

An Online Seller’s Dilemma: How a User’s Claim About Comment Deletion Affects Product Evaluation and Purchase Intention via Seller Disliking

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With the increasing possibility to spread negative rumors online, online sellers find ways to control user comments on social media. Based on warranting theory, this study examined whether a user’s claim of a seller’s comment-deletion behavior affected observers’ perceptions of a seller’s information dissemination control (IDC) over user comments. It also tested how such IDC perception affected two mediators—seller liking and comment trust—which would influence product evaluation and purchase intention. A 3 (negative rumor vs. deletion claim vs. neutral comment) × 2 (individual vs. company seller) experiment demonstrated that a deletion claim increased IDC perception compared to a neutral comment and a negative rumor. IDC control perception negatively influenced product evaluation and purchase intention more through lowered seller liking than through lowered comment trust. Results supported the warranting principle and emphasized the explanatory role of affective judgments toward sellers for the effects of IDC perception.

Keywords: warranting theory, e-commerce, user comments, social media, fake rumor

E-commerce has become an integral part of many people’s lives in contemporary society. In the United States alone, roughly 80% of the population engages in online shopping (Smith & Anderson, 2016). There are various platforms for online shopping, including typical e-commerce shopping platforms such as Amazon or eBay and brand-specific shopping websites. A newer version of e-commerce platform that has been arising in more recent years is social media. Although social media (e.g., Facebook, Instagram) were originally developed and used for connecting with friends and acquaintances, it also has become a place for online sellers to reach out to customers and sell their products (Arnold, 2018).

One element commonly found on different e-commerce platforms is third-party reviews of products that are referred to as user- or customer-generated comments. User-generated online reviews have been found to greatly impact people’s product and service evaluations, purchase intention, and behaviors (Cheung & Thadani, 2012). Truthful reviews can reduce inherent uncertainty about the product (Lee & Shin, 2014a)

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and enhance people's interest (Zhang, Ye, Law, & Li, 2010). However, when the reviews contain false information or rumors, they not only hurt the seller's reputation and profits but also take away customers' chances to select quality products. Unfortunately, research evidence suggests that negative information tends to be more impactful for customer attitudes (Wu, 2013), making the problem of negative false rumors in e-commerce more acute.

Given the impact of false rumors and ease-to-produce fake information online (Malbon, 2013), many social media platforms provide a seller with the ability to hide or delete certain comments (i.e., information dissemination control [IDC]). According to the warranting theory (Walther & Parks, 2002), however, the action of IDC has the potential to backfire on the seller's image. Recent experiments revealed that when people saw evidence of comments being hidden or deleted, the influence of favorable user-generated comments on their attitude toward the review object was decreased (DeAndrea & Vendemia, 2016; Shin et al., 2020).

Despite the progressive research on the warranting theory, the underlying psychological process through which IDC over user comments exerts its negative influence over target evaluations is not yet clear. While previous research on warranting theory has implied trust in information being a mediator for warranting effects (Lew & Walther, 2017), persuasion knowledge model (Friestad & Wright, 1994) suggested that when a situation activates thinking about a seller's motives, seller disliking can incur, which could constitute another mechanism for the effect of IDC. The current study aims to clarify the mechanism of the impacts of IDC by testing comment trust and seller liking simultaneously as the mediators of the effect of IDC on individuals' attitude toward and purchase intention of the review object. In doing so, we also investigate whether product involvement and seller type (individual vs. company) influence the mechanism.

This study first introduces the warranting theory and the relevant research about the impacts of IDC. It then presents hypotheses on the influence of a user's comment-deletion claim on IDC perception, product evaluation, and purchase intention. Next, this study proposes seller liking and comment trust as dual mediators of the effect of IDC perception. Also, product involvement and seller type are proposed as two moderators in the dual mediation model. The results from an original experiment clarified the mechanism of IDC perception effects and provided insights on the reputation management practices of online sellers.

Warranting Theory and Information Dissemination Control Perception

The warranting theory was proposed by Walther and Parks (2002) to explain how people make use of online information to reduce uncertainty about a target. According to the theory, online information about a target can differ in warranting value—the degree to which the information is immune to manipulation by the target it refers to (DeAndrea, 2014). The less the target can manipulate the information, the higher the warranting value the information has about the target. An influential derivation of the warranting principle that guided much of the subsequent research is that third-party information about a target is more influential on people's attitude than information published by the target itself (Walther, Van Der Heide, Hamel, & Shulman, 2009).

In subsequent developments of the warranting theory, DeAndrea (2014) proposed that third-party information about a target can vary on warranting value depending on whether the information has been subject to possible manipulations. One of the information-manipulation behaviors that are relevant to the management of user-generated information is IDC, namely, controlling what information is visible to viewers on a site. The subsequent empirical test has confirmed this proposition by showing that when there is evidence that certain user-generated information about an evaluation target has been removed (DeAndrea & Vendemia, 2016; Shin et al., 2020) or when the evaluation target is granted greater editing power of the information (DeAndrea, Tong, & Lim, 2018), the warranting value of the user-generated information is reduced.

Previous tests of the impact of IDC, however, have a few limitations, which prompted the current investigation. First, most of the studies employed system-generated cues to elicit perceptions of the target's controlling behavior over user-generated cues, for example, by showing a system-generated message that says "This comment has been hidden/deleted (by the target)" (Shin et al., 2020; Vendemia, Bond, & DeAndrea, 2019) or displaying a website policy that describes the target's right to remove certain reviews (DeAndrea et al., 2018). Given that these cues are generated by the online platforms and are difficult, if not impossible, to fake, their existence almost warrants the occurrence of the target's IDC behaviors. In real-world scenarios, however, such system-generated cues may not be readily available given that social media profile owners can report or delete certain customer comments without leaving explicit trace (e.g., Instagram, 2020). People may need to rely on other cues to detect a target's IDC behaviors, such as a customer's claim about a seller having removed previous user comments. The question remains as to whether the principles of warranting theory still operate in the face of such user-generated evidence for IDC.

