

**PEOPLE ARE STILL WORRIED,  
BUT MOST ARE GETTING PREPARED FOR Y2K:  
Changing Public Attitudes and Behaviors Toward Y2K Across 7 Months  
[February 1999 to September 1999]  
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Executive Summary

*A survey of public knowledge of the Year 2000 Issue, concern about potential Y2K problems, and Y2K preparedness plans was administered twice. The first sample, collected in February 1999 included 1,071 Southern California adults and the second sample, collected 7 months later in September 1999, included a similar sample of 917 Southern California adults.*

*Results of the first survey demonstrated that in early 1999 the majority of adults expressed concern about the possible Year 2000 failure of government, bank, utility and medical service computer systems. Many planned to celebrate the new year with a stockpile of food and cash.*

*Seven months later, a similar sample showed that concern had dropped. However, half of the adults still felt concerned about problems with personal computers, and between 40% and 50% were concerned about government computers, credit cards, bank accounts and the social security system computer operations.*

*Even with reduced concern, one-third of the adults were certain they would have extra cash and food supplies on hand and another third were considering both options.*

*Interestingly, the two samples showed a decline in general attitudes toward technology (click [here](#) for information about our categorization of technology attitudes and [here](#) for a review of changing attitudes toward technology in the workplace over the past four years). In February, 1999 23% of the sample rated themselves Eager Adopters, 63% Hesitant "Prove Its" and 14% Resisters. Seven months later, the Eager Adopters had dropped to 20%, Hesitant "Prove Its" increased to 70% and Resisters dropped to 9%. Thus, over the seven months, people became more hesitant about technology, paralleling results found in the four-year workplace study described earlier.*

*Further replications of these studies are in progress.*

For current research reports [click here](#). For summaries and full text of publications, [click here](#). For newspaper and magazine articles [click here](#).

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## Overview

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A survey which assessed Y2K knowledge, concern and preparation plus items addressing technological attitudes and demographic characteristics was administered to 1,071 adults in the urban Southern

California area between February 1 and February 8, 1999 and another 917 adults in the same geographic region between September 7 and September 14, 1999. The two samples were multi-cultural and representative of the Southern California area with a range of ages, educational levels and family structures. ([click here for demographic table](#)).

The authors have been studying people's reactions to technology for nearly two decades. We have noted that as technology plays an ever-increasing role in our lives, we find ourselves feeling more and more frustrated, uncomfortable, and stressed. That experience is called "TechnoStress." In our book, <http://www.technostress.com/>, we describe how technology adds stress to our lives on an individual, group and societal basis. From our extensive studies, we identify seven areas of TechnoStress and offer easy-to-use techniques to overcome the stress so that technology stays a benefit and not a liability:

- Learning TechnoStress
- Boundary TechnoStress
- Time TechnoStress
- Communication TechnoStress
- Family TechnoStress
- Workplace TechnoStress
- Societal TechnoStress

The entire issue surrounding the Year 2000 is the latest manifestation of Societal TechnoStress. Y2K is adding a tremendous amount of TechnoStress to people's lives. These surveys provide a time-lapse picture of those stresses. Using similar samples of Southern California adults, we examined attitudes and behaviors toward Y2K and technology in general across 7 months. Samples were collected in early February and early September, 1999 which was a critical time period in information flow about Y2K. As early as February, media reports began to appear on national television and in other national media. By September, however, nearly every media outlet was presenting Y2K reports on a regular basis. Based on this change in media, we were interested in assessing any concomitant changes in attitudes and behaviors.

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## Result Highlights

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### 1. Knowledge About Y2K

The table below presents the level of expressed knowledge about the Year 2000 Issue for both survey periods. Clearly, adults knew somewhat more about Y2K by September with 70% feeling they knew a fair amount or more compared with only 58% in the earlier survey.

Survey Dates	Knowledge About the Year 2000 Issue				
	"Not at All"	"A Little"	"A Fair Amount"	"Much"	"Very Much"
February 1999	7%	35%	36%	14%	8%
September	4%	26%	44%	18%	8%

## 2. Primary Y2K Information Sources

The following table shows the percentage of adults in each survey who stated that their primary source of information about the Y2K came from the five categories. The table shows that most adults get their information from the media, particularly television. In the earlier survey, 69% got their information from television, newspapers, magazines and radio. This number rose slightly to 74% in September. The major difference seen here is that over 25% more gained information from television, which parallels the trend we have seen in increased television coverage of Y2K.

Survey Dates	Primary Source of Information About the Year 2000 Issue				
	Television	Newspapers and Magazines	Friends and Relatives	Radio	Internet and Other
February 1999	35%	27%	16%	7%	14%
September 1999	44%	25%	12%	5%	13%

## 3. Concern About Potential Y2K Problems

The table below shows the percentage of people from both surveys who expressed concern about potential Y2K problems at the level of "a fair amount" of concern or more. The data for February are in the second column and the data for the September replication are in the third column. NOTE: the potential problem areas are listed in order from the largest perceived problem in February 1999 to the least perceived problem in February 1999.

