J. of the Acad. Mark. Sci.
DOI 10.1007/s11747-013-0361-6

ORIGINAL EMPIRICAL RESEARCH

Coping with information requests in marketing exchanges: an examination of pre-post affective control and behavioral coping

Patricia A. Norberg · Daniel R. Horne

Received: 15 January 2013 / Accepted: 21 October 2013

Abstract This paper examines consumers' personal information disclosure behaviors and how consumers emotionally respond to and behaviorally cope with requests for personal data. We show through two experiments that individuals' felt emotions toward requests for information change based on the disclosure strategy chosen. We also provide evidence that individuals rely on falsification as a means of behaviorally coping with personal information requests and that falsification mediates pre-to-post disclosure control perceptions. Implications for marketers are discussed.

Keywords Coping · Control · Consumer information disclosure · Falsification

Many exchanges in market-based economies now contain elements of consumer information disclosure. For example, loyalty programs identify individuals and combine their personal information with actual behavioral data, and websites often require individuals to register using personal data to receive the benefits of online information access or for Internet purchases. While eCommerce sites request basic information (name, address, phone and payment details) which allows them to efficiently fulfill orders, other interactions with a connected world require extensive profiles. For example, consumers seeking mortgage or refinancing rates at a website for low cost loans need to provide personal and financial data (including social security number) to access the sought-after information. Professional networking sites like LinkedIn request background on past and current employment, education, location, etc., while dating sites like Match.com ask for details on name, location, profession, physical appearance, activities, interests, opinions. The promise of "big data" suggests that the more marketers know, the better their targeting and communication and, therefore, the more effective and efficient the marketing. If consumers want the benefits of a better mortgage, a better professional career or even a better love life, they must trade their personal information to get it.

The continued increase in consumer data collection has heightened the concern of policy makers and individuals alike due to the vulnerabilities that consumers now face (Dash 2005; Duhigg 2012; London 2002; Rosen 2006; Schwartz 2004). Such concerns may spark restrictive policies or resistance by consumers to such efforts, which can compromise the effectiveness of data driven marketing strategy. Concerns may arise for a variety of reasons, including fear that information will get into the wrong hands (e.g., identity theft (Milne 2003)), irritation that information will be used to annoy the individual through junk mail or telemarketing efforts (Culnan 1993) or simply because of personal preferences for anonymity and solitude (Zwick and Dholakia 2004).

We believe that concern about the type and amount of personal data collected affects how consumers respond to information requests that are part of marketing exchanges. Responses to these requests have significant implications for marketers who are increasingly dependent on data-driven decision making. Concern over personal information disclosure is triggered by the perceived threat of loss of control over that information (Goodwin 1991), while a sense of control is a condition for participation in information-based exchanges (Olivero and Lunt 2004). Control in these studies is defined in terms of what it is consumers seek to control

P. A. Norberg (✉)
Quinnipiac University, 275 Mount Carmel Avenue, Hamden, CT 06518, USA
e-mail: patricia.norberg@quinnipiac.edu

D. R. Horne
Providence College, 549 River Avenue, Providence, RI 02918, USA
e-mail: dhorne@providence.edu

Published online: 21 November 2013

(presence of others, unwanted communications, etc.). In order to retain a sense of control while still reaping the benefits of exchange, consumers may resort to such strategies as omitting data, falsifying data, or some combination of the two (c.f., Lwin and Williams 2003; Lwin et al. 2007).

Falsification and omission as control strategies can have a significant negative impact on companies that rely on consumer data for decision making. Thus, the objectives of our research are (1) to examine the degree to which engaging in falsification allows the consumer to maintain an emotional state of felt control and (2) to identify elicitation techniques that may counterproductively exacerbate falsification. Specifically, we examine three different methods of elicitation, voluntary, required, and validated,[1] and their impact on consumers' felt control and falsification behavior. Though other forms of elicitation exist, such as those on social networks, we focus specifically information requests that are structured and commercial in nature (as compared to social interactions).

It seems reasonable that marketers would want to take steps to reduce falsification and omission, as the very reason for collecting personal information, i.e., improved understanding and targeting of consumers, is compromised by this negative behavior (LaValle et al. 2011). The problem is exacerbated because much personal information is shared with or sold to other companies, creating a network effect of bad data. Thus, it is critical for marketers to understand the consequences of data requests and to develop data collection strategies that optimize the quality of data received.

Theoretically, our examination contributes to the literature by showing how perceptions of control triggered by different elicitation contexts affect information disclosure, and how such disclosure partially mediates the relationship between pre-disclosure perceptions of control and post disclosure perceptions of control. Unlike previous studies in privacy and information disclosure, we rely on theories of control (reactance theory, Brehm 1966; cognitive evaluation theory, Deci and Ryan 1985) and coping (Lazarus and Folkman 1984) to guide the development of the studies we report here. Other areas of marketing management have also relied on behavioral theories of control/coping (Collier and Sherrell 2010; Jaworski 1988; Nyer 1997; Singh 2000), demonstrating the value of consumer theory to marketing practice.

Researchers in the marketing and policy domains acknowledged personal information control to be an issue, defined privacy in terms of control, and/or developed control as a construct in the privacy domain (Goodwin 1991; Jones 1991; Margulis 1977; Margulis 2003; Milne and Gordon 1993; Phelps et al. 2000; Westin 1967). Yet, no theoretically grounded empirical examinations of how perceptions of control prompt consumers to utilize disclosure coping strategies that allow them to regain a sense of autonomy have been published in the marketing domain. Relatedly, the call for more research in emotion-based control and coping in marketing has been voiced previously (Luce 1998).

Practically, the contribution of such research to marketing is an important one. If current elicitation environments prompt maladaptive consumer behaviors that are also detrimental to successful future marketing efforts, then it is important to figure out why the maladaptive behaviors take place and what marketers can do to reduce such behaviors. The question of "how do we stop people from engaging in bad behaviors" might better be reconceptualized as (1) what marketplace actions are creating the bad behaviors in the first place, and (2) what is the consumer attempting to achieve by engaging in such behaviors?

Before presenting the results of the studies, a background on control is provided. Following the studies and discussion, potential marketing consequences of consumer reaction to information requests and marketing implications are offered. Future research suggestions close the paper.

Background and hypotheses

Control is defined as pressuring one toward a specific outcome; such pressure can be triggered by environmental/contextual forces that the consumer perceives as restricting choice (Deci and Ryan 1985). Thus, individuals can construe contextual factors as either supporting autonomy (allowing one to make their own choice) or being controlling (pressuring one toward a particular outcome). This judgment is subjective and can be measured as the emotional state associated with having choice (Deci and Ryan 1987). Consequently, consumers may demonstrate negative behavioral and emotional responses to contextual factors perceived as controlling (see Deci and Ryan 1987 for review). Perceptions of being controlled are positively correlated with negative emotions (e.g., distress and guilt) (Ryan et al. 1985). Marketers can benefit from understanding how their attempts to collect consumer data might be negatively perceived by consumers, which subsequently can negatively impact the organization's effective use of the information gathered.

