

Are Critics More Credible? When Positivity is the Norm, Negative Reviewers are Perceived to
be Less Credible

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CONSUMER RELEVANCE AND CONTRIBUTION STATEMENT

This research contributes to the literature on source credibility (e.g., Chaiken and Maheswaran 1994; Petty and Wegener 1998; Priester and Petty 2003; Tormala and Petty 2004) and consumer reviews and word-of-mouth (e.g., Berger 2014; Cheema and Kaikati 2010; Kupor and Tormala 2018; Mayzlin, Dover, and Chevalier 2014). Past research has mostly focused on credibility as an exogenous input (i.e., antecedent/IV) to attitudes and persuasion. In our work, we explore source credibility as the consequence (DV) and ask how source credibility is affected by the valence of reviews. In terms of consumer reviews, past research has provided many insights as to how different reviews are helpful or affect choice and WOM. In this research, we go a different direction and focus on the perceptions of the reviewer. We also utilize the expectancy-violation theory framework (Burgoon 1993; 2015) as a model to better understand how expectations about positivity can damage credibility, which can decrease subsequent attitudes, persuasion, and consumer choices.

Our research provides important contributions to consumer behavior theory, branding, and marketing communications. First, the findings suggests that source credibility is not an independent factor but is influenced by consumers' expectations. Second, in terms of branding, our results suggest that a negative review might not be so bad, as long as consumers expect positive reviews, because consumers are attributing it to the reviewer. Third, the results reiterate the importance of establishing expectations for positive reviews (Park, Shin, and Xie 2021). Finally, for opinion leaders, influencers, and critics, the results suggest that negativity often comes at the price of one's reputation. When followers and consumers expect positive reviews – which seems to be the norm – a negative review can damage an influencer's reputation.

ABSTRACT

Source credibility is an important antecedent that shapes consumer reviews, attitudes, and behavior. Whereas source credibility is an antecedent to consumer reviews and attitudes, it is possible that consumer reviews can shape source credibility and future consumer behavior. The current research examines source credibility as a consequence to consumer reviews by examining consumer's perception of source credibility in the online review context. The authors propose that the valence of a message systematically influences consumers' credibility perceptions of a reviewer, with implications for consumer attitudes, decisions, and branding. Specifically, consumers perceive negative reviewers to be less credible than positive reviewers due to an expectancy violation: negative valence violates the descriptive norm of positivity. Supporting this expectancy-violation account, when consumers expect reviews not to be positive (e.g., the driver's license office or a new brand), a negative review does not damage a reviewer's credibility. Twelve studies, across several product and service categories and situations, provide systematic empirical support that a reviewer's credibility is damaged with negative reviews (studies 1, 2A-2H). Studies 3A and 3B directly test the expectancy-violation account through moderation and study 4 demonstrates that the negative credibility has downstream consequences on consumer attitudes and behavior.

Consumers' attitudes toward products and brands are often influenced by the opinions of others (Cialdini and Goldstein 2004; Schlosser 2005). An increasingly prevalent form of such social influence is reviews from other consumers (Chen and Xie 2008; Godes and Mayzlin 2004; Mayzlin, Dover, and Chevalier 2014). Reviews can provide information about not only a product's features, quality, and performance, but also any potential issues or problems. As a result, almost every consumer reads reviews before making a purchase (Murphy 2019) and considers online reviews and ratings to be important (Smith 2013). Perhaps because of this fact, the literature on online reviews has examined what motivates people to write reviews (Berger and Iyengar 2013; Berger and Schwartz 2011; Cheema and Kaikati 2010; Packard and Wooten 2013) and the impact of online reviews on sales (e.g., Basuroy, Chatterjee, and Ravid 2003; Berger, Sorensen, and Rasmussen 2010; Chevalier and Mayzlin 2006; Liu 2006), with an implicit assumption that the individual reviewers are equally credible.

However, consumers are often concerned about the credibility of reviewers and the accuracy of reviews (Cheung et al. 2009; Schlosser 2011; Willemsen, Neijens, and Bronner 2012). Brands sometimes incentivize consumers to write positive reviews, and sometimes even try to sabotage competitors by writing negative reviews (Mayzlin et al. 2014). Further, there are often too many reviews for consumers to comprehend, which can lead to suboptimal decisions (Jacoby 1974, 1984; Shugan 1980). As a consequence, consumers may look for a handful of reviews from credible sources, suggesting the important need to understand the role of source credibility perceptions in consumer reviews.

Source credibility, or a source's overall believability, is the combination of expertise and trustworthiness (Petty and Cacioppo 1981a; Petty and Wegener 1998), and a large literature has demonstrated that it has important implications for consumers' attitudes, belief formation, and

consumption decisions (e.g., Chaiken and Maheswaran 1994; Petty and Cacioppo 1984; Sternthal, Dholakia, and Leavitt 1978). Generally, the same message is more persuasive when the source of the message is perceived to be more credible. One way to achieve higher credibility perceptions is to use credentials. For example, marketers often feature people in a white lab coat to signal credibility in science, or athletes to signal credibility in athletic performance.

In this research, we propose and provide evidence that the credibility of a reviewer is systematically influenced by a message's valence. Specifically, consumers perceive negative reviewers to be less credible than positive reviewers when they violate the norm of providing positive feedback. Using the expectancy-violation theory framework (Burgoon 1993, 2015), we propose and find support that the effect is due to consumers expecting reviews to be positive in most situations. In situations where consumers expect negative reviews, credibility is not damaged, consistent with expectancy-violation theory. In twelve studies, we find support for this prediction across eleven product/service categories with varying ratings. The results consistently demonstrate that consumers perceive reviewers that leave negative reviews to be less credible (i.e., less trustworthy, lower expertise) than reviewers that leave positive reviews. Testing the expectancy-violation account through moderation, we find that when consumers have low expectations for positive reviews or prior expectations for negative reviews (e.g., a review about the driver's license office or a new brand/restaurant), a negative review does not damage a reviewer's credibility.

By focusing on the credibility perceptions of the reviewer themselves for the first time, these findings provide important marketing insights and contribute to consumer theory on product reviews, persuasion, and source credibility. Whereas existing literature has largely focused on the review itself, we focus on how consumers judge the credibility of *reviewers*,

which further influences how consumers use reviews. In addition, we examine an antecedent to source credibility, showing how the incongruity between the valence of a message and prior expectation can shape source credibility perceptions. In past literature, source credibility and message valence are treated as independent factors affecting persuasion. However, we demonstrate that this is not necessarily the case when consumers have prior expectations for positive messages. From a managerial standpoint, our findings reiterate the importance of establishing expectations for positive reviews (Park, Shin, and Xie 2021), and it suggests that individual negative reviews might not be as bad as brands have previously thought, as long as consumers have prior expectations for positive reviews. Finally, for opinion leaders, influencers, and critics, the results suggest that negativity often comes at the price of one's reputation. When followers and consumers expect positive reviews – which seems to be the norm – a negative review can damage an influencer's reputation.

CONCEPTUAL BACKGROUND

Source credibility refers to the perception of a message source's ability or motivation to provide accurate, truthful information (Hovland, Janis, and Kelley 1953; Petty and Cacioppo 1981a; Petty and Wegener 1998). That is, message sources can be considered credible if they are experts (Rhine and Severance 1970) and trustworthy (Mills and Jellison 1967). Source credibility has long been of interest to consumer researchers (e.g., Erdem and Swait 2004; Grewal, Gotlieb, and Marmorstein 1994; Petty and Cacioppo 1981b, 1984; Petty, Cacioppo, and Schumann 1983; Priester and Petty 2003; Sternthal et al. 1978; Tormala and Petty 2004). In general, more credible sources are more persuasive than less credible sources (see Petty and Wegener 1998, for a review).

Traditionally, source credibility and message valence are two independent factors that affect message persuasion. However, given the extensive research on valence asymmetries (Baumeister et al., 2001; Fazio et al., 2015), it is possible that the message valence itself could affect credibility. How message valence might affect credibility is less clear because there are competing theories as to whether negative reviewers will be perceived to be more credible or less credible, which we discuss next.

Reviewers and Source Credibility

Existing theories are mixed as to whether negative reviews might increase or decrease the credibility of a source. On the one hand, the literature on negativity bias (Baumeister et al. 2001; Rozin and Royzman 2001) and consumer expertise (Alba and Hutchinson 1987; Bettman and Sujan 1987) suggests that consumers perceive negative reviewers to be more credible. On the other hand, negative messages may be unexpected and violate descriptive norms, and this expectancy-violation may be perceived as inappropriate, thus decreasing credibility. In this next section, we first discuss theories suggesting a positive effect on source credibility, and then we discuss theories suggesting a negative effect on source credibility.

