PEW / INTERNET

PEW INTERNET & AMERICAN LIFE PROJECT

DATA MEMO

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The volume of spam is growing in Americans' personal and workplace email accounts, but email users are less bothered by it.

Spam continues to plague the internet as more Americans than ever say they are getting more spam than in the past. But while American internet users report increasing volumes of spam, they also indicate that they are less bothered by it than before. Users have become more sophisticated about dealing with spam; fully 71% of email users use filters offered by their email provider or employer to block spam. Users also report less exposure to pornographic spam, which to many people is the most offensive type of unsolicited email. Spam has not become a significant deterrent to the use of email, as some observers speculated it might when unsolicited email first began flooding users' inboxes several years ago. But it continues to degrade the integrity of email. Some 55% of email users say they have lost trust in email because of spam.

Spam by the Numbers	
88% of email users have a personal account; 49% of email users have a work account.	
	% of users
Getting more spam in personal email account	37%
Getting less spam in personal email account	10
Have not noticed a change	51
Getting more spam in work email account	29
Getting less spam in work email account	8
Have not noticed a change	55

Source: Pew Internet & American Life Project February-March 2007 Survey (N=2,200). Margin of error for the entire sample is +/- 2%.; for internet users it is +/- 3%. Margins of error for comparison of subgroups are higher.

These are the highlights of a new phone survey about spam that was conducted between February 15 and March 7, 2007, among a nationally representative sample of 2,200 American adults. In the sample 1,405 of the respondents were email users and the margin of error on this group is plus or minus 3 percentage points.

More Spam

Asked if the volume of spam in their inboxes had changed, 37% of email users said spam had increased in their personal email accounts, up from 28% of email users who said that two years ago and 24% three years ago.[1] And 29% of work email users said spam had increased in their work email accounts, up from 21% two years ago and 18% three years ago.

The percentage of email users who report getting less spam has decreased over the last three years to just 10% of email users. About half of email users have not noticed a change in their email inboxes, which is similar to earlier survey findings.

Spam Bothers Users Less

Despite increased volumes of spam for some people, American internet users seem somewhat less bothered by spam than before. The Pew Internet & American Life Project first began tracking users' behavior and attitudes toward spam in June 2003. At that time, when we first asked internet users how spam affected their life on the internet, 25% of users said spam was a big problem for them. Three and a half years later, the percentage of users who say spam is a big problem has dropped to 18%.

On the positive side, the percentage of users who say spam is not at all a problem has risen from 16% to 28%. And the portion of email users who take the middle ground, describing spam as an annoyance but not a big problem, hovers at about half (51%) down from 57% in 2003.

Users underscored this decreasing sense of bother from spam in other ways as well. Fewer users said spam has made using email unpleasant or annoying, 63% in this survey, down from 67% in 2005, 77% in 2004, and 71% in 2003.[2]

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[1] The wording in the surveys has been slightly different. In February 2007, the question included a reference to the inbox of a person's accounts: "Thinking about your personal/work email account…In the past 12 months, have you noticed any change in the amount of spam you received in the inbox of your personal/work email account? IF YES: Are you getting more or less spam in the inbox of your personal/work email than you were before?" In January 2005, the questions read as follows: "Thinking just about your personal/work email account…In the past 12 months, have you noticed any change in the amount of spam you receive in your personal/work email account? IF YES: Are you getting more or less spam in your personal/work email than you were before?" In February, 2004, the question referred to changes since the previous month, which marked the date when the CAN-SPAM Act went into effect: "Thinking about your personal/work email account…Since January 1st of this year, have you noticed any change in the amount of spam you receive in your personal/work email account? IF YES: Are you getting more or less spam in your personal/work account since that date?"

[2] Wording of this question changed slightly: In February 2007, the question asked if spam "made using email unpleasant or annoying." In earlier surveys, the wording asked if spam "made being online unpleasant or annoying."

Why Spam Bothers Users Less

There appear to be several reasons fewer people say that spam is a big problem for them. First, the volume of most offensive kind of spam has decreased. And second, people are becoming more knowledgeable about spam, and they know better how to handle it.

The special case of porn spam

Since first reporting about spam, we noticed that spam with pornographic or adult content constitutes a case by itself. Compared with every other type of spam – for drugs, beauty products, financial opportunities – porn spam elicited intense and visceral reactions from internet users, particularly women. Their personal comments were reflected in the data as well. For example, people reported that the most bothersome thing about spam was exposure to content that was offensive or obscene in nature. And, three times more respondents reported that porn spam bothered them more than any other kind of spam.[3]

Results from this survey show a steady and dramatic reduction in the porn spam. Now, 52% of email users report having received pornographic spam, down from 63% two years ago and 71% three years ago.

