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"Now that you mention it": A survey experiment on information, inattention and online privacy



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ABSTRACT

Personal data lie at the forefront of different business models and constitute the main source of revenue of several online companies. In many cases, consumers may have incomplete information or may be inattentive about the digital transactions of their data. This paper investigates whether highlighting positive or negative aspects of online privacy policies, thereby mitigating the informational problem, can affect consumers' privacy actions and attitudes. Results of an online survey experiment indicate that participants adopt a more conservative stance on disclosing sensitive and identifiable information, even when positive attitudes of companies towards their privacy are made salient, compared to when privacy is not mentioned. On the other hand, they do not change their attitudes and social actions towards privacy. These findings suggest that privacy behavior is not necessarily sensitive to exposure to objective threats or benefits of disclosing personal information. Rather, people are inattentive and their dormant privacy concerns may manifest only when consumers are asked to think about privacy.

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1. Introduction

Agreeing with the terms and conditions and privacy policies of online service providers has become an almost daily task for billions of people worldwide. By ticking the consent box, online consumers usually give permission to service providers to collect, share or trade their personal data in exchange for various online services. Indeed, personal data lie at the forefront of different business models and constitute an important source of revenue for several online companies, such as Google and its subsidiary DoubleClick, Facebook and Amazon (Taylor 2004; Casadesus-Masanell and Hervas-Drane, 2015). Despite giving formal consent, consumers are often unaware of what these digital transactions involve (Acquisti et al., 2015b) and have incomplete information about the consequences of disclosing personal information – when, how and why their data are going to be collected and with whom these data are going to be traded (Acquisti and Grossklags, 2005b; Vila et al., 2003).

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¹ As of March 31, 2016, Facebook had 1.65 billion monthly active users. http://newsroom.fb.com/company-info/

A considerable number of studies (Acquisti 2004; Acquisti and Grossklags, 2005a; Acquisti et al., 2015a; Brandimarte and Acquisti, 2012; Chellappa and Sin, 2005; Jensen and Potts, 2005; Norberg et al., 2007) and consumer surveys show that consumers are generally concerned about privacy, while the issue of privacy regulation has entered the policy agenda with important challenges being raised, for instance, regarding the scope of government surveillance and the legal framework surrounding data sharing. For instance, reforming data protection rules in the EU is currently a policy priority for the European Commission. At the same time, some online companies (e.g. the search engine DuckDuckGo) use enhanced privacy as a way of differentiating their product (Tsai et al., 2011), or even build their business model around the protection of privacy (e.g. Disconnect.me).

The standard approach to privacy posits that consumers use all available information to make privacy decisions considering the benefits and costs associated with revealing personal information (e.g. Acquisti et al., 2015b; Posner, 1981; Stigler, 1980; Varian, 1997). In other words, each time consumers face a request to disclose personal information to service providers, they process the available information and decide accordingly by evaluating the risks and benefits of this exchange (Chellappa and Sin, 2005; Culnan 1993; Culnan and Armstrong, 1999; Dinev and Hart, 2006; Hann et al., 2008; Hui and Png, 2006; Xu et al., 2010). Sharing personal information provides consumers with benefits that are tangible (e.g. free access to online services, personalized ads, discounts) and intangible (e.g. the possibility to connect with long-lost friends), but also gives rise to potential costs (e.g. risk of identity theft, shame of exposure of personal information, potential exposure to price discrimination, being bothered by an excessive volume of ads).⁵