Could Negative Reviews Increase Source Credibility? There are two related theories suggesting that negative reviews might increase source credibility. First, negative information is more diagnostic (Herr, Kardes, and Kim 1991; Mizerski 1982) partly due to loss aversion (Kahneman and Tversky 1979; Kahneman and Tversky 1984). Consumers pay much more attention to negative information than to positive information (Fiske 1980; Ohira, Winton, and Oyama 1998) and have better memories for negative events than positive events (Dreben, Fiske, and Hastie 1979; Pratto and John 1991; Skowronski and Carlston 1987). As negative information

is more diagnostic, consumers are drawn more to negative stories compared to positive stories (Ito et al. 1998; Soroka, Fournier, and Nir 2019) and make decisions based on negative information more than positive information (Cacioppo, Cacioppo, and Gollan 2014). Even when both positive and negative information is present, consumers tend to overweigh negative information when forming evaluations of a target (Anderson 1965; Fiske 1980). Similarly, negative reviewers can help consumers make more informed decisions about their purchases by exposing potential issues or flaws that may not be mentioned in advertising or promotional materials. Thus, the perceived helpfulness, salience, and diagnosticity of negative information might be used by consumers as a proxy for greater credibility.

Second, expert consumers have greater knowledge and higher standards, which can help them discriminate among various qualities in a product (Alba and Hutchinson 1987; Bettman and Sujan 1987). As a result, experts are more likely to give lower evaluations than the general population (Mollick and Nanda 2016). Furthermore, when people are concerned about the way in which their intellectual abilities are perceived, they may become negatively critical in an effort to preserve their self-esteem and their esteem in the eyes of observers (Amabile 1983; Amabile and Glazebrook 1982). These findings suggest that experts would be more critical in their evaluations and that non-experts try to give more negative evaluations when they want to be seen as experts. Thus, consumers may draw an inference that the source of a negative review is an expert. Given that expertise is perceived to be related to trustworthiness (Petty and Wegener 1998), consumers could infer higher source credibility from expertise. Thus, one might predict that negative reviewers will be perceived to be more credible than positive reviewers.

Could Negative Reviews Decrease Source Credibility? An Expectancy-Violation Account.

Based on expectancy-violation theory, it is also possible that negative reviews could have the

opposite effect and decrease source credibility. Negative messages are often unexpected and violate norms in most contexts. Consumer reviews tend to be generally positive, with the majority of review ratings giving four or five stars (e.g., 72.7%, Kupor and Tormala 2018; exploratory study). For example, 68% of Yelp reviews are either four or five stars (Yelp 2020), suggesting that consumers expect positive messages most of the time. Similarly, reviews on Amazon tend to be overwhelmingly positive in general, while the overall distribution of star ratings on Amazon is not publicly available and may vary depending on the product category. Many products have a majority of 5-star reviews, with a smaller number of 4-star, 3-star, 2-star, and 1-star reviews. It is not uncommon for products to have 80-90% 5-star reviews, with only a small percentage of the remaining ratings. Because the prevalence of positive reviews creates a frame of references against which consumers make comparative judgments of a review and its source, negative reviews violate this expectation. When the expectations are violated in a negative direction it leads to worse communication outcomes than valence alone (Burgoon 1993; 2015). Relatedly, when consumers are dissatisfied (Cadotte, Woodruff, and Jenkins 1987; Oliver 1980) they tend to be more skeptical about the source of disconfirming information (Ditto and Lopez 1992; Nickerson 1998). That is, a negative review could create an imbalance between a prior expectation for the valence of a review and other's evaluation of a product, which is psychologically stressful (Festinger 1962; Festinger, Riecken, and Schachter 1956). Consumers resolve the imbalance by either updating their prior expectation for the valence of reviews or changing their attitude toward the reviewer (Heider 1958; Petty and Cacioppo 1996). It is relatively easier to shift the attitude toward the reviewer because consumers generally do not have a prior expectation or knowledge of a reviewer (Cheung et al. 2009; Schlosser 2011; Willemsen, Neijens, and Bronner 2012). Thus, based on this theory, one might predict that a

negative review will violate communication expectations, and thus negative reviewers will be perceived to be less credible than positive reviewers.

In sum, there are two conflicting theories as to how negative reviews might affect credibility; however, there are additional theoretical reasons supporting the expectancy-violation account that are closely related to the review literature. Consumers are often heavily influenced by local descriptive norms (Goldstein, Cialdini and Griskevicius 2008). That is, consumers tend to form their attitude toward an object by conforming to the majority attitude of others who are in a similar situation. Thus, when consumers read reviews, they would be more influenced by the majority opinion of other consumers who have purchased and used the product before. Given that most products on the market tend to have overwhelmingly positive overall ratings (Kupor and Tormala 2018; Yelp 2020), consumers would use this information to evaluate the credibility of an individual reviewer. Thus, a reviewer would violate the descriptive norm of positive reviews when leaving a negative review, decreasing perceptions of source credibility.

In the studies that follow, we test whether negative reviews decrease consumers' source credibility perceptions, and we test the expectancy-violation account by examining situations when descriptive norms are not violated (i.e., when consumers are expecting negative reviews), which we discuss next.

Descriptive Norms of Reviews

If consumers perceive negative reviewers to be less credible because their negative review violates their prior expectations for the valence of reviews, then the effect should be mitigated when prior expectations are negative or do not exist. Negative reviews are even expected for certain types of products and services that have a reputation for poor service or low quality, such as visiting the DMV (Department/Bureau of Motor Vehicles), the cable company,

or food at a school cafeteria. Under these circumstances where negative reviews are expected, negative reviews do not violate expectations. Thus, based on the expectancy-violation framework, we would predict that negative reviewers will not be perceived to be less credible than positive reviewers when leaving reviews for products and services where negative reviews are expected.

Another situation where a negative review might not violate the expectations of positivity is when no expectations exist, such as rating a new brand. A new brand does not have reviews yet and has not proven itself in the marketplace. Thus, its quality is largely unknown, and the expectation of a positive review should be less salient. Thus, when a brand is new, we predict that negative reviewers will not be perceived to be less credible than positive reviewers.

Downstream Consequences: Social Perception of a Reviewer

When consumers perceive a reviewer as less credible, it is also likely that it will influence other social perceptions of the reviewer, such as competence, warmth, and likability. As source credibility includes expertise in its conceptualization (Hovland, Janis, and Kelley 1953; Petty and Cacioppo 1981; Petty and Wegener 1998), it is possible that lower credibility perceptions will also decrease perceptions of competence. In addition, according to the stereotype content model (Fiske, Cuddy, Glick, and Xu 2002), likability and trustworthiness are both a part of warmth perceptions. Thus, we predict that the decrease in credibility perceptions formed by a negative review will decrease social perceptions, such as competence, warmth, and likability.

Downstream Consequences: Following a Reviewer

Source credibility can have several downstream consequences on persuasion (e.g., Petty and Cacioppo 1981; Petty, Cacioppo, and Schumann 1983; Priester and Petty 1995, 2003), and it is likely that these negative credibility perceptions will decrease consumers' willingness to

follow a reviewer in other domains and recommendations. We further predict that credibility perception will carry over to (and mediate) consumer's willingness to follow the reviewer's recommendations on a related, yet different product. To the extent that more credible sources are more persuasive, the credibility perception formed by an initial review will influence consumer's willingness to follow the reviewer's recommendations. Thus, we predict that the credibility perception formed by the initial review influences consumers' willingness to follow a reviewer's subsequent recommendations.

OVERVIEW OF STUDIES

We test our prediction across twelve studies that span different product categories and situations. Table 1 provides an overview of the studies, which includes information about the sample, product categories, different dependent measures, and results. Study 1 demonstrates that reviewers leaving negative (vs. positive) reviews are perceived to be less credible. Studies 2A through 2G test the robustness of the effect across different situations and product categories and we report all studies in our file drawer. We find that the effect replicates across both hedonic and utilitarian products, different goals for reading reviews, decision stages, complex and simple products, different reviewer credentials, and fake review concerns. Study 3A and 3B test the expectancy-violation account by manipulating the expectations for positive reviews, finding that the effect is mitigated in situations when consumers expect a negative review. Study 4 demonstrates the downstream consequences of credibility perception. We report all studies, conditions, measures, data exclusions, and sample size determinations. All materials are available via OSF (https://osf.io/m9vaw/?view_only=4a2aa602158047d8947b0e1f355a9a67).

