Let it go: the Effect of Stress on Anonymous Self-Disclosure

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ABSTRACT

Despite increasing concerns regarding information privacy and regulations that enhance consumers' control over their personal data, consumers voluntarily share personal and sensitive information about themselves. The current research identifies one important driver of consumer self-disclosure: psychological stress. Specifically, it shows that consumers are more likely to disclose negative information about themselves (e.g., a social transgression such as cheating on an exam, using a fake ID, etc.), when they are under high (vs. low) stress. However, this effect is attenuated when self-promotion motives are salient.

Keywords: stress, self-disclosure, consumer privacy

Track: Consumer Behavior

1. Introduction

Due to the technological developments in the collection, storage, analysis, and usage of information, which altogether are referred to as "big data", information privacy has become an increasingly deep concern for consumers, policy makers, and scholars alike (Acquisti, Brandimarte, & Loewenstein 2015). However, regardless of individuals' self-reported concern about their information privacy and despite the regulations that increase consumers' control over their personal data, oftentimes consumers voluntarily provide personal, sensitive, and sometimes even incriminating information about themselves, especially on social media – a phenomenon termed "the privacy paradox" (Norberg, Horne, & Horne 2007).

The questions of when and why consumers reveal private information about themselves (i.e., self-disclose) are important not only within consumer research, but across multiple domains including law (e.g., fraud and data leakages), criminology (e.g., crime confession), insurance (e.g., risk calculations), healthcare (e.g., patients' disclosure to doctors), psychology (e.g., trauma treatment). Therefore, understanding the conditions under which consumers voluntarily disclose sensitive, private, or unfavorable information about themselves is key for both theory and practice (Alter & Oppenheimer 2009). The current research argues that one important driver of consumers' self-disclosure is psychological stress, and that the effect of stress on self-disclosure can be reduced by activating self-presentation goals.

Self-presentation denotes the process by which individuals attempt to control the impressions that others form of them (Schlenker 1980). Although the desire to present oneself positively is innate (Goffman 1959), self-presentation efforts are not constant, but vary across individuals and situations (Tyler 2012). When self-presentation motives are salient, individuals attempt to minimize the risk of conveying a suboptimal image (Leary & Kowalski 1990). Since self-disclosure entails a self-presentational component, the willingness to self-disclose varies according to the salience of their self-presentation goals (Tyler 2012). Thus, the more salient their self-presentation goals are, the more likely individuals are to conceal private information (Ellison, Heino, & Gibbs 2006). Drawing on this work, we propose that the activation of individuals' self-presentation efforts reduces the effect of stress on self-disclosure by encouraging individuals to protect their self-image. Hence, we hypothesize that when consumers are under high (vs. low) stress, their self-disclosure will increase, but only when their self-presentations motives are not salient. Next, we report the results of four experiments that test our hypotheses using different settings. Across all the studies, we report all the conditions and all the measures employed.

2. Method

Results from four studies using different stress manipulations and various research settings (i.e., field, laboratory, and online) lend support to these hypotheses.

2.1 Study 1

In Study 1, using a naturalistic stress manipulation, we tested the basic prediction that stress amplifies self-disclosure. We ran a quasi-experimental field study that capitalized on an oral exam with a one factor design (stress: high vs. low) ($N = 38$). Students were either part of a group that had to take an oral exam or part of a neutral group as the oral exam occurred at two different moments. This enabled us to contrast two comparable groups with different levels of naturally occurring stress: high stress (oral exam) vs. low stress (no oral exam). Self-disclosure was measured using fifteen highly intrusive questions (John, Acquisti, and Loewenstein 2011). The questions were pretested on the same graduate student population (e.g., "Have you every shoplifted?", "Have you ever used a fake ID?", "Have you ever smoked marijuana?"). Our dependent variable comprised the number of "Yes" responses. Results revealed that students in the high stress condition answered a higher number of intrusive questions affirmatively than students in the low stress condition, $F(1, 36) = 4.32$, $p = .045$, $d = .67$. Thus, Study1 showed that a naturally occurring stressful situation significantly increased self-disclosure.