Magnifying the impact of this trend, significantly fewer women (who are most upset by porn spam), than men say they received spam with adult content (46% vs. 58%).

Nuanced reactions to spam

There are nuances of differences among respondents, depending on their age and education, on their veteran internet user status, and on their frequency and purpose of email use. Internet users under the age of 50 are more likely than older users to say that spam is annoying. Two-thirds of college graduate internet users are annoyed by spam, compared with 45% of those with less education. Those with accounts both work and personal accounts are more annoyed with spam than those with only one type of account.

More details are in the chart below.

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[3] Please see "Spam: How It Is Hurting Email and Degrading Life on the Internet." Available at: http://www.pewinternet.org/PPF/r/102/report_display.asp

Nuanced Reactions to Spam There are nuances of differences among respondents, depending on their age and education, on their veteran internet user status, and on their frequency and purpose of email use.			
Demographic Group	**Spam is a big problem**	**Spam is annoying**	**Spam is not a problem at all**
All internet users	18	51	28
Internet users age 18-49	18	54	25
Internet users age 50+	18	44	36
Internet users with a college degree	18	62	19
Internet users with less education	19	45	32
Internet users with 6+ years online	19	58	21
Internet users w/less than 6 years online	16	36	41
Daily internet users	18	56	23
Less-frequent internet users	18	38	38
Internet users with both work and personal email accounts	19	60	20
Internet users with only a personal email account	19	49	27
Internet users with only a work email account	18	34	46

Source: Pew Internet & American Life Project February-March 2007 Survey (N=2,200). Margin of error for the entire sample is +/- 2%.; for internet users it is +/- 3%. Margins of error for comparison of subgroups are higher.

A few more users recognize spam.

Most email users have always been confident about being able to identify spam. When we first asked in 2003 how email users identify spam, almost two-thirds, 63%, said "I know it right away when I see it." Most of the rest, 34%, admitted spam was sometimes hard to distinguish from other email.

In this survey, when probing the issue in a slightly different way, we found that more users have become savvier about spam. Just over two thirds of emailers, 68%, say they almost never unintentionally open an email message without realizing it was spam. About a quarter, 27%, say they do that once in a while, and only 5% say they do it often.

A lot more users know how to address spam.

Users increasingly apply filters to keep spam out of their inboxes. Currently, 71% of email users say they use filters provided by their email providers or employers, up from 65% two years ago. Some 41% say they apply their own filters, up from 33% two years ago.[4] Further, 44% of email users say they have taken steps to make it more difficult for others to find their email address.

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[4] The wording of this question changed slightly. In 2007, we asked, "We'd like to know if you have ever

Just over half of email users let it go at that. Some 51% say they check their spam folders at least once in a while. But 46% say they check it almost never or not at all.

In addition, users increasingly behave smartly with respect to spam. Fewer than one quarter, 23%, say they have clicked on a link within a spam message in order to get more information, down from 33% in 2003. And only 4% of email users admitted to action that keeps the spam industry viable, which is ordering a product or service from an unsolicited email. This number has always been low; it was 7% in 2003, 5% in 2004, and 6% in 2005.

What Spam Means to the Institution of Email

When we first wrote about spam four years ago, we highlighted survey results that suggested spam was threatening at least some email users' overall willingness to keep using electronic communication.[5] The Federal Trade Commission also expressed concern about the long-term fate of email as notable numbers of Americans objected to spam.

Revisiting the issue now, we find that that the vast majority of internet users still rely on email. In February of 2003 and 2007 both, 91% of internet users said they were using email. Further, fewer email users now say that spam has eclipsed their email habits. In this survey, 19% of users said spam has reduced their overall user of email, down from 22% in 2005, 29% in 2004, and 25% in 2003.

Not surprisingly, the people who are most likely to report reduced email use are those who say spam is a big problem for them. Among the 18% of email users who say spam is a big problem, about one-third (37%) say that spam caused them to use email less. Only 15% of other email users, who are less affected by spam, say that spam has decreased their use of email.

The other side of the spam story, however, is that spam continues to take a toll on the integrity of email. In 2003, over half of email users, 52%, said that spam has made them less trusting of email in general. That sensibility is largely unchanged. In 2004, 62% of email users said spam made them less trusting of email, 53% agreed in 2005, and 55% agree now.

Again, loss of trust is significantly greater among the fifth of email users who say they consider spam a big problem. Some 82% of this minority says spam has made them less trusting of email in general, compared with 58% of those who are just annoyed by spam, and the 35% who don't consider spam a problem at all.

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done the following things to keep spam out of your inbox." In 2005, we asked, "We'd like to know if you have ever done the following things to avoid receiving spam or junk email in an email account."