Second, previous research testing the effect of IDC lacked the comparison with negative information conditions (Shin et al., 2020; Vendemia et al., 2019). In the previous research that showed the impacts of IDC, the user comments were kept constant across all conditions while the manipulation reflected the presence or the absence of system-generated cues indicating the possibility of IDC behavior by the target. Although such a method enables a pure test of the control cues, it does not answer the question of whether it is worthy for a seller to control problematic user-generated comments in the first place, since the designs did not compare user-comment removal with the effect of negative user comments if they were not removed.

To address the aforementioned limitations, the current study compares three scenarios one may encounter when viewing user comments to a promotional social media post about a product on the assessment of sellers' IDC behavior and its influence. These scenarios include (1) the presence of negative rumor about a product, (2) the presence of user-generated claim for sellers' comment-deletion behavior, and (3) neutral comment as a baseline control. Although viewers could doubt the truthfulness of a user's claim, it is plausible that the presence of a comment-deletion claim could raise red flags about the IDC behaviors of a seller and challenge the authenticity of other favorable user-generated comments about the product. Therefore, we propose the following hypotheses about the negative effects of user-generated claim about a seller's IDC:

H1a–b: Observing a deletion-claim comment increases IDC perception compared to (a) a neutral comment and (b) a negative-rumor comment.

H2: Dissemination control perception mediates the influence of comment conditions on product evaluation and purchase intention. Specifically, the higher IDC perception from observing a deletion claim, compared to a neutral comment and a negative-rumor comment, negatively affects product evaluation and purchase intention.

Mechanism of the Effect of Dissemination Control Perception

Over a decade of research on warranting theory has provided us with important insight into how people judge the reliability of online information. Although the warranting principle has been confirmed in many empirical findings in that people's target judgments are more affected by information less prone to manipulation (e.g., Walther et al., 2009), the direct tests of the mechanism behind the principle—the perception about a target's manipulation—have only recently been conducted, with validated measurements of various kinds of warranting values including IDC perception (DeAndrea & Carpenter, 2018). Among them, the mediating role of IDC perception has received support in several studies. For example, people who saw a system-generated message indicating that some user comments had been hidden under a medical or political organization's Facebook post developed higher IDC perception, which decreased their trust in the comments and in the organizations and their endorsement for the organizational claim, compared with those who did not see the message indicating comment-deletion behavior (DeAndrea & Vendemia, 2016; Vendemia et al., 2019).

Despite that the effect of information dissemination cues has been confirmed in many prior studies, the question remains as to how exactly IDC perception affects target evaluations. To address the gap in the literature about the explanatory mechanism, the current study presents and tests a dual-route model through which IDC perceptions affect target evaluations. The first route is via trust in information. The effect of warranting values, including IDC perception on target evaluation, has been presumed to originate from the trust for information that is difficult to manipulate (Lew & Walther, 2017). Research evidence appears to be consistent with this prediction as IDC cues were found to negatively affect trust in user comments (DeAndrea & Vendemia, 2016; Vendemia et al., 2019). However, whether such trust in comments indeed precedes the evaluation for targets, as presumed in previous literature on warranting theory, has not been directly tested. Hence, the current study tests comment trust as a mediator to see whether it indeed explains the effect of IDC perceptions.

In addition, the current study proposes that viewers' IDC perception may not only reduce trust toward third-party reviews of the review object but also reduce individuals' liking toward the seller because of the seller's questionable behavior. The latter could constitute an alternative mechanism to the effect of IDC, in addition to trust in the information. The persuasion knowledge model (Friestad & Wright, 1994) suggests that once consumers activate their persuasion knowledge about the hidden motive of a seller, they are more likely to cope with the persuasion attempts in a defensive manner, resulting in negative evaluations about the seller. Based on the model, Campbell and Kirmani (2000) found that when the ulterior motive of a seller is highly accessible in viewers' minds, their evaluation of the seller decreased. It is thus likely that

when people suspect that a seller selectively removed certain user comments, they are more likely to activate the negative motive and tactic of a seller in their minds and reduce their liking toward the seller, which can affect the product evaluations independent of their trust toward remaining user comments about the product.

This negative-seller evaluation based on IDC is conceptually separate from assessment toward the quality of user comments that were attempted to be hidden or remaining to be visible. Given that people tend to process messages in a biased manner such that they disregard information that favors a person or an organization they do not like (Ecker & Ang, 2019; Nyhan & Reifler, 2010), it is plausible when people have negative affects toward a seller that the content or trustworthiness of the remaining user comments becomes less important when they decide whether they will purchase a product from the seller. Indeed, empirical research in e-commerce settings has discovered that an individual's impression of an online seller influences their tendency to purchase from the seller in an e-commerce context (Dai, Viken, Joo, & Bente, 2018).

Seller attraction is especially pertinent in the context of social media platforms such as Instagram, which is increasingly employed by influencers and companies for cost-effective product advertisement and relied on by Internet users as important sources for product information (Arnold, 2018). In social media-based marketing, it is reasonable to expect that individuals' liking toward a seller will play a larger role in their attitude toward a product since the nature of social media allows for a more intimate glance into the seller's personal life (Lee & Watkins, 2016). However, since prior research has not tested liking toward a seller as a potential mediator of the effect of IDC perception or compared that with trust toward the user comments in the same statistical model, it is yet unclear whether IDC perception affects the product judgments through the reduction of the trust in user comments or the reduction of seller liking. Based on the discussions so far, we propose the following hypothesis and research question:

H3a-b: (a) Comment trust and (b) seller liking mediate the influence of IDC perception on product evaluation and purchase intention.

