

DATA MEMO

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RE: CAN-SPAM a year later

DATE: April, 2005

Email users get more spam, but the harmful impact of unsolicited messages is diminishing for them

A year after the CAN-SPAM Act became law, email users say they are receiving slightly more spam than before, but they are minding it less. More than half of internet users still consider spam to be a big problem, yet the ill effects of spam on email habits and the overall internet experience have declined.

Compared to a year ago, fewer email users now say that spam is undermining their trust in email, eroding their email use, or making life online unpleasant or annoying. These findings suggest that at least for now, the worst case scenario – that spam will seriously degrade or even destroy email – is not happening, and that users are settling in to a level of discomfort with spam that is tolerable to them.

Users also report that their greatest spam irritant, pornographic email, has declined. On the other hand, 35% of email users now report they have received unsolicited email requesting personal financial information, a spamming technique known as “phishing.”

These are the general findings of a nationwide phone survey of 1,421 internet users by the Pew Internet & American Life Project between January 13 and February 9, 2005. The margin of error in the survey is plus or minus three points. Here are some of the statistical highlights:

- 52% of internet users consider spam a big problem

- 28% of users with a personal email account say they are getting more spam than a year ago, while 22% say they are getting less.
- 21% of users with a work email account say they are getting more spam than a year ago, while 16% say they are getting less.
- 53% of email users say spam has made them less trusting of email, compared to 62% a year ago.
- 22% of email users say that spam has reduced their overall use of email, compared to 29% a year ago.
- 67% of email users say spam has made being online unpleasant or annoying, compared to 77% a year ago.
- 63% of email users say they have received porn spam, compared to 71% who said that a year ago.
- 35% of email users say they have received unsolicited email requesting personal financial information.

Further Analysis

Slightly Increasing Volume of Spam

Those who keep tabs on spam report major increases in the volume of spam over the last year. For example, the spam filtering company MessageLabs has reported that in an average month during 2004, spam constituted 73% of email, up from 40% in 2003.¹

The early 2005 survey by the Pew Internet & American Life Project found that while more users report an increase than a decrease in spam over the last year, the numbers are much more modest than the dramatic increases reported by spam filtering companies that track spam volumes. In personal email accounts, which have always received more spam than work email accounts, 47% of users say they noticed no change in volume of spam, 28% said they were getting more spam, and 22% said they were getting less spam than a year ago. In work email accounts, 53% of users reported no change, 21% said they were getting more spam, and 16% said they were getting less spam.

¹ <http://www.messagelabs.co.uk/news/pressreleases/detail/default.asp?contentItemId=1245®ion=>

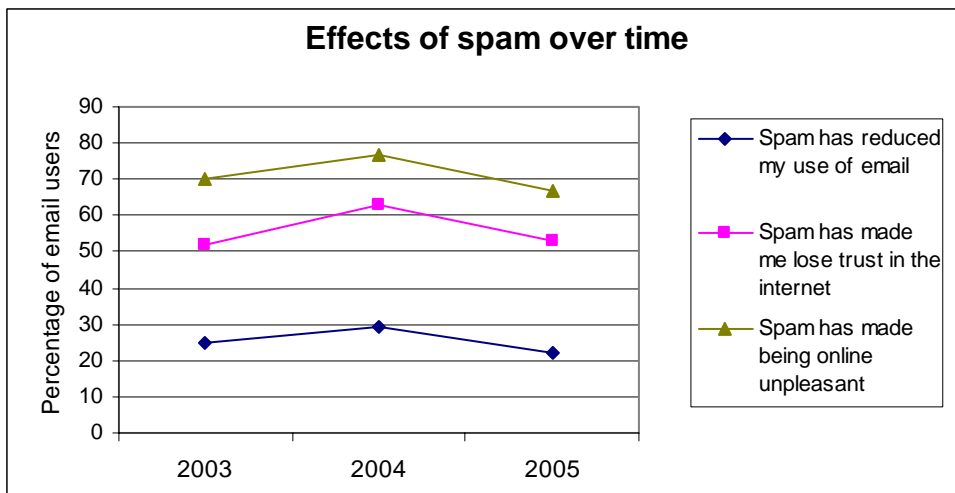
This differential between very big increases in calculated spam volume on the internet (an 83% increase reported by MessageLabs) and very modest yet statistically significant increases in spam reported by emailers, suggests that for whatever reason – better filters, more filters, better spam avoidance behavior by users – not much of that additional spam is making it to the inboxes of users.

