Three

35 Four

34 Five to eight

$\frac{1}{100}$ Don't know/No answer

SECTION VII - COMPUTERS

Q.36 Do you have any type of personal computer, including laptops -- such as an IBM PC or a Macintosh in your home? These do not include game machines such as Nintendo or Sega.

KIDS

ADULTS

46 Yes - **ASK Q.37**

31

54 No - **GO TO Q.70(TV MODULE)**

69

$\frac{0}{100}$ Don't know - **GO TO Q.70(TV MODULE)**

$\frac{0}{100}$

Q.37 Do you yourself use the home personal computer on at least an occasional basis? (**IF YES, PROBE:**
Is this everyday, most days, occasionally or rarely?)

KIDS: USE OF COMPUTER AT LEAST OCCASIONALLY		
<u>KIDS</u>	<u>OCCASIONALLY</u>	<u>ADULTS</u>
3 Everyday	9	6
13 Most days	35	7
20 Occasionally	56	11
4 Rarely	0	2
6 No/Never GO TO Q.61	0	5
* Don't know GO TO Q.61	0	*
<u>54</u> No computer	<u>-</u>	<u>69</u>
<u>100</u>	<u>100</u>	<u>100</u>
	(N=177)	

Q.38 Do you use your home computer in connection with school, a job, for personal use, or some combination of these?

KIDS: USE OF COMPUTER AT LEAST OCCASIONALLY		
<u>KIDS</u>	<u>OCCASIONALLY</u>	<u>ADULTS</u>
* Job only	*	17
16 School only	37	12
3 Personal only	9	21
* Job and school	1	-
1 Job and personal	3	-
15 School and personal	37	-
All three --		
4 job, school, personal	10	-
1 Don't know	3	-
No computer/ <u>60</u> Don't use computer	<u>-</u>	<u>74</u>
<u>100</u>	<u>100</u>	<u>100</u>
	(N=177)	

Q.39 How much would you miss your home computer, if you no longer had one? (**READ CATEGORIES**)

<u>KIDS</u>	<u>ADULTS</u>
42 A lot	65
40 Some	23
14 Not much	8
2 Not at all	4
<u>2</u> Don't know/Refused	<u>*</u>
100	100
(N=177)	(N=1137)

Q.40 Now I'd like to ask you about some of the kinds of things people do with their home computers. First of all, how often, if ever, do you use your computer at home to do word processing ... often, sometimes, hardly ever, or never?

<u>KIDS</u>	<u>ADULTS</u>
42 Often	56
41 Sometimes	27
14 Hardly ever	9
3 Never	8
<u>0</u> Don't know/Refused	<u>*</u>
100	100
(N=177)	(N=1137)

Q.40a And how often, if ever, do you use your computer at home for drawing pictures or art ... often, sometimes, hardly ever, or never?

<u>KIDS</u>	KIDS: USE OF COMPUTER AT LEAST <u>OCCASIONALLY</u>
6 Often	15
11 Sometimes	27
11 Hardly ever	30
12 Never	27
* Don't know/Refused	1
No computer/ 60 Don't use computer	=
100	100
	(N=177)

Q.42 How often, if ever, do you use your computer at home to play games ... often, sometimes, hardly ever, or never?

<u>KIDS</u>	<u>ADULTS</u>
43 Often	24
25 Sometimes	25
17 Hardly ever	21
14 Never	30
<u>1</u> Don't know/Refused	<u>0</u>
100	100
(N=177)	(N=1137)

SECTION VIII - ON LINE

Q.44 (Does the/Do any of the) personal computers have a modem that allows you to connect to other computers through the telephone lines?

<u>KIDS</u>		<u>ADULTS</u>
15	Yes	12
23	No GO TO Q.60a	14
2	Don't know GO TO Q.60a	*
	No computer/ Don't use computer	
<u>60</u> 100	-	<u>74</u> 100

Q.45 Do you or anyone in your household ever use the modem to connect to any computer bulletin boards, information services such as Compuserve or Prodigy, or other computers at other locations? (**IF YES, PROBE:** Is that you, someone else, or both?)

<u>KIDS</u>		<u>ADULTS</u>
41	No - SKIP TO Q.60a	0
8	Respondent only	59
23	Respondent and other	41
3	Other only - SKIP TO Q.60a	0
<u>1</u> 100 (N=79)	Don't know - SKIP TO Q.60a	<u>0</u> 100 (N=546)

Q.46 Do you or anyone in your household belong to any of the commercial information services such as Compuserve, Prodigy, America On-line, or Genie?