Table 1. Study Overview: Target Product, Review Star Ratings, Sample, Effects, and Measurement Items

Study	Target Product(s)	Review Star Ratings	Moderator	Sample	Credibility Mean (SD)		Credibility Measure
					Negative reviewer	Positive reviewer	
1	Blender	5 vs. 1	N/A	347 (UGs)	3.60 (1.10)	4.31 (0.87)***	1,2,3,4,5
2A	Wine	5 vs. 2	Product Choice (by reviewer vs. not by reviewer)	605 (Mturk)	4.96 (1.16)	5.17 (0.97)*	1,4,5,6,7
2B	Hiking trail	4 vs. 2	Credential (Present vs. Absent)	254 (UGs)	4.38 (1.32)	5.07 (1.07)***	1,2,4,5,6
2C-1	Hedonic: Wine, Chocolate, Movie Utilitarian: Scale, Thermometer, Vacuum	5 vs. 2	Product Type (Utilitarian vs. Hedonic)	404 (Mturk)	4.57	4.94***	1,4,6
2C-2		5 vs. 2		403 (Mturk)	4.34	4.71***	1,4,6
2D	Blender	5 vs. 1	Product Complexity (Simple vs. Complex)	602 (Mturk)	4.46 (1.10)	5.06 (0.89)***	1,2,4,5,8
2E	Vacuum	5 vs. 2	Decision Stage (Early vs. Late)	321 (UGs)	3.73 (1.13)	4.42 (1.10)***	1,4,5,6,7
2F	Blender	5 vs. 1	Fake review concern (Present vs. Control)	398 (Prolific)	4.27 (1.16)	4.76 (1.09)***	1,2,3,4,5
2G	Blender	5 vs. 1	Goal (Choose vs. Avoid)	221 (UGs)	3.88 (1.07)	4.44 (0.95)***	1,2,3,4,5
2H (file drawer)	Scale	5 vs. 2	Membership tenure (Short vs. Long)	297 (UGs)	4.12 (0.78)	4.24 (0.81)	1,2,4,5,8
3A	Vacuum	5 vs. 2	Prior expectations for positive reviews (Low vs. Baseline)	200 (Mturk)	Overall: 3.92 (1.24) Baseline: 3.60 (1.24) Low: 4.22 (1.17)	Overall: 4.24 (1.07)* Baseline: 4.41 (1.05)*** Low: 4.07 (1.07)	1,4,6
3B	Positive priors: AA batteries, chocolates Negative priors: public parking, BMW	5 vs. 1	Prior expectations for review valence (Positive vs. Negative)	372 (UGs)	Overall: 4.07 Positive: 3.94 Negative: 4.21	Overall: 4.43*** Positive: 4.61*** Negative: 4.24	1,2,3,4,5
4	Hiking trail	4 vs. 2	N/A	420 (UGs)	3.61 (1.10)	4.47 (0.93)***	1,2,3,4,5

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Credibility measure items: To what extent do you think s/he is (has)... 1. an expert? 2. credible? 3. unbiased? 4. trustworthy? 5. honest? 6. knowledgeable? 7. a lot of experiences? 8. biased (reversed)?

STUDY 1

In study 1, we test whether consumers perceive a negative reviewer as more or less credible and the downstream consequence of the credibility perception. The study's pre-registration can be found at [https://aspredicted.org/WVC_VRF].

Method

Participants. We recruited 347 undergraduates ($M_{\text{age}} = 20.14$, 48.41% female) from a large Midwestern university. Participants received extra credit in their introductory marketing class in exchange for participation. Sample size was set by the lab manager blind to the hypothesis and based on participant allocations.

Procedure. The study was a two-cell (review valence: negative vs. positive) between subjects design. Participants read a review of blenders. In the positive review condition, participants read a 5-star review that compliments the blender. In the negative review condition, participants read a 1-star review that criticizes the blender. The vocabulary and the topic were held constant across conditions (see Web Appendix for complete stimuli).

Participants indicated the perceived credibility of the source by responding to the 5-item source credibility scale: To what extent do you think s/he is credible, expert, unbiased, trustworthy, and honest ($\alpha = .80$). We created these items based on the conceptualization of source credibility that taps both expertise and trustworthy (Cooper, Blackman, and Keller 2016; Hovland et al. 1953; McGuire 1985; Petty and Cacioppo 1981; Petty and Wegener 1998; Wallace, Wegener, and Petty 2020). In addition, as preregistered, they indicated the subjective expertise in blenders with four items: How often do you use a blender, to what extent are you familiar with blenders, to what extent is a blender personally relevant to you, and to what extent do you consider yourself as an expert in blenders? ($\alpha = .85$).

Results

A one-way ANOVA showed a significant main effect of review valence on the source credibility perception, such that participants perceived the negative reviewer as less credible ($M = 3.60$, $SD = 1.10$) than the positive reviewer ($M = 4.31$, $SD = .87$, $F(1,345) = 44.09$, $p < .001$, $\eta_p^2 = .11$). The effect remained significant after controlling for the subjective expertise ($F(1,343) = 43.69$, $p < .001$, $\eta_p^2 = .11$), while the main effect of subjective expertise and the interaction were not significant ($F_s < 1.14$, $p_s > .286$).

Discussion

The results of study 1 show that consumers perceive a negative reviewer to be less credible than a positive reviewer. Further, consumers' subjective expertise on the focal product does not influence the source credibility perception and does not influence the effect of message valence on the source credibility perception.

STUDY 2A – 2G

Having shown that consumers perceive a negative reviewer to be less credible than a positive reviewer, we next test the robustness of this effect across multiple product categories, situations, reviewer characteristics, star ratings, and different measures of source credibility. We report all our studies (including one that did not find a significant effect).

Each study tests a potential theoretical limitation (i.e., moderator) to the effect. Study 2A tests choice attribution by manipulating whether the reviewer chose or did not choose the product. Study 2B tests prior credibility by manipulating whether the reviewer has relevant

credentials. Study 2C-1 and 2C-2 both test hedonic and utilitarian products. Study 2D tests whether the complexity of the product moderates the effect. Study 2E manipulates the decision stage of the decision maker (i.e., whether the reader of the review is either the early or later stage of the searching process). Study 2F primes a general concern for fake reviews. Study 2G tests different goals by manipulating whether the goal of reading the review is one to choose or to avoid the target product.

Study 2A: When Reviewers Did Not Choose the Product

One reason a reviewer might be viewed as less credible with a negative review is because others might view the reviewer as a poor decision maker. For example, if a person chooses a bottle of wine, and it turns out to be bad, then perhaps the person is not such a wine expert, otherwise they would have chosen a better bottle of wine. To test this alternative process, in Study 2A we manipulate whether the reviewer chose the product or not (i.e., a free gift).

Method

Participants. We recruited 600 US-based MTurk workers via CloudResearch's approved participant list, and 605 participated ($M_{\text{age}} = 38.01$, 43.14% female).

Procedure. The study was a 2(review valence: negative vs. positive) x 2(product choice: by reviewer vs. not by reviewer) between subjects design. Participants imagined that they were looking for a bottle of wine online and presented with a wine review. In the *choice-by-reviewer condition*, the review states, "I am disappointed (delighted) that I chose this wine" and "I won't (will) choose this wine again!" In the *choice not by reviewer condition*, the review states, "I am disappointed (delighted) that I won this wine from an event" and "They should not (should) choose this wine again!" In the positive message condition was a 5-star review and the negative

message condition was a 2-star review (see Web Appendix for complete stimuli). Participants then responded to five source credibility questions measuring perceived expertise, knowledge, experience, trustworthiness, and honesty on 7-point scale (1 = *not at all*, 7 = *very much*, $\alpha = .88$).

Results

Replicating study 1, participants perceived the negative reviewer to be less credible ($M = 4.96$, $SD = 1.16$) than the positive reviewer ($M = 5.17$, $SD = .97$; $F(1,601) = 5.81$, $p = .016$, $\eta_p^2 = .010$). Participants perceived a reviewer who chose the wine themselves to be more credible ($M = 5.20$, $SD = .98$) than who did not choose the wine themselves ($M = 4.93$, $SD = 1.15$; $F(1,601) = 9.62$, $p = .002$, $\eta_p^2 = .016$); however, the interaction between the message valence and the choice was not significant ($F(1,601) = .02$, $p = .882$, $\eta_p^2 < .001$). The results suggest that the negative perception is not due to consumers perceiving a reviewer negatively simply because they made a poor choice (of wine, in this case).

Study 2B: Reviewer with Credentials

To test whether reviewer credentials might insulate reviewers, study 2B manipulates the presence of expert credentials (i.e., a ‘Verified Park Ranger’ badge).

Method

Participants. We recruited 254 undergraduates ($M_{\text{age}} = 20.10$, 46.46% female) from a large Midwestern university. Participants received extra credit in their introductory marketing class in exchange for participation. Sample size was set by the lab manager blind to the hypothesis and based on participant allocations.

Procedure. The study was a 2(review valence: positive vs. negative) x 2(credential: present vs. absent) between subjects design. Participants read a review of hiking trails. In the

positive review condition, participants read a 4-star review that complimented the trail. In the *negative review condition*, participants read a 2-star review that criticized the trail. In the *credential present condition*, there was an additional blue badge and title next to the name of the reviewer, saying ‘Verified Park Ranger’ (see Web Appendix for complete stimuli).

