



# **Ignorance is Bliss: The Effect of Increased Knowledge on Privacy Concerns and Internet Shopping Site Personalization Preferences**

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## **ABSTRACT**

*Studies have shown that people claim that privacy matters to them but then they often do things while browsing that are risky in terms of privacy. The seeming inconsistency between professed privacy concerns and risky behavior on the Internet may be more a consequence of ignorance rather than irrationality. It is possible that many people simply don't understand the technologies, risks, and regulations related to privacy and information gathering on the Web. In this study, we conducted an experiment to determine the answer to the following question: If people understood the risks and technology, would that knowledge alter their level of privacy concern and their preferences concerning e-commerce Web site personalization? Results indicate that increased awareness of information gathering technology resulted in significantly higher levels of privacy concern and significantly reduced preferences for Web site personalization. Implications of the findings are discussed.*

*Keywords:*     *electronic commerce; privacy; Web*

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## **INTRODUCTION**

Individuals are willing to participate in diverse activities online—from e-mailing friends and looking up personal medical information to purchasing a wide variety of goods and services. While consumers benefit from their activities online, businesses also benefit from information gained while consumers browse. The Internet environment allows business to collect and analyze more personal information with greater ease and efficiency than ever be-

fore. Firms can use several methods to collect information about visitors to their sites. These include overt methods, such as registration forms, Web surveys and order forms, as well as covert methods including spyware, Web bugs and cookies. The information gathered serves as an important input into marketing, advertising, customer service and product-related decisions by online firms. The information gathered also allows firms to offer personalization (i.e., mass customization) to the Web site. This has the potential to benefit both the customer, through

added convenience and options, as well as the firm by encouraging increased sales.

However, the consequences of information gathering are not all positive. The ability of firms to gather so much information creates the risk of possible misuse and generates concerns over information privacy among users. These privacy concerns impede e-commerce. The Federal Trade Commission estimates that online retail sales were reduced by \$18 billion due to privacy concerns in 2002 (Gellman, 2002).

Users claim that privacy is important to them (Westin, 2003). However, they are constantly taking actions that are risky in terms of privacy. Internet users are often required to make tradeoffs, taking actions that sacrifice privacy in return for convenience, such as Web-site personalization. These actions often appear to be in contradiction of their professed attitudes regarding their personal privacy.

For example, Internet users have consistently indicated that they did not want firms to track their Web surfing habits (Westin, 2003). However, people routinely accept cookies through their Web browsers by default. According to one study, users rejected fewer than 1% of cookies in over a billion page views (Websidestory, 2001).

There are several possible explanations for the seeming contradictions between user attitudes and actions. According to Kristol (2001) these include:

- Users know how cookies can collect information and track them but are unconcerned.
- Users don't know how cookies can be used to track them.
- Users have inadequate means to select which cookies to accept so they just give up and select them all.
- Users assume that the firms collecting the information will protect it and use it discreetly (not true in all cases).
- Users assume (incorrectly) that that they are protected by governmental regulations that will prevent Web sites from misusing information about them.

Determining which of these explanations are true regarding users has important policy implications. Companies and interests groups that benefit from the information collected on the Net back self-regulation, and that is the current model used in the United States. Research by authors such as Westin (2003) can be used to support self-regulation on the grounds that people are free to make a choice. According to surveys, the majority of Internet users fall into group that Westin refers to as privacy pragmatists. These people make informed cost-benefit decisions regarding Internet privacy (Westin, 2003). However, such reasoning presupposes that respondents accurately assess their level of knowledge and understanding. It is possible that many who believe they are making informed, rational decisions are, in fact, making irrational decisions based on an unrecognized ignorance of the technologies, laws, and data flows related to online information gathering. If people do not understand the technology, regulations, and so forth, then it is unrealistic to expect them to make an informed choice. Such findings could be used to argue for increased government regulation.

Unfortunately there is evidence that many people do not understand the technology, risks, or regulations related to information gathering on the Web. For example, research shows that "many individuals are unaware of the extent of the personal data stored by government and private corporations" (Roddick, 2001). In addition, the Pew Internet & American Life project found that 56% of Internet users could not identify a cookie and that *even those who claimed to have knowledge of cookies seem confused about the technology* (Fox, 2000). If people understood the type of information collected, the technology used to gather the information and the potential uses of the information, how would this alter their level of privacy concern and their desire for e-commerce Web site personalization?

In this article, we examine the effect of increased knowledge on privacy concerns and desire for mass customization (Internet shopping preferences). In the following sections, we first review the literature on privacy risks,

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