DAVID DUBOIS, ANDREA BONEZZI, and MATTEO DE ANGELIS*

How does interpersonal closeness (IC)—the perceived psychological proximity between a sender and a recipient—influence word-of-mouth (WOM) valence? The current research proposes that high levels of IC tend to increase the negativity of WOM shared, whereas low levels of IC tend to increase the positivity of WOM shared. The authors hypothesize that this effect is due to low versus high levels of IC triggering distinct psychological motives. Low IC activates the motive to self-enhance, and communicating positive information is typically more instrumental to this motive than communicating negative information. In contrast, high IC activates the motive to protect others, and communicating negative information is typically more instrumental to this motive than communicating positive information. Four experiments provide evidence for the basic effect and the underlying role of consumers' motives to self-enhance and protect others through mediation and moderation. The authors discuss implications for understanding how WOM spreads across strongly versus weakly tied social networks.

Keywords: word of mouth, word-of-mouth valence, interpersonal closeness, self-enhancement, social media

Online Supplement: http:/dx.doi.org/10.1509/jmr.13.0312

Sharing with Friends Versus Strangers: How Interpersonal Closeness Influences Word-of-Mouth Valence

Social transmission of information is a primary vehicle of economic, political, and cultural change (Christakis and Fowler 2009). Every day, consumers share billions of messages about news, rumors, and trends (Berger 2013), which sway important decisions such as what products to buy (Godes and Mayzlin 2009) or whom to vote for (Bond et al. 2012). Particularly important to managers is to understand what factors influence consumers to share positive or negative information, as valenced word-of-mouth (WOM) has a crucial influence on the success or downfall of products and services (Chevalier and Mayzlin 2006; Herr, Kardes, and Kim 1991). For instance, cross-industry research has shown that a 7% increase in positive WOM can boost a company's revenues by as much as 1% (Marsden, Samson, and Upton 2005). Conversely, a study found that an increase of 1,000 WOM complaints can cost the airline industry an accumulated loss of as much as $8.1 million over 20 months (Luo 2009).

Although consumers frequently engage both in positive (East, Hammond, and Wright 2007; Godes and Mayzlin 2004) and negative (Donavan, Mowen, and Chakraborty 1999; Kamins, Folkes, and Perner 1997) WOM, only recently have scholars begun to investigate factors that shed light on *when* consumers might share more positive or negative WOM. For example, De Angelis et al. (2012) examine how talking about one's own versus others' experiences affects WOM valence and show that consumers tend to share more positive WOM when talking about their

own experiences but more negative WOM when talking about others' experiences, in the service of self-enhancement. Similarly, Barasch and Berger (2014) examine how audience size influences WOM valence and show that broadcasting (i.e., talking to a large audience) leads consumers to avoid sharing negative WOM, compared with narrowcasting (i.e., talking to a single person; for a review, see Berger 2014).

This article contributes to our understanding of *when* consumers might share more positive versus negative WOM by exploring a key factor that characterizes the social interactions in which a WOM exchange may occur: interpersonal closeness (IC), defined as the perceived psychological proximity between two people (Gino and Galinsky 2012; Kreilkamp 1984). Across marketing (Brown and Reingen 1987; Frenzen and Nakamoto 1993), psychology (Weenig and Midden 1991), and sociology (Friedkin 1980) fields, researchers have shown that IC influences the reach (Lin, Ensel, and Vaughn 1981) and impact (Brown and Reingen 1987) of socially transmitted information. Yet less is known about how IC influences the kind of information people share. Indeed, aside from Frenzen and Nakamoto's (1993) seminal work showing that IC affects people's tendency to share information that has inherent value for the recipient, the literature lacks an investigation of the influence of IC on the valence of the information shared.