Brehm (1966) argues that individuals react in a variety of negative ways to an actual or threatened reduction of known choices, depending on the importance of the eliminated or threatened alternative. On a general level, individuals will act in such a way as to reestablish the lost alternative or to eliminate the threat of a loss. In the context of interest to us,

[1] For example, a website may have a two-stage registration process where a validation code is sent to the consumer's email account. Only by providing a genuine email address will the consumer be able to access the desired website.

an example of this is a consumer who must give up personal information to participate in the marketplace to satisfy some need. The request to "give up" something, e.g., a sense of privacy, may be perceived as a threat. Such a threat is a state that a consumer might wish to avoid and must be reconciled in light of the receipt of a benefit, i.e., a desired end state. This prompts the need for coping—behaving in a way that would alleviate perceived restriction on choice while still allowing engagement in the exchange.

The need for coping contains both affective and cognitive dimensions (c.f., Duhachek 2005) and depends on the degree to which the individual feels that the exchange environment threatens autonomy and/or the ability to achieve desired outcomes. A negative emotional state prompts an analysis of the situation and the consideration of coping strategies available to reduce the negative emotion associated with the stressful encounter (Folkman and Lazarus 1988). Behavior-based coping can be used to help navigate the approach-avoidance components of market exchanges (c.f., Krohne 1993) and minimize the negative emotion generated during these exchanges (Luce 1998). Further, emotion-based perceptions of control may influence a decision maker's coping strategy (Luce et al. 1997). In the context of interest to us here, such coping could lead the consumer to potentially falsify information that is then used for marketing decisions.

Elliot and Devine (1994), Folkman (1984), Frijda et al. (1989), Luce (1998), Roseman et al. (1990) and numerous others suggest that emotions are associated with control. Though some researchers suggest that negative emotions and positive emotions can be analyzed in terms of the two dimensions (Larsen et al. 1992; Larsen et al. 2001; Watson et al. 1988), others suggest that specific emotions should be examined on an individual basis because situations can trigger different negative or positive emotions and felt intensities of these different emotions (Roseman 1991; Roseman et al. 1990). Not all felt emotions trigger behaviors; rather, this reaction depends on the action readiness and appraisal related to the emotion (Frijda 2004; Frijda et al. 1989). Action readiness, also known as behavior readiness, is defined as the dimension of emotion that links experience to behavior (Frijda et al. 1989). Appraisal is defined as the dimension of emotion that relates to evaluation of favorability or harmfulness to an individual's objectives, motives, etc. (Frijda et al. 1989).

Relating this body of research to personal information disclosure allows us to frame what underlies consumers' overt information provision behaviors in the marketplace. Consistent with the literature that examines discrete emotions (e.g., Frijda et al. 1989; Roseman 1991), we suggest that (1) different elicitation contexts will trigger different types of emotions felt (e.g., fear, guilt, alertness), and (2) the intensity of only certain types of felt emotion will change pre-to-post disclosure.

Because previous research does not consistently demonstrate how various positive or negative emotions might trigger appraisal of and action in the disclosure context, we further examine this phenomenon. We hypothesize that different kinds of emotions are elevated based on the elicitation context, given that the individual is expected to appraise each context differently and will feel different levels of control. We also hypothesize that a greater variety of felt negative emotions will be elevated in-process when required to disclose as compared to other contexts (voluntary disclosure or when disclosure is to be validated). This is expected because appraisal in the required condition is likely to trigger heightened evaluation of the harmfulness of the situation *and* of the actions available to the consumer. This elevated emotional state can be reduced significantly post-process in the required condition, since there is an option to falsify. Such a process can lead to less valid personal information in the hands of the marketer.

H1: Different types of felt negative emotion (e.g., fear, irritation, guilt, etc.) will be elevated based on elicitation context (voluntary, required, validated).

H2: (a) A greater variety of negative emotions will be elevated in the required condition (compared to volitional and validated conditions), and (b) the level of elevation in the required condition will be significantly reduced from pre- to post-process.

Related to the felt emotion, a consumer may perceive the provision of personal data as an increased exposure to possible abuse or misuse, such as identity theft or commercial sharing/selling of data which creates a sense of lost privacy and a potential for unwanted mail, spam, text and/or phone solicitations. This consumer can cope with the possibility of a loss by selectively controlling the level and "quality" of information provided. Research indicates that people are not always truthful (Mazar et al. 2008) and frequently falsify and omit when providing personal information requested during marketing exchanges (Horne et al. 2007). This type of behavioral action is referred to as problem-focused coping and relates to primary control (Folkman and Lazarus 1988; Lazarus and Folkman 1984).

Previous research also shows that consumers think about personal information in terms of levels of sensitivity (Ackerman et al. 1999). Phelps et al. (2000) found that consumers were most sensitive and thus least willing to provide financial information and personally identifying information. The work of these authors is consistent with a risk assessment on the part of consumers, with information provision potentially having elements of physical, financial and psycho-social risk in varying degrees.

It is intuitive that people will falsify information that is more sensitive at a greater rate as compared to falsification rates of less sensitive information. However, we do not know

if increased restrictiveness of the information request itself changes the degree to which consumers attempt to maintain control of just certain personal details, or if they just become sensitive to controlling all of their personal information more generally. The former would predict that people will falsify only the more sensitive pieces of information at a greater rate when they are required to disclose. The latter predicts that the feelings of loss of control will increase falsification of all types of information, even the less sensitive.

Based on the control literature (e.g., Deci and Ryan 1987; Frijda et al. 1989), because appraisal of a forced request for information (required disclosure) is likely to trigger heightened evaluation of harmfulness of the situation and of the actions available to the consumer, behavioral based coping through falsification will be greater. More specifically, we hypothesize that falsification will be greatest in contexts where personal data provision is required, because there is an attempt of the marketer to control the outcome, as compared to instances when it is asked for voluntarily. When information is required, the consumer will perceive the context as controlling and will falsify information required *across* information category, rather than just falsifying certain kinds of data at a greater rate. Marketers therefore need to consider how the quality of information is impacted by their elicitation techniques.

H3a: Consumers will falsify personal information items at a greater rate when information is required as compared to when it is voluntary.

H3b: Personal information items across all categories of information will be falsified at a greater rate when disclosure is required.[2]

Given that individuals are expected to behaviorally respond to their perceptions of control, Luce (1998) suggests that there are two time periods for which control should be measured, one that captures in-process perceived control and one that captures perceptions of control retrospectively (post-exchange). In-process control is reflected through emotion based reactions to restrictions on autonomy *when considering* the exchange request. "Retrospective" or post-process control equates to the emotional reflection about autonomy *after behaviorally engaging* in the exchange. Luce (1998) found that increased negative in-process emotion led to greater selection of avoidance, when available, as a coping strategy to reduce negative feelings. In the context under study here, we suggest that consumers feel heightened levels of negative emotions during the process of exchange when they feel controlled and are more likely to use falsification as a coping strategy to mitigate negative emotion associated with the sense of being controlled.

In short, we suggest that when consumers feel a sense of discomfort or uncertainty in the exchange because choice is restricted, they are more likely to engage in falsification behavior. However, behavioral actions may not fully alleviate negative feelings towards the exchange (e.g., falsification (lying) itself may also be associated with negative emotions), leaving some sense of discomfort post-process. Thus, we expect actual disclosure to partially mediate the relationship between in-process control and post-process control and formally hypothesize that:

H4: Behavioral based coping, as measured by falsification, partially mediates the relationship between in-process control and post-process control.

The following experiments are presented to test our hypotheses. Because measuring in-process control perceptions is operationally complex, we use a scenario-based experiment to examine emotions associated with requests for personal information (experiment 1) and a real disclosure setting to examine actual falsification behavior and its effect on control perceptions (experiment 2).