Participants responded to the credibility questions measuring perceived credibility, expertise, knowledge, trustworthiness, and honesty on 7-point scales ($\alpha = .90$). As preregistered, participants also indicated the expected average ratings of the hiking trails using a star slider scale, ranging from 1-star to 5-star. The pre-registration can be found at [https://aspredicted.org/1YY_2DR].

Results

Replicating our previous studies, participants perceived the negative reviewer to be less credible ($M = 4.38$, $SD = 1.32$) than the positive reviewer ($M = 5.07$, $SD = 1.07$; $F(1,250) = 26.75$, $p < .001$, $\eta_p^2 = .10$). As we would expect, participants did perceive a reviewer who has a relevant credential to be more credible ($M = 5.06$, $SD = 1.24$) than one who does not ($M = 4.34$, $SD = 1.16$; $F(1,250) = 28.71$, $p < .001$, $\eta_p^2 = .10$). However, the interaction between the message valence and credential was not significant ($F(1,250) = .30$, $p = .582$, $\eta_p^2 = .001$), suggesting that having a credential does not protect negative reviewers from being perceived as less credible. We also measured the average expected ratings of hiking trails, which was 3.44 ($SD = .80$) with the median of 4, and significantly higher than the mid-point of the scale (mean: $t = 8.62$, $p < .001$; median: $Z = 12089$, $p < .001$). We return to these positive expectations in studies 3A and 3B when we manipulate the positivity of expectations and test our expectation-violation account.

Study 2C-1: Utilitarian vs. Hedonic Products

Studies 2C-1 and 2C-2 test whether the effect holds for both hedonic and utilitarian purchases by providing multiple replicates that vary on their hedonic and utilitarian qualities.

Method

Participants. We recruited 400 US-based MTurk workers via CloudResearch's approved participant list, and 404 participated ($M_{\text{age}} = 39.43$, 51.24% female).

Procedure. The study followed a 2(review valence: positive vs. negative) x 2(product type: hedonic vs. utilitarian) x 3(product replicates of each type, within) mixed design. Participants were presented with a total of 6 products and 6 reviews. Each product replicate was presented separately, with order and valence randomized. Participants were asked to imagine shopping for the product and reading product reviews. The three hedonic products were wines, movies, and chocolate, and the three utilitarian products were scales, thermometers, and vacuum cleaners.

Credibility perceptions were measured after showing each product review, on a 7-point scale using three items measuring expertise, knowledge, and trust ($\alpha_s > .79$). Finally, participants reported their own expertise in each product category (see Web Appendix for complete stimuli).

Results

We conducted a multi-level linear regression, allowing each participant and each replicate to have a random intercept (Judd, Westfall, and Kenny 2017), and used contrast coding for both message valence (-1 = negative, 1 = positive) and product type (-1 = utilitarian, 1 = hedonic). Participants perceived the negative reviewers as less credible than the positive reviewers ($M_{\text{neg}} = 4.57$ vs. $M_{\text{pos}} = 4.94$; $b = .18$, $SE = .02$, $t(2161.628) = 9.79$, $p < .001$). Product

type (i.e., utilitarian vs. hedonic) did not influence reviewer credibility perception ($M_{\text{utilitarian}} = 4.61$ vs. $M_{\text{hedonic}} = 4.90$; $b = .15$, $SE = .10$, $t(4.002) = 1.44$, $p = .225$). There was a significant interaction between review valence and product type ($b = -.05$, $SE = .02$, $t(2150.114) = -2.59$, $p = .010$); however, the simple effects were significant for both hedonic ($M_{\text{neg}} = 4.76$ vs. $M_{\text{pos}} = 5.03$; $p < .001$) and utilitarian products ($M_{\text{neg}} = 4.37$ vs. $M_{\text{pos}} = 4.84$; $p < .001$), indicating that the effect replicated in both conditions but was stronger for utilitarian products.

Subjective expertise as a covariate did show a significant main effect ($b = .06$, $SE = .02$, $t(2349.891) = 3.85$, $p < .001$), but the estimates and overall pattern remained almost identical. Message valence remained significant ($b = .18$, $SE = .02$, $t(2158.507) = 9.70$, $p < .001$), the product type remained non-significant ($b = .15$, $SE = .10$, $t(4.002) = 1.43$, $p = .225$), and the message valence by product type interaction remained significant ($b = -.05$, $SE = .02$, $t(2148.701) = -2.58$, $p = .010$). Further, subjective expertise did not create a significant interaction ($|ts| < 1.84$, $ps > .06$).

Study 2C-2: Utilitarian vs. Hedonic Products

Since study 2C-1 showed an interaction with hedonic-utilitarian products, we tested it again using a slightly different method for robustness.

Method

Participants. We recruited 400 US-based Mturk workers via CloudResearch's approved participant list, and 403 participated ($M_{\text{age}} = 38.66$, 51.12% female).

Procedure. The study followed a 2(review valence: positive vs. negative) x 2(product type: hedonic vs. utilitarian) x 3(product replicate, within) mixed design. Participants were presented with a total of either three hedonic or three utilitarian products and one review for each

product. One product replicate was presented at a time, with order and valence randomized. For each replicate, participants were asked to imagine shopping for the product and reading product reviews. Three hedonic products were wines, movies, and chocolate, and three utilitarian products were scales, thermometers, and vacuum cleaners. Credibility perceptions and participant expertise were measured after each product review using the same measures as study 2C-1 (see Web Appendix for complete stimuli).

Results

We conducted a multi-level linear regression, allowing each participant and each replicate to have a random intercept (Judd et al. 2017), with contrast coding for both message valence (-1 = negative, 1 = positive) and product type (-1 = utilitarian, 1 = hedonic). Participants perceived the negative reviewers as less credible than the positive reviewers ($M_{\text{neg}} = 4.34$ vs. $M_{\text{pos}} = 4.71$; $b = .18$, $SE = .03$, $t(994.124) = 6.83$, $p < .001$). Product type (i.e., utilitarian vs. hedonic) again did not influence reviewer credibility perception ($M_{\text{utilitarian}} = 4.31$ vs. $M_{\text{hedonic}} = 4.74$; $b = .21$, $SE = .12$, $t(5.023) = 1.80$, $p = .132$). As in study 2C-1, there was a significant interaction between review valence and product type ($b = -.12$, $SE = .03$, $t(994.124) = -4.47$, $p < .001$). The simple effects were again significant for both hedonic ($M_{\text{neg}} = 4.68$ vs. $M_{\text{pos}} = 4.80$; $p < .001$) and utilitarian products ($M_{\text{neg}} = 4.01$ vs. $M_{\text{pos}} = 4.62$; $p < .001$), indicating that the effect replicated in both conditions but was stronger for utilitarian products.

Once again, adding subjective expertise as a covariate had a significant main effect ($b = .10$, $SE = .02$, $t(1041.247) = 4.54$, $p < .001$), and the estimates and overall pattern remained almost identical. Message valence remained significant ($b = .18$, $SE = .03$, $t(999.467) = 6.84$, $p < .001$), product type remained non-significant ($b = .21$, $SE = .12$, $t(4.878) = 1.81$, $p = .131$), and

the message valence by product type interaction remained significant ($b = -.12$, $SE = .03$, $t(999.467) = -4.36$, $p < .001$). Subjective expertise did not create any significant interactions ($|ts| < 1.92$, $ps > .05$).

Study 2D: Product Complexity

Study 2D manipulated product complexity to test whether the effect might be mitigated for simple products where credibility is less of a requirement for leaving a review.

Method

Participants. We recruited 600 US-based Mturk workers via CloudResearch's approved participant list, and 602 participated ($M_{\text{age}} = 38.84$, 52.49% female).

Procedure. The study was a 2(review valence: positive vs. negative) x 2(product complexity: simple vs. complex) between subjects design. Participants read a review of a blender. In the *positive review condition*, participants read a 5-star review that compliments the blender. In the *negative review condition*, participants read a 1-star review that criticizes the blender. In the *simple product condition*, the review stated, "This blender is so simple and has only necessary features," in bold; the *complex product condition* stated, "this blender has so many complex features," in bold. Participants then responded to five source credibility questions measuring credibility, expertise, bias (reverse-coded), trustworthiness, and honesty ($\alpha = .82$). Then, participants reported their subjective expertise in blenders and answered the complexity manipulation check (see Web Appendix for complete stimuli).

