

How Content Acquisition Method Affects Word of Mouth

ZOEY CHEN
JONAH BERGER

People often share word of mouth with others, and such social sharing is an integral part of everyday life. But the content (e.g., stories, news, information) that people transmit can be acquired in different ways. Sometimes people *find* content themselves, and other times people *receive* content from others (e.g., via email or conversation). Might these different acquisition methods impact subsequent sharing, and if so, how? Six studies demonstrate that acquisition method can impact transmission through changing how content is processed. Compared to received content, people are more likely to associate found content with themselves, which decreases processing. Reduced processing, in turn, lowers sensitivity to diagnostic content characteristics (e.g., whether content is interesting or well written), which reduces these characteristics' impact on sharing. Thus while receivers are more likely to share interesting (than boring) content, the difference is attenuated (and in some cases, disappeared) among finders. These findings deepen insights into the psychological drivers of word of mouth and shed light on how contextual factors, content characteristics, and the self interact to drive social transmission.

Keywords: word of mouth, social sharing, interpersonal communication

Word of mouth is a huge part of everyday life. People often share news, opinions, and information with their friends, family members, and other social ties (De Angelis et al. 2012; Dubois, Rucker, and Tormala 2011; Dubois, Bonezzi, and De Angelis 2015; Packard and Wooten 2013). Technology has only made such sharing faster and easier. Through email, Facebook, and other outlets, consumers share billions of pieces of online content (e.g., news articles, videos, and stories) each day (Protalinski 2011). Further, this sharing has a significant impact on consumer behavior. It shapes the products

people buy (Chevalier and Mayzlin 2006), the movies they watch (Duan, Gu, and Whinston 2008; Liu 2006), and the restaurants they enjoy (Babin et al. 2005; Chen and Lurie 2013).

Driven by the importance of this phenomenon, recent work has focused on what drives people to talk and share word of mouth in the first place (Berger 2014). Most research has examined how different characteristics, or aspects, of content impact whether people share it. Products and information that evoke more interest (Berger and Schwartz 2011; Chen and Berger 2013; Heath, Bell, and Sternberg 2001; Moldovan, Goldenberg, and Chattopadhyay 2011), arouse more emotion (Berger and Milkman 2012; Rimé 2009; particularly high arousal, Berger 2011), or contain more useful information (Berger and Milkman 2012; Heath et al. 2001) get shared more.

But while it is clear that content with certain characteristics is more likely to be passed on, might the mere method through which people acquire that content also impact sharing? Sometimes people *find* content themselves, coming across it while reading the newspaper or browsing a website. Other times people *receive* content from others, via face-to-face conversations or email forwards. While the content of a given article or video is the same whether

Zoey Chen (zchen@bus.miami.edu) is assistant professor of marketing at the School of Business Administration, University of Miami, P.O. Box 248027, Coral Gables, FL 33124. Jonah Berger (jberger@wharton.upenn.edu) is associate professor of marketing at the Wharton School, University of Pennsylvania. Portions of this article were completed while the second author was a visiting professor at Cornell Tech. The authors thank Jordan Etkin, Juliano Laran, Nick Lurie, Zak Tormala, and three anonymous reviewers for their helpful comments and suggestions.

Vicki Morwitz served as editor, and Derek Rucker served as associate editor for this article.

Advance Access publication January 18, 2016

people find it themselves or receive it from others, might acquisition method impact subsequent transmission, and if so, how?

This article examines how and why acquisition method influences word of mouth. Six studies demonstrate that *how* people acquire content affects their willingness to share it with others. When people find (vs. receive) content, they associate the content with the self and process it less systematically. As a result, diagnostic content characteristics such as interestingness, writing quality, and argument strength have less of an impact on sharing. People are more willing to share an interesting article than a boring one when they received those articles, for example, but this difference attenuates (and in some cases, disappears) when they feel like they found those articles themselves.

This work makes several important contributions. First, we demonstrate that the context in which people come across content affects subsequent sharing. While the content itself does not change, the mere fact that people found versus received it shapes their willingness to pass it on.

Second, we deepen the understanding around *when* content characteristics (e.g., interestingness, positivity) versus context drives sharing. We demonstrate that when people find content themselves, certain content characteristics have less of an impact on sharing.

Third, we contribute to the literature on the extended self. While a great deal of research shows that people associate purchases, possessions, and other physical items with the self, we suggest that such associations can be even broader. Even when things are explicitly owned by someone else (e.g., articles are owned by their authors), the feeling of finding or discovering something may create a personal connection and encourage association with the self. Taken together, this research provides insight into the psychological drivers of word of mouth and showcases the complex relationship between contextual factors, content characteristics, and the self, in driving sharing.

ACQUISITION METHOD AND WORD OF MOUTH

While prior work has shown that content characteristics such as interest or emotions drive sharing (Berger 2014, 2015), there has been less attention to how contextual factors—variables unrelated to the underlying content itself—affect sharing. To address this gap, we explore how content acquisition method affects word of mouth. We start by reviewing relevant literature on self-association and information processing and then introduce our theoretical framework and key hypotheses.

Acquisition Method and Association of Content with the Self

People often associate external things with the self (Beggan 1992; Belk 1988). Consumers see possessions like cars or clothes as extensions of who they are. The car someone drives is not just a car, it is *their* car, and is viewed as part of the self (just like one's own body). One's possessions signal one's identity (Berger and Heath 2007; Escalas and Bettman 2005), and emotional connections can be formed such that the loss or damage of possessions is akin to losing a "loved one who had been a part of one's life" (Belk 1988, 142).

While associations often occurs with material things (e.g., a car), they can also occur with nonmaterial entities, like thoughts and ideas (Baer and Brown 2012; Belk 1988; Dittmar 1992). People show unconscious ownership over letters in their name (Nuttin 1985, 1987), for example, despite the fact that they did not acquire these letters and that other people's names have the same letters. Extending these ideas to the online domain, Belk (2013) proposed that people associate themselves with digital things they create (e.g., avatars) or own (e.g., purchased music or e-books).

We theorize that associations with the self can be even broader. Even when someone did not create content, or even pay for it, and even when it is explicitly owned by others (e.g., articles are owned by writers or news outlets), we suggest that how one acquires content may influence association. Kids, for example, claim nursery rhymes as "theirs" if they thought they were the first ones to hear it (Isaacs 1933; Pierce, Kostova, and Dirks 2002). Similarly, contributors to the popular content-sharing website Reddit.com feel that the person who first posts content has claim over the content as her "own." In fact, this sentiment is so strong that contributors are explicitly discouraged from posting content that has already been posted by someone else (<http://www.reddit.com/wiki/reddiquette>).

Building on these ideas, we suggest that compared to when they receive content from others, people who feel like they found content should associate that content more with themselves. A pilot study confirms this idea. Participants ($N = 61$) envisioned either receiving an article from someone else, or finding it on their own, and they indicated how much they associated the article with themselves in two ways. First, we asked, "To what extent do you associate the content with yourself?" (1 = Not at all to 7 = Very much so). Second, we used a commonly used association measure adopted from Bergami and Bagozzi (2000). Participants were presented with seven pairs of circles, where one circle represents the self and the other represents the article, that overlapped to different degrees ranging from no overlap (coded as 1 = No association) to complete overlap (coded as 7 = Complete association). Participants chose the pair of circles that reflected their felt association to the article. On both measures, people

indicated a greater sense of association when they found the content than when they received it ($M_{\text{finding}} = 3.19$ vs. $M_{\text{receiving}} = 2.14$, $t(59) = 2.78$, $p < .01$ and $M_{\text{finding}} = 2.91$ vs. $M_{\text{receiving}} = 2.17$, $t(59) = 2.21$, $p = .03$, respectively).

Self-Association and Processing

Associating content with the self, in turn, should decrease information processing. The elaboration likelihood model (ELM; Petty and Cacioppo 1986) suggests that depth of processing (i.e., elaboration) falls on a continuum, with peripheral/heuristic processing on one end and central/systematic processing on the other (Chaiken 1980; Petty, Cacioppo, and Schumann 1983).

In general, people tend to have healthy (i.e., high) self-esteem. They attribute success (e.g., doing well on a test) to themselves (e.g. being smart) and failures (e.g., doing badly) to outside forces (e.g., the test was tricky; Campbell and Sedikides 1999; Heider 1958). Similarly, on most desirable dimensions such as intelligence, people tend to see themselves as above average or better than most of their peers (Alicke et al. 1995; Dunning, Meyerowitz, and Holzberg 1989; Kruglanski 1996).

Various research streams support the notion that high self-esteem reduces information processing. Compared to those with low self-esteem, people with high self-esteem tend to feel more certain about the self and are less likely to process self-related information (Baumgardner 1990; Campbell and Lavalley 1993; Marsh and Weary 1989; Weary, Elbin, and Hill 1987). Certainty, in turn, reduces information processing (Tiedens and Linton 2001; Weary and Jacobson 1997). People often engage in in-depth information processing to reduce feelings of uncertainty, so when people feel certain (e.g., when they have high self-esteem), their need for processing decreases (Tiedens and Linton 2001; Weary and Edwards 1994; Weary and Jacobson 1997; Yost and Weary 1996). Attitude research makes similar predictions. Self-esteem is associated with self-trust (Govier 1993), and trust reduces information processing (Priester and Petty 1995, 2003). When ads contain trustworthy sources, for example, people tend to process them less. Thus research on both certainty and trust suggest that self-esteem may be associated with less in-depth (or systematic) processing of things associated with the self.

Further, when people process less, they become less sensitive to diagnostic information (i.e., information typically considered useful in a judgment context; Hilton and Fein 1989). As processing decreases, for example, attitude change becomes less affected by the merits of the underlying persuasive arguments (Chaiken 1980; Petty and Cacioppo 1986). While in-depth processors were more persuaded by a razor ad using strong arguments (e.g., chemically formulated coating eliminated nicks) than weak ones (e.g., designed with the bathroom in mind), sensitivity to argument strength (a diagnostic characteristic for attitude change) was

attenuated among those who processed more shallowly (Petty et al. 1983). In other words, while one might imagine that people should be more persuaded by strong (or high-quality) arguments than weak (or low-quality) ones, this tendency decreases as processing decreases (Petty et al. 1983; Petty, Wegener, and Fabrigar 1997).