Declining Impact of Spam

Over the last year and a half, the Pew Internet & American Life Project has been polling internet users about their awareness, behavior, and attitudes toward spam. In a June, 2003, survey, 25% of internet users reported they were using email less because of spam, and 52% said spam made them less trusting of email in general. In addition, some 71% said that spam made being online unpleasant or annoying.

About 8 months later, and two months after the CAN-SPAM Act became law, the negatives intensified, despite the fact that the law was designed to apply restrictions to unsolicited commercial email. Respondents to our survey suggested that users' frustrations with spam were mounting and the quality of their internet experience was declining. In February, 2004, some 29% of email users said they were using email less because of spam (up 4 points), and 62% said spam had caused them to lose trust in email (up 10 points). And 77% of users said spam made being online unpleasant or annoying (up 6 points). All increases were statistically significant.

Nearly another year later, in January, 2005, the Pew Internet Project again polled internet users on some of the questions about spam. This time, negatives fell back significantly, reverting to their mid-2003 figures or even lower. This suggests the findings from almost one year ago might have represented a spike or a high point, rather than a growing negative trend of the impact of spam on the internet experience.



In January, 2005, some 22% of email users say that spam has reduced their overall use of email – 3 percent less than numbers from 19 months earlier; and 53% say that

spam has made them less trusting of email in general – one per cent more than 19 months earlier. The effect of spam on the internet in general also decreased to a new low; some 67% of users said spam made being online unpleasant or annoying -- 4 points below numbers from 19 months earlier.

Despite declines, spam remains a relatively major issue for internet users: More than half of internet users, 52%, consider spam a big problem. Internet users are more negative about spam than they are about other commonplace internet problems. For example 45% of internet users consider pop-up ads a big problem, and 31% say computer viruses or worms are a big problem. On the other extreme, only 22% consider spam to be no problem at all, compared to 28% who say that about pop up ads and 38% who say it about viruses or worms.

Users are not helping themselves.

There is little evidence that email users have learned more about how to help themselves combat spam. Despite much publicity and press about spam legislation and prosecutions over the last 12 or 15 months, general internet user awareness has changed little. In June, 2003, 57% of users say they had heard “some” or “a lot” about spam. In January, 2005, some 19 months later, that number stood at 60%. The number of those who said they had heard “only a little” remained steady at 26%. Only the number who said they had heard “nothing at all” about spam declined from 17% to 12% over that time.

Email users have changed their spam avoidance behavior very little in the last year and a half. If anything, they have been a little less likely to practice good habits. In June, 2003, 69% of users say they would avoid posting their email addresses to web sites, a common source for spammers to collect email addresses. Now, 64% say so. The number of users who avoid giving out their email addressees or who set up additional addresses for times they might attract spam remained virtually the same. There is one change that suggests more email users are taking the initiative: In June, 2003, 14% of users said they had set up unusual email addresses, which are harder for random name generating spam software to match. That has increased now to 19%.

Still, there seem to be enough email users willing to check out the material that arrives in unsolicited commercial email. Some 6% of email users say they have ordered a product or service offered in an unsolicited email, a number that is virtually unchanged from 7% in June 2003 and 5% one year ago. It is certainly a number adequate to make spam profitable for some purveyors.

Again, about 13% of users say that after responding to an email offer, they later learned it was phony or fraudulent, up from 12% in June 2003 and 9% one year ago.

Changing Content of Spam: less porn, more phishing

Pornographic spam, which has stood out as uniquely offensive to users, has declined significantly. Users who say they have ever received porn spam have decreased from 71% to 63% over the past year. Also, 29% of those who have received porn spam say

they are getting less of it now than they were a year ago, compared to 16% who say they are getting more and 52% who say it is unchanged. Also, this compares positively to a year ago, when 25% of those who had received porn spam said they were getting less; 15% were getting more; and 56% reported no change.

Recently, there has been an uptick in the so-called “phishing,” the term for spam that solicits users’ personal and financial information. In this survey, the Pew Internet Project asked users for the first time if they had ever received unsolicited email requesting personal financial information. Some 35% said they had. Of those, some 2% said they had provided the information.