Experiment 1

Experiment 1 used a scenario-based, mixed experimental design to measure emotion before and after disclosure, relying on a subset of items from Watson et al. (1988) Positive and Negative Affect Scale[3] (PANAS) to capture in-process and post-process emotion-based control (see Appendix).

Participants and design

Eighty-six students from a northeast university were recruited to participate in an online experiment. A 3 between-subject disclosure (voluntary, required, validation) by 10 within-subject (in-process, post-process) measures of emotion design was used to test the change in emotion based on disclosure options. The scenario was the same across conditions, with the exception of the data request manipulation itself (voluntary, required, validation). Of the 86 participants, 12 were eliminated either because the questionnaires were not completed (10 respondents) or because the time taken to complete the questionnaire was longer than 10 min, indicating that the participant was sufficiently distracted while taking the online survey (2 respondents). This resulted in 74 usable surveys with a gender split of 65% female, 35% male.

[2] Omission is also a potential coping strategy in the voluntary condition. However, as it is not available in the required conditions, falsification was used for comparisons across conditions.

[3] We used only a subset of PANAS items for two reasons. First, we wanted to ensure that we did not lose the participants to boredom. Second, because a number of the items on the PANAS did not map well to the study context, we felt it was important, given the context, to use a subset of the emotions that would not be confusing to participants.

Procedure

Participants in the experiment were asked to read a short scenario and identify with the person and situation therein. The scenario described an individual who was in need of an important piece of information for a business plan that was to be presented to the individual's employer. They were told that success in completing and presenting the business plan would lead to career advancement and greater compensation, and therefore the need to access the information was high. The scenario noted that the focal person was able to locate a website that contained the information but had to register to gain access to the information. Participants were then presented with the items needed for registration (name, street address, city/state/zip, email address, gender, date of birth). They then proceeded to the next screen and were asked to complete the negative and positive affect scales as related to how this person felt when *first faced* with the information request (in-process negative and positive emotion).

After completing the emotion scale items, participants clicked "Next" again. In the voluntary and required conditions, they were asked to indicate the degree to which the person in the scenario would misrepresent their data (4-point completely true to completely false scale). Additionally, participants in the voluntary condition were asked if they would omit any data requested. In the validation condition, respondents were told that the focal subject had to pay for access to the information and therefore had to provide accurate information since it would be validated and checked for accuracy (with results emailed). This procedure was used to sensitize the respondent to their own actual disclosure behavior in the conditions presented.

After responding to the information page, participants again clicked "Next" and were asked to complete scale items regarding their feelings about providing the personal data *after* the provision had taken place (post-process negative and positive emotion).

Measures

In-process/post-process negative/positive emotion Emotion items were adapted from PANAS and appear in the Appendix. The scale items were the same for both in-process and post-process, and participants were asked to indicate the degree to which they felt each emotion on a five-point (1-not at all to 5-extremely) scale.

Covariates Covariates were collected for experience with disclosure, internet buying, privacy concern, gender and beliefs about falsifying information.

Manipulation and covariate checks

The manipulation check showed that participants processed the scenarios correctly, reflected in different perceptions of information control by condition, as measured by "I have a choice in completing the form" on a 5-point agree-disagree scale [$F(2,69)=4.38$, $p=.016$]. Examination of covariates showed that gender was significantly related to in-process emotions of *distress* [$F(1,67)=9.45$, $p<.01$], *upset* [$F(1,67)=6.20$, $p<.05$] and *alert* [$F(1,66)=4.77$, $p<.05$]. Attitude toward misrepresentation was significantly related to the post-process emotion of *determined* [$F(1,67)=4.59$, $p<.05$]. These covariates were retained for the relevant analysis. All other covariates were dropped.

Results

Emotion by condition – in process and post process Mean in-process and post-process scores for each emotion by condition are shown in Table 1. Multivariate ANOVA was used to examine the differences in emotion by condition, and these results are shown in Table 2. MANOVAs for both in-process emotion by condition [$F(20,112)=3.77$, $p<.001$] and post-process emotion by condition [$F(20,118)=1.80$, $p<.05$] were significant, in support of H1. Analysis shows that in process, *guilty* ($F=10.00$, $p<.000$), *enthusiastic* ($F=2.92$, $p=.06$), *alert* ($F=4.53$, $p=.01$) and *determined* ($F=3.86$, $p<.05$) were significantly different by condition. For post-process, *distressed* ($F=3.74$, $p<.05$), *upset* ($F=4.90$, $p=.01$), *irritated* ($F=3.41$, $p<.05$) and *nervous* ($F=3.85$, $p<.05$) were significantly different by condition.

Examining the data in more detail, the in-process emotions commonly felt across condition at a high level include *distress*, *upset* and *irritated*. With regard to positive emotions, all respondents demonstrated low levels of in-process *excitement* (as one would expect). However, beyond these consistencies across condition in-process, the differences in felt emotion, and changes in emotion, are not consistent across condition.

Still considering in-process emotion and examining the differences in felt emotion by condition, heightened mean emotion scores in the required condition (as compared to others) appear for *guilty* ($M=2.61$) and *enthusiastic* ($M=2.26$). *Alert* ($M=2.78$) and *afraid* ($M=2.59$) are highest in the voluntary condition, and *nervous* ($M=3.00$) is highest in the validate condition. In-process emotions in the voluntary and validate conditions are not significantly different, which may indicate that in-process appraisal in these contexts is similar. This picture, however, changes post-process.

For post-process, of the three negative emotions (*distress*, *upset*, *irritated*) that were consistent across condition in-process, *distressed* and *upset* were lower post disclosure in the voluntary condition compared to the validate condition.

Table 1 Experiment 1: Mean in-process and post-process emotion scores by condition

Emotion	Voluntary in-process mean (SD)	Required in-process mean (SD)	Validate in-process mean (SD)	Voluntary post-process mean (SD)	Required post-process mean (SD)	Validate post-process mean (SD)
Distressed	2.59(1.28)	2.57(1.16)	2.92(1.02)	2.30(1.17)	2.04(1.07)	2.96(1.33)
Excited	1.44(0.85)	1.78(1.04)	1.71(1.23)	1.63(1.01)	1.30(0.56)	1.63(1.06)
Upset	2.37(1.04)	2.35(1.40)	1.83(0.96)	2.07(1.21)	1.57(0.84)	2.58(1.25)
Guilty	1.74(1.20)	2.61(1.03)	1.33(0.64)	2.07(1.27)	1.83(1.03)	1.88(1.12)
Enthusiastic	1.37(0.79)	2.26(1.21)	1.88(1.30)	1.63(0.97)	1.52(0.90)	1.83(1.17)
Irritated	3.63(1.25)	3.22(1.35)	3.00(1.18)	2.54(1.28)	2.09(1.00)	2.96(1.27)
Alert	2.78(1.25)	1.70(1.33)	2.50(1.02)	2.15(1.26)	2.22(1.38)	2.54(1.25)
Nervous	2.81(1.33)	2.26(1.29)	3.00(1.22)	2.11(1.40)	2.04(1.11)	2.96(1.37)
Determined	1.93(1.14)	1.35(0.65)	2.29(1.40)	1.74(1.13)	1.91(1.20)	2.29(1.43)
Afraid	2.59(1.31)	1.65(1.15)	2.21(1.22)	1.92(1.16)	1.78(0.95)	2.50(1.29)