RQ1: Between comment trust and seller liking, which is a stronger mediator for the influence of IDC perception on product evaluation and purchase intention?

Moderating Effects of Product Involvement and Seller Type

The proposed dual mechanism of IDC perception effects, however, may transpire differently depending on other factors. In terms of the relative strength of a mediator over another, the current study focused on two potential moderators: product involvement and seller type.

Dual processing models of persuasion (Chaiken, 1980; Petty & Cacioppo, 1986) suggest that people process persuasion messages in two different ways: central route and peripheral route. In the central route, people focus more on the argument quality, but in the peripheral route, they pay more attention to cues outside of the message, such as source attractiveness. A key determinant of which route people process information is people's involvement level with the topic. The higher the level of involvement, the more likely

a person is to focus on the quality of arguments rather than peripheral cues to determine his or her attitude toward the target. In the context of e-commerce, product involvement—the perceived importance or relevance of a target product to a person (Traylor, 1981)—can determine how people process information about the product (Eslami & Ghasemaghaei, 2018; Park & Lee, 2008). Extending the dual processing models' propositions to the current study, people who have higher product involvement may focus more on the trustworthiness of the user comments rather than their liking toward the seller, which corresponds more to the argument-focused central processing. In contrast, those with low product involvement are less likely to pay attention to online comments but determine their product evaluations based on how much they (dis)like the seller, which is more in line with peripheral route processing. Thus, the following hypothesis is proposed:

H4: The higher the product involvement, the stronger the mediating effect of comment trust than that of seller liking.

Apart from product involvement, the type of seller (company vs. individual) may also influence the mechanism underlying the effect of IDC perception. With the increasing popularity of social media among consumers, in addition to typical commercial companies, individuals such as influencers also promote and sell their products on various social media platforms (Abrams, 2018). Despite the relatively small scale of business that might negatively affect the credibility, individual sellers tend to use their interpersonal charms—whether it be social or physical attractiveness, goodwill, or similarity—to attract customers (Lou & Kim, 2019). According to recent research, Instagram celebrities' brand posts are more trusted and affect the brand attitude more than traditional celebrities brand posts because of higher social presence, which is the perception of a real human feel (Jin, Muqaddam, & Ryu, 2019). A similar pattern can be expected for company sellers versus individual sellers in that a company seller is also more impersonal and less similar to laypeople than individual sellers. When a negative cue about the sellers such as IDC cue exists, however, individual sellers may experience more loss in customers because of decreased interpersonal liking by the customers. Thus, seller liking may be a more powerful determinant for product evaluation and purchase intention for individual sellers than for company sellers.

Relatedly, previous research discovered that in social media such as Twitter and Facebook, people have more thoughts on the message source (Lee & Shin, 2014b) and focus less on the message arguments (Chung, Han, & Koo, 2015) compared to more traditional online platforms such as online news platforms or blogs. This also suggests the possibility of a stronger influence of seller liking on product assessment and purchase intention than comment trust given more focus on a person in social media settings. Hence, the following hypothesis is put forward:

H5: When viewing a post from an individual seller compared to a company seller, the mediating effect of seller liking is stronger than that of comment trust.

Method

Experimental Design and Participants

We conducted an original Web-based experiment featuring a 2 (seller type: individual vs. company) × 3 (user comment: negative rumor vs. deletion claim vs. neutral comment) between-subjects design. Participants were randomly assigned to one of the six conditions. A total of 175 participants were recruited through Amazon's Mechanical Turk. After data cleaning by removing attention check failures, missing data, and outliers,¹ the final number of participants was $N = 166$. All participants received US\$2 in exchange for their participation. Participants' ages ranged from 21 to 69, with an average of 36.19 ($SD = 10.16$) years. Males constituted 53.6% of the participants. The racial composition of the sample was Caucasian (79.5%), African American (9.6%), Hispanic (5.4%), Asian (3.0%), mixed-race (1.2%), Native American (0.6%), and Pacific Islanders (0.6%). A total of 94.3% of the sample reported having used Instagram before, and 32.5% of the sample have bought products from sellers on social media.

Stimuli

We created a mock-up online advertisement posted on Instagram. Instagram is a popular social media platform where people can share their pictures, videos, captions, and comments. Using its visual-focused features, Instagram has been promoting itself as an e-commerce platform where people can sell their products (Instagram Business Team, 2019), which makes it an appropriate candidate for the current study. We chose sunscreen as the target product because (1) skincare products are often advertised and sold on social media (Prokofieva, 2019) and thus can increase realism of the stimuli, (2) sunscreen is relatively gender-neutral among skincare products, and (3) there is a low chance of people having strong preexisting attitudes toward sunscreen, which helps to avoid any floor or ceiling effect that may have obscured the effectiveness of the experimental manipulations.

The advertisement and comments were presented in two screenshots from Instagram (see Figures 1 and 2). The first screenshot showed a picture of the product and the seller's description of the product. The second screenshot presented other users' comments under the seller's post. The seller's message and user comments conveyed that the sellers were promoting their own products. To manipulate the seller's identity, the advertisement was posted by either a company named *All Good* with a company logo profile photo or an individual with the username *sarah.bache* and a person's face as a profile photo. For the individual seller, we chose a female in her 20s to assimilate a natural social media browsing experience as females between 25 and 34 are the most frequent group of influencers creating advertising posts on Instagram (Guttman, 2020a, 2020b).²

¹ Outliers were determined by examining whether a value is outside the range of 1.5 interquartile range ± 1st and 3rd quartiles for dependent variables.