<u>KIDS</u> ¹⁶	<u>ADULTS</u>
49 Yes	48
29 No SKIP TO Q.48	52
<u>22</u> Don't know SKIP TO Q.48	<u>*</u>
100	100
(N=35)	

Q.48 How often, if ever, do you use the modem to dial up any computer bulletin boards ... often, sometimes, hardly ever, or never?

<u>KIDS</u> ¹⁷	<u>ADULTS</u>
23 Often	25
35 Sometimes	28
29 Hardly ever	23
13 Never	24
<u>0</u> Don't know/Refused	<u>*</u>
100	100
(N=35)	(N=333)

¹⁶CAUTION: Small sample.

¹⁷CAUTION: Small Sample.

Q.49 Do you ever use the modem to dial up a computer that's located at school or work?

<u>KIDS</u> ¹⁸	<u>ADULTS</u>
2 Yes, at work	42
0 Yes, at school	10
0 Yes, both	5
96 No - SKIP TO Q.51	43
<u>2</u> Don't know - SKIP TO Q.51	<u>*</u>
100	100
(N=35)	(N=333)

Q.51 I'd like to ask you a few questions about what you do when you use the modem to dial up another computer. How often, if ever, do you send or receive electronic mail ... often, sometimes, hardly ever, or never?

<u>KIDS</u> ¹⁹	<u>ADULTS</u>
20 Often	29
19 Sometimes	24
38 Hardly ever	22
23 Never	24
<u>0</u> Don't know/Refused	<u>1</u>
100	100
(N=35)	(N=333)

¹⁸CAUTION: Small Sample.

¹⁹CAUTION: Small Sample.

Q.52 How often, if ever, do you communicate with other people through on-line forums, discussion lists, or "chat groups" ... often, sometimes, hardly ever, or never?

<u>KIDS</u> ²⁰	<u>ADULTS</u>
23 Often	12
45 Sometimes	20
6 Hardly ever	26
26 Never	41
<u>0</u> Don't know/Refused	<u>1</u>
100	100
(N=35)	(N=333)

Q.53 How often, if ever, do you dial up in order to get news, weather, or sports information ... often, sometimes, hardly ever, or never?

<u>KIDS</u> ²¹	<u>ADULTS</u>
17 Often	11
19 Sometimes	17
42 Hardly ever	17
22 Never GO TO Q.55	55
<u>0</u> DK/Refused GO TO Q.55	<u>*</u>
100	100
(N=35)	(N=333)

²⁰CAUTION: Small sample.

²¹CAUTION: Small sample.

Q.54 Which types of information do you get -- news, weather, sports?
[ENTER ALL THAT APPLY]

<u>KIDS</u> ²²	<u>ADULTS</u>
50 News	75
31 Weather	53
74 Sports	36
<u>0</u> Don't Know (N=26)	<u>6</u> (N=151)

Q.56 How often, if ever, do you dial up in order to do research for work or school, or to communicate with someone at work or school ... often, sometimes, hardly ever, or never?

<u>KIDS</u> ²³	<u>ADULTS</u>
29 Often	31
38 Sometimes	32
16 Hardly ever	10
17 Never	27
<u>0</u> Don't know/Refused 100 (N=35)	<u>*</u> 100 (N=333)

SKIP Q.57

²²CAUTION: Small sample.

²³CAUTION: Small sample.

Q.58 How often, if ever, do you dial up to play games ... often, sometimes, hardly ever, or never?

<u>KIDS</u> ²⁴	<u>ADULTS</u>
17 Often	5
37 Sometimes	12
31 Hardly ever	15
15 Never	68
<u>0</u> Don't know/Refused	<u>0</u>
100	100
(N=35)	(N=333)

*Q.59a Do you use your modem for any activities besides those we've talked about? (**RECORD ALL MENTIONS**)

<u>KIDS</u> ²⁵	<u>ADULTS</u>
64 None/No others	78
1 Connect to other non-commercial computers	2
- Faxing	7
- Personal use (faxes)	5
- Work related	5
- Downloading files	2
- Other	3
<u>35</u> Don't know/No answer	<u>1</u>
100	100
(N=35)	(N=546)

²⁴CAUTION: Small sample.

²⁵CAUTION: Small sample.

ASK ALL:

*Q.60a Do you use your home computer for any other activities besides those we've talked about? (**DO NOT READ LIST. CODE ALL MENTIONED**)

<u>KIDS</u>	<u>ADULTS</u>
2 Writing/Word processing	-
1 Keeping business records, inventory, etc.	7
* Programming	4
1 Keeping records for hobbies (e.g., sewing, ham radio, etc.)	5
1 Music	2
1 Educational/Schoolwork	-
- Genealogy, family tree	3
- Help for disabled person	1
- Graphs, charts	6
- Mailing lists	3
- Desktop publishing	3
- Interior design	1
- Pictures/Art	3
2 Other (SPECIFY)	19
88 No other uses/nothing else	67
4 Don't know/Refused (N=177)	5 (N=1137)

Q.68 Sometimes it's said that kids are more comfortable with computers than their parents are. In general, do you think your parents are more comfortable using computers than you are, less comfortable, or is there no difference?