Results

Manipulation check. The product was rated as more complex in the complex condition ($M = 4.61, SD = 1.46$) than in the simple condition ($M = 2.35, SD = 1.47, F(1,598) = 358.87, p < .001, \eta_p^2 = .38$). Unexpectedly, the effect of message valence was significant ($F(1,598) = 5.28, p = .022, \eta_p^2 = .009$), such that participants perceived the product to be more complex when the review was positive ($M = 3.62, SD = 1.78$) than negative ($M = 3.33, SD = 1.91$). However, the interaction between review valence and product complexity was not significant ($F(1,598) = 1.19, p = .275, \eta_p^2 = .002$), suggesting that the product complexity manipulation was successful.

Source credibility. Participants perceived a negative reviewer to be less credible ($M = 4.46, SD = 1.10$) than a positive reviewer ($M = 5.06, SD = .89; F(1,598) = 54.04, p < .001, \eta_p^2 = .08$). Product complexity did not have a significant main effect ($M_{simple} = 4.79, SD = 1.08$ vs. $M_{complex} = 4.73, SD = 1.00; F(1,598) = .72, p = .397, \eta_p^2 = .001$). The message valence by product complexity interaction was not significant ($F(1,598) = .30, p = .582, \eta_p^2 = .001$). After controlling for the subjective expertise covariate, the main effect of review valence remained significant ($F(1,598) = 53.24, p < .001, \eta_p^2 = .082$) and the other interactions were not significant ($F_s < 1.60$). These results suggest that negative reviewers are perceived to be less credible regardless of whether the product is perceived to be simple or complex.

Study 2E: Decision Stage

The consumer decision process can be divided into an early-stage of browsing for options and a late-stage of making a decision (Goodman and Reczek 2021). To test whether the stage of the decision might moderate the effect, we manipulated the goal/decision stage.

Method

Participants. We recruited 321 undergraduates ($M_{\text{age}} = 20.48$, 49.53% female) from a large Midwestern university. Participants received extra credit in their introductory marketing class in exchange for participation. Sample size was set by the lab manager blind to the hypothesis and based on participant allocations.

Procedure. The study was a 2(review valence: positive vs. negative) x 2(decision stage: early vs. late) between subjects design. Participants were asked to imagine shopping for a vacuum cleaner. In the *early-stage condition*, participants imagined that they just started looking for available options and started reading reviews of the first product they saw. In the *late-stage condition*, participants imagined that they had searched online for quite a while and decided to look at reviews of the final candidates. The *positive review condition* had a 5-star review and the *negative review condition* had a 2-star review. Participants then responded to five source credibility questions measuring to what extent they thought s/he is credible, expert, knowledgeable, trustworthy, and honest ($\alpha = .87$). Finally, participants reported their subjective expertise in vacuum (see Web Appendix for complete stimuli).

Results

Participants perceived a negative reviewer to be less credible ($M = 3.73$, $SD = 1.13$) than a positive reviewer ($M = 4.42$, $SD = 1.10$; $F(1,317) = 31.60$, $p < .001$, $\eta_p^2 = .091$). Decision stage did not have a significant effect ($M_{\text{early}} = 4.07$, $SD = 1.08$ vs. $M_{\text{late}} = 4.13$, $SD = 1.23$; $F(1,317) = 1.00$, $p = .318$, $\eta_p^2 = .003$), and the message valence by decision stage interaction was not significant ($F(1,317) = .01$, $p = .923$, $\eta_p^2 < .001$). After controlling for the subjective expertise covariate, the main effect of review valence remained significant ($F(1,313) = 30.02$, $p < .001$, η_p^2

= .088), while no interactions were significant (F 's < 1.95). These results suggest that negative reviewers are perceived to be less credible across consumers' decision stages.

Study 2F: General Fake Review Concerns

Many reviews are often fake, and consumers might be concerned that a negative review might be left by a competitor and not a real consumer. To test this theory, we manipulated the saliency of fake reviews.

Method

Participants. We recruited 400 US-based Prolific workers, and 398 participated ($M_{\text{age}} = 34.57$, 52.49% female). Participants received monetary rewards in exchange for participation.

Procedure. The study followed 2(review valence: positive vs. negative) x 2(fake review concerns: present vs. control) between subjects design. This study had two parts. In the first part, all participants read a short article. In the *fake review condition*, the article was about how fake reviews are prevalent on Amazon. In the *control condition*, the article was about how to get more reviews on Amazon. As a manipulation check, participants indicated to what extent they trust reviews on Amazon after reading an article. In the fake review concern present condition, participants answered additional item asking how concerned they are about fake reviews.

In the second part, participants were asked to imagine that they were shopping for a blender and reading reviews on Amazon. The *positive review condition* had a 5-star review and the *negative review condition* had a 1-star review. Participants then responded to five source credibility questions measuring to what extent they thought s/he is credible, expert, unbiased, trustworthy, and honest ($\alpha = .87$). Finally, as an attention check, participants were asked to remember the topic of the article they read with options of "Amazon Expansion," "Fake reviews

on Amazon,” “How to get more reviews on Amazon,” “The Safety of Vaccines,” “COVID-19,” and “None of above.”

Results

Manipulation check. Participant trusted reviews on Amazon less in the fake review concern condition ($M = 4.12$, $SD = 1.38$) than in the control condition ($M = 4.72$, $SD = 1.27$, $F(1,393^1) = 20.51$, $p < .001$, $\eta_p^2 = .05$). The main effect of message valence was not significant ($F(1,393) < .01$, $p = .987$, $\eta_p^2 < .001$), nor was the interaction between review valence and fake review concern manipulation ($F(1,393) = .35$, $p = .555$, $\eta_p^2 = .001$), suggesting that the fake review concern manipulation was successful. Further, almost every participant correctly recalled the topic of the article they read in the first part. In the fake review concern condition, 95.5% participants (189 out of 198) correctly recalled the topic, and in the control condition, 89.5% participants (179 out of 200) correctly recalled the topic.

Source credibility. Participants perceived the negative reviewer to be less credible ($M = 4.27$, $SD = 1.16$) than the positive reviewer ($M = 4.76$, $SD = 1.09$; $F(1,394) = 18.61$, $p < .001$, $\eta_p^2 = .045$). The fake review concern manipulation did not have a significant main effect ($M_{\text{fake-review}} = 4.45$, $SD = 1.18$ vs. $M_{\text{control}} = 4.58$, $SD = 1.12$; $F(1,394) = 1.11$, $p = .293$, $\eta_p^2 = .003$), and the interaction between the message valence and fake review concern manipulation was not significant ($F(1,394) = .11$, $p = .735$, $\eta_p^2 < .001$). After controlling for subjective expertise covariate, the main effect of review valence remained significant ($F(1,598) = 53.24$, $p < .001$, $\eta_p^2 = .082$), while other interactions were not significant ($F_s < 1.60$). These results suggest that

¹ One participant did not answer this question.

negative reviewers are perceived to be less credible regardless of whether the product is perceived to be simple or complex.

Study 2G: To Choose or to Avoid

Making a choice selection can put consumers in a positive frame where they look for positive attributes, whereas choosing to avoid an option can lead consumers to focus on negative attributes (Meloy and Russo 2004). Thus, to test whether the effect might be driven by a focus on positive attributes, study 2G manipulates whether the goal is to choose or avoid a product.

Method

Participants. We recruited 217 undergraduates ($M_{\text{age}} = 20.40$, 54.38% female) from a large Midwestern university. Participants received extra credit in their introductory marketing class in exchange for participation. Sample size was set by the lab manager blind to the hypothesis and based on participant allocations.

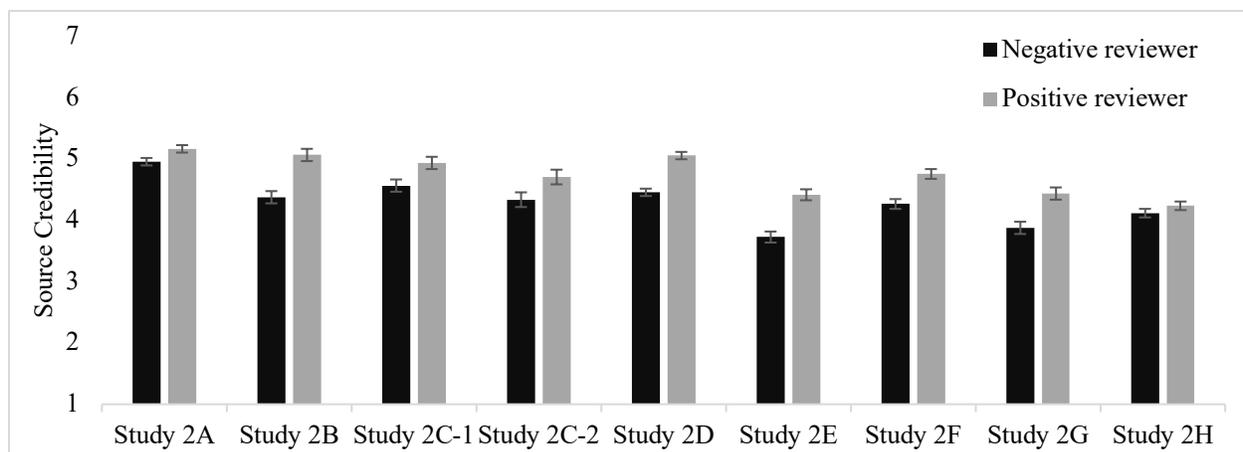
Procedure. The study was a 2(review valence: positive vs. negative) x 2(goal: to avoid vs. to choose) between subjects design. Participants were asked to imagine shopping for a blender. In the *avoid (vs. choose) condition*, the goal of reading reviews is to decide whether to avoid (vs. choose) this product or not. The *positive review condition* had a 5-star review and the *negative review condition* had a 1-star review. Participants then responded to the same 5-item source credibility scale as study 2F ($\alpha = .80$). In addition, participants also indicated the perceived usefulness of the review itself (To what extent do you think the review is useful/helpful for deciding whether to (avoid or choose) this product or not; $r = .87$). Finally, participants reported their subjective expertise and involvement in blender with four items ($\alpha = .86$; see Web Appendix for complete stimuli)