In the first survey, people were most concerned about problems with Government Computers, Financial Systems, followed by Airlines, Medical Services and Supplies, Home Technology and Home Appliances. In the recent replication, concern about every potential technology problem area dropped, with the average level of concern across all areas falling from 44% to 32%. Interestingly, most potential problem areas fell about the same percentage, staying in approximately order with the exception of the highlighted areas.

Concern about Y2K problems with Personal Computers fell only 9%, making it the largest level of concern for the second sample. Concern about Electronic Mail, Electrical, Water Utility and Telephone Services also fell less than the average. These comprise many of the areas that have received the most recent media coverage.

(NOTE: Entertainment Technology and Kitchen Appliance concern fell only 4% and 8%, respectively. However, this is most likely due to the fact that they were of least concern in the first survey and have reached a bottom plateau.)

POTENTIAL TECHNOLOGY PROBLEM AREAS	February 1999 Percentage Expressing	September 1999 Percentage Expressing	Change Across 7 Months
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	Concern*	Concern*	
Government Computers	60%	48%	-12
Credit Cards	60%	45%	-15
Bank Accounts	59%	43%	-16
Personal Computers	59%	50%	-9
Social Security Computers	56%	40%	-16
Internal Revenue Service	55%	39%	-16
Airlines	51%	38%	-13
Medical Insurance	47%	32%	-15
Electronic Mail	44%	39%	-5
Hospitals	43%	30%	-13
Medical Services	43%	30%	-13
Pharmacies	40%	27%	-13
Electrical Services	39%	31%	-8
Fax Machines	38%	28%	-10
Home Security Systems	38%	25%	-13
Voice Mail Systems	36%	26%	-10
Telephone Service	36%	27%	-9
Water Utility Service	35%	26%	-9
Food Supply	33%	21%	-11
Entertainment Technology	24%	20%	-4
Kitchen Appliances	21%	13%	-8
<b>AVERAGE CONCERN</b>	44%	32%	-12
*Percentages are based on people who expressed a "fair amount of concern", "much concern" or "very much concern"			

#### 4. Plans to Keep Extra Food and Cash on Hand

The table below shows the percentage of people who are certain they will have extra supplies and cash on hand when the calendar turns January 1, 2000. It is very clear from this table that interest in hoarding supplies and money have not lost their lure over the seven months. In fact, an additional 2% were either thinking or certain to have food and cash on hand. As the media continues to report the importance of maintaining an adequate supply of necessities, it is expected that more people will stockpile food and cash. Interestingly, the [Red Cross](#) is encouraging people to keep enough supplies to last from several days to a week and Japan's government [just announced](#) that it was asking its citizens to stockpile several days worth of food and water. In addition, many governments are having banks stockpile cash including Japan, the United States, Canada, Australia, and Britain.



Survey Dates	EXTRA FOOD		EXTRA CASH	
	"Thinking About"	"Certain"	"Thinking About"	"Certain"
February 1999	31%	32%	38%	34%
September 1999	34%	31%	38%	36%

## 5. Demographic Differences in Concern About the Y2K Crisis

- **In the first survey, there were several demographic differences in (1) knowledge of Y2K, (2) concern about the Y2K crisis, (3) understanding of cyberspace and (4) plans to stockpile extra food and cash.**

NOTE: All differences mentioned below were statistically significant; any differences not mentioned failed to meet statistical significance.

- **AGE**
  - Older adults knew more about Y2K than younger adults.
  - Adults over 25 years of age are more likely to stockpile extra cash and food than those 25 and under.
- **GENDER**
  - Males and Females did not differ.
- **EDUCATION**
  - People with college degrees knew more and understood more about Y2K than people without degrees.
  - People with some college background knew more and understood more about Y2K than those with no college.
  - People with more education were more likely to stockpile extra cash than those with less education.
- **FAMILY STRUCTURE**
  - People with children knew more about cyberspace.
  - Those who were married were more likely to stockpile food than those who were not married.
- **TECHNO-TYPES:**
  - Eager Adopters of technology knew more about Y2K and understood more about cyberspace than Hesitant "Prove Its," who, in turn, knew more than Resisters.
  - The percentages of Eager Adopters (23%), Hesitant "Prove Its" (63%) and Resisters (14%) matched prior studies of reactions to technology with three-fourths of the population being either hesitant or resistant toward technology.
  - Eager Adopters and Resisters were more likely to stockpile extra cash than Hesitant "Prove Its."
- **Similar, but somewhat different results were found in the second survey 7 months later:**
  - **AGE**
    - Younger adults feared more Y2K problems than older adults
    - Baby Boomers knew more about Y2K than the younger subjects.
    - Older adults understood less about Y2K than younger adults

- **GENDER**
  - Males knew more about Y2K, understood more about cyberspace and were less concerned about potential Y2K problems than females.
- **EDUCATION**
  - People with college degrees knew more and understood more about Y2K than people without degrees.
  - People with some college background knew more and understood more about Y2K than those with no college.
- **FAMILY STRUCTURE**
  - People with children knew more about cyberspace.
  - Those who were married and had children were more likely to stockpile cash than all others.
- **TECHNO-TYPES:**
  - Eager Adopters of technology knew more about Y2K and understood more about cyberspace than Hesitant "Prove Its," who, in turn, knew more than Resisters.
  - The percentages of Eager Adopters (20%), Hesitant "Prove Its" (70%) and Resisters (9%) showed that the percentage of Hesitant Users continues to grow (from 63% to 70%) while the percentages of Eager Adopters and Resisters decreased about the same.