² Participants' gender and age did not interact with the manipulation of seller type to affect the outcome variables.

In all six conditions, participants read four comments on the product. The first three comments were all positive toward the product, and they were identical across all conditions. Depending on the condition, the fourth comment presented one of the following three messages. In the *deletion-claim* condition, the fourth user comment read "You deleted my comment [emoticon of an angry face]" showing a third-party claim about the seller's IDC attempt. In the *neutral* condition, the fourth comment read "One more option of sunscreen on the market." Last, in the *negative-rumor* condition, the fourth comment mentioned a false but publicized rumor about sunscreen products, saying "Sunscreen CAUSES skin cancer rather than prevents it!! People, please don't waste your money on a sunscreen like this. They are total frauds!! [emoticons of angry faces and dislike]," reflecting a popularized false rumor about sunscreen side effects (Harvard Health Publishing, 2018). Other than the content of the fourth comment, everything else including the profile photos and names of the commenters, a promotional message written by the seller, the photo of the product, and the number of likes of the seller's post was equivalent across experimental conditions.



Figure 1. Example stimuli for the company seller-negative rumor condition.

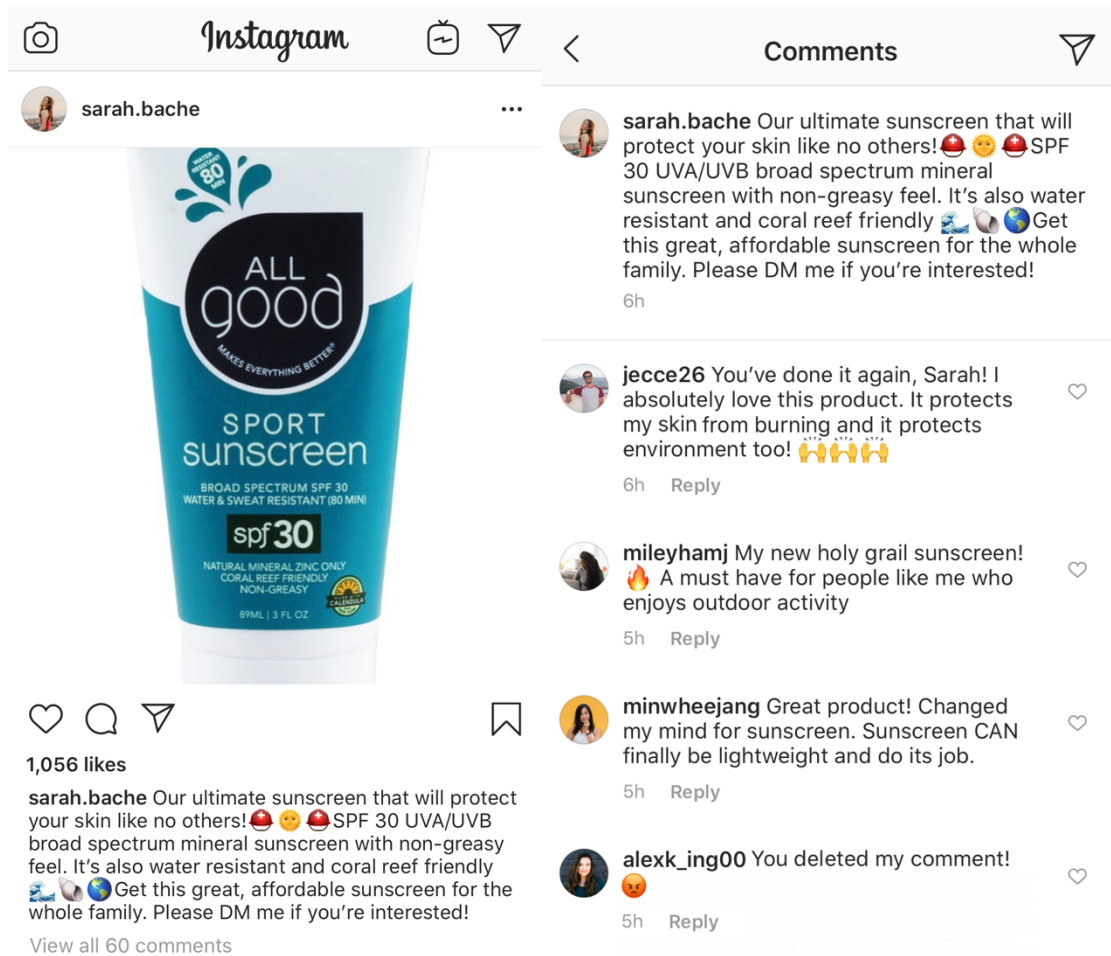


Figure 2. Example stimuli for the individual seller-comment deletion condition.

Procedure

After consenting to participate in the study, participants saw two alleged screenshots that presented an advertisement for sunscreen and four user-generated comments below it. Afterward, participants provided their answers to the questions on product evaluations, purchase intention, seller liking, comment trust, product involvement, IDC perception, seller recall, and their demographic information.

Measurement

IDC Perception

IDC perception was measured by asking people's perception of the extent to which the seller controlled the visibility of users' comments on a 7-point Likert-type scale with four items (1 = *Strongly disagree*; 7 = *Strongly agree*). The scale developed by DeAndrea and Carpenter (2018) was adapted for the current context. Items included "The seller controlled what comments appeared on Instagram" and "The seller picked what comments were presented on Instagram." The average score was computed for analysis ($\alpha = .96$, $M = 3.90$, $SD = 1.91$).