Results

Source credibility. Participants perceived the negative reviewer to be less credible ($M = 3.88$, $SD = 1.07$) than the positive reviewer ($M = 4.44$, $SD = .95$; $F(1,213) = 16.51$, $p < .001$, $\eta_p^2 = .072$). The goal manipulation did not have a significant main effect ($M_{\text{avoid}} = 4.07$, $SD = 1.07$ vs. $M_{\text{choose}} = 4.25$, $SD = 1.02$; $F(1,213) = 1.71$, $p = .193$, $\eta_p^2 = .008$), and the interaction between the message valence and goal manipulation was not significant ($F(1,213) = .07$, $p = .796$, $\eta_p^2 < .001$). After controlling for subjective expertise as a covariate, the main effect of review valence remained significant ($F(1,209) = 17.40$, $p < .001$, $\eta_p^2 = .077$), while other interactions were not significant ($F_s < 1.59$). These results suggest that negative reviewers are perceived to be less credible when consumers have different goals for reading reviews.

Review usefulness. Participants perceived the negative review to be marginally less useful ($M = 4.88$, $SD = 1.40$) than the positive review ($M = 5.20$, $SD = 1.37$; $F(1,213) = 2.86$, $p = .092$, $\eta_p^2 = .013$). The goal manipulation did not have a significant main effect ($M_{\text{avoid}} = 4.94$, $SD = 1.42$ vs. $M_{\text{choose}} = 5.15$, $SD = 1.36$; $F(1,213) = 1.36$, $p = .245$, $\eta_p^2 = .006$) nor the interaction ($F(1,213) = .43$, $p = .511$, $\eta_p^2 = .002$). These patterns were consistent after controlling subjective expertise and involvement.

Figure 1. Source Credibility (Study 2A – 2G)



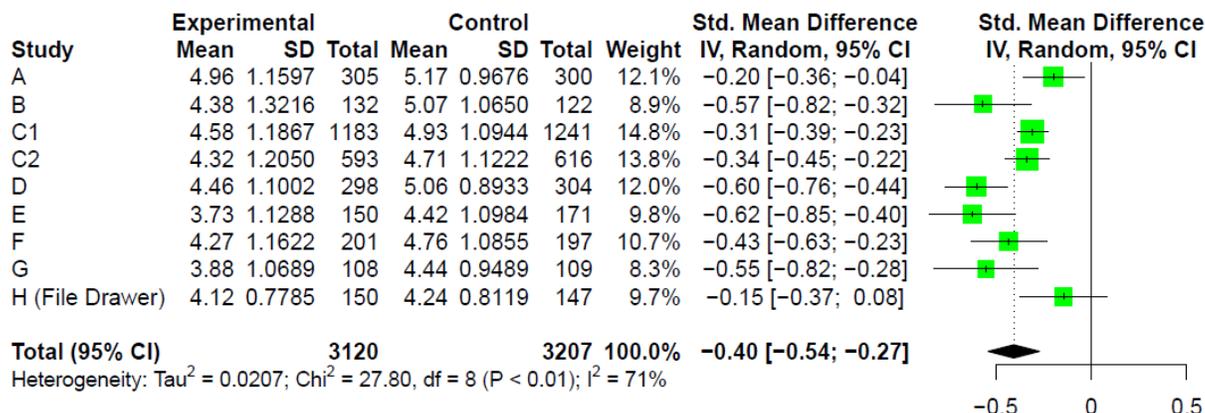
Note: Error bars represent ± 1 SE.

Discussion: Study 2A – 2G and the File Drawer.

File Drawer, P-curve Analysis, and Single Paper Meta-Analysis. In addition to these seven studies (Studies 2A-2G), there was one additional study that we conducted that did not find significant results, representing our ‘file drawer.’ To have a better idea of the size and reliability of the effect, we briefly describe this study, provide a p-curve analysis, and report a single paper meta-analysis. Single paper (or ‘internal’) meta-analyses have received criticism because the results are likely invalid *unless* (1) there is no selective reporting (i.e., all studies are included) and (2) only one analysis was conducted per study (Vosgerau et al. 2019). We satisfy these two criteria; thus, we included all our studies and conducted only one analysis per study.

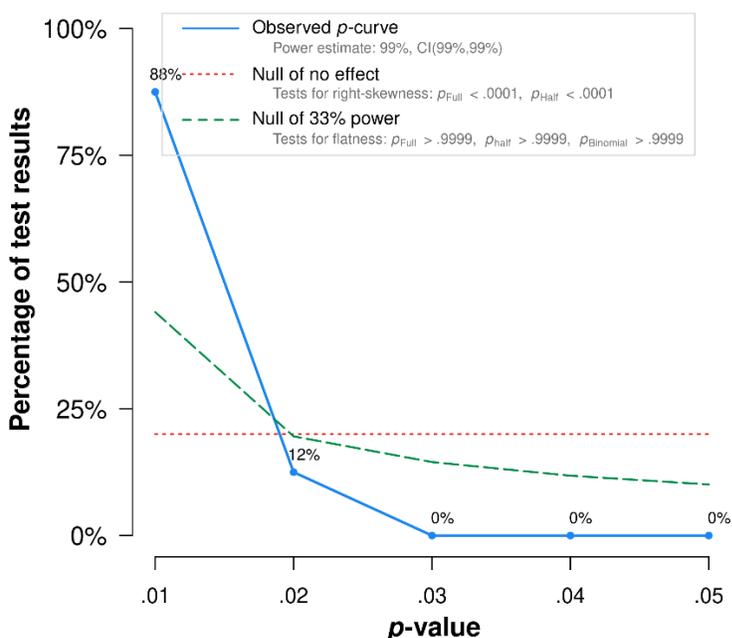
We conducted a single paper meta-analysis using the Hunter-Schmidt method (Hunter & Schmidt, 2004) to test the main effect of review valence on the source credibility. The results showed high reliability of the obtained effect (effect size Cohen’s $d = -.40$; 95% CI $[-.54, -.27]$; see Figure 2). Note that “Study H” in Figure 2 refers to the ‘file drawer’ study that did not result in significant results.

Figure 2. Single paper meta-analysis (studies 2A-2G)



We also conducted a p-curve analysis (Simonsohn, Simmons, and Nelson 2015) on all our studies, which indicated the presence of evidential value (binomial test $p = .0039$; full p-curve: $Z = -11.77$, $p < .0001$; half p-curve: $Z = -11.08$, $p < .0001$; see Figure 3) with the estimated statistical power of tests included in p-curve of 99% (90% CI = [99%, 99%]). Note that we did not include our non-significant finding, in accordance with p-curve analysis guidelines.

Figure 3. P-curve analysis



Note: The observed p-curve includes 8 statistically significant ($p < .05$) results, of which 8 are $p < .025$. There were no non-significant results entered.

In sum, these results consistently demonstrate that consumers perceive a source to be less credible when they leave a negative (vs. positive) review across different product categories, product characteristics, reviewer's characteristics, and consumer's goals and situations. Next, in study 3A and 3B, we test the expectancy-violation account and demonstrate a boundary condition in which the effect is mitigated.

STUDY 3A: NEW BRAND

Study 3A tested our expectancy-violation account. To that end, we manipulated the description of a brand to be either a fictitious new brand or simply a fictitious brand (no information about it being new). From an economic perspective, a new brand has not been tested in the marketplace and consumers should have lower expectations compared to other brands. If expectations are driving our results, then we should expect that the effect will be mitigated when the negative review is about a new brand.

Method

Participants. We recruited 200 US-based MTurk workers via CloudResearch's approved participant list, and 200 participated ($M_{\text{age}} = 36.56$, 48.50% female).