[NOTE: For further information about Eager Adopters, Hesitant "Prove-Its" and Resisters [click here](#)]

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## CONCLUSIONS

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Perhaps the most striking changes that we see across the seven months are the following:

1. Concern about potential technology problems fell from around two-thirds of the population to one-half or less. HOWEVER, concern about problems with personal computers, e-mail and utilities fell much less. Those technologies that are generating the most concern are personal computers, government computers, credit cards and banking.
2. Attitudes toward technology in general have also changed with more of the population hesitant toward technology and fewer either eager or resisting.
3. Slightly more people are planning to stockpile food and money.
4. More people know about the Y2K Issue and they are getting more of their information from television and other media.
5. Demographic differences exist and indicate the following:
  - Male Baby Boomers who are more highly educated and who are Eager Adopters know more about Y2K.
  - Male Adults 50 and under, who have children and who are Eager Adopters understand more about cyberspace.
  - Male young adults are more concerned about potential Y2K problems than older adults.
  - Females who are married and have children are more likely to stockpile cash and all females are more likely to stockpile food.

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## RECOMMENDATIONS

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The seven-month trends in our Southern California study parallel those of other national samples. For example, recent USA TODAY/National Science Foundation surveys, completed in December 1998, March 1999 and September 1999 show a drop in anticipated "major" problems from 34% to 21% to 11% across the 9 month period. In addition, 36% of their sample planned to stockpile food and water, up from 26% nine months earlier.

The United States government continues to provide somewhat conflicting messages. John Koskinen, chairman of the President's Council on Year 2000 Conversion says that everything is going fine and the government is ready. However, the CIA recently predicted supply chain ills (Computerworld, October 18, 1999) and the U.S. Senate Special Committee on the Year 2000 Technology Problem recently raised flags about supply chains, health care, local governments, small business, oil and gas companies, nuclear power plants and education (reported in CNET, September 22, 1999). Other reports echo similar sentiments, including admonitions by the U.S. and British State Departments that certain countries should be watched carefully for Y2K failures that may knock out power grids, telephone links and other services.

What can you do to prepare yourselves, your families, your schools, your local governments, your small businesses or your companies from potential Y2K problems? Here are some of our suggestions:

**For individuals, families and the workplace:**

1. Make a list of all technology in your home and at work. Contact the manufacturer and get their word (in writing or off their website) that their product is Y2K compliant.
2. Keep copies of bills from any services for whom you anticipate problems. Our recommendation is to keep a notebook with dividers for each service and place copies of statements, bills, correspondence, website declarations, etc. That way you have clear past performance records to compare to any future statements or bills in question.
3. Prepare, don't panic. Prepare just as you would for an earthquake, hurricane, winter storm or any other possible natural disaster. Remember, there may not be a problem. Store enough food and cash to get you through a few days. Don't withdraw large sums of money. As we get closer to the end of December, make sure your gas tank is on the full side. Don't top off every day, but it is best not to let your gas tank drop below half full.
4. Make your plans and then let go of the concern and worry. Once people have compiled a natural disaster survival kit, they are able to push their concerns about how they will fare during and after the disaster out of their minds. Help yourself prepare for potential Y2K problems and you will feel relieved, not scared.
5. If you are concerned about your personal computer, you may want to purchase a computer program that will assess your PC's readiness for Y2K. Those affordable packages receiving the highest ratings include Norton 2000 (Symantec) and Check 2000 PC Deluxe (Greenwich Mean Time-UTA).
6. Check in with the [Cassandra Project](#) every week or so to see what they recommend. In our experience, their view is the most level-headed of the Y2K sites.

**For Your Community:**

1. Help others learn about potential Y2K problems and assist them with their Y2K Plan.
2. Filter the media. As the year progresses, you will hear and see an increasing amount of

sensationalized media proclaiming the potential disasters that will strike on January 1, 2000. Read each with an eye toward how much you feel a particular problem might affect your life and then examine your plan to see if you are adequately prepared.

**Additional Recommendations:**

<http://www.technostress.com/> teaches you how to recognize and eliminate the TechnoStress in your personal life, your communication, your family interactions, your workplace environment and your surrounding community and society. Heed our advice and become TechnoStress-Free. Let's all have a successful transition into the new millennium.

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[Read more about our research on a potential International Y2K Crisis](#)

More information on related topics can be found at [Dr. Rosen's](#) web site.

E-mail [Dr. Rosen](#).