[5] Please see "Spam: How It Is Hurting Email and Degrading Life on the Internet."

Still Phishing

While email users report the volume of pornographic spam has decreased, they report no change in the volume of another troubling form of spam, phishing, which is an email designed to trick someone into revealing personal financial information. In January 2005, we first asked email users if they had received unsolicited email requesting personal financial information such as a bank account number or Social Security number. At that time, 35% of respondents answered yes, a figure that remains almost unchanged, at 36%, today.

About the Pew Internet & American Life Project

The Pew Internet Project is a nonprofit, non-partisan initiative of the Pew Research Center that explores the impact of the Internet on children, families, communities, the work place, schools, health care, and civic/political life. Support for the project is provided by The Pew Charitable Trusts. More information available at:
http://www.pewinternet.org

February 2007 Tracking Survey   Final Topline   3/12/07

Data for February 15 – March 7, 2007

Princeton Survey Research Associates International
for the Pew Internet & American Life Project

Sample: *n* = 2,200 adults 18 and older
Interviewing dates: 02.15.07 – 03.07.07
Margin of error is plus or minus 2 percentage points for results based on total sample
     [n=2,200]

SP1 Which of the following best describes how spam affects your life on the Internet?

Based on internet users [N=1,492]

	CURRENT		JUNE 2003
%	18	Spam is a big problem for me	25
	51	Spam is annoying, but not a big problem	57
	28	Spam is not a problem at all for me	16
	3	Don't know/Refused	1

SP2 We'd like to know if unsolicited email, or spam, has affected you in any of the following ways. Has spam…?

Based on email users [N=1,405]

	YES	NO	DON'T KNOW/ REFUSED
a Reduced your overall use of email			
Current	19	80	1
Jan 2005	22	77	1
Feb 2004	29	70	2
June 2003	25	75	*
b Made you less trusting of email in general			
Current	55	43	1
Jan 2005	53	46	1
Feb 2004	62	37	1
June 2003	52	47	1
c Made using email unpleasant or annoying[6]			
Current	63	36	1

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[6] In Jan 2005 and before, item wording was "Made being online unpleasant or annoying."

Jan 2005	67	31	1
Feb 2004	77	22	1
June 2003	71	28	1

SP4 Thinking about your email… Do you have…

Based on email users [N=1,405]

	YES	NO	DON'T WORK/ NOT EMPLOYED (VOL)	DON'T KNOW/ REFUSED
a An email account for work				
Current	49	37	14	*
Jan 2005	46	45	9	*
Feb 2004	45	47	8	*
June 2003[7]	41	59	n/a	*
b A personal email account				
Current	88	12	n/a	*
Jan 2005	86	13	n/a	*
Feb 2004	88	12	n/a	*
June 2003	85	15	n/a	*

SP5 Thinking just about your PERSONAL email account…In the past 12 months, have you noticed any change in the amount of spam you receive in the INBOX of your PERSONAL email account? **IF YES:** Are you getting MORE or LESS spam in the INBOX of your PERSONAL email than you were before?

Based on those with personal email account [N=1,230]

	CURRENT		JAN 2005[8]	FEB 2004[9]
%	37	Yes, getting more spam	28	24
	10	Yes, getting less spam	22	20
	51	No, haven't noticed a change	47	53
	1	Never got spam in my personal account/accounts (VOL)	2	1
	1	Don't know/Refused	1	2

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[7] In June 2003 this question was asked only of email users currently employed full or part-time. Trend figures are based on all email users, with those not currently employed included in the "no" response category.

[8] In Jan 2005, question wording was "Thinking just about your PERSONAL email account…In the past 12 months, have you noticed any change in the amount of spam you receive in your PERSONAL email account? IF YES: Are you getting MORE or LESS spam in your PERSONAL email than you were before?"

[9] In Feb 2004, question wording was "Thinking about your PERSONAL email account…Since January 1st of this year, have you noticed any change in the amount of spam you receive in your PERSONAL email account? IF YES: Are you getting MORE or LESS spam in your PERSONAL email since that date?"

SP6   Thinking just about your WORK email account… In the past 12 months, have you noticed any change in the amount of spam you receive in the INBOX of your WORK account? **IF YES:** Are you getting MORE or LESS spam in the INBOX of your WORK email than you were before?

Based on those with work email account [N=692]

	CURRENT		JAN 2005[10]	FEB 2004[11]
%	29	Yes, getting more spam	21	18
	8	Yes, getting less spam	16	11
	55	No, haven't noticed a change	53	52
	7	Never got spam in my work account/accounts (VOL)	9	17
	1	Don't know/Refused	1	2

SP18 We'd like to know if you have ever done the following things to keep spam out of your inbox. Have you ever…?

