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ScienceDirect

Journal of Interactive Marketing 42 (2018) 46–62

JOURNAL OF INTERACTIVE MARKETING

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A New Information Lens: The Self-concept and Exchange Context as a Means to Understand Information Sensitivity of Anonymous and Personal Identifying Information

Ereni Markos [a,*] & Lauren I. Labrecque [b] & George R. Milne [c]

[a] *Sawyer Business School, Suffolk University, 73 Tremont St. 7th floor, United States*
[b] *Quinlan School of Business, Loyola University Chicago, United States*
[c] *Isenberg School of Management, University of Massachusetts, Amherst, United States*

Abstract

Given technological advances, consumers' sensitivity around personal information is shifting, whereby information once considered innocuous, is now considered more sensitive and warrants more protection. This research examines the self-concept and exchange context as a new lens to understand consumer sensitivity to anonymous and personal identifying information exchange. Two studies examine the role of the public and private self in predicting attitudes toward sharing PII and non-PII items, and across different information exchange contexts. Implications for business and policy makers are provided.

Keywords: Sensitive information; Personally identifiable information (PII); Anonymous information; Self-concept; Private/public self; Consumer privacy; Digital privacy

Introduction

It's 6:00 am; Lily's smart watch emanates a gentile vibration and tone. After hitting 'snooze' a few times, she gets out of bed and is off on her morning run. Back at home, she logs into her Fitbit dashboard to see if she beat her all-time record — 5 miles in 35 minutes. Ecstatic, she shares her achievement with her network of 504 Facebook friends before hitting the shower. On the way to work she stops at a local Starbucks for a coffee, which is waiting at the counter since she placed the order via the Starbucks app on her smartphone. She grabs the coffee and heads to work. During her lunch hour, she scans her email and finds an offer from a favorite retailer letting her know that her favorite underwear is on sale. With a few clicks, she's purchased a few pairs, as well as a new dress for the weekend. "What a great day!" she thinks to herself and she decides to leave work an hour early. On her commute home, she realizes that her Nest smart thermostat isn't expecting her for another hour, so she opens the Nest app on her phone to let it know the new plan — this way the home temperature will be to her liking upon arrival. After dinner, an alert on her phone from Netflix tells her that their algorithms have identified a new show that she may like, so she decides to watch an episode. "That was a good one!" she thinks to her herself as she navigates over to Facebook to share it with friends before going to bed.

The above scenario reflects a typical day in the life of a typical consumer and illustrates the vast number and types of information exchanges/interactions that people face daily in a variety of contexts. From wearable technologies like Fitbit that capture consumers' vital signs and movements, to personalized shopping and social media experiences, consumers face a plethora of choices regarding *what*, *whom* and *in what context* they may share their personal information. Digital platforms, where users maintain online lives and compile a digital footprint, (containing both public and private information) amass information quickly, routinely and sometimes unwittingly from consumers (Labrecque,

* Corresponding author.
E-mail addresses: emarkos@suffolk.edu (E. Markos), llabrecque@luc.edu (L.I. Labrecque), milne@isenberg.umass.edu (G.R. Milne).

https://doi.org/10.1016/j.intmar.2018.01.004
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Markos, and Milne 2011). Much of the information reflected in these online profiles is potentially sensitive as it reflects the consumers' self-concept. Despite the rapid increase in these types of exchanges, the majority of the information that consumers share with companies are neither classified nor protected under the FTC's guidelines, which focus on personally identifiable information (PII) (FTC 2009). Even with the myriad of information captured and exchanged in the above scenario, only select pieces are protected under existing legislative guidelines. At the same time, the current understanding of potential privacy ramifications stemming from a consumer's digital footprint is limited.

Given this, we propose a new lens to examine and understand information sensitivity and exchanges (see Fig. 1). We go beyond recent studies that examine consumer reactions to PII/non-PII (anonymous) data (Markos, Milne, and Peltier 2017; Milne et al. 2017; Ohm 2014; Schwartz and Solove 2011), to examine these information exchanges from a public and private self-schema. This lens, grounded in self-concept theory (Belk 1988, 2013; Jung 1953; Marx 2001; Petronio 2012), reflects much of the basis of the information contained in consumers' digital footprints. Rather than relying upon potentially outdated and limiting classifications, we situate the information types within a private versus public space conceptualization that theoretically reflects the consumer decision-making process. Further, we also respond to the call for privacy research to be more contextualized (Martin and Murphy 2017; Martin and Nissenbaum 2016) by examining sensitivity and/or willingness to disclose across a range of user contexts (interpersonal and commercial exchange partners in both online and offline situations), which go beyond the contexts examined in previous studies.