2.2 Study 2

Study 2 ($N = 118$ students) employed a more controlled laboratory environment and a between-subjects design. Students played the Mental Game, an established protocol for inducing moderate psychological stress based on the Montreal Imaging Stress Task (Dedovic et al. 2005). The Mental Game consisted of a series of computerized mental arithmetic tasks, followed by the same self-disclosure measure as in Study 1 (John et al. 2011). The arithmetic questions were the same across the high and low stress conditions. However, in the high stress condition participants had to answer under time pressure (i.e., 10 seconds/question) and received "correct" or "incorrect" feedback. Results indicated a higher rate of self-disclosure in the high vs. low stress condition (Table 1).

2.3 Study 3

In Study 3 (N = 188 MTurkers) stress was manipulated using the Mental Game as in Studies 1 and 2. We used again a between-subjects design. State-neuroticism (Costa & McCrae, 1992) and the perceived stressfulness of the Mental Game were then measured as manipulation checks followed by the same self-disclosure measure (John et al. 2011). As theorized, participants in the high stress condition answered a higher number of the intrusive questions affirmatively (M = .32, SD = .23) than participants in the low stress condition (M = .24, SD = .21), F (1, 186) = 5.10, p = .025, d = .37.

2.4 Study 4

Study 4 (N = 530 MTurkers) employed a 2 (stress: low vs. high) by 3 (prime: none vs. neutral vs. self-presentation) factorial experimental design. The Mental Game was used to manipulate stress. Self-presentation motives were primed using Tyler's (2012) scrambled sentence task. Participants were randomly assigned to one of the following three conditions: the no-priming condition (akin to Study 2 and Study 3), the impression prime condition, or the neutral prime condition. Participants in the neutral and impression prime conditions were provided with ten sets of scrambled five words that were either neutral or accordingly, impression related. Following the self-disclosure measure (John et al. 2011), participants assessed their privacy concerns (2 items: "To what extent are you concerned with your online privacy?" and "How important is online privacy to you?" from 1 = "Not at all" to 5 = "Very much"; α = .77, M = 3.87, SD = 0.87). As predicted, results revealed that activating self-presentation motives reversed the effect of stress on self-disclosure (Table 1). Study 4 also ruled out the potential role of privacy concerns. In an ongoing field study we are examining whether the effect occurs in the context of public speaking. To this end, we simulate job interviews under low vs. high stress conditions.

3. Conclusion

Considered jointly, the present studies support our central hypothesis that stress enhances self-disclosure. Given the centrality of stress in our daily lives, a deeper understanding of how stress influences our decision making is much needed. Overall, we augment the current understanding of stress and contribute to the disclosure literature by providing insights for organizations that value customer welfare and customer disclosure (e.g., insurance companies, healthcare providers).

Table 1. Summary of results across all studies

Key results

Study 1	Stress		Self-disclosure
N = 38		*M*	8.05
	High	SD	2.84
		M	6.11
	Low	SD	2.91
Study 2	Stress		Self-disclosure
N = 118		*M*	21.6%
	High	SD	0.20
		M	14.8%
	Low	SD	0.14
Study 3	Stress		Self-disclosure
N = 188		*M*	0.32
	High	SD	0.23
		M	0.24
	Low	SD	0.21

Study 4
N = 530

The moderating role of self-presentation motives

Table 1. Self-Disclosure as a function of stress (high vs. low) and self-presentation priming (none, neutral prime, self-presentation prime)

Stress	Low Stress			High Stress			Overall		
Self-presentation	No prime	Neutral prime	Self-presentation prime	No prime	Neutral prime	Self-presentation prime	No prime	Neutral prime	Self-presentation prime
N	95	85	73	93	76	78	188	161	151
Mean	**5.42a (3.46)**	5.66a (3.52)	**6.11b (3.54)**	**6.62b** (3.73)	5.93a (3.40)	**5.23a** (3.77)	6.02 (3.64)	5.79 (3.45)	5.66 (3.68)
Overall	5.70 (3.50)			5.97 (3.67)					

Note. Standard deviations are given in brackets. Cell means with different subscripts in a given row differ from each other at $p < .05$

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