KIDS

13 More comfortable

13 Less comfortable

17 No difference

(DO NOT READ) One is more/

1 One is less comfortable

2 Don't know/Refused

54 No computer in home
100

**SECTION IV - TV VIEWING
Q.70 ASK OF ALL RESPONDENTS**

A FEW QUESTIONS ABOUT TELEVISION ...

Q.70 Generally, how satisfied are you with the choice of things you can see on television these days? Are you ...

KIDS

ADULTS

21 Very Satisfied

14

55 Fairly Satisfied

43

19 Not Too Satisfied

29

4 Not At All Satisfied

11

(DO NOT READ) Does not apply/

1 Irrelevant/Don't care

2

0 Don't know/Refused
100

1
100

SECTION V - HOME VIDEO/CABLE

Q.79 Do you have a VCR or Video Cassette Recorder, in your household?

<u>KIDS</u>	<u>ADULTS</u>
96 Yes	85
4 No - GO TO Q.92	15
$\frac{0}{100}$ Don't know/Refused - GO TO Q.92	$\frac{*}{100}$

Q.80 How often, if ever, do you use your VCR to play videos you have rented or purchased ... often, sometimes, hardly ever, or never?

Based: Respondents with VCR's

<u>KIDS</u>	<u>ADULTS</u>
60 Often	43
30 Sometimes	35
8 Hardly ever	17
2 Never	5
$\frac{0}{100}$ Don't know/Refused (N=389)	$\frac{*}{100}$ (N=3267)

Q.81 Generally, how easy is it for you to find something in the video store that you are interested in watching at home? **(READ CATEGORIES)**
Based: Respondents with VCR's

<u>KIDS</u>	<u>ADULTS</u>
30 Very Easy	29
55 Fairly Easy	42
11 Not Too Easy	15
3 Not At All Easy	5
(DO NOT READ) Don't have a store/ * Don't use a store	7
<u>1</u> Don't know/Refused 100 (N=389)	<u>2</u> 100 (N=3267)

Q.82 How often, if ever, do you use your VCR to record television programs ... often, sometimes, hardly ever, or never?
Based: Respondents with VCR's

<u>KIDS</u>	<u>ADULTS</u>
18 Often	23
33 Sometimes	26
31 Hardly ever	28
18 Never	23
<u>0</u> Don't know/Refused 100 (N=389)	<u>*</u> 100 (N=3267)

Q.83 Do you, yourself, know how to set the timer on your VCR to automatically record a program that will be televised in the future?
Based: Respondents with VCR's

<u>KIDS</u>	<u>ADULTS</u>
65 Yes	66
34 No	33
$\frac{1}{100}$ Don't know/Refused (N=389)	$\frac{1}{100}$ (N=3267)

ASK ALL:

Q.92 All things being equal what's your favorite way to watch a movie: would you prefer to go out to a theater or would you prefer to watch at home?

<u>KIDS</u>	<u>ADULTS</u>
47 Go out to a theater	27
49 Watch at home	67
3 (DO NOT READ) Depends on movie	4
$\frac{1}{100}$ Don't know	$\frac{2}{100}$

SKIP TO Q.96 IF 2 OR 3 AT Q.79. ASK ONLY IF 1 AT Q.79

Q.93PV What's your favorite way to get a movie to watch at home: from a video store, from Pay Per View or watching what's on Cable or regular TV?

<u>KIDS</u>	<u>ADULTS</u>
81 Video store	53
4 Pay Per View	6
15 Watch Cable/Regular TV	37
* Don't know/Refused	4
$\frac{0}{100}$ Don't have a VCR	$\frac{-}{100}$ (N=575)

Q.96 Is there a video game system such as Sega or Nintendo that can be hooked up to a TV set in your household?

<u>KIDS</u>	<u>ADULTS</u>
83 Yes - ASK Q.96a	40
16 No - GO TO Q.D2	60
<u>1</u> Don't know - GO TO Q.D2 100	<u>*</u> 100

Q.96a How often, if ever, do you yourself play this video game system ... often, sometimes, hardly ever, or never?

<u>KIDS</u>	<u>ADULTS</u>
27 Often	5
26 Sometimes	7
22 Hardly ever	12
8 Never	16
* Don't know/Refused	*
<u>17</u> No video game system 100	<u>60</u> 100