While consumers may be aware of the many benefits of disclosing personal information, the potential costs are not so clear. There is evidence that consumers tend to disclose their personal information most of the time (Acquisti and Grossklags, 2012; Adjerid et al., 2013, 2016; Beresford et al., 2012; Goldfarb and Tucker, 2012; Olivero and Lunt, 2004); yet, it is questionable whether this is due to the benefits of disclosure generally being considered greater than the associated costs – that is, whether this is an informed and rational choice. To start with, consumers may fail to fully inform themselves, even if the relevant information is readily available. Indeed, although users mechanically accept the terms and conditions by ticking a box, few read the privacy policies (Jensen and Potts, 2004; Privacy Leadership Initiative, 2001; TRUSTe, 2006) and those who do try to read them find them time-consuming and difficult to understand (McDonald and Cranor, 2008; Turow et al., 2005). Furthermore, there is growing evidence emerging from psychology and behavioral economics that bounded rationality and several behavioral biases and heuristics influence individuals' decision-making in this realm. Examples are optimism bias (e.g. Baek et al., 2014), overconfidence (Jensen and Potts, 2005; Brandimarte et al., 2013) and hyperbolic discounting (Acquisti and Grossklags, 2003, 2005a). Consequently, individuals face incomplete information, bounded rationality and behavioral biases, which can affect their choices regarding sharing personal information online (Acquisti, 2004; Acquisti and Grossklags, 2007; Baddeley, 2011; Reidenberg et al., 2015).

In this paper, we experimentally investigate to what extent exposure to information about how online companies deal with personal information (trading or not personal data) influences privacy decisions. In particular, we investigate whether information about the degree of privacy protection has an impact on disclosure actions and on privacy attitudes, as well as on social actions. Becoming more aware of the threats associated with disclosure of personal information could influence consumers to change their own individual behavior – for instance by withholding information, but it could also lead to an increased pressure on policy makers to take action – for instance, by implementing more consumer-friendly regulations. In the language of Hirschman (1970), a consumer could react to information about threats to online privacy by "exit" (withholding their own information) or "voice" (asking for more protection for all users), or both. To the best of our knowledge, this is the first paper to investigate both these aspects. In light of the regulatory activism highlighted above, the effect of information on public opinion and on the willingness to engage in social actions is particularly relevant.

As privacy-related stories attract more headlines in mainstream media, an interesting question is to explore how people react to information regarding privacy reported in the news. Thus, we investigate whether news coverage of actual privacy practices by companies affects users' privacy preferences. To address this question, we conducted an online survey experiment, with around 500 respondents, involving an informational intervention. In particular, we use extracts from newspaper

² For instance, 72% of US consumers revealed concerns with online tracking and behavioral profiling by companies – Consumer-Union 2008–(http://consumersunion.org/news/poll-consumers-concerned-about-internet-privacy/).

³ In January 2012, the European Commission proposed a comprehensive reform of data protection rules in the EU. The completion of this reform was a policy priority for 2015. On 15 December 2015, the European Parliament, the Council and the Commission reached agreement on the new data protection rules, establishing a modern and harmonized data protection framework across the EU. The General Data Protection Regulation (GDPR) will be a law in the beginning of 2018. http://ec.europa.eu/justice/data-protection/reform/index_en.htm

⁴ The interaction between privacy protection regulation and market performance and structure is analyzed in Campbell et al. (2015), Goldfarb and Tucker (2011) and Shy and Stenbacka (2015).

⁵ The three main benefits of the privacy trade-off identified in the privacy literature are financial rewards, such as discounts (Caudill and Murphy, 2000; Hann et al., 2008; Phelps et al., 2000; Xu et al., 2010), personalization and customization of information content (Chellappa and Shivendu, 2010; Chellappa and Sin, 2005) and social interactions and network externalities (Lin and Lu, 2011). See also Acquisti et al. (2015b) for an overview of the cost and benefits of sharing information for both data holders and data subjects.

⁶ As of 26 Jan 2016, there are 2,170,000 hits in Google news category for the search "online privacy". For instance, The Guardian reported a study where Londoners accepted the terms and conditions for access to public Wi-Fi with a clause stating that they accept to give up their eldest children in exchange for Wi-Fi. Most of the participants accepted the clause, however, obviously, did not have to give up their child (http://www.theguardian.com/technology/2014/sep/29/londoners-wi-fi-security-herod-clause).

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