Product Evaluation

Participants' product evaluation was measured by asking them to rate the quality of the sunscreen product they viewed on a 7-point semantic differential scale with five items (DeAndrea & Carpenter, 2018). Items included bad (1)/good (7), unappealing/appealing, low quality/high quality, unexceptional/exceptional, and poor/great. The average score was computed for analysis ($\alpha = .95$, $M = 5.42$, $SD = 1.03$).

Purchase Intention

Participants indicated their willingness to buy the sunscreen product on a 7-point semantic differential scale with three items (Zhang, 1996). Items included unlikely (1)/likely (7), impossible/possible, and improbably/probable. The average score was computed for analysis ($\alpha = .94$, $M = 5.02$, $SD = 1.46$).

Seller Liking

Participants' seller liking was measured by a 7-point semantic differential scale with five items (Roskos-Ewoldsen, Bichsel, & Hoffman, 2002). Items included negative (1)/positive (7), unfavorable/favorable, con/pro, unappealing/appealing, and unlikable/likable. The average score was computed for analysis ($\alpha = .98$, $M = 5.13$, $SD = 1.32$).

Comment Trust

Participants indicated their trust toward the user comments they read on a 7-point semantic differential scale with five items (DeAndrea & Vendemia, 2016). Items included untrustworthy (1)/trustworthy (7), biased/unbiased, not credible/credible, not reliable/reliable, not believable/believable. The average score was computed for analysis ($\alpha = .97$, $M = 4.46$, $SD = 1.55$).

Product Involvement

Participants indicated how involved they were with general sunscreen products on a 7-point Likert-type scale with four items (Verhagen, Boter, & Adelaar, 2010). Items included "Sunscreens are very important to me" and "I have a strong interest in sunscreens" (1 = *Strongly disagree*; 7 = *Strongly agree*). The average score was computed for analysis ($\alpha = .93$, $M = 4.85$, $SD = 1.61$).

Seller Type

To check whether participants had successfully recognized the type of the seller, participants were asked to indicate who the seller was by choosing from one of the three options: "an individual named Sarah" or "a company named All Good" or "Not sure."

Results***Induction Check***

Before testing hypotheses, we checked whether our experimental induction for seller identity was successful. Results from a chi-square test showed that people who were in the individual-seller condition recalled the seller to be an individual significantly more than those who were in the company-seller condition, whereas people who were in the company-seller condition recalled the seller to be a company significantly more than those who were in the individual-seller condition, $\chi^2(2) = 122.50, p < .001$.³

Hypothesis Test

Hypothesis 1a–b predicted a deletion-claim comment would lead to higher IDC perception than (a) a neutral comment and (b) a negative-rumor comment. An ANOVA was conducted with comment types as the independent variable and IDC perception as the dependent variable. The result showed that there was a significant difference between the three comment conditions on IDC perception, $F(2, 163) = 65.14, p < .001, \eta^2 = .44$. Pairwise comparisons using Tukey's HSD (honestly significant difference) confirmed that deletion claim ($M = 5.65, SD = 1.22$) had higher IDC perception compared to neutral comment ($M = 3.54, SD = 1.59$), $p < .001$, and negative comment ($M = 2.63, SD = 1.46$), $p < .001$. Thus, H1a–b was supported.

Hypothesis 2 predicted that IDC perception would mediate the influence of comment conditions and product evaluation and purchase intention. To test H2, two mediation analyses (Model 4) were conducted using Hayes' PROCESS (Hayes, 2017) with product evaluation and purchase intention as dependent variables. Comment conditions were dummy coded with the deletion claim as the reference group. Results supported H2. When people saw a deletion claim, their IDC perception was higher than those who saw a neutral comment, $b = -2.11, t = -7.61, p < .001$, or a negative rumor, $b = -3.02, t = -11.19, p < .001$. The IDC perception, in turn, negatively affected product evaluation, $b = -0.15, t = -2.81, p = .006$, and purchase intention, $b = -0.20, t = -2.63, p = .009$. The indirect effects through IDC perception were significant; for the comparison with neutral comment, $b = 0.32, 95\%$ bias-corrected 10,000 CI [0.08, 0.58] (for product evaluation), $b = 0.30, 95\%$ bias-corrected 10,000 CI [0.07, 0.54] (for purchase intention) and for the comparison with negative rumor, $b = 0.46, 95\%$ bias-corrected 10,000 CI [0.11, 0.82] (for product evaluation), $b = 0.62, 95\%$ bias-corrected 10,000 CI [0.15, 1.13] (for purchase intention). All direct effects were insignificant, except the comparison with negative rumor on purchase intention, $b = -0.70, t = -1.98, p = .05$. Total effects were only significant for the comparison with neutral comment on product evaluation, $b = 0.54, t = 2.74, p = .007$.

³ Hypothesis testing results did not change when we conducted the same analyses using the data set that excluded participants who misidentified or were unsure of the seller ($n = 15$).

Hypothesis 3a–b predicted that (a) comment trust and (b) seller liking would mediate the influence of IDC perception on product evaluation and purchase intention. Further, RQ1 asked which mediator has a stronger influence on the outcome variables. To provide answers for H3 and RQ1, two mediation analyses (Model 4) using PROCESS were conducted with comment trust and seller liking as two parallel mediators (see Table 1 for intercorrelation results). In addition, two pairwise comparison analyses between the indirect effects were conducted within PROCESS by testing the significance of the estimate subtracting the indirect effect coefficient of seller liking from that of comment trust.

