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Is it Really That Big of a Problem? An Investigation into User Perceptions and Realities of Unsolicited Commercial E-mail

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Abstract

Amongst the Internet community today, there is a common taboo against companies using unsolicited commercial electronic mail to reach potential customers. This taboo exists for many reasons, including the foundation of the Internet and the dubious nature of many companies and products who use unsolicited commercial e-mail, a.k.a. “Spam,” to reach potential customers. The purpose of this paper is to investigate the real time and monetary costs of filtering spam from other personal and business e-mail as compared with another form of mass advertising, bulk postal mail, a.k.a. “Junk Mail”. A pilot survey was completed with subjects recording their time spent with junk mail and spam as opposed to their time spent with all postal mail (a.k.a. “snail mail”) and e-mail.

Introduction

As the world becomes more computer literate and dependent on the Internet for everyday tasks, the word “Spam” has entered our vocabulary to mean something other than a potted meat product from Hormel Foods. With the assortment of electronic mail we often receive from friends and business colleagues, there is often mail from people we do not know about subjects which we might not care. Many times the purpose of this unrequested mail is to introduce us to a product or service in order to get us to purchase it. This unsolicited commercial e-mail is often known as spam, a term derived from Monty Python movies where the word Spam is repeated over and over on a menu of various dishes. Spam™ the meat product is often perceived to be a less-than-quality product, rationed to American soldiers during World War II. The same perceptions can be noticed for spam the e-mail product. Purveyors of spam are despised by system administrators, loathed by Internet pioneers, and generally treated as second-class Internet citizens.

However, we wonder why is there such animosity for spammers when that hatred generally does not extend to junk mailers. Junk mail seems to be something we have simply accepted and deal with on an as-needed basis. The same people who lash out at spammers probably go home at night and receive many pieces of junk mail to which they may respond or throw away with little or no fanfare. Some have proposed that the main difference which promotes tolerance of the junk mailers is that junk mailers must pay for their delivery mechanism by the piece of mail, while spammers may deliver their product to millions of others at no per-unit cost. Others have mentioned the monetary cost to connect to their Internet Service Provider, while walking down to the mailbox and retrieving mail is free. A third possibility is that the proliferation of the Internet through its first two decades was for academics, students, and the U.S. government, while snail-mail has always been available for commercial interests. Whatever the reason, we would like to examine the real cost and time differential between user handling of snail mail and e-mail.

Prior Literature

The popular press is consumed with articles about spam. Many articles have appeared recently about spammers (Economist 1997), legal consequences of spam (Time 1997), and ways to avoid spam (Kiplinger’s 1998). However, in the IS and marketing literature, there really is no prior academic literature stream concerning spam. Many different aspects of e-mail have been considered in the literature, including acceptance(Gefen and Straub 1997), privacy (Dowling et al 1997), and gender effects (Gefen and Straub 1997), but there has been little on the effects of spam. We then use this study as a primary piece to call for the need to study the effects of spam more, and we use junk mail as a baseline for comparing attitudes toward spam to other advertising forms.

Hypotheses

Given the little academic literature we have to use in theory development, we use the popular press and culture of the Internet to create initial hypotheses about spam. As we have stated earlier, spam seems to have a stigma attached to it which makes it almost evil. However, there is a literature stream which suggests that people that have a “Type A” personality are more likely to be irritated by interruptions and interrupting factors than those with a “Type B” personality (Kirmeyer 1988). Given
the work of Spence et al. (1987), where the Type A construct is divided into subconstructs of need to achieve and irritability, we feel the irritability subconstruct to be the one of concern for our study. We thus conclude:

H1 Initially, people will rate spam as less helpful than junk mail.
H2a Initially, Type A irritability people will rate spam as less helpful than Type B irritability people will rate spam.
H2b Initially, Type A irritability people will rate junk mail as less helpful than Type B irritability people will rate junk mail.

In addition, we would like to look at the actual quantity and time spent with spam and junk mail. Given the literature and apparent polarization of attitudes about spam in the popular press, we pose the following hypotheses:

H3 People receive more spam than junk mail. \( (N_{\text{spam}} > N_{\text{junk}}) \)
H4 People have a higher ratio of spam to total electronic mail than their ratio of junk mail to total snail mail received. \( (N_{\text{spam}}/N_{\text{all e-mail}} > N_{\text{junk}}/N_{\text{all mail}}) \)
H5 People spend a greater proportionate amount of time with spam to all electronic mail than they do with junk mail to all snail mail. \( (T_{\text{spam}}/T_{\text{all e-mail}} > T_{\text{junk}}/T_{\text{all mail}}) \)

The relative lack of literature in the field allows us to suppose little when it comes to actual numbers on attitude formation with spam and junk mail. Our experiment is probably the first time subjects have been forced to consider the actual number of times spam and junk mail affects their lives. Since we do not know how this exposure will affect their attitudes, but we have no reason to believe the exposure will change the Type A/Type B phenomenon, we propose the following additional hypotheses:

H6 After exposure to personal usage data, people will rate spam and junk mail as equally helpful.
H7a After exposure to personal usage data, Type A irritability people will continue to rate spam as less helpful than Type B irritability people will rate spam.
H7b After exposure to personal usage data, Type A irritability people will continue to rate junk mail as less helpful than Type B irritability people will rate junk mail.

**Experiment**

Eighty-nine undergraduate students at a large, Midwestern university were chosen for the study. All students were juniors or seniors, and nearly all had a computer-related major. The sample selection was chosen to make sure the subjects had adopted computers and electronic mail sufficiently, at least as a part of their curriculum, to be representative of an active Internet user. Subjects were surveyed before the experiment to capture their personality type, their feelings about spam, and their opinions about junk mail before participating in the experiment. They completed the same survey after participating in the experiment. During the week-long experiment, students were asked to keep logs of their regular mail, indicating the number of junk mail messages received and their ultimate disposition. At the same time, students were also asked to keep logs of their e-mail. Electronic logs, which captured the number of mail messages each student received and the number of times each student logged into the mail server, were kept to determine the reliability of the self-reported data.

This study utilized undergraduate students as the sole subject populations due to availability. This does not lead to a major methodological liability in that this population has long been used for research studies. In addition, we feel that undergraduates, specifically those in Information Systems courses, are representative of typical Internet and electronic mail users. These students utilize electronic mail and the Internet for most of their courses and out-of-class communication with friends and family, typical of many Internet and electronic mail users from other service providers.

**Results**

Following this first study, it was determined that there were some problems with the data collection techniques. In particular, in order to obtain the above-mentioned electronic logs of subject e-mail usage, we had to create a separate e-mail server from the main university servers and set up accounts for each subject. This process turned out to be very confusing for the subjects, and the reliability of our data was in question.

Therefore, we have simplified this unobtrusive data collection of subjects’ e-mail usage. We are repeating the study with a new sample group. Data from this second study is still being analyzed for this experiment and will be available by the actual conference dates.

**References**