Based on email users [N=1,405]

	YES	NO	DON'T KNOW/ REFUSED
a Used filters offered by your email provider or employer to block spam			
Current	71	26	3
Jan 2005[12]	65	32	2
b Applied your own filters to block spam			
Current	41	57	2
Jan 2005	33	65	2
c Taken steps to make it more difficult for others to find out your email address			
Current	44	55	1

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[10] In Jan 2005, question wording was "Thinking about your WORK email account…In the past 12 months, have you noticed any change in the amount of spam you receive in your WORK account? IF YES: Are you getting MORE or LESS spam in your WORK email than you were before?"

[11] In Feb 2004, question wording was "Thinking about your WORK email account…Since January 1st of this year, have you noticed any change in the amount of spam you receive in your WORK account? IF YES: Are you getting MORE or LESS spam in your WORK email since that date?"

[12] In Jan 2005 and before, question wording was "We'd like to know if you have ever done the following things to avoid receiving spam or junk email in an email account."

SP19 How often do you check your spam folder for email messages that might have been sent there by mistake? Do you do this…

Based on email users [N=1,405]

CURRENT

%	22	Often
	29	Once in a while
	46	Never or almost never
	1	(VOL) Don't have spam folder/Don't filter
	1	Don't know/Refused

SP20 How often do you unintentionally open an email message without realizing it was spam? Do you do this…

Based on email users [N=1,405]

CURRENT

%	5	Often
	27	Once in a while
	68	Never or almost never
	1	Don't know/Refused

SP3 Thinking about all of the times you've received unsolicited email, have you ever…?

Based on email users [N=1,405]

	YES	NO	DON'T KNOW/ REFUSED
a Received an unsolicited email containing adult content or pornography			
Current	52	46	2
Jan 2005	63	35	2
Feb 2004	71	28	2
b Ordered a product or service that was offered in an unsolicited email			
Current	4	95	1
Jan 2005	6	94	*
Feb 2004	5	95	*
June 2003	7	93	*

c Clicked on a link in an unsolicited email to get
   more information

Current	23	76	1
June 2003	33	66	1

c Received an unsolicited email requesting
   personal financial information such as a bank
   account number or Social Security number

Current	36	62	3
Jan 2005	35	62	4

Methodology

This report is based on the findings of a daily tracking survey on Americans' use of the Internet. The results in this report are based on data from telephone interviews conducted by Princeton Survey Research Associates between February 15 to March 7 2007, among a sample of 2,200 adults, 18 and older. For results based on the total sample, one can say with 95% confidence that the error attributable to sampling and other random effects is plus or minus 2.3 percentage points. For results based Internet users (n=1,492), the margin of sampling error is plus or minus 2.8 percentage points. In addition to sampling error, question wording and practical difficulties in conducting telephone surveys may introduce some error or bias into the findings of opinion polls.

The sample for this survey is a random digit sample of telephone numbers selected from telephone exchanges in the continental United States. The random digit aspect of the sample is used to avoid "listing" bias and provides representation of both listed and unlisted numbers (including not-yet-listed numbers). The design of the sample achieves this representation by random generation of the last two digits of telephone numbers selected on the basis of their area code, telephone exchange, and bank number.

New sample was released daily and was kept in the field for at least five days. The sample was released in replicates, which are representative subsamples of the larger population. This ensures that complete call procedures were followed for the entire sample. At least 10 attempts were made to complete an interview at sampled households. The calls were staggered over times of day and days of the week to maximize the chances of making contact with a potential respondent. Each household received at least one daytime call in an attempt to find someone at home. In each contacted household, interviewers asked to speak with the youngest male currently at home. If no male was available, interviewers asked to speak with the youngest female at home. This systematic respondent selection technique has been shown to produce samples that closely mirror the population in terms of age and gender. All interviews completed on any given day were considered to be the final sample for that day.

Non-response in telephone interviews 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. In order to compensate for these known biases, the sample data are weighted in analysis. The demographic weighting parameters are derived from a special analysis of the most recently available Census Bureau's March 2006 Annual Social and Economic Supplement. This analysis produces population parameters for the demographic characteristics of adults age 18 or older, living in households that contain a telephone. These parameters are then compared with the sample characteristics to construct sample weights. The weights are derived using an iterative technique that simultaneously balances the distribution of all weighting parameters.

PSRAI calculates a response rate as the product of three individual rates: the contact rate, the cooperation rate, and the completion rate. Of the residential numbers in the sample, 76 percent were contacted by an interviewer and 41 percent agreed to participate in the survey. Eighty-seven percent were found eligible for the interview. Furthermore, 94 percent of eligible respondents completed the interview. Therefore, the final response rate is 29 percent.