We conduct two online studies. In Study 1 we look at three exchange contexts – *friend*, *trusted marketer*, and *unknown marketer* – to test whether information sensitivity varies across different contexts. In Study 2, we evaluate willingness to disclose across five exchange contexts — *friend*, *trusted marketer* (*retail and social media*), and *unknown marketer* (*retail and social media*). Findings from Study 1 indicate that both information type (PII vs. anonymous), and exchange partner context (friend, trusted marketer, and unknown marketer) impact sensitivity perceptions. We find some anonymous information is rated as being equally as, or more, sensitive than some PII items. We show that this variability within both PII and anonymous data is explained, in part, by whether the data relates to the public or private self. This finding deviates from a general societal interpretation and legislative focus, which categorize only PII as highly sensitive. Study 2 builds on these findings to show how these attributes (PII vs. anonymous, private-self vs. public-self) affect consumers' willingness to disclose personal information. Finally, we link Study 1 and Study 2 to directly examine the relationship between perceived sensitivity and willingness to disclose information. Examining average ratings across thirty-four information types, we find that information sensitivity partially mediates the relationship between information type and willingness to disclose information.

Our research contributes to existing knowledge in a number of ways. First, building on existing privacy literature (Goodwin 1991; Markos, Milne, and Peltier 2017; Milne et al. 2017; Mothersbaugh et al. 2012; Phelps, Nowak, and Ferrell 2000; Walker 2016), sensitivity and willingness to disclose are explored across new classifications of information, based on the private and public self, for an extended set of items that reflect the modern day digital footprint. Second, it empirically tests information in view of the *public-self* and *private-self*; building on current research by further delineating an expanded set of information items (Goodwin 1992; Mothersbaugh et al. 2012; Phelps, Nowak, and Ferrell 2000; Sheehan and Hoy

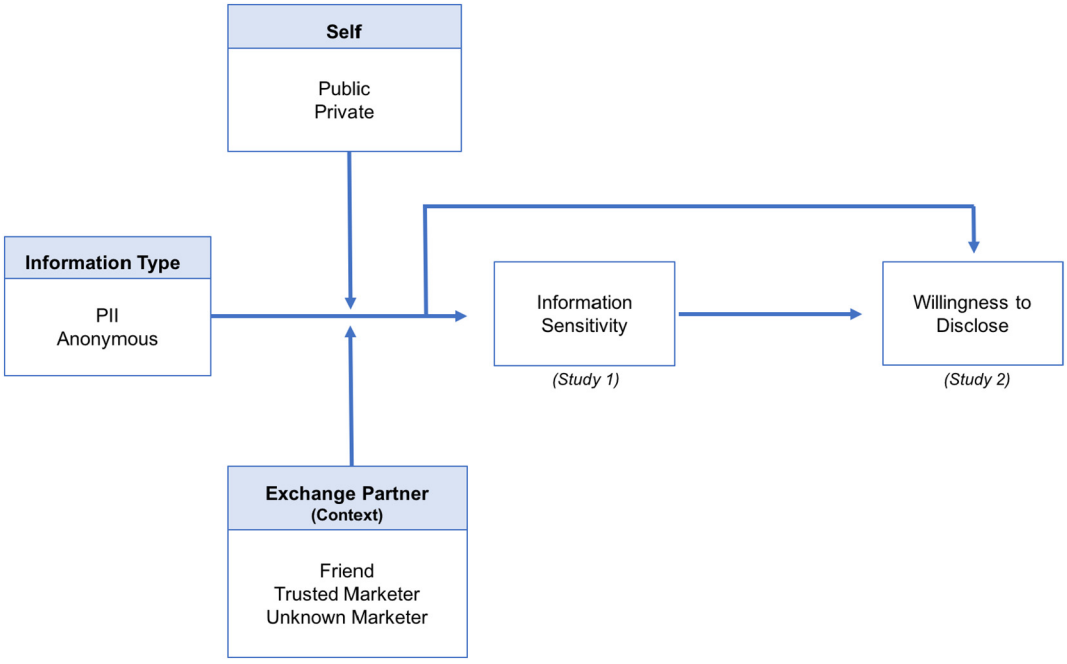

Fig. 1. Framework.