Results supported H3b, but not H3a. Specifically, IDC perception negatively influenced seller liking, $b = -0.20$, $t = -3.83$, $p < .001$, which in turn influenced product evaluation, $b = 0.52$, $t = 9.94$, $p < .001$, and purchase intention, $b = 0.64$, $t = 7.56$, $p < .001$. The indirect effect through seller liking was significant, $b = -0.10$, 95% bias-corrected 10,000 CI $[-0.17, -0.05]$ (for product evaluation), $b = -0.13$, 95% bias-corrected 10,000 CI $[-0.20, -0.06]$ (for purchase intention). In contrast, IDC perception was negatively associated with comment trust, but the association was only marginally significant, $b = -0.12$, $t = -1.96$, $p = .052$, which in turn influenced product evaluation, $b = 0.11$, $t = 2.41$, $p = .02$, and purchase intention, $b = 0.18$, $t = 2.62$, $p = .01$. The indirect effect through comment trust was not significant, $b = -0.01$, 95% bias-corrected 10,000 CI $[-0.04, 0.001]$ (for product evaluation), $b = -0.02$, 95% bias-corrected 10,000 CI $[-0.06, 0.002]$ (for purchase intention). The total effect was significant for product evaluation, $b = -0.11$, $t = -2.66$, $p = .009$, and purchase intention, $b = -0.12$, $t = 1.99$, $p = .048$. Direct effect was not significant for either product evaluation or purchase intention.

For RQ1, consistent with the mediation results reported above, seller liking was a stronger mediator than comment trust for both product evaluation and purchase intention. The results of testing the significance of the estimate subtracting the indirect effect coefficient of seller liking from that of comment trust demonstrated that, for product evaluation, the indirect effect through seller liking was greater than that through comment trust, $b = 0.09$, 95% bias-corrected 10,000 CI $[0.04, 0.15]$, and for purchase intention, the indirect effect through seller liking was also greater than that through comment trust, $b = 0.10$, 95% bias-corrected 10,000 CI $[0.03, 0.18]$.⁴

Table 1. Pearson Product-Moment Correlations of Key Continuous Variables.

	2	3	4	5
1. IDC perception	-.29**	-.15	-.20**	-.15*
2. Seller liking		.66**	.77**	.70**
3. Comment trust			.60**	.57**
4. Product evaluation				.75**
5. Purchase intention				

Note. IDC = Information Dissemination Control; * $p < .05$ ** $p < .01$

⁴ Post hoc power analysis ($N = 166$, N of replication = 1000, N of Monte Carlo draws = 20000, CI level = 95%) showed that the power to detect the difference between the two indirect effects was sufficient (.91 for product evaluation and .80 for purchase intention).

Table 2. Means and Standard Deviations of Key Variables.

	Company seller			Individual seller		
	Deletion claim	Neutral comment	Negative rumor	Deletion claim	Neutral comment	Negative rumor
IDC perception	5.67 (0.95)	3.49 (1.53)	2.81 (1.49)	5.63 (1.44)	3.60 (1.69)	2.46 (1.43)
Seller liking	4.75 (1.31)	5.54 (0.94)	5.46 (1.38)	4.76 (1.36)	5.53 (1.26)	4.73 (1.38)
Comment trust	4.67 (1.29)	4.88 (1.45)	4.61 (1.31)	4.19 (1.58)	5.10 (1.56)	3.44 (1.57)
Product evaluation	5.19 (0.86)	5.64 (0.98)	5.53 (1.02)	5.26 (1.13)	5.90 (0.85)	5.06 (1.13)
Purchase intention	5.06 (0.95)	5.37 (1.08)	5.23 (1.76)	4.75 (1.75)	5.37 (1.39)	4.41 (1.44)

Note. IDC = Information Dissemination Control; SDs are reported in parenthesis.

To test H4, which predicted the moderating role of product involvement for the dual mediator model tested above, two moderated mediation models using PROCESS (Model 7) were conducted. The mean-centered product involvement was entered as a moderator for the relationship between mean-centered IDC perception and two parallel mediators (comment trust and seller liking). Results did not support H4. No significant interaction between product involvement and IDC perception was found for comment trust, $b = 0.01$, $t = 0.41$, $p = .68$, or seller liking, $b = 0.01$, $t = 0.44$, $p = .66$. Index of moderated mediation was also not significant for either product evaluation or purchase intention, suggesting that the mediation model does not change based on product involvement.

To test H5, which explored if the dual mediation model changes based on seller type, two moderated mediation models using PROCESS (Model 7) were conducted. Dummy-coded seller type (0 = *company*; 1 = *individual*) was entered as a moderator for the relationship between mean-centered IDC perception and two parallel mediators (comment trust and seller liking). Results did not support H5. No significant interaction between seller type and IDC perception was found for comment trust, $b = 0.03$, $t = 0.23$, $p = .82$, or seller liking, $b = -0.03$, $t = -0.27$, $p = .79$. Index of moderated mediation was also not significant for either product evaluation or purchase intention, suggesting that the mediation model does not change based on seller type.

To incorporate all findings, we additionally tested a serial mediation model (Model 81) using PROCESS with comment conditions as the independent variables and product evaluation and purchase intention as the dependent variables. The first mediator was IDC perception, and the second mediators were comment trust and seller liking. Results supported the serial mediation model (see Table 2 for regression analysis results). The indirect effects of comment conditions on product evaluation and purchase intention through IDC perception and then comment trust and seller liking were all statistically significant (see Table 3 for coefficients and confidence intervals). The indirect effects through comment trust (mean of $bs = 0.075$, $SD = 0.02$) were weaker than those through seller liking (mean of $bs = 0.29$, $SD = 0.07$). All direct effects were not significant. Total effects were only significant for the comparison between deletion-claim and neutral comment conditions on product evaluation, $b = 0.54$, $t = 2.74$, $p = .007$.

Table 3. Serial Mediation Analysis Results.