In this research, we propose that communicating to a close versus a distant other increases the sharing of negative information. In contrast, communicating to a distant versus a close other increases the sharing of positive information. Our prediction builds on the idea that communicating to close versus distant others activates distinct psychological motives that drive consumers' behavior in their social interactions and affects the kind of information they share. Specifically, talking to a distant other tends to activate a motive to self-enhance (Belk 1988; Blaine and Crocker 1993; Heine et al. 1999), whereas talking to a close other tends to activate a motive to protect others (Cross, Bacon, and Morris 2000; Cross and Madson 1997; Heine et al. 1999). Importantly, sharing positive information is typically instrumental to consumers' motive to self-enhance (Berger 2014; Folkes and Sears 1977), whereas sharing negative information is typically instrumental to consumers' motive to protect others (Hennig-Thurau et al. 2004; Sundaram, Mitra, and Webster 1998). Thus, we propose that high IC increases the negativity of WOM shared, whereas low IC increases the positivity of WOM shared.

Next, we first review previous work on IC and its role in information transmission. We then elaborate on how IC activates distinct psychological motives that drive consumers to share more positive versus negative information. Finally, we present four experiments that test the effect of IC on WOM valence and investigate the role of consumers' motives to self-enhance and protect others through mediation and moderation (Experiments 2 and 3), as well as the consequences of the effect on systematic distortions in message content and consumers' attitudes across multiple transmissions (Experiment 4).

INTERPERSONAL CLOSENESS

Interpersonal closeness, the perceived psychological proximity between two people (Gino and Galinsky 2012), is a key factor that characterizes social relationships (Marsden and Campbell 1984). In particular, IC refers to feelings of connectedness stemming from the perceived affective, cognitive, and behavioral overlap between two people (Dibble, Levine, and Park 2012; Kelley et al. 1983). Importantly, IC influences several social behaviors such as whether people decide to disclose information about themselves (Altman and Taylor 1973), cooperate (Batson et al. 2002), or provide financial help to others (Aron et al. 1991).

Interpersonal closeness can stem from a variety of structural or incidental features of social interactions (for a review, see Gino and Galinsky 2012). To illustrate, the nature and depth of a conversation, or even the mere physical proximity between two individuals, can influence feelings of connectedness (Sedikides et al. 1999; Vohs, Baumeister, and Ciarocco 2005). In addition, IC can originate from incidental factors that influence the perceived similarity between two people such as sharing the same birthday or the same name (Jiang et al. 2010). Furthermore, linguistic markers used during a conversation can foster high versus low IC. For instance, in languages such as French or Italian, people use distinct pronouns and verb endings depending on how close they feel with their recipient (i.e., in French *tu* for close others versus *vous* for distant others; Brown and Gilman 1960).

It is important to note that IC can but does not always overlap with tie strength, originally conceptualized by Granovetter (1973, p. 1361) as a combination of "the amount of time, the emotional intensity, the intimacy (or mutual confiding), and the reciprocal services which characterize each tie." According to this conceptualization, tie strength is indeed closely related to IC, because part of the definition taps into feelings of psychological proximity. However, with few notable exceptions (Frenzen and Nakamoto 1993; Wilcox and Stephen 2013), subsequent empirical work has primarily viewed and assessed tie strength in terms of frequency of observable interactions between both sides of a social dyad (Bakshy et al. 2012; Brown and Reingen 1987; Godes and Mayzlin 2004; Weimann 1983). To illustrate, in their study of online conversations about television shows, Godes and Mayzlin (2004) construed members of the same online communities as characterized by strong ties because they interacted more frequently, relative to members of different online communities who interacted less frequently. Despite its merits, this approach does not really consider the "emotional intensity" and the "intimacy (or mutual confiding)" dimensions that were part of the original definition of tie strength (Granovetter 1973), because frequency of observable interactions does not always correlate with feelings of psychological proximity. To illustrate, when tie strength is measured in terms of frequency of observable interactions, two people might appear to be strongly tied within a social network yet not experience any feeling of psychological proximity (e.g., two colleagues who work in the same office and interact frequently but feel disconnected from each other); similarly, two people might appear to be weakly tied within a social network yet feel psychologically close (e.g., two acquaintances who rarely interact with one another but happen to have shared the same tragic event).