THE CURRENT RESEARCH

Taken together, we suggest one way that acquisition method can shape transmission is through changing information processing. While the ELM is often applied to attitude change, we argue that similar principles shape word of mouth. Because people associate found content more with the self, and tend to feel a heightened sense of certainty and trust toward self-associated things, this should reduce processing of found (vs. received) content, which should, in turn, impact sharing.

In particular, similar to how argument strength (a diagnostic characteristic for attitude change in the ELM framework) matters less under low processing, content characteristics that are diagnostic of content's share-worthiness—such as interestingness and writing quality—may matter less when people find the content. Not surprisingly, people often use how interesting content is to determine whether to share the content. More interesting news articles are more likely to be shared (Berger and Milkman 2012), and more interesting products or conversation topics are more likely to be discussed (Chen and Berger 2013; Moldovan et al. 2011). Similarly, given that what people share is a signal of identity (Berger 2014), people should be more willing to share well-written content as opposed to articles with typos.

If our theory that finding reduces processing is correct, then the impact of diagnostic content characteristics like interestingness and writing quality on sharing should be attenuated when people find content themselves. When people receive content, they should be more likely to share more interesting (vs. less interesting) or well-written content (vs. poorly written content). When people find content, however, the content should have less of an impact on sharing (i.e., the content characteristic's effect on sharing should be attenuated) because people are less able to distinguish between more and less interesting (or well-written versus poorly written) content. It is not that finders think content characteristics are less diagnostic for sharing (e.g., weaker link between perceived interestingness and willingness to share); rather, lack of processing leads them not to notice variation in content characteristics (e.g., interestingness) to begin with. Taken together, our theorizing leads to the following hypotheses:

H1: Diagnostic content characteristics should have less of an impact on sharing when people feel like they found the content themselves, as opposed to received it from others.

H2: This occurs because finding makes people less sensitive to diagnostic content characteristics.

It is worth noting that our theorizing differs from research on self-relevance. Personally relevant information, or information that is more important to the self, tends to be processed more systematically (Cacioppo and Petty 1986). Self-relevance, however, is different from self-association. While certain content may be more self-relevant because of the topic's personal importance (e.g., tuition increases at one's own school), *any* content can become self-associated by finding it rather than receiving it. An article about tuition increases at one's own school, for example, is more personally relevant than one about tuition increases at a distant school, but finding (rather than receiving) either article should lead that article to become more associated with the self. Thus the two constructs are distinct. When looking through a newspaper, people find some articles that are self-relevant, but they also find many that are less so (e.g., water on Mars), and so articles can become associated with the self even if they are not self-relevant.

Six studies test our theoretical framework. Studies 1 and 2 provide preliminary tests of our theorizing, demonstrating that while receivers are more willing to share interesting rather than less interesting content, this difference is attenuated among finders. Study 3 finds similar results for writing quality. To further connect these findings to the ELM, study 4 uses a traditional argument of quality manipulation and measures thought listing. The final two studies provide additional backing for our theoretical framework. If our theory is correct that finders are less sensitive to diagnostic content characteristics because people tend to be less critical of things associated with the self (i.e., found content), then our effects should be attenuated among finders who are prone to be self-critical, such as those with low self-esteem. Supporting this idea, study 5 shows our effect is attenuated among finders with chronically low self-esteem. Study 6 shows the same result when self-esteem is manipulated.

One methodological detail is worth noting. If finders searched for articles on their own, while receivers were assigned to receive a particular article, this would create a potential confound. Even if we tried to choose content that would greatly interest receivers, given the breadth of content available, finders would be more likely to come across something that better fit their idiosyncratic preferences. Consequently, it would be unclear whether any sharing differences were driven by acquisition method or the different articles themselves. To circumvent this issue, our studies randomly assign participants to either find or receive the *same* piece of content. This allows us to control for the content itself and isolate the impact of the acquisition method.

STUDY 1: ACQUISITION METHOD AND INTERESTINGNESS

Our first study provides a preliminary examination of whether acquisition method influences sharing. People should be more willing to share interesting rather than boring content. But compared to people who receive content, would this tendency be reduced among people who feel like they found the content themselves?

Participants were randomly assigned to either find or receive an article that had been pretested to be either more or less interesting. Then, we measured willingness to share and perceptions of the content itself (i.e., how interesting it is).

We predict that content's influence on willingness to share should be moderated by acquisition method. If feeling like one has found content reduces processing, as we suggest, then finders' willingness to share should be less sensitive to, and thus less impacted by, diagnostic content characteristics. In other words, people should be more willing to share more interesting content (over less interesting content), but this difference should be attenuated (i.e., smaller) among finders.

We also test the proposed mechanism behind this effect. Compared to receivers, finders should see less of a difference between the more and less interesting content, and this, in turn, should drive differences in willingness to share.

Method

A total of 192 people from Amazon Mechanical Turk (MTurk) participated in the study for pay. They were randomly assigned to condition in a 2 (Acquisition method: finding vs. receiving) \times 2 (Content: more vs. less interesting) between-subjects design.

First, we manipulated how people acquired the content. Everyone was asked to envision browsing the Internet. Participants in the receiving condition were then told, "Someone emailed you the following article." In contrast, participants in the finding condition came upon the target article themselves after navigating through other content. They were taken to a mock news website where they had to click the "Next" button (located on the bottom right corner of the page) to flip through articles. Participants clicked "Next," were shown a filler article (labeled "Article A"), and then clicked next again to be taken to the next article. Eventually, after clicking through a few filler articles ("Article B," "Article C," etc.), they were shown the target article. To ensure that the filler articles' content did not affect sharing of the target article (e.g., contrast effects), the filler articles were left blank. This manipulation thus allowed participants to experience finding content on one's own while controlling for the potential effects of encountering other articles. A pretest ($N = 76$) confirms that

compared to participants in the receiving condition, participants in the finding condition felt a greater sense of having found the content themselves (To what extent do you feel like you had found the article? 1 = Not at all to 7 = Very much; $M_{\text{finding}} = 3.56$ vs. $M_{\text{receiving}} = 2.55$, $t(74) = 2.34$, $p = .02$).

Second, we manipulated whether the focal article was more or less interesting. Pretest participants ($N = 109$) rated how interesting (1 = Not at all to 7 = Extremely) various articles were. We picked two articles, one that was perceived as more interesting than the other ($M = 5.47$ vs. $M = 3.94$, $F(1, 107) = 43.03$, $p < .001$). The more (less) interesting article discussed a spray-on battery (women losing weight; online appendix A).

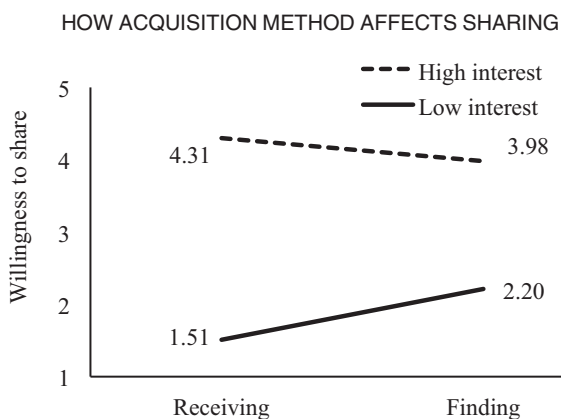
After reading the article, participants completed our key dependent variable, willingness to share (How likely would you be to share this article? 1 = Not very to 7 = Extremely).

Finally, to test the underlying process (i.e., sensitivity to diagnostic content characteristics), participants rated how interesting they thought the article was (1 = Not at all to 7 = Extremely).

Results

Sharing. In addition to a main effect of Content ($F(1, 188) = 86.74$, $p < .001$), a 2×2 analysis of variance (ANOVA) revealed the predicted Acquisition Method \times Content interaction ($F(1, 188) = 4.37$, $p = .04$; figure 1). While both finders and receivers were more willing to share the more interesting article than the less interesting one, compared to people who received the content (4.31 vs. 1.51, $F(1, 188) = 71.76$, $p < .001$), this tendency was attenuated among people who found the content themselves (3.98 vs. 2.20, $F(1, 188) = 23.85$, $p < .001$). Thus the interaction indicates that while both finders and receivers were more willing to share the high- rather than the low-interest article, this difference was smaller for finders.

FIGURE 1



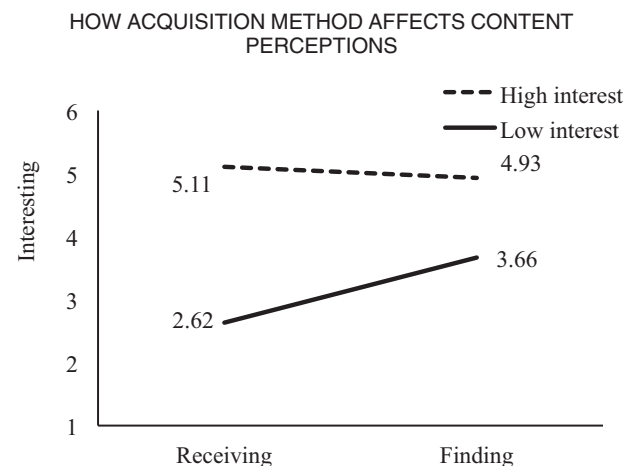
Perceived Content Interestingness. Content perceptions revealed a similar pattern. In addition to a main effect of content ($F(1, 188) = 67.33$, $p < .001$), a 2×2 ANOVA revealed the predicted interaction ($F(1, 188) = 7.09$, $p < .01$; figure 2). While everyone perceived the more interesting article as more interesting, the interaction indicates that compared to people who received the content (5.11 vs. 2.62, $F(1, 188) = 65.18$, $p < .001$), this difference was smaller among people who found the content themselves (4.93 vs. 3.66, $F(1, 188) = 14.04$, $p < .001$).