IDC perception (1st mediator)		
Predictors	<i>b</i> (<i>SE</i>)	<i>t</i>
Neutral comment ^a	-2.11 (0.28)	-7.61***
Negative rumor ^a	-3.02 (0.27)	-11.19***
<i>F</i> (<i>R</i> ²)	65.14*** (.44)	
Comment trust (2nd mediator)		
Predictors	<i>b</i> (<i>SE</i>)	<i>t</i>
Neutral comment ^a	-0.02 (0.33)	-0.07
Negative rumor ^a	-1.24 (0.36)	-3.41***
IDC perception	-0.28 (0.08)	-3.50***
<i>F</i> (<i>R</i> ²)	8.20*** (.13)	
Seller liking (2nd mediator)		
Predictors	<i>b</i> (<i>SE</i>)	<i>t</i>
Neutral comment ^a	0.27 (0.28)	0.96
Negative rumor ^a	-0.39 (0.31)	-1.25
IDC perception	-0.24 (0.07)	-3.50***
<i>F</i> (<i>R</i> ²)	7.51*** (.12)	
Product evaluation (DV)		
Predictors	<i>b</i> (<i>SE</i>)	<i>t</i>
Neutral comment ^a	0.08 (0.15)	0.51
Negative rumor ^a	-0.07 (0.17)	-0.42
IDC perception	-0.001 (0.04)	-0.03
Comment trust	0.09 (0.05)	2.07*
Seller liking	0.52 (0.05)	9.84***
<i>F</i> (<i>R</i> ²)	50.63*** (.61)	
Purchase intention (DV)		
Predictors	<i>b</i> (<i>SE</i>)	<i>t</i>
Neutral comment ^a	-0.13 (0.24)	-0.55
Negative rumor ^a	-0.25 (0.27)	-0.91
IDC perception	-0.005 (0.06)	-0.08
Comment trust	0.17 (0.07)	2.26*
Seller liking	0.64 (0.09)	7.56***
<i>F</i> (<i>R</i> ²)	32.65***(.51)	

Note. IDC = Information Dissemination Control; ^areference group = deletion claim; **p* < .05, ***p* < .01, ****p* < .001.

Table 4. Indirect Effects of Comment Conditions Based on the Serial Mediation Analysis.

Product evaluation (DV)			
(Comment → IDC perception → Comment trust → Product evaluation)			
Predictors	<i>b</i>	Boot <i>SE</i>	Boot 95% CI
Neutral comment ^a	0.05	0.03	[0.003, 0.13]
Negative rumor ^a	0.08	0.05	[0.004, 0.18]
(Comment → IDC perception → Seller liking → Product evaluation)			
Predictors	<i>b</i>	Boot <i>SE</i>	Boot 95% CI
Neutral comment ^a	0.26	0.08	[0.10, 0.42]
Negative rumor ^a	0.37	0.11	[0.15, 0.60]
Purchase intention (DV)			
(Comment → IDC perception → Comment trust → Purchase intention)			
Predictors	<i>b</i>	Boot <i>SE</i>	Boot 95% CI
Neutral comment ^a	0.07	0.04	[0.003, 0.17]
Negative rumor ^a	0.10	0.06	[0.004, 0.24]
(Comment → IDC perception → Seller liking → Purchase intention)			
Predictors	<i>b</i>	Boot <i>SE</i>	Boot 95% CI
Neutral comment ^a	0.22	0.07	[0.09, 0.38]
Negative rumor ^a	0.32	0.11	[0.13, 0.54]

Note. IDC = Information Dissemination Control; ^areference group = deletion claim.

Discussion

Through an experiment, this study found that a user's claim about the seller's comment deletion increased viewers' IDC perception. The IDC perception decreased product evaluation and purchase intention more through lowered seller liking than through lowered comment trust. This mediation pattern did not vary depending on seller type or product involvement levels. The results of the study provide additional insight into the mechanism through which warranting values of online information affects target evaluations.

Theoretical Implications

First, the study provides evidence for the effect of IDC perception of online information on target evaluations, supporting the principle of warranting theory (DeAndrea, 2014; Walther & Parks, 2002). Specifically, when a seller was suspected to have deleted certain comments, people had a higher IDC perception and such perception led people to rely less on positive user comments when evaluating the product and making a purchase decision. A distinct contribution of the current study is that unlike previous research that tested the effect of IDC using system-generated evidence that is usually not questioned of its authenticity, we tested whether a random user's claim about a seller's deletion behavior sufficed to influence people's IDC perception. Our results demonstrate that even though people do not know the true identity of a user who claimed a seller's manipulation over comments, his or her motivation for writing such a claim,

or the truthfulness of the claim, they still factored the claim into their consideration when judging the extent to which online information has been manipulated by the seller.

The results are consistent with the literature on truth bias (Levine, 2014)—a tendency to believe others by default—in people's information processing of user comments. A recent study found that people consider "who gains what" when they judge the reliability of online information, and they discount the value of information that is self-serving (DeAndrea & Vendemia, 2019). While the self-interest of a seller in a promotional social media posting is relatively easy to guess, the potential self-interest of a random user claiming a seller's deletion behavior is vague. Our results imply that people do not doubt the truthfulness of users as long as there is no specific reason to suspect that the users' comments are self-serving. Alternatively, the characteristics of the social media platform that reveal a profile photo and shared network information with a random user, even though they may not be authentic, may have enhanced the believability of the deletion claim by another user (Donath, 2007). Also, the general skepticism toward online sellers and high uncertainty about online shopping could have made people extra conscious of any type of red flag.