With changing content of spam comes an evolving definition of spam. Spam first hit the stage with “unsolicited commercial email,” where spammers sold products and services ranging from beauty and health-related products to computer software. In June, 2003, 92% of emailers considered unsolicited commercial email from a sender they don’t know to be spam. Now, 87% consider that spam, a significant drop.

Further, In June, 2003, 74% of emailers considered “unsolicited email from a political or advocacy group” to be spam. A year and a half later, months that spanned the 2004 campaign and election cycle which produced an unprecedented volume of political emails, that number had dropped. In January, 2005, 66% percent of emailers considered unsolicited political or advocacy email to be spam, a statistically significant difference.

Notable Demographic Differences

Men and women were equally likely to say spam was reducing their email use in 2003 (25% for women and 25% for men) and again when that number spiked in 2004 (29% for women and 28% for men). By 2005, the drop in percentage of those who say spam was eroding their email use was much more pronounced for men. By January, 2005, 25% of women said this, compared to 20% of men, a significant difference.

In 2003, men and women reported equal levels of loss of trust in email because of spam (53% for women and 52% for men). In 2004, those numbers rocketed up. Women (65%) were significantly more likely than men (59%) to say spam was causing them to lose trust in email. Then, a year later, loss of trust levels settled back significantly, with women a just little higher (54% for women and 51% for men)

Similarly, in 2003, just about equal numbers of women (72%) and men (69%) said spam make life online unpleasant or annoying. In 2004, the overall number spiked to 77%, with women still a bit more likely to say that (79% women v 76% men). In January, 2005, the numbers dropped to 67% across the board.

Effects of Spam on Internet Use over Time			
<i>Women have been more troubled than men; younger users have been more tolerant; veteran users get more spam and are more bothered.</i>			
	2003	2004	2005
% Reduce email use			
Women	25	29	25
Men	25	28	20
% Lose trust in email			
Women	53	65	54
Men	52	59	51
% Lose trust in email			
< 30 years	45	56	45
30 yrs & older	55	65	55
% Find online life unpleasant or annoying			
< 30 years	70	78	60
30 yrs & older	72	77	70
% Spam volume increased in past year			
Online < 6 yrs	--	--	23
Online > 6 yrs	--	--	31
% Received phishing email			
Online < 6 yrs	--	--	24
Online > 6 yrs	--	--	42
% Find online life unpleasant or annoying			
Online < 6 yrs	--	--	61
Online > 6 yrs	--	--	72

Source: Pew Internet & American Life Project Survey, Jan.13 - Feb.9, 2005. Margin of error is ±3%.

certain gullibility. Once again, younger users were more likely to say they had been cheated online. Some 18% said they had been defrauded, compared to 11% of older users who reported that.

As earlier, those who have been online the longest – the veteran users of at least six years-- continue to be the most informed about spam, the most likely to consider any form of unsolicited email to be spam, and the most aggressive about avoiding it. Yet, probably because of their stronger presence online, veteran users still report a slight increase in their spam volume from a year ago. For example, in personal email accounts, some 31% of those who have been online 6 or more years say they are getting more spam than a year ago, compared to 23% of those who have been online fewer years. Further, many more veterans report receiving the newest type of spam, the “phishing” spam where spammers request personal and financial information.

The youngest user, 18 – 29 years, have traditionally been the most tolerant and least bothered by spam. That trend continues. The 18 – 29 year olds followed the spike in loss of trust in email in February , 2004, and its resettlement to the 2003 levels in January 2005. That is, in 2003, 45% of the youngest users reported a loss of trust in email, compared to 55% of older users. That rose to 56% for younger users and 65% for older users in 2004. It dropped back to 45% for younger users and 55% for older users in 2005.

The quality of online life is reportedly better for the younger users in 2005, a significant change for that group, and one that sets them apart from older users. In 2003, 70% of younger users reported spam made being online unpleasant or annoying, compared to 72% of older users. In 2004, that rose to 78% for younger users and 77% for older users. In 2005, when the overall quality improved overall, 60% of younger users reported online life as unpleasant or annoying, significantly lower than the 70% of older users. Perhaps the more forgiving and casual attitude of younger users extends to a

Some 42% say they have received such spam, compared to 24% of others. Perhaps the increased spam volumes account for greater numbers of veterans who report that spam is making their online lives unpleasant or annoying. Some 72% of 6 year veterans say this, compared to 61% of others.