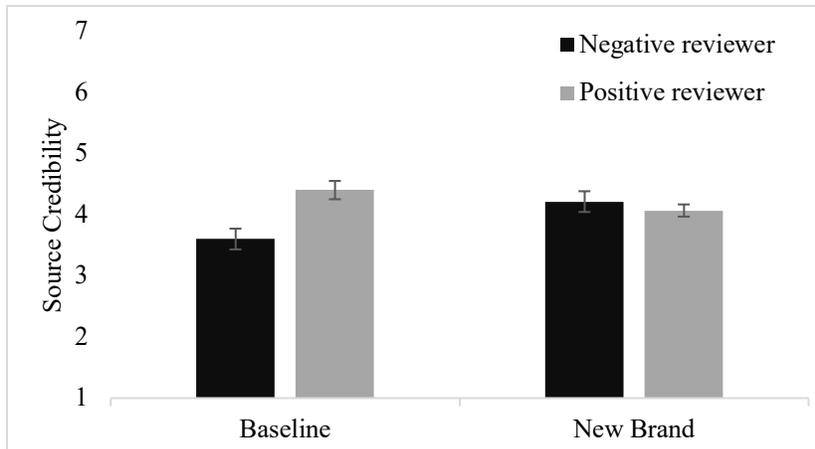
Procedure. The study followed a 2(review valence: positive vs. negative) x 2(brand: new brand vs. baseline) between subjects design. Participants were asked to imagine looking for a vacuum cleaner and read a review of a vacuum cleaner. In the new brand condition, additional information was provided about the brand. Specifically, the vacuum cleaner was described as "from a brand you've never heard of before" and "they just entered the market and this is their

first and only product.” After reading the review, participants indicated the perceived credibility of the source by responding to a 3-item source credibility scale (To what extent do you think s/he is expert, knowledgeable, and trustworthy; $\alpha = .81$). Finally, participants reported their subjective vacuum expertise.

Results

A two-way ANOVA revealed that participants perceived the negative reviewer to be less credible ($M = 3.92, SD = 1.24$) than the positive reviewer ($M = 4.24, SD = 1.07; F(1,196) = 4.18, p = .042, \eta_p^2 = .021$). The brand manipulation did not have a significant main effect ($M_{\text{baseline}} = 4.05, SD = 1.20$ vs. $M_{\text{new}} = 4.14, SD = 1.11; F(1,196) = .75, p = .387, \eta_p^2 = .004$). Importantly, the interaction between the message valence and the brand manipulation was significant ($F(1,196) = 8.74, p = .003, \eta_p^2 = .043$; see Figure 4). Specifically, a negative reviewer was perceived to be less credible than a positive reviewer in the baseline condition ($M_{\text{neg}} = 3.60, SD = 1.24$ vs. $M_{\text{pos}} = 4.41, SD = 1.05, F(1,196) = 12.23, p < .001$), replicating our previous studies. However, in the new brand condition a negative reviewer was perceived to be just as credible as a positive reviewer ($M_{\text{neg}} = 4.22, SD = 1.17$ vs. $M_{\text{pos}} = 4.07, SD = 1.07, F(1,196) = .43, p = .515$). After controlling for the subjective expertise the main effect of review valence ($F(1,192) = 7.87, p = .006, \eta_p^2 = .039$), and the interaction ($F(1,192) = 7.56, p = .007, \eta_p^2 = .038$) remained significant. Other interactions were not significant ($F_s < 1.58$).

Figure 4. Source Credibility (Study 3A)



Discussion

These results again demonstrate that consumers perceive reviewers to be less credible when the review is negative (vs. positive); however, this effect disappeared when the expectations for a positive review were absent (i.e., with a review about a new brand). These results provide evidence for the expectancy-violation account such that when there is no descriptive norm for positivity – and thus, when a negative reviewer does not violate these expectations – the effect disappears.

STUDY 3B: POSITIVE VS. NEGATIVE PRIOR EXPECTATIONS

Study 3B further examines the role of our expectancy-violation account by manipulating expectations in a different way: by identifying product categories where consumers have negative review expectations. A pre-test showed that AA batteries and chocolates have positive expectations for the overall ratings, whereas public parking lots and Driver's license offices have negative expectations for the overall ratings (see Web Appendix for pre-test). The study's pre-registration can be found at [https://aspredicted.org/7Z5_XTP].

Method

Participants. We recruited 372 undergraduates from a large Midwestern university ($M_{age} = 20.12$, 43.01% female). Participants received extra credit in their introductory marketing class in exchange for participation. Sample size was set by the lab manager blind to the hypothesis and based on participant allocations.

Procedure. The study followed a 2(review valence: positive vs. negative) x 2(prior expectation: negative vs. positive) x 2(product replicates of each prior expectation) mixed design. Participants were presented with a total of 4 reviews, one for each product. One product replicate was presented at a time, with replicate order randomized. For each product replicate, participants were asked to imagine looking for the product and reading product reviews. They were randomly presented with either a positive or negative review. Based on our pre-test, AA batteries and chocolates were the two positive expectations products and public parking lots and Driver's license offices were the two negative expectations products.

Participants indicated the perceived credibility of each source by responding to a 5-item source credibility scale ("To what extent do you think this reviewer is credible, an expert, unbiased, trustworthy, and honest?" $\alpha s > .85$), and they then reported their expertise for each product category (see Web Appendix for complete stimuli).

Results

We used multi-level linear regression, allowing each participant and each replicate to have a random intercept (Judd et al. 2017), to test the effect of review valence (-1 = negative, 1 = positive), prior expectations (-1 = negative, 1 = positive), and their interaction on reviewer credibility perception. Participants perceived the negative reviewers as less credible than the positive reviewers ($M_{neg} = 4.07$ vs. $M_{pos} = 4.43$; $b = .18$, $SE = .02$, $t(1268.322) = 7.33$, $p < .001$).

Prior expectations (i.e., expectation of overall ratings) did not influence reviewer credibility perception ($M_{\text{negative}} = 4.22$ vs. $M_{\text{positive}} = 4.28$; $b = .03$, $SE = .05$, $t(1.998) = .55$, $p = .640$).

Importantly, there was a significant review valence by prior expectation interaction ($b = .16$, $SE = .02$, $t(1284.369) = 6.48$, $p < .001$), indicating that the effect was stronger for products that consumers have positive prior expectations for overall ratings. When consumers had positive prior expectations, negative reviewers were perceived as less credible ($M_{\text{neg}} = 3.94$ vs. $M_{\text{pos}} = 4.61$; $p < .001$); but when consumers had negative prior expectations, providing a negative review did not significantly decrease credibility ($M_{\text{neg}} = 4.21$ vs. $M_{\text{pos}} = 4.24$; $p = .579$).

After controlling for subjective expertise, the main effect of review valence ($b = .18$, $SE = .02$, $t(1261.440) = 7.34$, $p < .001$) and the interaction ($b = .16$, $SE = .02$, $t(1277.971) = 6.51$, $p < .001$) remained significant. Other interactions were not significant ($|t|s < 1.07$).

Discussion

Consistent with study 3B, these results suggest that the negative effect of negative reviews on source credibility is mitigated when consumers already expect negative reviews because negative reviewers do not violate local descriptive norms. The results provide further evidence for our expectancy-violation account.

STUDY 4: DOWNSTREAM CONSEQUENCES – INTENTION TO FOLLOW THE REVIEWER’S POSITIVE RECOMMENDATION

Study 4 aimed to test the downstream consequences of source credibility on subsequent consumer recommendations. A key reason why reviews are important is that they provide consumers guidance and advice for the product under review, as well as future product decisions.

Reviewers often establish reputations for their reviews, sometimes attracting thousands of followers, and they are then followed and used for future recommendations. Thus, Study 4 will test whether the decrease in credibility from a negative review can discourage consumers to take the advice of a reviewer on subsequent recommendations. To test whether other social perceptions are also affected by negative reviews, we will also measure various social perceptions (i.e., competence, likability, and warmth) of the reviewer. The study's pre-registration can be found at [https://aspredicted.org/4J7_FZC].

Method

Participants. We recruited 420 undergraduates ($M_{\text{age}} = 20.11$, 45.71% female) from a large Midwestern university. Participants received extra credit in their introductory marketing class in exchange for participation. Sample size was set by the lab manager blind to the hypothesis and based on participant allocations.

Procedure. The study was a two-cell (review valence: negative vs. positive) between subjects design. Participants read a review of hiking trails. In the positive review condition, participants read a 4-star review that complimented the trail. In the negative review condition, participants read a 2-star review that criticized the trail (see Web Appendix for complete stimuli).

Participants indicated the perceived credibility of the source using the same 5-item source credibility measure as study 3B ($\alpha = .84$). As preregistered, participants indicated their social perceptions of the reviewer (3-items: To what extent do you think s/he is likable, competent, and warm; $\alpha = .88$).