Second, our results on the comparison between a negative-rumor comment and a deletion-claim comment show that a seller's attempt to remove a user's unsubstantiated negative comment does not recover the damage of the negative comment when a cue for a seller's control exists. When people saw a deletion-claim comment, their perception about the seller's IDC increased more compared to when people saw a negative-rumor comment. This heightened IDC perception, in turn, decreased product evaluation and purchase intention. This result fills in a gap from the previous research on the effects of IDC. In prior literature that has found that IDC perception negatively affects target evaluations, the effect of evidence for IDC was mainly observed in conditions where the user comments were positive (Shin et al., 2020; Vendemia et al., 2019). Our results show the first evidence that even if a seller controls user comments that contain a negative false rumor, the effect of IDC perception can be more detrimental compared to when leaving the negative false rumor as it is.

Given that negative rumor constitutes a form of disinformation (Molina, Sundar, Le, & Lee, 2019), the findings from our study suggest that deleting user-generated disinformation may not be the best approach to dealing with disinformation, at least when the removal is done by the target to which the disinformation concerns. This is somewhat worrisome given the prevalence of untruthful information online and how it is widely spread through social network sites. The results of our study suggest that agencies that face the challenge of controlling disinformation about them should at least consider giving legitimate explanations when removing disinformation about them, which has been proven in previous research to be an effective strategy in combating the negative impact of IDC (Shin et al., 2020).

Third, the current study revealed that seller liking was a more powerful mediator than comment trust of the effect of IDC on product evaluation and purchase intention. This result indicates that the mechanism through which the warranting principle exerts its influence may be more complex than it had been described in the theory. The warranting theory presumes that less manipulatable information about a target is more influential. The results from our study showed that, at least in the context of e-commerce, IDC perception influenced the value of information in people's decision making more by decreasing their

liking toward the seller who manipulated the information, than by decreasing their trust toward the information itself. Moreover, such a mechanism did not vary depending on people's involvement with a product and the seller type. Once a cue prompts a suspicion that a seller engaged in a murky activity, the suspicion dominates the further evaluations of the seller and seller's product, regardless of the type of seller or the reader's involvement with the product. This result is in line with the persuasion knowledge model (Friestad & Wright, 1994) in that people's knowledge about a seller's ulterior motive or covert tactic motivates them to evaluate the seller in a negative light to defend oneself from being easily persuaded. These results suggest that it is worthwhile for future studies to consider the role of interpersonal or affective judgments toward the seller as an important driver for the influence of warranting values of online information when it comes to applying warranting theory in e-commerce contexts.

Practical Implications

Our study findings can provide some practical suggestions for online sellers. The results showed that third-party claims about an online seller's comment-deletion behaviors could jeopardize the likability of the seller to potential customers, which further lowers product evaluation and purchase intention. This is particularly detrimental to online sellers because the results also showed that individuals did not doubt the truthfulness of user-generated comment-deletion claims. Our findings suggest that when managing user comments about products, it is not enough to simply delete negative comments about the product, even though they may be unsubstantiated and deserve to be removed. If the removal triggers user-generated claims about the seller's comment-deletion behaviors, a seller may pay a bigger price with his or her reputation than leaving the negative product comment as it is. Rather, actively replying to these comments and clarifying the unsubstantiated nature of these comments to potential consumers might be a more superior approach that helps to both reserve customers' positive affects toward the seller and salvage potential consumers' evaluation of the product and their purchase intention of it. Moreover, the current study found that seller liking was a more important mediator of the effect of IDC on product evaluation and purchase intention than trust toward the other users' comments. These results suggest that cultivating a positive reputation among the customers will benefit an online seller in the long run.

Limitations and Future Directions

Some limitations of the current study should be noted. First, our results may be more applicable to a certain type of individual seller (i.e., young females) than sellers of different demographics. Although our choice for specific seller type was made to increase the experimental realism (i.e., there are more female sellers of skincare products than male sellers), it still leaves open the question of whether the (lack of) findings about seller type would pertain to other individual-seller types. Although our data did not reveal any interaction between seller type and participants' age and gender, which reduces the concern for the effects of demographics, it can be worthwhile for future studies to differentiate types of individual sellers and company sellers to discover boundary conditions of the current finding.

Second, the use of a single product as a stimulus could limit the generalizability of the current findings for product involvement. The distribution of product involvement about sunscreen showed that

more people were highly involved with the product than less involved.⁵ Future studies will benefit from testing diverse products with varying levels of product involvement to further clarify its role.

Third, additional cues presented in the Instagram posts such as many likes and total comments could have reduced the effects of IDC perceptions. Given that people tend to follow the majority's opinion (e.g., bandwagon effect; Kim & Gambino, 2016), it is possible that people evaluated the product more positively by considering the popularity cues and less impacted by IDC perceptions than when such popularity cues do not exist or indicate low popularity. It can be worthwhile for future research to manipulate popularity cues to clarify how they may interact with other warranting cues to influence target evaluations.

Fourth, the current study measured seller liking using an established general attitude scale. However, given that the general attitude could involve not only social attraction but also trust judgments toward sellers, we encourage future research on IDC perceptions to have separate measurements for seller liking and seller trust to further clarify the role of the seller judgments.

Conclusion

The proliferation of online user-generated content has not only created a wide range of opportunities for online sellers and customers but also increased transactional risks. While customers need to actively assess the quality of various kinds of information about potential transactions, sellers also need to deal with false rumors that can easily arise and quickly affect other customers. Despite the necessity to control false information, our study suggests that covertly deleting problematic user comments is not likely to remove the harm done by negative rumors; further, once a claim for such action emerges, people are likely to discount their liking toward the seller, which could not only affect the immediate transactions but future relationships with the seller. Thus, our finding calls for more research to find effective ways to fight against online false claims in the e-commerce context without damaging consumers' attitudes toward the seller.

⁵ When the data was split using the neutral value (4 on a 7-point scale), the number of participants who had high product involvement was 117, the number of participants who had low product involvement was 45, and the number of participants who had neither high nor low product involvement was 4.

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