Mediation. As predicted, moderated mediation analysis (with independent variable [IV] = Article Interest, Moderator = Acquisition method, Mediator = Interesting, and dependent variable [DV] = Share, where the Moderator moderates the A path between the IV and the Mediator; Hayes 2013, model 7: 5000 bootstrapped samples) demonstrates that acquisition method's impact on sharing was driven by sensitivity to the content. Acquisition method moderates sensitivity to underlying content interest ($\beta = -1.22$, standard error [SE] = .46, $t = -2.66$, $p < .01$), and interestingness is positively related to sharing ($\beta = .66$, SE = .06, $t = 11.20$, $p < .01$). Compared to receivers (Conditional indirect effect = 1.66, Boot SE = .25; 95% confidence intervals (CIs), 1.22–2.20), finders discriminated less between the two articles, and thus the content had less of an impact on driving sharing (Conditional indirect effect = .85, Boot SE = .23; 95% CIs, .42–1.34). Index of moderated mediation further confirms successful moderated mediation (95% CI, -1.46 to $-.23$).

Discussion

Study 1 provides preliminary support for our theorizing. First, as hypothesized, acquisition method influenced word of mouth. Compared to receivers, the content itself had

FIGURE 2



less of an impact on sharing among people who felt like they found the content themselves.

Second, as predicted, this was driven by how much people attended to the content itself. Not surprisingly, people thought the high-interest article was more interesting than the low-interest one. More importantly, however, finders perceived a *smaller* difference between the two articles (compared to receivers), and this drove the effect of acquisition method on sharing. Said differently, study 1 demonstrates that finding content makes people less sensitive to diagnostic content characteristics (moderation of the A path, in this case, how interesting it is), reducing the impact of that content characteristic on sharing.

Ancillary data cast doubt on alternative explanations based on effort. Exerting effort to acquire or create something can increase evaluations (Bem 1972; Norton, Mochon, and Ariely 2012), and so if our finding manipulation increased perceived effort, one could argue that this drove willingness to share. But this was not the case. There was no difference in acquisition effort across conditions (1 = Very little effort to 7 = A lot of effort, $M_{\text{finding}} = 1.87$ vs. $M_{\text{receiving}} = 1.64$, $F(1, 188) = 2.39$, $p > .12$). This casts doubt on the possibility that the results are driven by finders spending more effort.

One might wonder if, in addition to changing processing, finding should have a main effect on sharing. If people like themselves, and associate the content with themselves, maybe this affective transfer would increase sharing. But while ownership can increase overall liking (Beggan 1992; Heider 1958) or valuation (Kahneman, Knetsch, and Thaler 1991), these effects are usually observed when people have exclusive physical ownership (Thaler 1980) or when the owned object is especially telling about one's identity (e.g., arguments that represent one's morals; De Dreu and van Knippenberg 2005). Finding, while inducing some association with the self, is unlikely to generate such strong associations. As a result, finding may not be enough to increase overall liking and thus sharing.

STUDY 2: A DIFFERENT ACQUISITION MANIPULATION

Study 2 tests our perspective using an alternative acquisition method manipulation. While study 1 tried to mimic how people find content in real life, one might argue that our results are due to the particular operationalization used. Further, even though there was no difference in perceived effort between conditions, one might still contend that effort is a viable alternative explanation. Study 2 addresses both points by operationalizing finding a different way.

Method

A total of 177 undergraduate students participated in the study for pay. They were randomly assigned to condition

in a 2 (Acquisition method: finding vs. receiving) \times 2 (Content: more vs. less interesting) between-subjects design.

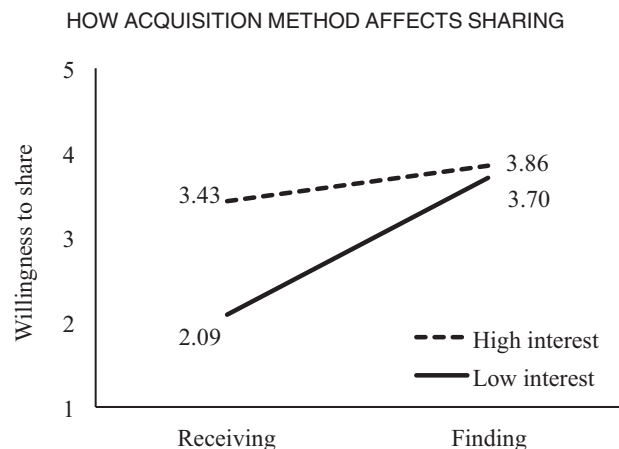
First, we manipulated acquisition method. To keep the conditions as similar as possible, the only difference was that those in the receiving condition imagined that someone emailed them an article, whereas those in the finding condition imagined discovering that article on a news website. A pretest ($N = 123$) confirmed that those in the finding condition felt a greater sense of having found the content than those in the receiving condition (To what extent do you feel like you had found the article? 1 = Not at all to 7 = Very much; $M_{\text{finding}} = 4.47$ vs. $M_{\text{receiving}} = 2.03$, $t(121) = 8.69$, $p < .001$). Second, we manipulated content using the same high- or low-interest article from study 1. Third, participants indicated their willingness to share the article (1 = Not very to 7 = Extremely). Finally, participants indicated how interesting they perceived the article to be using the measure from study 1.

Results

Sharing. Main effects of content ($F(1, 173) = 6.98$, $p < .01$) and acquisition method ($F(1, 173) = 13.11$, $p < .01$) were qualified by the predicted interaction ($F(1, 173) = 4.34$, $p = .04$; figure 3). While receivers were much more likely to share the high- than low-interest content (3.43 vs. 2.09, $F(1, 173) = 10.96$, $p < .01$), this difference was attenuated in finders (3.86 vs 3.70, $F < 0.2$, $p > .6$).

Perceived Content Interestingness. Content perceptions revealed a similar pattern. Main effects of content ($F(1, 175) = 19.78$, $p < .01$) and acquisition method ($F(1, 175) = 6.88$, $p = .01$) were qualified by the predicted interaction ($F(1, 175) = 9.15$, $p < .01$; figure 4). While receivers perceived the high-interest content as significantly more interesting than the low-interest content (4.65 vs.

FIGURE 3



2.51, $F(1, 173) = 27.39$, $p < .01$), finders were less sensitive to this difference (4.53 vs. 4.13, $F < 1.1$, $p > .3$).

Mediation. Moderated mediation analysis (with IV = Article Interest, Moderator = Acquisition method, Mediator = Interesting, and DV = Share; Hayes 2013, model 7: 5000 bootstrapped samples) confirms our predictions. Acquisition method moderates people's sensitivity to underlying content interestingness ($\beta = -1.73$, $SE = .57$, $t = 3.02$, $p < .01$), and perception of interestingness is positively related to sharing ($\beta = .75$, $SE = .05$, $t = 15.14$, $p < .01$). Further, while content drove sharing among receivers (Conditional indirect effect = 1.61, Boot SE = .30; 95% CIs, 1.00–2.24), this was not the case among finders (Conditional indirect effect = .31, Boot SE = .32, 95% CIs, -.31 to .97). Index of moderated mediation again confirms that acquisition method moderates the mediating effect of content interest (95% CIs, -2.17 to -.41).

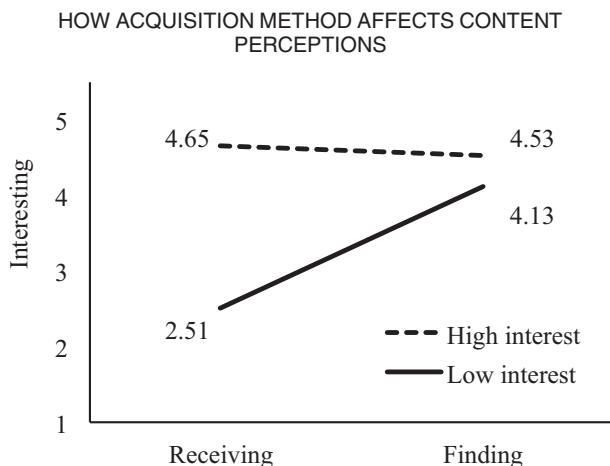
Discussion

Study 2 further supports our theorizing. Consistent with study 1, acquisition method influenced willingness to share. Diagnostic content characteristics (in this case, interest) had less of an impact on sharing when people found (vs. received) content.

Further, this effect was driven by decreased sensitivity to the content itself. Compared to receivers, finders saw less of a difference between the low- and high-interest articles.

The fact that we found similar results using a different acquisition method manipulation speaks to the robustness of the effects. Further, this manipulation casts further doubt on alternative explanations based on effort because both conditions involved similar actions on the part of the participants.

FIGURE 4



STUDY 3: ACQUISITION METHOD AND WRITING QUALITY

To test the generalizability of our effect, study 3 uses a different diagnostic content characteristic: writing quality. Not surprisingly, text passages that have more typos or grammatical issues are considered lower writing quality (Robb, Ross, and Shortreed 1986). Further, by manipulating the number of typos, we can hold the article topic constant, ruling out the possibility that different topics are driving any observed results.

Although in extreme cases people might share very poorly written content to point out how bad it is, in general, typos and grammatical issues should decrease people's willingness to share. Indeed, when pilot study participants ($N = 21$) were asked whether they would be more likely to share an article with typos or one without, they overwhelmingly chose the article without typos (90%, $\chi^2(1) = 13.76$, $p < .001$). When asked why, most indicated self-presentational concerns (e.g., "It would make me seem smarter" or "seems more professional"); the two who preferred to share the article with typos cited reasons of "funny to share" and "so I could correct them."

If finding reduces sensitivity to content characteristics, then finders should be less likely to notice typos, and as a result, whether or not the article is well written should have less of an impact on willingness to share.

Method

A total of 130 undergraduates participated in a 2 (Acquisition Method: finding vs. receiving) \times 2 (Content: control vs. typos) between-subjects study for partial course credit.

First, we manipulated acquisition method using the method from study 1.

Second, we manipulated the content itself. We selected an article from a publisher and showed participants one of two versions, either with typos and grammatical issues (typos condition) or without (control condition; online appendix B).