Table 2 Experiment 1: MANOVA results

Emotion	F	Sig.
IP Distressed	1.08	0.35
IP Excited	0.38	0.69
IP Upset	2.15	0.12
IP Guilty	10.00	0.00
IP Enthusiastic	2.92	0.06
IP Irritated	1.16	0.32
IP Alert	4.53	0.01
IP Nervous	2.18	0.12
IP Determined	3.86	0.03
IP Afraid	1.85	0.17
PP Distressed	3.74	0.03
PP Excited	0.87	0.42
PP Upset	4.90	0.01
PP Guilty	0.23	0.80
PP Enthusiastic	0.54	0.59
PP Irritated	3.41	0.04
PP Alert	0.58	0.56
PP Nervous	3.85	0.03
PP Determined	1.70	0.19
PP Afraid	2.64	0.08

Differences by condition

IP Guilty (Vol-Req, $p<.01$; Req-Valid, $p<.001$)

IP Enthusiastic (Vol-Req, $p<.05$)

IP Alert (Vol-Req, $p=.01$; Req-Valid, $p<.05$)

IP Nervous (Req-Valid, $p<.05$)

IP Determined (Vol-Req, $p=.05$; Req-Valid, $p<.01$)

IP Afraid (Vol-Req, $p<.10$)

PP Distressed (Vol-Valid, $p<.1$; Req-Valid, $p=.01$)

PP Upset (Vol-Valid, $p<.1$; Req-Valid, $p<.01$)

PP Irritated (Req-Valid, $p=.01$)

PP Nervous (Vol-Valid, $p<.05$; Req-Valid, $p<.05$)

PP Determined (Vol-Valid, $p<.1$)

PP Afraid (Vol-Valid, $p<.1$; Req-Valid, $p=.05$)

Both emotions were marginally significantly lower than the validate condition ($p<.10$ for both items). *Irritated*, however, does not significantly differ for the voluntary group as compared to the other conditions post-process ($p>.10$).

Still considering post-process, the level of *distress, upset* and *irritated* are significantly lower post-process for the required condition as compared to validate condition ($p=.01$, $p<.01$ and $p=.01$ respectively). Of the emotions that were significantly higher in-process for the required condition (*guilty*, *enthusiastic*) compared to other conditions, post-process means are not significantly different from the other conditions ($p>.10$). Thus, respondents' thoughts on how they might manage disclosure in this condition seemed to allow for all heightened in-process emotions to be reduced to some extent.

In process-to-post process change in emotion by condition Next, repeated measures ANOVA was run to examine the changes from pre- to post-disclosure for each condition (Table 3). With regard to the required condition, the levels of *upset* [$F(1,22)=6.79$, $p<.01$], *guilty* [$F(1,22)=9.14$, $p<.01$], *enthusiastic* [$F(1,22)=9.08$, $p<.01$] and *irritated* [$F(1,22)=22.60$, $p<.001$] were all reduced significantly from the felt in-process levels. Thus, in the required condition, more emotions were felt and thoughts on how respondents would disclose appears to reduce the intensity of these felt emotions post-process (in support of H2a, b). In the voluntary disclosure condition, the levels of *irritated* [$F(1,25)=18.96$, $p<.001$], *alert* [$F(1,25)=4.12$, $p<.05$], and *afraid* [$F(1,25)=8.74$, $p<.01$] were significantly reduced from the felt in-process levels. Guilty [$F(1,23)=11.60$, $p<.01$] also changed significantly in the validate condition, but unlike the reductions of felt emotion in other conditions, *guilty* was elevated post-process in the validate condition.

Table 3 Experiment 1: Repeated measures in-process to post-process emotion by (between subject) condition

Cond	Emotion	N	In-process mean (SD)	Post-process mean (SD)	F	Sign.*
Voluntary	Distressed	27	2.59(1.28)	2.30(1.17)	0.09	
	Excited	27	1.44(0.85)	1.63(1.01)	0.59	
	Upset	27	2.37(1.04)	2.07(1.21)	0.57	
	Guilty	27	1.74(1.20)	2.07(1.27)	1.70	
	Enthusiastic	27	1.37(0.79)	1.63(0.97)	2.50	
	Irritated	27	3.63(1.25)	2.54(1.28)	18.96	$p<.001$
	Alert	27	2.78(1.25)	2.15(1.26)	4.12	$p<.05$
	Nervous	27	2.81(1.33)	2.11(1.40)	0.10	
	Determined	27	1.93(1.14)	1.74(1.13)	1.14	
	Afraid	27	2.59(1.31)	1.92(1.16)	8.74	$p<.01$
Required	Distressed	23	2.57(1.16)	2.04(1.07)	2.55	
	Excited	23	1.78(1.04)	1.30(0.56)	2.05	
	Upset	23	2.35(1.40)	1.57(0.84)	6.79	$p<.01$
	Guilty	23	2.61(1.03)	1.83(1.03)	9.14	$p<.01$
	Enthusiastic	23	2.26(1.21)	1.52(0.90)	9.08	$p<.01$
	Irritated	23	3.22(1.35)	2.09(1.00)	22.60	$p<.001$
	Alert	23	1.70(1.33)	2.22(1.38)	1.57	
	Nervous	23	2.26(1.29)	2.04(1.11)	6.94	$p<.05$
	Determined	23	1.35(0.65)	1.91(1.20)	0.35	
	Afraid	23	1.65(1.15)	1.78(0.95)	0.20	
Validated	Distressed	24	2.92(1.02)	2.96(1.33)	1.56	
	Excited	24	1.71(1.23)	1.63(1.06)	0.86	
	Upset	24	1.83(0.96)	2.58(1.25)	0.33	
	Guilty	24	1.33(0.64)	1.88(1.12)	11.60	$p<.01$
	Enthusiastic	24	1.88(1.30)	1.83(1.17)	0.04	
	Irritated	24	3.00(1.18)	2.96(1.27)	0.04	
	Alert	24	2.50(1.02)	2.54(1.25)	0.04	
	Nervous	24	3.00(1.22)	2.96(1.37)	0.01	
	Determined	24	2.29(1.40)	2.29(1.43)	1.11	
	Afraid	24	2.21(1.22)	2.50(1.29)	2.48	

*blank cells indicate $p>.10$

Discussion

The results demonstrate that felt emotions were different depending on the form of elicitation. To the extent participants could reduce the feeling of negative emotions, they appeared to take a course of action that allowed them to do so. Interestingly, the emotions of *irritated*, *upset* and *distressed* were felt across condition, and therefore were likely associated with appraisal of the situation, rather than the evaluation of action alternatives. Importantly, regardless of disclosure choice, these feelings remained post process. Also based on these findings, the feeling of being distressed is not relieved in any condition. In short, our findings support the notion that any request for disclosure in this context, regardless of form, is likely to trigger certain types of emotions consistently. Although these emotions can be reduced to some extent through action, some negative feelings are likely to remain, potentially negatively impacting consumer willingness to continue information exchanges with the marketer requesting information.

Our findings also show that in-process emotion scores for the participants in the voluntary condition did not differ significantly from the validate condition. We therefore suggest that the appraisal of these two types of elicitations is similar, in that neither condition triggers a need to *think about how* to disclose. The voluntary condition provides for autonomy to disclose and therefore may trigger intuitive response, and the validate condition does not provide room for considering other options. In comparison, the required condition might heighten the level of cognition needed to think through the choice of falsifying or disclosing truthfully, as well as the risks therein, which then acts to temper or accentuate felt emotion. The required condition triggered higher levels of certain kinds of emotions, here *guilty* and *enthusiastic*, likely due to the consideration of falsifying. We may conclude that the emotions unique to the required condition that change pre-

to-post process are those felt based on the consideration of falsification behavior.