Next, participants read another review by the same reviewer, but on another hiking trail rated as 4-star. Participants indicated their interests in going to this trail (1 = not interested at all,

7 = very much interested). Finally, they indicated their subjective expertise in hiking trails with four items ($\alpha = .92$).

Results

Factor analysis of dependent measures. A factor analysis (principal component with varimax rotation) revealed two factors with eigenvalues greater than one and accounting for 70.1% of the total variance. Five items for the source credibility perception loaded onto one factor and social perceptions of the reviewer loaded onto another factor, though the two factors were highly correlated ($r = .64, p < .001$). The factor loadings ranged from .64 to .90.

Source credibility. Replicating our previous studies, participants perceived the negative reviewer to be less credible ($M = 3.61, SD = 1.10$) than the positive reviewer ($M = 4.47, SD = .93; F(1,418) = 116.83, p < .001, \eta_p^2 = .216$). The main effect of review valence remained significant after controlling for the subjective expertise ($F(1,416) = 116.14, p < .001, \eta_p^2 = .215$). The interaction between review valence and subjective expertise was not significant ($F(1,416) = 2.39, p = .123, \eta_p^2 = .006$).

Social perceptions. Participants also perceived the negative reviewer to be less positive ($M = 3.15, SD = 1.02$) than the positive reviewer ($M = 4.61, SD = .92; F(1,418) = 236.05, p < .001, \eta_p^2 = .361$). The main effect of review valence remained significant after controlling for the subjective expertise ($F(1,416) = 241.50, p < .001, \eta_p^2 = .367$) and the interaction between review valence and subjective expertise was also significant ($F(1,416) = 4.82, p = .029, \eta_p^2 = .011$), such that the effect becomes larger as subjective expertise with trails increases.

Downstream consequences. To examine the downstream consequences of source credibility, we tested whether the review valence manipulation led to higher intentions to follow

the reviewer's recommendation through source credibility perceptions. As predicted, we found a significant indirect effect of the review valence on the intention to follow the reviewer's recommendation through source credibility perceptions (95% CI = [.02, .16]). The indirect effects remained significant at all levels of subjective expertise, and there was no significant conditional indirect effect based on the level of subjective expertise (95% CI = [-.002, .03]).

As an exploratory analysis, we also examined both the social perceptions and source credibility perception as mediators. A serial mediation (Process Model 6) found a significant indirect effect of the review valence on the intention to follow the reviewer's recommendation through the source credibility perception and then the social perception of the reviewer (i.e., valence → source credibility → social perceptions → intention to follow: 95% CI = [.03, .12]). However, we are cautious towards making any strong causal claims given the concerns with an "inspect-and-select" strategy in mediation (see Pieters 2017). While we are confident making causal claims from the mediator of source credibility to intentions to follow (based on prior theory and because the reverse is unlikely to logically occur), it is much less certain theoretically how source credibility and social perceptions might interact to affect the dependent variable of intention to follow.

Discussion

The results of study 4 further demonstrate the negative consequences to reviewers when they leave negative reviews: It leads to lower perceptions of source credibility and reduces consumers intentions to follow these reviewers on subsequent reviews. The decrease in intention to follow subsequent reviews holds even when those subsequent reviews are positive. The

mediation analysis provides further evidence that a negative review reduces intentions to follow subsequent recommendations due to lower source credibility perceptions.

GENERAL DISCUSSION

Across twelve studies, using different product categories and situations, we find consistent support that negative reviews lead consumers to perceive the reviewer to be less credible. Further, the studies support an expectancy-violation explanation for this effect: Consumers perceive negative reviewers to be less credible than positive reviewers due to expectations that criticism should be positive. In study 1, we demonstrate that reviewers leaving negative (vs. positive) reviews are perceived to be less credible. Studies 2A to 2G test the robustness of the effect across different situations and product categories, reporting all studies in our file drawer. We find a significant effect in six out of seven studies (reporting p-curve analysis and a single paper meta-analysis with our entire file drawer), and across both hedonic and utilitarian products, different goals for reading reviews, decision stages, complex and simple products, different reviewer credentials, and fake review concerns. Study 3A and 3B test the expectancy-violation account by manipulating the expectations for positive reviews, finding that the effect is mitigated in situations when consumers expect a negative review (i.e., new brands, parking lots, and driver's license office). Study 4 demonstrates the downstream consequences of a decrease in credibility perceptions. Credibility perceptions influence consumers' social perceptions (e.g., warmth, likability) of a reviewer and how affect how consumers respond to other reviews. Taken together, these studies provide converging support for our expectancy-violation account across different situations and product categories.

By focusing on the source credibility perceptions of a reviewer, rather than the review itself, our research makes a unique contribution to the literature on consumer reviews and word-

of-mouth (e.g., Basuroy et al. 2003; Berger 2014; Berger and Schwartz 2011; Cheema and Kaikati 2010; Chen and Xie 2008; Kupor and Tormala 2018; Liu 2006; Mayzlin, Dover, and Chevalier 2014; Packard and Wooten 2013). Past literature has mostly focused on whether a review is helpful or leads to purchase intent, and little work has explored how consumers perceive the person behind the review – the reviewer (for an exception, see Gershoff, Mukherjee, and Mukhopadhyay (2007) or Gershoff, Broniarczyk, and West (2001), which explored inferences about recommendation agents based on past performance). Our findings suggest that simply leaving a negative review decreases one’s credibility, which could extend to other relevant situations, such as criticizing a movie, concert, or colleague’s presentation. Further, this decrease in credibility has important implications because source credibility plays such an important role in the formation of attitudes, persuasion, and consumer choice.

Thus, the findings also contribute to the literature on attitudes and persuasion (e.g., Chaiken and Maheswaran 1994; Erdem and Swait 2004; Petty and Cacioppo 1981, 1984; Petty and Wegener 1998; Priester and Petty 2003; Tormala and Petty 2004) by examining an antecedent to source credibility and showing that a expectancy-violating message decreases source credibility perceptions. In the persuasion literature, source credibility and message valence are usually treated as independent factors affecting persuasion. However, we demonstrate that this may not necessarily be the case when a negative message violates the expectations for positive messages. This literature demonstrates how consumers process messages that are incongruent with their pre-existing *attitudes* (e.g., Kidwell, Farmer and Hardesty 2013; Maheswaran and Chaiken 1991; Updegraff, Sherman, Luyster and Mann 2007). However, negative reviews are not necessarily incongruent with a consumer’s attitude toward a product because they have not purchased and consumed the product, yet they violate their prior

expectations for the valence of the message. Our findings show that when this message violates the prior expectations for its valence (positivity in, most cases), consumers discount the credibility of the source of the messages. Thus, our research suggests that a message's valence and source credibility can interact depending on whether people have prior expectations for the valence of the message.

Implications and Future Research

Our research has several implications for marketing practice, consumer theory, and future consumer research. In terms of marketing practice, our results suggest that individual negative reviews might not be as bad as brands have previously thought, as long as the overall rating is high, and consumers have prior expectations for positive reviews. Instead of attributing the negativity to the brand, consumers are attributing it to the reviewer. The results provide more evidence for the importance of brands to establish expectations for positive reviews for consumers (Park et al. 2021). Coupled with the fact that negative reviews can often create positive publicity (Berger et al. 2010), marketers should continue to think about new ways to handle negative reviews (if at all).

For opinion leaders, influencers, and critics, the results suggest that negativity often comes at a price of one's reputation. When followers and consumers expect positive reviews – which seems to be the norm – and they read a negative review, the influencer is viewed as less credible. Future research could examine how such criticism might extend to other domains where criticism may be more or less common, such as politics, ideation, management, or academia.

These findings also have implications for practitioners and academics when providing peer criticism and/or negative feedback. While the criticism at a seminar might be helpful and even warranted, our research suggests it can damage the credibility of the message sender. While

we did look at situations where the reviewer had expertise in the area, it is possible that power differences or other factors may mitigate (or exacerbate) the effect. What we do know is that when people expect negativity, the effect does seem to be mitigated. Thus, consistently negative supervisors and colleagues may become immune to further decreases in credibility over time, if everyone learns to expect negativity from the source or the topic of criticism.

Finally, we should note that it is possible that all criticism is not the same and constructive criticism might alleviate negativity. The old adage that it is best to start with something positive might help mitigate the negative consequences on credibility; though this approach is not feasible when consumers read overall ratings (e.g., 2 out 5 stars) before reading the individual comments. The order of overall information might alleviate the effect, or perhaps it is ratings themselves (e.g., stars and scales) that enhance the negativity effect.

In sum, while criticism may be intended to hurt the credibility and perceptions of a brand, service, or idea, we find that it decreases the credibility of the person being critical. Thus, critics are less credible – at least as perceived by others – when positivity is expected.

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