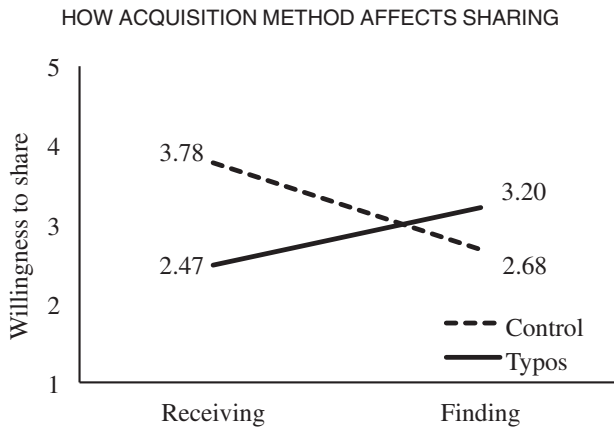
Third, participants indicated willingness to share the article using the scale from study 1.

Finally, to measure process, participants were asked how well written they perceived the article to be (1 = Not at all well written to 7 = Extremely well written).

Results

Sharing. A 2 \times 2 ANOVA revealed only the predicted Acquisition Method \times Content interaction ($F(1, 126) = 8.23$, $p < .01$; figure 5). Among receivers, adding typos decreased willingness to share (2.47 vs. 3.78, $F(1, 126) = 8.52$, $p < .01$). This difference, however, was attenuated (and

FIGURE 5



disappeared in this case) among people who found the content themselves (3.20 vs. 2.68, $F < 1.4$, $p > .25$).

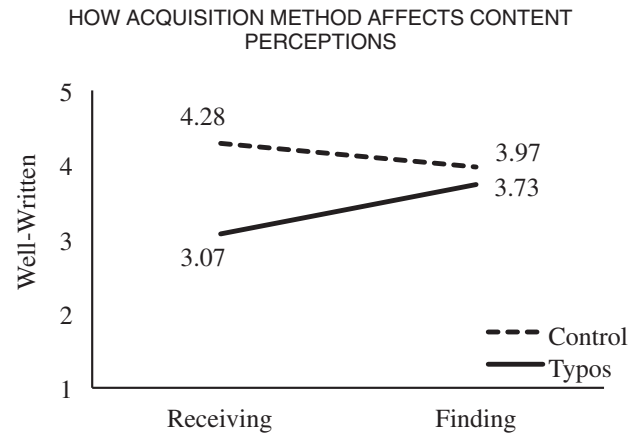
Perceived Writing Quality. Content perceptions revealed similar effects. As predicted, there was an Acquisition Method \times Content interaction (albeit marginal, $F(1, 126) = 3.24$, $p = .07$; figure 6). Among people who received the article from others, adding typos made the article seem less well written (3.07 vs. 4.28, $F(1, 126) = 10.15$, $p < .01$). This difference was attenuated among people who found the content themselves (3.73 vs. 3.97, $F < 0.4$, $p > .5$). Said another way, while receivers noticed the version with typos was more poorly written than the version without typos, finders were less able to tell the two versions apart.

Mediation. As predicted, moderated mediation (with IV = Content characteristic, Moderator = Acquisition method, Mediator = Well written, and DV = Share; Hayes 2013, model 7: 5000 bootstrapped samples) demonstrates that acquisition method moderates people's sensitivity to how well written the content is ($\beta = .97$, $SE = .54$, $t = 1.80$, $p = .07$) and that well writtenness is positively related to sharing ($\beta = .54$, $SE = .10$, $t = 5.75$, $p < .01$). Compared to receivers (Conditional indirect effect = .66, Boot SE = .23; 95% CIs, .27–1.19), finders discriminated less between the control and the article with typos, and thus sharing depended less on the content itself (Conditional indirect effect = .13, Boot SE = .25; 95% CIs, $-.33$ to .64). Index of moderated mediation provides marginal support that acquisition method affects sharing by affecting sensitivity to diagnostic characteristics of content (95% CIs, $-.01$ to 1.26; 90% CIs, .07–1.18).

Discussion

Using a different content characteristic, study 3 underscores the findings of the first two studies. First,

FIGURE 6



acquisition method influenced willingness to share. A diagnostic content characteristic, in this case, how well written the content was, had less of an impact on sharing when people found (vs. received) the content.

Further, this effect was driven by decreased sensitivity to the content itself. Compared to receivers, finders were less discerning of whether the article was well written.

By holding the article itself constant and manipulating only the presence of typos, study 3 casts doubt on alternative explanations driven by content topic differences.

STUDY 4: ACQUISITION METHOD AND ARGUMENT STRENGTH

While the first three studies are consistent with our theorizing, one could argue that stronger processing evidence would come from testing our model using traditional ELM variables. To do this, study 4 uses one of the most common ways of testing processing: argument quality.

We take an article opposing a vegetarian-only lunch policy and, in addition to manipulating acquisition method, manipulate whether it contains strong or weak arguments against that policy. Then we examine willingness to share. The article should be more compelling when it uses strong arguments, and thus receivers should be more willing to share it when it contains strong (vs. weak) arguments. If our theorizing is correct, however, this effect should be attenuated among finders.

To further test our proposed mechanism, we use a well-validated depth-of-processing measure: thought listing (Petty and Cacioppo 1986). If the effect of content acquisition method is driven by differences in depth of processing (i.e., finders process less than receivers), as we suggest, then content acquisition method should impact the number of thoughts listed. Since the article argues *against* a policy, differential processing should be most clearly reflected in

the *unfavorable* thoughts generated from reading the article. Receivers should generate relatively more unfavorable thoughts toward a policy after receiving an article with strong (vs. weak) arguments against the policy, but this difference should be attenuated among finders. Further, unfavorable thoughts should mediate the effect of argument strength on sharing, but this will be moderated by acquisition method.

Method

A total of 187 undergraduate students were randomly assigned to condition in a 2 (Acquisition Method: finding vs. receiving) \times 2 (Content: strong argument vs. weak argument) between-subjects design. They participated for partial course credit.

First, we manipulated acquisition method using procedures from study 1. Next, we manipulated argument quality. Participants were shown an article that contained either strong or weak arguments against implementing a vegetarian-only lunch policy in primary school (adapted from Akhtar, Paunesku, and Tormala 2013; online appendix C).

After participants read the article, they indicated their willingness to share it. To show that our results were not driven by our single item sharing (DV), we use a three item measure adapted from Zhang, Feick, and Mittal (2014): To what extent do you think that you will tell or not tell others about the article (1 = Certain not to tell to 7 = Certain to tell, 1 = Very unlikely to tell to 7 = Very likely to tell, and 1 = Probably will not tell to 7 = Probably will tell, $\alpha = .97$).

Following prior research (Cacioppo and Petty 1981; Petty and Cacioppo 1979), participants were then asked to list all the thoughts they had when reading the article. After listing their thoughts, they rated whether each thought was unfavorable, favorable, or neutral/unrelated to the vegetarian-only policy. As mentioned earlier, given the article argued *against* the policy, we expect processing primarily to affect the relative number of unfavorable thoughts listed.

Results

Sharing. A main effect of argument strength ($F(1, 183) = 12.89, p < .01$) was qualified by the predicted interaction between acquisition method and article argument strength (albeit marginal, $F(1, 183) = 2.89, p = .09$; figure 7). As expected, while receivers were more likely to share the article if it contained strong rather than weak arguments (3.66 vs. 2.24, $F(1, 183) = 13.74, p < .01$), this effect was attenuated among finders (2.88 vs. 2.37, $F(1, 183) = 1.81, p > .10$).

Perceived Argument Strength. We examined whether finding reduces sensitivity to message quality by looking at the thoughts people generated. Following prior research

FIGURE 7

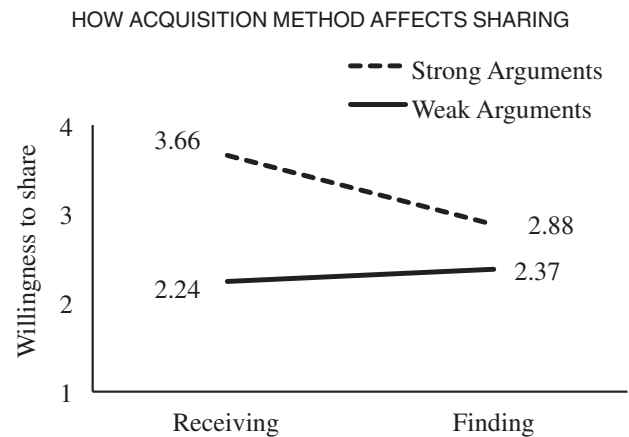
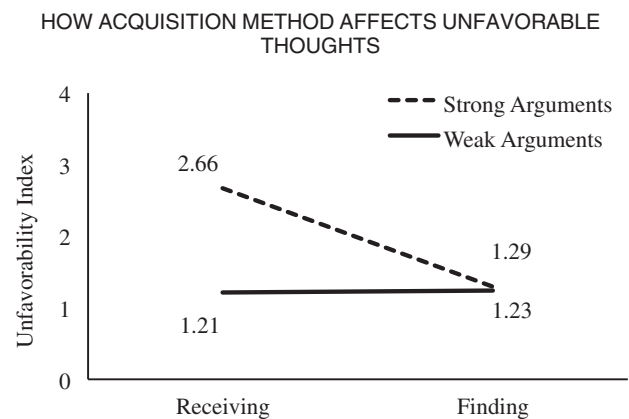


FIGURE 8



(Priester and Petty 1995, 2003), an unfavorability index was created by subtracting favorable thoughts from unfavorable thoughts.

Main effects of argument strength ($F(1, 183) = 4.06, p < .05$) and acquisition method ($F(1, 183) = 3.21, p = .08$) were qualified by the predicted interaction between acquisition method and argument strength (albeit marginal, $F(1, 183) = 3.46, p = .06$; figure 8). While receivers had relatively more unfavorable thoughts toward the policy after reading the article containing strong (vs. weak) arguments against the policy (2.66 vs. 1.21, $F(1, 183) = 7.38, p < .01$), finders were less discriminating (1.29 vs. 1.23, $F < .1, p > .9$). There were no main effects or interactions on number of neutral thoughts or unrelated thoughts (F 's $< 1.70, p$'s $> .19$).