Experiment 1 allowed us to examine changes in emotion based on the ability to consider different disclosure behaviors an individual might choose in different elicitation conditions, but we were constrained in examining actual disclosure behavior and how this behavior mediates felt control. Experiment 2 addresses this shortcoming. Because it is difficult to measure in-process emotion in a "live" experiment without contaminating behavior, we use response time as a surrogate for in-process control.

In online environments individuals are often asked to provide personal information which is collected and stored along with the clickstream activity such as time to respond. We suggest that the response time taken to disclose can capture felt emotion (emotion associated with perceptions of control), based on previous findings that demonstrate reaction time to be a useful indicator of conflict in stressful situations (Epstein and Fenz 1962). Likewise, Simon (1967) suggests that negative emotion acts as an "interrupt" signal. Accordingly, we suggest that an interrupt would manifest as longer response time here. To ensure that using response time to disclose was a reasonable surrogate in our experiment, we first examined the relationship between response time and control in a pretest.

Pretest

Participants and design

Twenty-nine students and non-faculty employees at a northeast university participated in the pretest, a lab-based reaction time study (repeated measures), for the chance to win a $25 gift card. Sixteen participants were undergraduates, and 21 participants were female. Participants were exposed to a series of personal information items displayed one at a time on a computer screen and asked to indicate whether or not they would disclose the different pieces of personal data. Specifically, participants were asked whether or not they would share the items presented with someone that they just met, but liked. The reaction times (the dependent variable) were measured in milliseconds using a commercially available response-time software: DirectRT (available at www.empirisoft.com).

Stimuli and procedure

Seven target information items (full name, address, email address, telephone number, date of birth, credit card number, social security number) were used for analysis and were embedded in a larger series of seventeen items. Two randomized blocks of the seventeen items were displayed to the respondent, and the presentation order of the items displayed was randomly determined by the software.

Each of the personal information items appeared on a separate slide,[4] and participants responded to whether or not they would share the information by pressing one of two keys on a computer keyboard (left shift for no, right shift for yes). They were asked to respond as truthfully but as quickly as possible. Participants were first exposed to 14 trial slides in order to familiarize themselves with the task. Instead of personal information, the trial slides named items that were not relevant to the study at hand (e.g., water bottle, taxi ride, answers on a test). The goal was to establish a comfort with viewing items and hitting the appropriate shift keys, so that "learning" did not affect the results of the actual experiment.

After the reaction time portion of the experiment, participants were asked to complete a pencil and paper questionnaire that contained questions regarding perceived control over personal information and four covariates—familiarity with requests for personal information, age, gender and whether subjects were right or left handed. After completing the pencil and paper questionnaire, respondents were debriefed and thanked for their participation.

Measures

Reaction time (DV) Reaction time was measured in milliseconds taken to respond to each information item displayed. Participants responded to whether or not they would disclose: full name, address, email address, telephone number, date of birth, credit card number, social security number.

Perceived control (IV) Perceived control was measured using a 7-point (1-strongly disagree to 7-strongly agree) Likert-type scale. Participants were asked to respond to, "With regard to your interactions on the internet, with businesses, the government or other institutions, please indicate your level of agreement that you have control over how the following details are used," for each of the personal information items displayed in the reaction time portion of the experiment. Mean scores for the pencil-and-paper questions were examined, and these scores were used to code the reaction time with perceived control rankings.

Covariates Responses to the covariates of familiarity, age, gender and handed-ness were collected using the pencil and paper questionnaire. Familiarity was measured via frequency of disclosure. Respondents were asked to indicate on a six point (1-never to 6-always) scale, "How frequently are you asked for the following information in a personal

[4] The item (e.g., Your Name) was centered on the screen. Once the respondent pressed one of the shift keys, the next item was displayed in random order.

setting, on the internet or by businesses, the government or other institutions?"

Covariate check

Age was found to be significantly related to perceived control ($t = -3.148$, $p = .004$) and therefore was retained in the analysis. No other covariates were significant and therefore dropped from further consideration.

Analysis and results

Prior to analyzing the data, the reaction time file was checked for errors (less than 1% of responses) and outliers. Any extremely high reaction times (greater than three standard deviations from the mean) signaled distraction and therefore were not included in the analysis (six extreme reaction times were found, which accounted for 1.2% of the observations). Since each participant provided two observations for each item, we used the mean RT of the two observations in the analysis. Each of the items in the reaction time file was coded with a control ranking (low to high control) as identified on the paper and pencil questionnaire.

Repeated measures analysis was then run on the coded reaction time data and the trend was assessed. A significant linear trend was evident [$F(1,27)=41.82$, $p = .05$], with control perceptions increasing as reaction time scores decreased (lower control correlates with higher reaction times). Reaction times for each of the items appear in Table 4, along with the control rankings.

Discussion

The results of the pretest showed that personal information items for which participants indicated less control over triggered longer reaction times. Though not conclusive in the sense that the pretest is a small study, the analysis suggests that reaction times are reflective of control perceptions, and therefore we use it (or rather, response time to disclose) as a measure for in-process control in experiment 2. Unlike the reaction time pretest, experiment 2 placed participants in a real data request context. This allowed us to examine actual behavior, rather than just relying on self-reported beliefs about how one would behave. The study examined the mediating effects of falsification on the in-process control —post-process control relationship.

Table 4 Pretest: Perceived control and reaction time means

Item	Control mean (SD)[a]	Reaction time mean (SD)[b]
Email	3.37(4.90)	1851.88(1005.36)
Address	3.73(2.10)	1778.76(971.19)
Name	3.90(1.99)	1572.21(823.28)
Date of Birth	4.20(1.88)	1565.55(796.16)
Phone	4.20(2.19)	1631.55(797.02)
Credit Card	5.07(1.89)	996.03(299.39)
Social Security Number	5.10(2.12)	899.76(228.81)

[a] Measured on a 7-point perceived control scale with 1 = no control and 7 = high control

[b] Measured in milliseconds

Experiment 2

Participants in this laboratory experiment were exposed to an online environment where they were asked to disclose personal details. We consider only the volitional and required conditions in this study, since the previous findings on felt emotion show that only one emotion changed significantly (and actually increased) in the validated condition in experiment 1. Thus, the volitional condition acts as the control condition in the current study. We tracked reaction time for disclosure to capture in-process loss of control and used pencil-and-paper responses to measure post-process loss of control. We used loss of control, rather than control, for ease of analysis and interpretation, as higher response times and higher scale measures both reflect loss of control. Participants were also asked to identify falsified items, allowing us to examine this behavior as a mediating process.

Participants, design and stimuli

Ninety-one undergraduate students from two northeast universities participated in the computerized experiment which examined individuals' reactions to personal information requests. Participants were compensated $10 for their time. The majority of the respondents were upperclassmen with 53% of the sample male and 47% female. Participants were randomly assigned to one of two elicitation conditions, voluntary and required, with those in the same condition run together. In the voluntary condition, information was requested, but not required, to engage in the exchange. In the required condition, all personal information requested was required to engage in the exchange.