The national phone survey covered 2201 American adults, of whom 1421 are internet users and was conducted between January 13 – February 9, 2005. The margin of error on data involving internet users is plus or minus 3 percentage points.

The Pew Internet & American Life Project is a non-profit initiative of the Pew Research Center and is funded by the Pew Charitable Trusts to examine the social impact of the internet. The project does not advocate any policy outcomes. It is non-partisan.

January 2005 Daily Tracking Survey

Final Topline

2/11/05

Data for January 13 – February 9, 2005

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

Sample: $n = 2,201$ adults 18 and older

Interviewing dates: 01.13.05 – 02.09.05

Margin of error is plus or minus 2 percentage points for results based on the full sample [$n=2,201$]

WEB1 Please tell me if you ever use the internet to do any of the following things. Do you ever use the internet to.../Did you happen to do this **yesterday**, or not?²

Based on internet users [N=1,421]

	TOTAL HAVE EVER DONE THIS	----- DID YESTERDAY	HAVE NOT DONE THIS	DON'T KNOW/ REFUSED
Send or read e-mail				
Current	90	49	9	*
November 23-30, 2004	92	48	8	*
November 2004	93	54	7	*
May/June 2004	93	45	7	*
February 2004	91	48	8	*
Nov 2003	91	48	8	*

² Prior to January 2005, question wording was "Please tell me if you ever do any of the following when you go online. Do you ever...?/Did you happen to do this yesterday, or not?" In January 2005 Tracking, half the sample was asked old WEB1 and half the sample was asked new WEB1. Current results are for both forms combined.

June 2003	91	49	9	*
April/May 2003	93	52	7	*
March 20-25, 2003	94	50	6	*
March 12-19, 2003	91	52	9	0
March 3-11, 2003	94	54	6	*
February 2003	91	52	8	*
Dec 2002	93	49	7	0
Nov 2002	94	51	6	*
Oct 2002	93	50	7	0
Sept 2002	93	51	7	*
June 26-July 26, 2002	93	46	7	*
March/May 2002	93	50	7	*
Jan 2002	95	52	5	0
Dec 17-23, 2001	95	54	5	*
Nov 19-Dec 16, 2001	95	53	5	*
Oct 19-Nov 18, 2001	94	52	6	*
Oct 8-18 , 2001	95	44	5	*
Oct 2-7, 2001	92	46	7	*
Sept 20-Oct 1, 2001	94	49	6	0
Sept 12-19, 2001	93	42	7	*
Aug 2001	93	51	7	*
Feb 2001	93	53	7	*
Fall 2000	92	49	8	*
July-August 2000	93	43	7	*
May-June 2000	92	44	8	*
April 2000	92	50	8	0

Q19 I'm going to read a list of things that are sometimes a problem for internet users. Please tell me if, for you personally, each one is a BIG problem, a SMALL problem, or NOT a problem at all.

Based on internet users [N=1,421]

	BIG PROBLEM	SMALL PROBLEM	NOT A PROBLEM AT ALL	DON'T KNOW WHAT THIS IS (VOL)	DON'T KNOW/REFUSED
a Spam or junk email	52	26	22	*	*
c Pop-up ads	45	27	28	*	*
d Missing email or email that never arrives	4	22	72	1	1

SP1 How much have you heard or read about SPAM, or junk email? Have you heard or read...?

Based on internet users [N=1,421]

	CURRENT		JUNE 2003 INTERNET USERS
%	30	A lot	29
	30	Some	28
	26	Only a little	26
	12	Nothing at all	17
	1	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=1,295]

		YES	NO	DON'T KNOW/ REFUSED
a Reduced your overall use of email				
Current	22	77	1	
Feb 2004	29	70	2	
June 2003	25	75	*	
b Made you less trusting of email in general				
Current	53	46	1	
Feb 2004	62	37	1	
June 2003	52	47	1	
c Made being online unpleasant or annoying				
Current	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=1,295]

	YES	NO	DON'T WORK/ NOT EMPLOYED (VOL)	DON'T KNOW/ REFUSED
a An email account for work				
Current	46	45	9	*
Feb 2004	45	47	8	*
June 2003 ³	41	59	n/a	*
b A personal email account				
Current	86	13	n/a	*
Feb 2004	88	12	n/a	*
June 2003	85	15	n/a	*

³ 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.