Mediation. As predicted, moderated mediation (with IV = Content characteristic, Moderator = Acquisition method,

Mediator = Unfavorability index, and DV = Share; Hayes 2013, model 7: 5000 bootstrapped samples) demonstrates that acquisition method moderates thought unfavorability toward the vegetarian-only policy ($\beta = -1.39$, $SE = .75$, $t = -1.86$, $p = .06$) and that thought unfavorability is positively related to sharing ($\beta = .11$, $SE = .05$, $t = 2.15$, $p = .03$). Further, compared to receivers (Conditional indirect effect = .16, Boot SE = .10; 95% CIs, .02–.41), finders were less sensitive to the quality of the articles (as reflected by a smaller difference in thought unfavorability) and were thus less affected by article argument strength when making sharing decisions (Conditional indirect effect = .01, Boot SE = .07; 95% CIs, -.13 to .15). Index of moderated mediation confirms that acquisition method affects sharing by influencing people's sensitivity to content characteristics (95% CIs, -.50 to -.001).

Discussion

Using traditional ELM measures, results of study 4 underscores our suggestion that acquisition method affects sharing by influencing content processing.

While people who received content were more likely to share it if the content contained strong (vs. weak) arguments, this effect was attenuated among finders. The fact that the results of the first three studies extend to argument quality speaks to the robustness of the findings.

Further, by using thought listing procedures, the gold standard for depth of processing (Petty and Cacioppo 1979, 1986; Priester and Petty 1995), the results provide direct support for our hypothesized process. While receivers generate more unfavorable thoughts from reading articles containing strong (vs. weak) arguments again a policy, this difference was attenuated among finders. This reduction in processing, in turn, drove sharing.

Note that other methods of measuring processing find similar results. Results are the same when just using unfavorable thoughts and similar when taking the difference between unfavorable and favorable thoughts divided by total number of thoughts (Briñol, Petty, and Tormala 2004). In that case, receivers had more unfavorable thoughts when receiving the article with strong than weak arguments (.47 vs. .32, $F(1, 173) = 2.76$, $p < .10$), but finders were less discriminating (.39 vs. .32, $F(1, 173) = .39$, $p > .50$); unfavorability mediates sharing for receivers (95% CIs, .01–.25) but not finders (95% CIs, -.05 to .19). However, this construction of unfavorability index is not ideal because it leads to the loss of 10 participants who listed zero thoughts (division by 0). Furthermore, one can argue that listing zero thoughts is the ultimate sign of low processing. A supplemental analysis shows that finders were more likely to appear in this zero-thought group than receivers (eight finders [or 8.42% of finders] vs. two receivers [or 2.17% of receivers], 8.42% vs. 2.17%, $\chi^2(1) = 3.60$, $p = .06$), which supports

our theory that finders are less likely to process than receivers.

STUDY 5: ROLE OF THE SELF

If finding desensitizes people to diagnostic content characteristics because people less deeply process self-associated things, as we suggest, then this effect should be attenuated among those who are prone to more deeply process self-related things. Studies 5 and 6 test this possibility.

As discussed earlier, people with low self-esteem (i.e., self-critical individuals) tend to be less certain about themselves (Campbell et al. 1996) and feel like their self-value is “on the line” (Kernis et al. 1993, 1203). As a consequence, they tend to process things associated with the self more deeply (Weary et al. 1987). More formally:

H3: As finder's self-esteem decreases, (a) diagnostic content characteristics should have a greater impact on sharing (b) due to increased sensitivity to content.

Study 5 tests our theorizing using individual differences in self-esteem. We focus on finders (given that is where we expect self-esteem to apply) and examine whether diagnostic content characteristics have a greater impact on sharing among finders with low self-esteem because they are more sensitive to these characteristics.

Method

Sixty people from Amazon MTurk participated in the 2 (Content: more vs. less interesting) \times self-esteem (measured) mixed design study for pay.

First, we manipulated the content. People were shown either the high- or low-interest article from study 1.

Second, all participants followed the finding procedures from study 1 and rated the target article on likelihood of sharing.

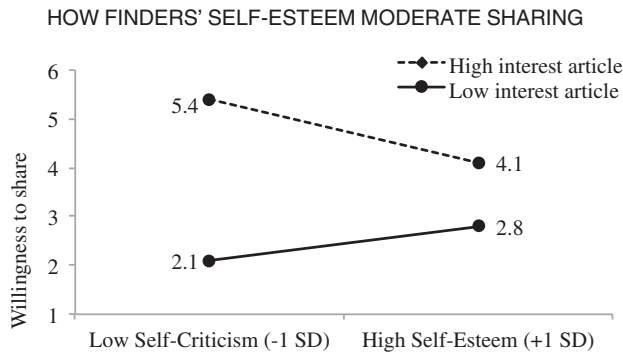
Third, they rated perceived interestingness.

Finally, we assessed self-esteem using measures adapted from Bosson, Swann, and Pennebaker (2000). People with higher self-esteem tend to show implicit egotism and like their initials more than other letters of the alphabet (Greenwald and Banaji 1995). Consistent with this idea, participants were asked how much they liked each letter of the alphabet (1 = Not at all to 5 = Very much so), and after rating all 26 letters, they were prompted for their initials. Consistent with prior work, self-esteem was calculated as average liking of the letters in one's own initials minus average liking of all other letters.

Results

Sharing. We regressed willingness to share on content interest, self-esteem (mean centered, standardized), and their interaction. People were more willing to share more

FIGURE 9



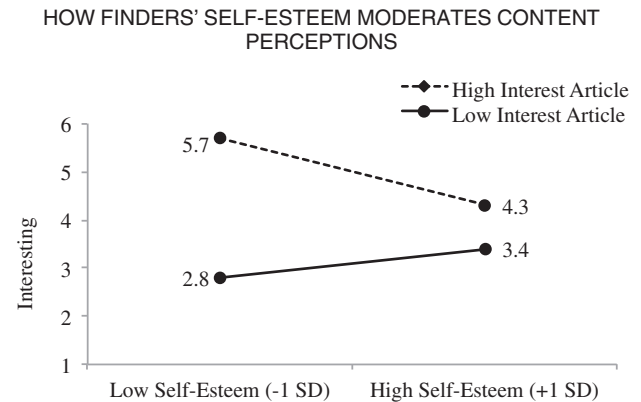
interesting content ($\beta_{\text{content}} = 2.29$, $SE = .50$, $t = 4.62$, $p < .001$), but more importantly, as predicted, this difference decreased as people's self-esteem increased ($\beta_{\text{content} \times \text{self-esteem}} = -.98$, $SE = .50$, $t = -1.96$, $p = .05$).

Spotlight analysis provides insight into the pattern of results (figure 9). People who have low self-esteem (-1 SD) were more willing to share the more interesting article than the less interesting one ($\beta = 3.27$, $t = 4.64$, $p < .001$). This difference was attenuated, however, and became marginal ($\beta = 1.31$, $t = 1.85$, $p = .07$) among those with high self-esteem ($+1$ SD).

Perceived Content Interestingness. Perceived interest shows similar results (figure 10). While people generally perceived the high-interest content as more interesting than the low-interest content ($\beta_{\text{content}} = 1.86$, $SE = .50$, $t = 3.72$, $p < .001$), this difference decreased as self-esteem increased ($\beta_{\text{content} \times \text{self-esteem}} = -1.04$, $SE = .50$, $t = 2.07$, $p = .04$). Spotlight analysis illustrates that those with low self-esteem (-1 SD) perceived the high-interest article as more interesting than the low-interest article ($\beta = 3.27$, $t = 4.64$, $p < .001$). Among those with high self-esteem ($+1$ SD), however, this difference was attenuated, and participants no longer differentiated between high- and low-interest content ($\beta = .83$, $t < 1.2$, $p > .20$).

Mediation. As predicted, moderated mediation (with IV = Article Interest, Moderator = Self-esteem, Mediator = Interesting, and DV = Share; Hayes 2013, model 7: 5000 bootstrapped samples) demonstrates that, consistent with our theorizing, self-esteem moderates the impact of finding on sharing by changing sensitivity to the content itself. Self-esteem moderated finder's sensitivity to content interestingness ($\beta = -1.04$, $SE = .50$, $t = 2.07$, $p = .04$) and interestingness drives sharing ($\beta = .84$, $SE = .07$, $t = 12.56$, $p < .01$). Those with low self-esteem (-1 SD) were more willing to share the more interesting content, which was driven by their sensitivity to underlying differences in content (Conditional indirect effect = 2.45, Boot SE = .52, 95% CIs, 1.32–3.39). As self-esteem increases, however, sharing

FIGURE 10



was driven less by the content itself. Among those with high self-esteem ($+1$ SD), content was less linked to sharing because individuals were less sensitive to differences in underlying content (Conditional indirect effect = .70, Boot SE = .63, 95% CIs, $-.55$ to 1.90). Index of moderated mediation confirms that self-esteem affects sharing via influencing people's sensitivity to content characteristics (95% CIs, .11–1.72).

Discussion

Study 5 further demonstrates the underlying role of self-association and processing in these effects. Consistent with our suggestion that finding reduced sensitivity to diagnostic content characteristics because people are less likely to deeply process things associated with the self (since people on average have high self-esteem that yields a feeling of certainty and trust), this effect was attenuated among those with low-esteem. When finding content, individuals with low self-esteem were more sensitive to differences in content interestingness, and these differences drove content's impact on sharing.

STUDY 6: MANIPULATING THE ROLE OF THE SELF

While study 5 is supportive, one could argue that rather than being driven by processing, they were driven by some other factor that covaries with self-esteem. Alternatively, one could argue that low self-esteem individuals are prone to critically process *all* content, and not just content associated with the self.

To rule out these possibilities, and further test our conceptualization, study 6 manipulates self-esteem (via feedback task) and examines how it impacts sharing by both finders and receivers. Decreasing self-esteem should increase processing of things associated with the self. As a result, we predict that it should moderate the impact of

acquisition method on sharing. In other words, decreasing self-esteem should lead finders to look more like receivers, making them attend more to how interesting the content is, and as a result, lead content to have a bigger impact on sharing.