Information disclosure was collected via an online registration form, similar to that found on an actual website when registering for access. The conditions were operationalized via the form fields. In the voluntary condition, participants interacted with an online form that did not require them to complete any of the information items requested. In order to signal "required" information (required condition), all information items requested were marked with an asterisk and indicated to be required, and participants could not continue

without providing responses. Other than the asterisks, the forms appeared the same for the two conditions.

Procedure

Upon entering the room, participants checked in, were provided with a sealed booklet and seated at a computer station. Once all participants for a session had arrived, the session administrator (one of the researchers not known to the participants) delivered the cover story, which conveyed that they would be involved in testing a new "internet search engine" for efficiency and ease of use. This context was used to increase external validity of the experiment by setting it in an environment common to the participants' everyday activity (since students use internet search engines frequently).

Participants in both conditions were given the task of finding a particular piece of information (mobile phone usage in the country of Chad) and were instructed to utilize the new search engine to accomplish this task. Unknown to them, the search environment was completely controlled by the researchers. Thus, the participants utilized a standard internet browser and were led to believe that they were accessing the internet to conduct searches, when in actuality they were accessing a server that contained all of the website information with which they were interacting during the search process. The particular piece of information (mobile phone usage) needed to complete the experiment was contained in the fictitious target "website" developed by the researchers.

When participants visited the target website and attempted to access the needed information, they were served the registration form that requested personal information in exchange for the data desired from the site. If the participants did not want to provide information at that point, they could continue to search as long as they wished. Since only the target website contained the answer to the cell phone question, participants eventually needed to interact with the form in order to successfully complete the task. Alternatively, the option of exiting the experiment without completing the task was available to them at any time (no one exercised this option). Internet search activity, i.e., time on page, mouse clicks on search results, page views, was tracked.

Once the computer part of the experiment was complete, participants were asked to break open a sealed booklet that included the post-process control measures, manipulation checks and covariates of familiarity and privacy concern.

After completing the booklets, participants were informed of the true nature of the experiment and asked to log back into the system where they could access the information they provided. They were asked to click radio buttons on the screen next to the items they provided in order to identify whether the information provided was true or false (only the participant could view his/her own computer screen during this process). They were informed that only the true/false would be retained for analysis (not their actual information) so that anonymity was ensured. Participants also were given the option to delete their entire record, but none exercised this option.

Measures

In-process loss of control In-process loss of control was measured by tracking the time spent completing the online registration form, or time to respond to the information request. Response time was measured in minutes and seconds elapsed between the initial display of the registration form on the computer screen (entry time stamp) and the submission of the form (the exit time stamp on the form).

Post-process loss of control Relying on Deci and Ryan's (1985) definition of control (pressuring one toward a particular outcome), two items were used to measure post-process loss of control ($\alpha = .67$) —"Because of the registration process, I felt I had to provide accurate personal information", and "I felt required to provide personal information requested by the website" —both measured on 5-point Likert scales.

Falsification The number of items identified by participants as falsified. The eleven pieces of information were: name, street address, city, email, phone, gender, date of birth, smoker, weekly spending on entertainment, alcohol consumption frequency, and fast food consumption frequency.

Familiarity Familiarity was measured using two items ($\alpha = .67$), "I provide personal information to websites" and "I purchase items using the Internet," on 1-never to 5-very often scales.

Privacy concern Two questions were asked with regard to privacy concern ($\alpha = .56$) —concern with providing information to (1) marketers and (2) websites on 1-not at all to 5-very concerned scales.

Cover story, manipulation and covariate checks

To ensure the cover story was believed, respondents were asked to rate the beta search engine's performance against other popular search engines and to provide comments in free form text. The check showed that participants believed the cover story, and the mean ratings for the search engine were not significantly different across elicitation condition [$t(89) = -.042$, $p = .97$]. Further, qualitative responses and comments reflected the similarity of the test search engine with other search engines or difficulties using the test search engine. Several stated that it was "better than Google!" Thus, we felt comfortable that participants believed the cover story.

One 5-point Likert scale item, "I felt I could leave information blank when I was uncomfortable supplying the requested information" was used to ensure the two conditions were manipulated successfully. *T*-test showed that the two conditions were perceived to be significantly different with regard to the voluntary/required nature of the form [t(89)=5.80, $p<.001$].

Neither familiarity nor privacy concern was found to be significant covariates and therefore were dropped from analysis.

Results

Descriptive statistics for the key variables in the experiment appear in Tables 5 and 6, as related to the examination of H3a, b and H4.

Falsification Falsification was apparent across conditions ($M=24\%$ of items were indicated to be inaccurate). As expected and in support of H3a, greater rates of falsification occur for the required condition, where individuals are forced to disclose (Table 5). Mostly in line with H1b, falsification increases across all items, with the exception of gender. When forced to disclose, our respondents provided accurate gender information (0% change in lie rate). Thus, there does appear to be a general increase in falsification that is in response to the general context of feeling forced. The average increase in falsification is 65% (in support of H3b) over the voluntary condition.

Yet, differences in number of individuals falsifying by item were also apparent, with greater levels for those items associated with getting in contact with the respondent (email = 111% increase and phone = 229% increase). Surprisingly, individuals preferred to falsify their drinking behaviors (133% increase) than admit to them truthfully when forced. Date of birth (66% increase) and fast food consumption (71% increase) were also subject to greater amounts of falsification. Though name, street and entertainment demonstrated lower changes in falsification (27%, 30%, 25% increases respectfully), these items were more often falsified under voluntary disclosure (15, 10 and 12 individuals falsified respectively) as well. Thus, the base was higher. City (25% increase) and smoking (25% increase) triggered lower levels of falsification when forced (and had lower bases), thus we might consider these items to be less sensitive than the others. In addition to the difference in falsification rates for voluntary versus required conditions, we also see changes in rates of truthful disclosure. We elaborate on this finding in the discussion.

Table 5 Experiment 2: Number of respondents disclosing truthfully and falsely for voluntary condition and % difference in number of respondents disclosing for required condition

Item	Base # true (voluntary)	Increase in truthfulness (when forced)	Base # false (voluntary)	Increase in falsification (when forced)
Name	22	0	15	27%
Street	23	26%	10	30%
City	25	28%	8	25%
Email	18	28%	9	111%
Phone	14	36%	7	229%
Gender	29	34%	3	0%
Date of Birth	17	29%	12	66%
Entertainment	16	63%	12	25%
Smoke	27	41%	3	25%
Alcohol	22	27%	6	133%
Fast Food	21	43%	7	71%

Table 6 Experiment 2: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Falsification[a]	91	0	11	2.68	3.23
IPLC	89	0.37	4.77	2.22	0.86
PPLC	91	1.00	5.00	3.00	1.06
Familiarity	91	1.00	5.00	2.63	0.72
Privacy Concern	91	1.00	5.00	3.50	0.74

[a] Falsification - number of items falsified; *IPLC* in-process loss of control, in minutes. All other variables measured on 5-point scales

Mediation analysis It was our expectation that in-process loss of control would work partially through disclosure strategy to influence post-process loss of control. Hayes' (2012a, b) mediation procedure was run to test our hypothesis. Due to the small sample size, the procedure provides bootstrapping logic for us to test the direct and indirect effects of in-process loss of control (IV) on post-process loss of control (DV) through falsification (Mediator). The full model was significant [$F(2,86)=14.77$, $p<.001$, $R^2=.24$]. The *a* path from in-process loss of control to falsification ($t=3.30$, $p<.01$) was significant [$F(1,87)=10.91$, $p<.01$, adjusted $R^2=.10$], as was the *b* path from falsification to post-process loss of control ($t=-3.01$, $p<.01$). The direct effect of in-process loss of control on post-process loss of control was also significant ($t=5.27$, $p<.001$). Finally, the indirect effect of in-process loss of control on post-process loss of control through falsification was significant as indicated by the confidence interval excluding zero (point estimate = −.1220, SE=.0566, LLCI=−.2482, ULCI=−.0308) based on 5000 bootstrap samples. The results indicate partial mediation in support of H4. Note that the total effects model was also significant [$F(1,87)=18.73$, $p<.001$, adjusted $R^2=.17$].