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 your PERSONAL email account? **IF YES:** Are you getting MORE or LESS spam in your PERSONAL email than you were before?

Based on those with personal email account [N=1,116]

	<u>CURRENT</u>		<u>FEB 2004⁴</u>
%	28	Yes, getting more spam	24
	22	Yes, getting less spam	20
	47	No, haven't noticed a change	53
	2	Never got spam in my personal account/accounts (VOL)	1
	1	Don't know/Refused	2

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 your WORK account? **IF YES:** Are you getting MORE or LESS spam in your WORK email than you were before?

Based on those with work email account [N=599]

	<u>CURRENT</u>		<u>FEB 2004⁵</u>
%	21	Yes, getting more spam	18
	16	Yes, getting less spam	11
	53	No, haven't noticed a change	52
	9	Never got spam in my work account/accounts (VOL)	17
	1	Don't know/Refused	2

⁴ 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?"

⁵ 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?"

SP18 We'd like to know if you have ever done the following things to avoid receiving spam or junk email in an email account. Have you ever...?

Based on email users [N=1,295]

	YES	NO	DON'T KNOW/ REFUSED
a Used a separate email address for times you might attract spam			
Current	24	76	*
June 2003	23	77	*
b Avoided posting your email address on web sites			
Current	64	35	1
June 2003	69	30	1
c Avoided giving out your email address			
Current	71	29	*
June 2003	73	27	*
d Set up an unusual email address that is hard to guess			
Current	19	81	1
June 2003	14	85	1
e Used filters offered by your email provider or employer to block spam			
Current	65	32	2
f Applied your own filters to block spam			
Current	33	65	2

SP31 If you received...[INSERT; ROTATE] would you think of this as spam, or not?

Based on email users [N=1,295]

	YES, SPAM	NO	IT DEPENDS (VOL)	DON'T KNOW/ REFUSED
a Unsolicited commercial email from a sender you don't know or can't identify				
Current	87	8	2	3
June 2003	92	6	2	1
b Unsolicited email from a non-commercial group, like a non-profit or a charity				
Current	66	29	2	2
June 2003	65	30	3	2
c Unsolicited email from a political or advocacy group				
Current	66	27	4	4
June 2003	74	21	4	2

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

Based on Email users [N=1,295]

	YES	NO	DON'T KNOW/ REFUSED
a Received an unsolicited email containing adult content or pornography			
Current	63	35	2
Feb 2004	71	28	2
b Ordered a product or service that was offered in an unsolicited email			
Current	6	94	*
Feb 2004	5	95	*
June 2003	7	93	*
c Received an unsolicited email requesting personal financial information such as a bank account number or Social Security number			
Current	35	62	4

SP7a Have you ever provided personal financial information that was requested in an unsolicited email?

Based on those who have gotten unsolicited email requesting personal financial information [N=460]

	CURRENT	
%	2	Yes
	98	No
	0	Don't know/Refused

SP7b In the past 12 months, have you noticed any change in the amount of PORNOGRAPHIC spam you receive? **IF YES:** Are you getting MORE or LESS pornographic spam than you were before?

Based on those who received pornographic spam [N=822]

	<u>CURRENT</u>		<u>FEB 2004⁶</u>
%	16	Yes, getting more pornographic spam	15
	29	Yes, getting less pornographic spam	25
	52	No, haven't noticed a change	56
	3	Don't know/Refused	4

SP8 Have you ever responded to an email offer, only to find out later it was phony or fraudulent?

Based on email users [N=1,295]

	<u>CURRENT</u>		<u>FEB 2004</u>	<u>JUNE 2003</u>
%	13	Yes	9	12
	87	No	90	88
	1	Don't know/Refused	1	*

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 January 13 to February 9, 2005, among a sample of 2,201 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 2.2 percentage points. For results based Internet users (n=1,421), the margin of sampling error is plus or minus 2.7 percentage points. The margin of error for

⁶ In February 2004, question wording was "And since January 1st of this year, have you noticed any change in the amount of PORNOGRAPHIC spam you receive? IF YES: Are you getting MORE or LESS pornographic spam since that date?"

estimates based on Form A or Form B respondents is plus or minus 3.2 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 oldest 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. The overall response rate was 30.1%.

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 by form in analysis. The demographic weighting parameters are derived from a special analysis of the most recently available Census Bureau's 2004 Annual Social and Economic Supplement (March 2004). 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.