Method

A total of 152 undergraduate students participated in the study for partial course credit. They were randomly assigned to condition in a 2 (Self-esteem: low vs. high) \times 2 (Acquisition method: finding vs. receiving) \times 2 (Content: more vs. less interesting) between-subjects design.

First, to manipulate self-esteem, we used a classic feedback design (adapted from Baumeister and Tice 1985; Forgas 1991). Participants were asked to solve 33 analogies (“Land is to dirt as ocean is to ____: a. river, b. water, c. air, d. sea”) and received positive or negative feedback based on their performance. A pretest ($N=41$) revealed that participants solved 17.4 analogies on average. Consequently, in the main study, all participants were first provided with their score on the analogy test, and those who answered 17 or fewer analogies correctly were told that they performed below average (low self-esteem manipulation), whereas those who answered more than 17 questions correctly were told that they performed above average (high self-esteem manipulation). People who were told that they had performed badly should have lowered self-esteem and thus process things associated with the self more thoroughly.

Second, we manipulated acquisition method. Participants either found or received a low- or high-interest article following the same procedures used in study 1. Third, participants indicated willingness to share the article and how interesting they found it.

Results

Sharing. In addition to a main effect of content ($M_{\text{high}}=3.93$ vs. $M_{\text{low}}=2.42$, $F(1, 144)=16.83$, $p<.001$), a $2 \times 2 \times 2$ ANOVA revealed only the predicted three-way interaction ($F(1, 144)=7.07$, $p<.01$).

Examining the high and low self-esteem conditions separately sheds light on the pattern of results. People tend to have high self-esteem (Kruglanski 1996), and so, as expected, for participants given feedback that they did well, the results were consistent with the earlier studies. A significant acquisition method \times content interaction ($F(1, 144)=6.68$, $p=.01$) indicates that while content interest affected willingness to share among receivers ($M_{\text{high}}=4.70$ vs. $M_{\text{low}}=1.91$, $F(1, 144)=22.14$, $p<.001$), it was attenuated among finders ($M_{\text{high}}=3.00$ vs. $M_{\text{low}}=2.75$, $F<1$).

Among those given negative feedback (low self-esteem), however, there was only a main effect of content interestingness ($M_{\text{high}}=3.96$ vs. $M_{\text{low}}=2.63$, $F(1, 144)=7.26$,

$p=.001$). Acquisition method no longer moderated the effect ($F<1.2$, $p>.3$). Reducing people’s self-esteem led finders to be as sensitive to content characteristics as receivers when sharing.

Perceived Content Interestingness. Perceived content interestingness showed similar effects. A main effect of content ($M_{\text{high}}=4.65$ vs. $M_{\text{low}}=3.19$, $F(1, 144)=16.83$, $p<.001$) was qualified by the predicted three-way interaction ($F(1, 144)=3.13$, $p=.04$). All other main and interactive effects were insignificant (F ’s <1.6 , p ’s $>.10$). Examining the high and low self-esteem conditions separately provides insights into the pattern of results.

Among those primed with high self-esteem, results replicate the earlier studies. A marginal interaction between acquisition method and content ($F(1, 144)=2.91$, $p=.09$) shows that while receivers saw the high-interest article as more interesting ($M_{\text{high}}=5.40$ vs. $M_{\text{low}}=2.77$, $F(1, 144)=18.99$, $p<.001$), this tendency was attenuated among people who found the content themselves ($M_{\text{high}}=4.25$ vs. $M_{\text{low}}=3.25$, $F(1, 144)=1.58$, $p>.2$).

Among those primed with low self-esteem, however, there was only a main effect of content ($M_{\text{high}}=4.43$ vs. $M_{\text{low}}=3.43$, $F(1, 144)=5.27$, $p=.02$). Acquisition method no longer moderated this effect ($F<1.5$, $p>.2$). In other words, reducing self-esteem made finders as sensitive to underlying content characteristics as receivers.

Mediation. Moderated mediation analysis confirms the hypothesized process. A moderated mediation (IV = Article Interest, Moderator 1 = Acquisition method, Moderator 2 = Self-esteem, Mediator = Interest, DV = Share; Hayes 2013, model 11: 5000 bootstrapped samples) finds a three-way interaction between content interest, self-esteem, and acquisition method on perception of interestingness ($\beta=-2.70$, $SE=1.32$, $t=-2.03$, $p=.04$), and interestingness is positively related to sharing ($\beta=.75$, $SE=.05$, $t=14.16$, $p<.001$; figure 11).

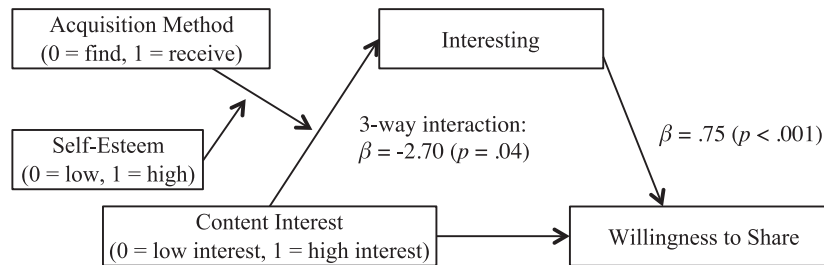
To better understand this interactive effect of self-esteem, acquisition method, and content characteristics on people’s sensitivity to the underlying characteristic of interest, we look at high versus low self-esteem conditions separately.

Among people made to feel high in self-esteem (i.e., told they had done well), results replicate studies 1 and 2. Compared to receivers (Conditional indirect effect = 1.97, Boot SE = .44, 95% CIs, 1.13–2.85), finders did not distinguish as much between the high- versus low-interest articles, and as a result, sharing depended less on the underlying content (Conditional indirect effect = .32, Boot SE = .46, 95% CIs, $-.50$ to 1.92).

Among people made to feel low in self-esteem, however, the difference between finding and receiving disappeared. Finding content no longer desensitized people to underlying content interest (as marked by a lack of interaction between acquisition method and content

FIGURE 11

HOW SELF-ESTEEM AND ACQUISITION METHOD MODERATES THE MEDIATING ROLE OF INTERESTINGNESS



characteristic, $\beta = -1.07$, $SE = .90$, $t = -1.18$, $p = .24$) and both finders' and receivers' sharing decisions were driven by content (Conditional indirect effect = .75, Bootstrapped $SE = .32$, 95% CIs, .15–1.43).

Discussion

By manipulating self-esteem, study 6 underscores its causal impact in driving finders' insensitivity to diagnostic content characteristics. As in the previous studies, finders were less sensitive to underlying differences in diagnostic content characteristics, and this led to a weaker link between content and sharing. But consistent with our suggestion that these effects are driven by finders processing content less deeply because people are not inclined to critically process things associated with the self, reducing people's self-esteem attenuated the difference between finders and receivers. Decreasing people's self-esteem led finders to attend more to the difference between high- and low-interest content, and this, in turn, drove willingness to share.

The fact that decreasing self-esteem made finders (but not receivers) more sensitive bolsters our suggestion that it is through the association of content with the self (which self-esteem affects) that makes finders less sensitive to content characteristics.

GENERAL DISCUSSION

Researchers have become more and more interested in the psychological drivers of social transmission, or why people share some things rather than others. But while work has begun to shed light on content characteristics (e.g., interestingness) that impact sharing, less is known about how contextual factors influence transmission. In particular, sometimes people find content themselves, and sometimes people receive content from others. Does acquisition method impact sharing, and if so, how?

We theorized that acquisition method influences sharing by changing how deeply people process content. In contrast to receiving content, the act of finding causes people

to associate the content with the self. And since people tend to have high self-esteem, and thus feel an elevated sense of certainty and trust for self-associated things, they are less likely to deeply process found content. As a result, finders are less sensitive to diagnostic content characteristics (e.g., how interesting or well written it is), and thus content has less of an impact on sharing.

Six studies support this conceptualization. The first four studies demonstrated that compared to receiving content, feeling like one has found content causes people to become less sensitive to diagnostic content characteristics (i.e., interestingness, writing quality, argument strength), which causes sharing to be driven less by the content itself. While receivers were more willing to share interesting over less interesting content (studies 1 and 2), well-written over poorly written content (study 3), and articles backed by strong than weak arguments (study 4), these differences were attenuated among finders. Further, these effects were driven by differences in processing, as demonstrated by participants' ratings of content characteristics (e.g., interestingness, well writtenness, studies 1–3) and thought listings (study 4), which are the gold standard for measuring processing (Petty and Cacioppo 1986).

Studies 5 and 6 provide further evidence for the role of the self in these effects. Consistent with the notion that content plays less of a role among finders because people on average have high self-esteem and are thus less prone to deeply process things associated with the self, differences in self-esteem moderated our effects. Finders with trait low self-esteem behaved more like receivers (study 5), and directly manipulating self-esteem had similar effects (study 6). Taken together, the studies demonstrate how acquisition method impacts sharing and the underlying processes behind these effects.

Contributions

The current work makes a number of contributions. First, it extends prior research on drivers of word of mouth. While prior work has shown that content characteristics such as positivity, arousal, and controversy can affect

sharing (Berger and Milkman 2012; Chen and Berger 2013), this work reveals conditions under which content is more or less likely to drive transmission. In this case, the content itself remained the same, but acquisition method influenced sensitivity to content characteristics, which, in turn, affected sharing.

Second, this work identifies a novel and unexplored contextual factor that affects social sharing. While some recent work has examined how communication channel (i.e., sharing online versus offline; Berger and Iyengar 2013) and audience size (Barasch and Berger 2014) impact sharing, these contextual factors occur at the point of sharing. The potential sharer has already processed the content and is deciding whether to share (or which content to share) given the particular audience and communication channel at the present moment. In contrast, acquisition method happens further upstream. It influences how content is processed and, as a result, affects sharing by impacting how potential sharers perceives the content itself.