Discussion

Experiment 2 findings provide support for the argument that consumers' choice in how to disclose is a consequence of felt control while in the disclosure environment, and this choice leads to an adjusted level of perceived control post-process (H4). Our results show that as participants felt less control during the exchange as measured in terms of greater response times, they falsified more, and this appears to lead to greater felt control post-process. Those who falsified less felt less control post-process. That said, it does appear that those who felt less control in-process did still feel some loss of control post-process. It should be noted that the reliability scores for post-process loss of control and familiarity are slightly lower than the acceptable range of .70 for exploratory research, the reliability for the covariate privacy concern is low.

Further, the pattern of falsification (H3a, b) itself provides insight into how consumers frame these elicitation conditions and subsequently behave. Participants in the voluntary condition frequently omitted responses as there was no consequence from this behavior. As was expected, moving to the required condition eliminated omission but significantly increased the rate of falsification. Interestingly, the level of truthful answers increased as well, but these increases were in general less than the increase in falsification. Table 5 demonstrates the changes in both telling the truth and falsification for the individual information items as the elicitation condition changed.

Consistent with the idea that provision of personal data creates a risk of additional costs to the consumer, respondents in our experiment tended to increase their falsification of more sensitive information. Provision of the correct phone number, for example, increased 36% when it was required, but provision of an incorrect phone number increased 229%. Correct email addresses increased by 28%, but incorrect email addresses increased by 111%. On the other hand, less personally identifying information such as gender and entertainment showed a greater increase in truthfulness than the concomitant increase in falsification. These results certainly bring into question the value of simply forcing information provision. If, for example, the goal is to build a contact database of phone numbers for future sales efforts, then those provided voluntarily, because of the superior quality, may be more cost effective.

General discussion and implications

The studies reported in this research demonstrate how requests for personal information by marketers affect the consumer, specifically by examining the behavioral based coping (falsification) and emotion-based changes related to perceived control. With regard to felt emotions, our findings from experiment 1 show that, regardless of elicitation style, individuals will likely feel negative (upset, irritated, distress) about any request for information, even when information requests are voluntary. It is these and other negative emotions that likely trigger disclosure behaviors leading to lower quality data provision. Our findings also show that telling people their responses will be validated heightens negative emotions. So, even though there are ways to ensure data is valid, it is possible such restrictive approaches will result in fewer or less satisfied customers overall. Though not tested in our experiments, if there are other marketplace alternatives that allow one to achieve the same benefits without information validation, individuals are likely to patronize companies that do not rely on such a restrictive model.

It may not be possible for many kinds of marketers to request personal information without triggering any negative emotion, but an option available to all marketers is to frame disclosure requests in such a way as to minimize negative appraisals of these requests. In essence, the marketer can benefit from explaining why information is requested and how it will be used, thus conveying that the marketer is not attempting to control the exchange process simply for their benefit. Marketers would gain from first examining the felt emotions of consumers based on current elicitation strategies before making any changes. This will provide a baseline from which to measure responses to new forms of information requests. Communication strategies that help reduce negative responses to information requests, in combination with better approaches to determining when to require and when to voluntarily ask for data, might allow for much higher quality and much more complete profile data from consumers overall.

We also provide evidence in experiment 2 that individuals use falsification as a coping strategy to regain felt control. We demonstrated that elicitations that restrict autonomy by pressuring an individual to act increase falsification across information types. We further demonstrated that forcing disclosure increases falsification rates.

In line with the evidence provided in experiment 2, it is important for marketers to consider the extent to which falsification will increase if a required disclosure strategy is executed. For example, we showed that although our respondents were more likely to provide truthful gender and entertainment information if forced to disclose, the likelihood of providing other information accurately, such as phone numbers and email addresses, is low. The frequency by which these items may be falsified far outweighs the amount of accurate data that may be received when disclosure of these items is forced. Thus, a marketer should consider the criticality of information they request to their marketing strategy and adjust the elicitation to maximize quality of personal information received. For example, if the goal is to gather contact information, then voluntary requests outweigh

the cost of bad data obtained when forcing one to disclose, especially as the cost of contact, such as via phone or ordinary mail, increases. However, if the marketer is interested in obtaining lifestyle information or gender, then requiring consumers (who register or purchase something, for example, on a website) to provide such data may result in greater amounts of better data than when it is asked for voluntarily. This is counter to what we often see on forms, where soft data is frequently asked for voluntarily and contact data (address, phone) is often required.

Limitations and future research

The objective of this research was to examine how consumers utilize coping strategies in order to regain feelings of control over their personal information when/if a felt loss of control initially exists. We provide evidence that consumers feel negatively about information requests and may falsify personal information in marketing exchanges due to a perceived loss of control and the need to cope with negative felt emotion. We hope to follow this initial foray with studies that explore marketing triggers that lead to changes in felt levels of control on the part of consumers. Though the PANAS scale provides us with a means to examine emotion here, and though we used a student sample, future research might attempt to examine emotion-based control components in other ways. Similarly, although our preliminary evidence shows that consumers' negative felt emotion can be mitigated through behaviorally coping, further refinement of coping measures would assist in adding support to the findings here. Alternative measures for control may also prove fruitful in a re-examination. For example, the operationalization of our experiment 2 measure of in-process loss of control is not validated, and thus future research might focus on refining the internet response time analysis. Further, although we did not have the level of detail needed in our experiment 2 to evaluate response time by information item, this would be something to consider in the future.

In addition, more anthropologic approaches to compensate for the limitations of experimental designs (i.e., external validity) and to study different marketing exchange contexts might be a productive avenue for future studies. Likewise, a qualitative approach may facilitate an understanding of how consumers progress from one coping strategy to another and the change in emotional states over time. It is possible that a hierarchical sequence in selection of control strategy, for example, is apparent, such that we can predict the pattern and develop strategies to counter a movement from telling the truth to falsification and omitting.

Future research should also consider the effects of trust and relationship based exchanges, which were not manipulated or examined in the studies reported here. Should a consumer trust the marketer, or should a consumer have an expectation of future exchange, he/she may be more willing to provide complete and truthful information, regardless of request type. These variables are likely relevant in examining the behavior in social based websites (social networking, business networking, dating and other sites). Given the expanse of internet companies, however, and given the different benefits associated with exchanges, our findings will continue to apply to many situations. There will always be a "first time" customer, and consumers will always be discovering new websites that they wish to patronize.

Appendix

Experiment 1

PANAS Scale (Items Used in Experiment 1 identified with asterisk)

Negative Affect Items:

- Afraid*
- Ashamed
- Distressed*
- Guilty*
- Hostile
- Irritable (adapted as Irritated*)
- Jittery
- Nervous*
- Scared
- Upset*

Positive Affect Items:

- Active
- Alert*
- Attentive
- Determined*
- Enthusiastic*
- Excited*
- Inspired
- Interested
- Proud
- Strong

References

Ackerman, M. S., Cranor, L. F., & Reagle, J. (1999). Examining user scenarios and privacy preferences. *ACM Conference on Electronic Commerce Proceedings*, 1–8.

Brehm, J. W. (1966). A theory of psychological reactance. In L. Festinger & S. Schachter (Eds.), *Social psychology, a series of monographs, treatises, and texts*. New York: Academic.

Collier, J. E., & Sherrell, D. L. (2010). Examining the influence of control and convenience in a self-service setting. *Journal of the Academy of Marketing Science, 38*, 490–509.

Culnan, M. J. (1993). How did they get my name?: an exploratory investigation of consumer attitudes toward secondary information use. *MIS Quarterly*, September, 341–361.

Dash, E. (2005). Nation's 5 million retail stores prove easy target for data thieves. *New York Times*, July 26, C1.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Deci, E. L. & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*(6), 1024–1037.

Duhachek, A. (2005). Coping: a multidimensional, hierarchical framework of responses to stressful consumption episodes. *Journal of Consumer Research, 32*, 41–53.

Duhigg, C. (2012). How companies learn your secrets. *New York Times*, Feb. 16.

Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: dissonance as psychological discomfort. *Journal of Personality and Social Psychology, 67*, 382–394.

Epstein, S., & Fenz, W. D. (1962). Theory and experiment on the measurement of approach-avoidance conflict. *Journal of Abnormal and Social Psychology, 64*, 97–112.

Folkman, S. (1984). Personal control and stress and coping processes: a theoretical analysis. *Journal of Personality and Social Psychology, 46*(4), 839.

Folkman, S., & Lazarus, R. S. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology, 54*, 466–475.

Frijda, N. H. (2004). Emotions and action. In *Feelings and emotions: The Amsterdam symposium* (pp. 158–173). Cambridge: Cambridge University Press.

Frijda, N. H., Kuipers, P., & Ter Schure, E. (1989). Relations among emotion, appraisal, and emotional action readiness. *Journal of Personality and Social Psychology, 57*(2), 212.

Goodwin, C. (1991). Privacy: recognition of a consumer right. *Journal of Public Policy and Marketing, 10*, 149–166.

Hayes, A. F. (2012a). An analytical primer and computational tool for observed variable moderation, mediation, and condition process modeling. *Working Paper*.

Hayes, A. F. (2012b). PROCESS: A versatile computational tool for observed variable moderation, mediation, and conditional process modeling. White paper. Retrieved from http://www.afhayes.com/public/process2012.pdf.

Horne, D. R., Norberg, P. A., & Ekin, A. C. (2007). Exploring consumer lying in information-based exchanges. *Journal of Consumer Marketing, 24*(2), 90–99.

Jaworski, B. J. (1988). Toward a theory of marketing control: environmental context, control types, and consequences. *Journal of Marketing, 52*(July), 23–39.

Jones, M. G. (1991). Privacy: a significant marketing issue for the 1990s. *Journal of Public Policy and Marketing, 10*, 133–148.

Krohne, H. W. (1993). Vigilance and cognitive avoidance as concepts in coping research. In H. W. Krohne (Ed.), *Attention and avoidance* (pp. 19–46). Seattle: Hogrefe and Huber.

Larsen, R. J., Diener, E., & Clark, M. (1992). Promises and problems with the circumplex model of emotion. *Review of Personality and Social Psychology, 13*, 25–59.

Larsen, J. T., McGraw, A. P., & Cacioppo, J. (2001). Can people feel happy and sad at the same time? *Journal of Personality and Social Psychology, 81*(4), 684–696.

LaValle, S., Lesser, E., Shockley, R., Hopkins, M., & Kruschwitz, N. (2011). Big data, analytics and the path from insights to value. *MIT Sloan Management Review, 52*(2), 21–31.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.

London, S. (2002). Customer information is the new commodity. *The Financial Times*, June 15, 19.

Luce, M. F. (1998). Choosing to avoid: coping with negatively emotion-laden consumer decisions. *Journal of Consumer Research, 24*, 409–433.

Luce, M. F., Bettman, J. R., & Payne, J. W. (1997). Choice processing in emotionally difficult decisions. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 23*, 384–405.

Lwin, M. O., & Williams, J. D. (2003). A model integrating the multidimensional developmental theory of privacy and theory of planned behavior to examine fabrication of information online. *Marketing Letters, 14*, 257–272.

Lwin, M. O., Williams, J. D., Wirtz, J., & Williams, J. D. (2007). Consumer online privacy concerns and responses: a power-responsibility equilibrium perspective. *Journal of the Academy of Marketing Science, 35*, 572–585.

Margulis, S. T. (1977). Conceptions of privacy: current status and next steps. *Journal of Social Issues, 33*, 5–21.

Margulis, S. T. (2003). Privacy as a social issue and behavioral concept. *Journal of Social Issues, 59*, 243–261.

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: a theory of self-concept maintenance. *Journal of Marketing Research, 45*(6), 633–644.

Milne, G. R. (2003). How well do consumers protect themselves from identity theft? *Journal of Consumer Affairs, 37*.

Milne, G. R., & Gordon, M. E. (1993). Direct mail privacy-efficiency trade-offs within an implied social contract framework. *Journal of Public Policy and Marketing, 12*, 206–215.

Nyer, P. U. (1997). A study of the relationships between cognitive appraisals and consumption emotions. *Journal of the Academy of Marketing Science, 25*(4), 296–304.

Olivero, N., & Lunt, P. (2004). Privacy versus willingness to disclose in e-commerce exchanges: the effect of risk awareness on the relative role of trust and control. *Journal of Economic Psychology, 25*, 243–262.

Phelps, J., Nowak, G., & Ferrell, E. (2000). Privacy concerns and consumer willingness to provide personal information. *Journal of Public Policy and Marketing, 19*, 27–41.

Roseman, I. J. (1991). Appraisal determinants of discrete emotions. *Cognition and Emotion, 5*(3), 161–200.

Roseman, I. J., Spindel, M. S., & Jose, P. E. (1990). Appraisals of emotion-eliciting events: testing a theory of discrete emotions. *Journal of Personality and Social Psychology, 59*(5), 899–915.

Rosen, J. (2006). Big business hits pay dirt in mining private information. *Sacramento Bee*, May 22, A1.

Ryan, R. M., Connell, J. P., & Deci, E. L. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R. E. Ames (Eds.), *Research on motivation in education: The classroom milieu* (pp. 13–51). New York: Academic.

Schwartz, B. (2004). *The paradox of choice: Why more is less*. New York: HarperCollins Publishers Inc.

Simon, H. A. (1967). Motivational and emotional controls of cognition. *Psychological Review, 63*, 129–138.

Singh, J. (2000). Performance productivity and quality of frontline employees in service organizations. *Journal of Marketing, 64*(April), 15–34.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the

PANAS scales. *Journal of Personality and Social Psychology, 47*, 1063–1070.

Westin, A. F. (1967). *Privacy and freedom*. New York: Athenium.

Zwick, D., & Dholakia, N. (2004). Whose identity is it anyway? Consumer representation in the age of database marketing. *Journal of Macromarketing, 24*, 31–43.