Third, this research sheds light on how personality factors influence transmission. Prior research has shown that individual's need for uniqueness (Cheema and Kaikati 2010) and self-construal (interdependent vs. independent; Zhang et al. 2014) affect whether people share things. We illustrate that self-esteem also influences transmission. When individuals with healthy self-esteem find content, they are less likely to process it thoroughly. Regardless of content acquisition method, however, individuals with lower self-esteem likely devote more effort into processing and evaluating content. Thus not only can individual differences explain some sharing behavior, we show that these differences interact with contextual and content-specific factors to affect social sharing.

Fourth, this work contributes to work on information processing. While prior research has identified contextual variables that influence depth of processing, such as background color (Soldat, Sinclair, and Melvin 1997) and the speed at which information is communicated (Smith and Shaffer 1991), our results suggest that *how* people come across information may also affect how they evaluate the information.

Our work also contributes to research on the ELM. While self-relevance, or the extent to which information has personal relevance or importance, can increase depth of processing (Petty and Cacioppo 1986), we show that merely *associating* content with the self (through finding) can reduce processing. To our knowledge, this is the first article to find that relating something to the self can actually decrease processing. Thus there may be an important conceptual difference between self-relevance (e.g., this policy will impact my life) and mere self-association (e.g., I found this article, so it is connected to me). While we have focused on cases where the two constructs seem independent, future work should more deeply examine when they are independent versus interrelated. When people

have a specific piece of self-relevant content in mind (e.g., looking for an article on policy change at one's own school), for example, finding the content versus receiving it from someone else might make that specific content even more self-relevant.

Finally, this research not only illustrates that people psychologically associate content with the self, it highlights the *ease* through which these associations occur. Merely feeling like one has found content, or come upon it by oneself, is enough to make people associate the content with the self. While prior work has shown that people make associations between themselves and the things they own (e.g., Belk 1988), the current work demonstrates that such associations can occur even more broadly. Even when someone else created/owned the content (e.g., article created by a journalist, and owned by her or the outlet she works for), feeling like one has discovered that content may be enough to engender a sense of association.

Implications and Directions for Future Research

This article offers practical advice for firms interested in word-of-mouth marketing. While firms might currently devote little thought to acquisition method, this work suggests that different amounts of attention should be devoted to crafting content with the aim of going viral in different channels. For example, if the goal is to foster sharing via long chains (i.e., one person sharing with another sharing with another), then higher quality content is needed because people are sensitive to the diagnostic characteristics when re-sharing received content.

Understanding the relationship between personality traits (e.g., self-esteem) and social sharing can help marketers develop better seeding strategies for viral campaigns. While firms might not have direct access to measures of self-esteem or other personality traits, readily available consumer information such as educational status, income, and so on, can be used to proxy self-esteem (Rosenberg and Pearlman 1978) and other trait variables.

These findings also suggest directions for future research. We demonstrated one route through which acquisition method impacts sharing (i.e., changing processing), but there are likely other routes as well. One could imagine, for example, that receiving content from others provides social proof, or a seal of approval that the content must be good, which should increase sharing. Alternatively, receiving content could make it seem less novel, which might decrease sharing.

Future work might also examine more directly how transmission versus retransmission shapes sharing. In our studies, everyone provided their willingness to share, but finders provided their willingness to *transmit* something that they found themselves, whereas receivers provided their willingness to *retransmit* something received from someone else. Some work has found similar effects for

transmission and retransmission (e.g., self-enhancement drives transmission of one's own product experience as well as the retransmission of someone else's experience; De Angelis et al. 2012), but our work suggests that effects for transmission and retransmission may differ based on situation. Content characteristics, for example, were weaker drivers of word of mouth during transmission (finding) than retransmission (receiving). Similarly, as noted earlier, information may gain social proof but lose novelty when received (vs. found), which may in turn impact retransmission. Certain variables may have differential impact across transmission and retransmission, but it is also possible that transmission and retransmission decisions are driven by different variables altogether.

In summary, this article illustrates that how one acquires content affects sharing. Compared to when they receive content from others, finding content makes people less sensitive to diagnostic content characteristics, and as a result, content has less of an impact on sharing. This work not only documents a previously unexplored facet of word of mouth, it highlights how various factors interact to impact transmission. Content characteristics interact with contextual factors and personality variables to affect what gets shared.

DATA COLLECTION INFORMATION

Both authors jointly managed the collection of data for study 1 using MTurk (fall of 2013). The second author supervised the collection of data for study 2 by research assistants at the Wharton Behavioral Lab (spring 2014). The first author supervised the collection of data for studies 3 (fall of 2014), 4 (fall of 2015), and 6 (spring of 2015) by research assistants at the University of Miami Canes Behavioral Laboratory. The first author managed collection of data for study 5 using MTurk (summer 2014). The data were analyzed by the first author.

REFERENCES

- Akhtar, Omair, David Paunesku, and Zakary L. Tormala (2013), "Weak > Strong: The Ironic Effect of Argument Strength on Supportive Advocacy," *Personality and Social Psychology Bulletin*, 39 (9), 1214–26.
- Alicke, Mark D., Mary L. Klotz, David L. Breitenbecher, Tricia J. Yurak, and Debbie S. Vredenburg (1995), "Personal Contact, Individuation, and the Better-Than-Average Effect," *Journal of Personality and Social Psychology*, 68 (5), 804–25.
- Babin, Barry J., Yong-Ki Lee, Eun-Ju Kim, and Mitch Griffin (2005), "Modeling Consumer Satisfaction and Word-of-Mouth: Restaurant Patronage in Korea," *Journal of Services Marketing*, 19 (3), 133–39.
- Baer, Markus and Graham Brown (2012), "Blind in One Eye: How Psychological Ownership of Ideas Affects the Types of Suggestions People Adopt," *Organizational Behavior and Human Decision Processes*, 118 (1), 60–71.
- Barasch, Alexandra and Jonah Berger (2014), "Broadcasting and Narrowcasting: How Audience Size Affects What People Share," *Journal of Marketing Research*, 51 (3), 286–99.
- Baumeister, Roy F. and Dianne M. Tice (1985), "Self-Esteem and Responses to Success and Failure: Subsequent Performance and Intrinsic Motivation," *Journal of Personality*, 53 (3), 450–67.
- Baumgardner, Ann H (1990), "To know Oneself Is to Like Oneself: Self-Certainty and Self-Affect," *Journal of Personality and Social Psychology*, 58 (6), 1062–72.
- Beggan, James K. (1992), "On the Social Nature of Nonsocial Perception: The Mere Ownership Effect," *Journal of Personality and Social Psychology*, 62 (2), 229–37.
- Belk, Russell W. (1988), "Possessions and the Extended Self," *Journal of Consumer Research*, 15 (2), 139–68.
- Bem, Daryl J. (1972), "Self-Perception Theory," in *Advances in Experimental Social Psychology*, Vol. 6, ed. Leonard Berkowitz, New York: Academic Press, 2–57.
- Bergami, Massimo and Richard P. Bagozzi (2000), "Self-Categorization, Affective Commitment and Group Self-Esteem as Distinct Aspects of Social Identity in the Organization," *British Journal of Social Psychology*, 39 (4), 555–77.
- Berger, Jonah (2011), "Arousal Increases Social Transmission of Information," *Psychological Science*, 22 (7), 891–93.
- . (2014), "Word of Mouth and Interpersonal Communication: A Review and Directions for Future Research," *Journal of Consumer Psychology*, 24 (4), 586–607.
- . (2015), "Word of Mouth and Interpersonal Communication," in *Cambridge Handbook of Consumer Psychology*, ed. Norton Michael I., Derek D. Rucker, and Cait Lamberton, Cambridge, Cambridge University Press.
- Berger, Jonah and Chip Heath (2007), "Where Consumers Diverge from Others: Identity Signaling and Product Domains," *Journal of Consumer Research*, 34 (2), 121–34.
- Berger, Jonah and Raghuram Iyengar (2013), "Communication Channels and Word of Mouth: How the Medium Shapes the Message," *Journal of Consumer Research*, 40 (3), 567–79.
- Berger, Jonah and Katherine L. Milkman (2012), "What Makes Online Content Viral?" *Journal of Marketing Research*, 49 (2), 192–205.
- Berger, Jonah and Eric M. Schwartz (2011), "What Drives Immediate and Ongoing Word of Mouth?" *Journal of Marketing Research*, 48 (5), 869–80.
- Bosson, Jennifer K., William B. Swann Jr., and James W. Pennebaker (2000), "Stalking the Perfect Measure of Implicit Self-Esteem: The Blind Men and the Elephant Revisited?" *Journal of Personality and Social Psychology*, 79 (4) 631–43.
- Briñol, Pablo, Richard E. Petty, and Zakary L. Tormala (2004), "Self-Validation of Cognitive Responses to Advertisements," *Journal of Consumer Research*, 30 (4), 559–73.
- Cacioppo, John T. and Richard E. Petty (1981), "Social Psychological Procedures for Cognitive Response Assessment: The Thought-listing Technique," in *Cognitive Assessment*, ed. Merluzzi Thomas V., Carol R. Glass, and Myles Genest, New York: Guilford Press, 309–42.
- Campbell, Jennifer D. and Loraine F. Lavalley (1993), "Who Am I? The Role of Self-Concept Confusion in Understanding the Behavior of People with Low Self-Esteem," in *Self-Esteem*, ed. Roy F. Baumeister, New York: Plenum Press.
- Campbell, Jennifer D., Paul D. Trapnell, Steven J. Heine, Ilana M. Katz, Loraine F. Lavalley, and Darrin R. Lehman (1996), "Self-Concept Clarity: Measurement, Personality Correlates,

- and Cultural Boundaries," *Journal of Personality and Social Psychology*, 70 (1), 141–56.
- Campbell, W. Keith and Constantine Sedikides (1999), "Self-Threat Magnifies the Self-Serving Bias: A Meta-Analytic Integration," *Review of General Psychology*, 3 (1), 23–43.
- Chaiken, Shelly (1980), "Heuristic versus Systematic Information Processing and the Use of Source versus Message Cues in Persuasion," *Journal of Personality and Social Psychology*, 39 (5), 752–66.
- Cheema, Amar and Andrew M. Kaikati (2010), "The Effect of Need for Uniqueness on Word of Mouth," *Journal of Marketing Research*, 47 (3), 553–63.
- Chen, Zoey and Jonah Berger (2013), "When, Why, and How Controversy Causes Conversation," *Journal of Consumer Research*, 40 (3), 580–93.
- Chen, Zoey and Nicholas H. Lurie (2013), "Temporal Contiguity and Negativity Bias in the Impact of Online Word-of-Mouth," *Journal of Marketing Research*, 50 (4), 463–76.
- Chevalier, Judith A. and Dina Mayzlin (2006), "The Effect of Word of Mouth on Sales: Online Book Reviews," *Journal of Marketing Research*, 43 (August), 345–54.
- De Angelis, Matteo, Andrea Bonezzi, Alessandro M. Peluso, Derek D. Rucker, and Michele Costabile (2012), "On Braggarts and Gossips: A Self-Enhancement Account of Word-of-Mouth Generation and Transmission," *Journal of Marketing Research*, 49 (4), 551–63.
- De Dreu, Carsten K. W. and Daan van Knippenberg (2005), "The Possessive Self as a Barrier to Conflict Resolution: Effects of Mere Ownership, Process Accountability, and Self-Concept Clarity on Competitive Cognitions and Behavior," *Journal of Personality and Social Psychology*, 89 (3): 345–57.
- Dittmar, Helga (1992), *The Social Psychology of Material Possessions: To Have Is to Be*, Hemel Hempstead: Harvester Wheatsheaf.
- Duan, Wenjing, Bin Gu, and Andrew Whinston (2008), "Do Online Reviews Matter?—An Empirical Investigation of Panel Data," *Decision Support Systems*, 45 (4), 1007–16.
- Dubois, David, Andrea Bonezzi, and Matteo De Angelis (2015), "Negative with Friends, Positive with Strangers: How Interpersonal Closeness Influences Word-of-Mouth Valence," working paper, INSEAD.
- Dubois, David, Derek D. Rucker, and Zakary L. Tormala (2011), "From Rumors to Facts, and Facts to Rumors: The Role of Certainty Decay in Consumer Communications," *Journal of Marketing Research*, 48(6), 1020–32.
- Dunning, David, Judith A. Meyerowitz, and Amy D. Holzberg (1989), "Ambiguity and Self-Evaluation: The Role of Idiosyncratic Trait Definitions in Self-Serving Assessments of Ability," *Journal of Personality and Social Psychology*, 57 (6), 1082–90.
- Escalas, Jennifer Edson and James R. Bettman (2005), "Self-Construct, Reference Groups, and Brand Meaning," *Journal of Consumer Research*, 32 (3), 378–89.
- Forgas, Joseph P. (1991), "Affective Influences on Partner Choice: Role of Mood in Social Decisions," *Journal of Personality and Social Psychology*, 61 (5), 708–20.
- (2009), "Firm-Created Word-of-Mouth Communication: Evidence from a Field Test," *Marketing Science*, 28 (4), 721–39.
- Govier, Trudy (1993), "Self-Trust, Autonomy, and Self-Esteem," *Hypatia*, 8 (1), 99–120.
- Greenwald, Anthony G. and Mahzarin R. Banaji (1995), "Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes," *Psychological Review*, 102 (1), 4–27.
- Hayes, Andrew F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, New York: Guilford Press.
- Heath, Chip, Chris Bell, and Emily Sternberg (2001), "Emotional Selection in Memes: The Case of Urban Legends," *Journal of Personality and Social Psychology*, 81 (6), 1028–41.
- Heider, Fritz (1958), *The Psychology of Interpersonal Relations*, New York: Wiley.
- Hilton, James L. and Steven Fein (1989), "The role of Typical Diagnosticity in Stereotype-Based Judgments," *Journal of Personality and Social Psychology*, 57 (2) 201–11.
- Isaacs, Susan (1933), *Social Development in Young Children*, London: Routledge & Kegan Paul.
- Kahneman, Daniel, Jack L. Knetsch, and Richard H. Thaler (1991), "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias," *Journal of Economic Perspectives*, 5 (1), 193–206.
- Kernis, Michael H., David P. Cornell, Chien-Ru Sun, Andrea Berry, and Thomas Harlow (1993), "There's More to Self-Esteem Than Whether It Is High or Low: The Importance of Stability of Self-Esteem," *Journal of Personality and Social Psychology*, 65 (6), 1190–1204.
- Kruglanski, Arie W. (1996), "Motivated Social Cognition: Principles of the Interface," in *Social Psychology: Handbook of Basic Principles*, ed. Tory Higgins Edward and Arie W. Kruglanski, New York: Guilford Press.
- Liu, Yong (2006), "Word of Mouth for Movies: Its Dynamics and Impact on Box Office Revenue," *Journal of Marketing*, 70 (3), 74–89.
- Marsh, Kerry L. and Gifford Weary (1989), "Depression and Attributional Complexity," *Personality and Social Psychology Bulletin*, 15 (3), 325–36.
- Moldovan, Sarit, Jacob Goldenberg, and Amitava Chattopadhyay (2011), "The Different Roles of Product Originality and Usefulness in Generating Word-of-Mouth," *International Journal of Research in Marketing*, 28 (2), 109–19.
- Norton, Michael I., Daniel Mochon, and Dan Ariely (2012), "The IKEA Effect: When Labor Leads to Love," *Journal of Consumer Psychology*, 22 (3), 453–60.
- Nuttin, Jozef M. (1985), "Narcissism Beyond Gestalt and Awareness: The Name Letter Effect," *European Journal of Social Psychology*, 15 (3), 353–61.
- . (1987), "Affective Consequences of Mere Ownership: The Name Letter Effect in Twelve European Languages," *European Journal of Social Psychology*, 17 (4), 381–402.
- Packard, Grant and David B. Wooten (2013), "Compensatory Knowledge Signaling in Consumer Word-of-Mouth," *Journal of Consumer Psychology*, 23 (4), 434–50.
- Petty, Richard E. and John T. Cacioppo (1979), "Issue Involvement Can Increase or Decrease Persuasion by Enhancing Message-Relevant Cognitive Responses," *Journal of Personality and Social Psychology*, 37 (10), 1915–26.
- . (1986), "The Elaboration Likelihood Model of Persuasion," *Advances in Experimental Social Psychology*, 19, 123–205.
- Petty, Richard E., John T. Cacioppo, and David Schumann (1983), "Central and Peripheral Route to Advertising Effectiveness: The Moderating Role of Involvement," *Journal of Consumer Research*, 10 (2), 135–46.
- Petty, Richard E., Duane T. Wegener, and Leandre R. Fabrigar (1996), "Attitudes and Attitude Change," *Annual Review of Psychology*, 48 (1), 609–47.
- Pierce, Jon L., Tatiana Kostova, and Kurt T. Dirks (2003), "The State of Psychological Ownership: Integrating and Extending

- a Century of Research," *Review of General Psychology*, 7 (1) 84–107.
- Priester, Joseph R. and Richard E. Petty (1995), "Source Attributions and Persuasion: Perceived Honesty as a Determinant of Message Scrutiny," *Personality and Social Psychology Bulletin*, 21 (6), 637–54.
- . (2003), "The Influence of Spokesperson Trustworthiness on Message Elaboration, Attitude Strength, and Advertising Effectiveness," *Journal of Consumer Psychology*, 13 (4), 408–21.
- Protalinski, Emil (2011), "Zuckerberg: 4 Billion 'Things' Are Shared on Facebook Every Day," <http://www.zdnet.com/article/zuckerberg-4-billion-things-are-shared-on-facebook-every-day/>.
- Rimé, Bernard (2009), "Emotion Elicits the Social Sharing of Emotion: Theory and Empirical Review," *Emotion Review*, 1 (1), 60–85.
- Robb, Thomas, Steven Ross, and Ian Shortreed (1986), "Salience of Feedback on Error and Its Effect on EFL Writing Quality," *Tesol Quarterly*, 20 (1), 83–96.
- Rosenberg, Morris and Leonard I. Pearlin (1978), "Social Class and Self-Esteem Among Children and Adults," *American Journal of Sociology*, 84 (1), 53–77.
- Smith, Stephen M. and David R. Shaffer (1991), "Celerity and Cajolery: Rapid Speech May Promote or Inhibit Persuasion Through Its Impact on Message Elaboration," *Personality and Social Psychology Bulletin*, 17 (6), 663–69.
- Soldat, Alexander S., Robert C. Sinclair, and Melvin M. Mark (1997), "Color as an Environmental Processing Cue: External Affective Cues Can Directly Affect Processing Strategy Without Affecting Mood," *Social Cognition*, 15 (1), 55–71.
- Thaler, Richard (1980), "Toward a Positive Theory of Consumer Choice," *Journal of Economic Behavior & Organization*, 1 (1), 39–60.
- Tiedens, Larissa Z. and Susan Linton (2001), "Judgment Under Emotional Certainty and Uncertainty: The Effects of Specific Emotions on Information Processing," *Journal of Personality and Social Psychology*, 81 (6), 973–88.
- Weary, Gifford and John A. Edwards (1994), "Individual Differences in Causal Uncertainty," *Journal of Personality and Social Psychology*, 67 (2), 308–18.
- Weary, Gifford, Susan Elbin, and Martha G. Hill (1987), "Attributional and Social Comparison Processes in Depression," *Journal of Personality and Social Psychology*, 52 (3), 605–10.
- Weary, Gifford and Jill A. Jacobson (1997), "Causal Uncertainty Beliefs and Diagnostic Information Seeking," *Journal of Personality and Social Psychology*, 73 (4), 839–48.
- Yost, John H. and Gifford Weary (1996), "Depression and the Correspondent Inference Bias: Evidence for More Effortful Cognitive Processing," *Personality and Social Psychology Bulletin*, 22 (2), 192–200.
- Zhang, Yinlong, Lawrence Feick, and Vikas Mittal (2014), "How Males and Females Differ in Their Likelihood of Transmitting Negative Word of Mouth," *Journal of Consumer Research*, 40 (6), 1097–1108.

Copyright of Journal of Consumer Research is the property of Oxford University Press / USA and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.