INTERPERSONAL CLOSENESS AND SOCIAL TRANSMISSION

Prior evidence has suggested that IC affects information transmission in two key respects. First, distant others seem more effective than close others in facilitating the diffusion of information. Because distant others typically bridge different communities (Burt 1992), information shared with people we feel distant from tends to have broader reach than information shared with people we feel close to (Lin et al. 1981). To illustrate, Weenig and Midden (1991) compared the implementation of identical communication programs in two neighborhoods with different levels of social cohesion and found that the diffusion of information was higher in the neighborhood where IC was low than in the neighborhood where IC was high.

Second, information received from people we feel close to tends to be more influential than information received from people we feel distant from. This may be because when making decisions, consumers tend to weight close others' views and opinions more than distant others' (Brown and Reingen 1987) and because consumers are more likely to receive valuable information from close rather than distant others (Frenzen and Nakamoto 1993). Recently, in the context of new product adoption, Aral (2011) proposed that close others exert a stronger influence because of the greater marginal utility a user might derive from adopting a product that close (vs. distant) others already use.

Although it is clear that IC influences the reach and impact of information shared, whether it influences the valence of information shared still remains an open question. We propose that communicating to a close other, relative to communicating to a distant other, might induce consumers to share more negative information. In contrast, communicating to a distant other, relative to communicating to a close other, might induce consumers to share more positive information. We argue that this occurs because IC activates different psychological motives that drive consumers to share more positive versus negative information. In the section that follows, we elaborate on our predictions about how IC affects the valence of information shared.

INTERPERSONAL CLOSENESS AND WOM VALENCE

Word-of-mouth communications are typically embedded in social interactions between a sender and a recipient who can differ in IC. To illustrate, the same piece of information might be shared between siblings (high IC) or between mere acquaintances (low IC). Importantly, recipients' characteristics can significantly alter communicators' motives when sharing information and, thus, the content of what is shared. For instance, Barasch and Berger (2014) show that talking to a large audience (compared with a small audience) activates impression management motives, leading consumers to avoid sharing negative WOM that could make them look bad.

In the current research, we suggest that interacting with a close versus distant other can systematically activate different psychological motives (Aaker and Lee 2001; Markus and Kitayama 1991). In particular, we argue that interacting with a close (vs. distant) other is more likely to activate a motive to protect others (Cross, Bacon, and Morris 2000), whereas interacting with a distant (vs. close) other is more likely to activate a motive to self-enhance (Lee, Aaker, and Gardner 2000). Our argument draws on the following evidence.

First, when consumers feel psychologically close to others, they become more other-focused and experience a sense of responsibility toward others (Clark, Fitness, and Brissette 2001; Clark and Mills 1993). This prompts them to engage in behaviors aimed to protect others (Heine et al. 1999; Markus and Kitayama 1991). For instance, research has shown that people have a tendency to justify close others' unethical actions to protect them (Gino and Galinsky 2012). Research has also shown that parents who feel close to their children often adopt strict curfew practices or enroll their children in safe activities to protect them (Elder et al. 1995).

Second, when consumers feel psychologically distant from others, they become more self-focused and tend to engage in social comparisons (e.g., "Am I better than them?"; Argo, White, and Dahl 2006; Cross and Madson 1997). This prompts consumers to engage in behaviors aimed to enhance their self and promote a favorable image (Blaine and Crocker 1993; Heine et al. 1999). For example, when interacting with distant others, consumers tend to talk about positive personal experiences (Brown, Collins, and Schmidt 1988; De Angelis et al. 2012) and avoid talking about negative personal experiences (Sedikides 1993). Similarly, they tend to talk about positive news and events (Berger and Milkman 2012) and avoid discussing critiques and complaints (Hamilton, Vohs, and McGill 2014).

In turn, we propose that the motives to protect others and self-enhance, activated by different degrees of IC, affect WOM valence. Specifically, a motive to protect others should lead consumers to share more negative information, because doing so is instrumental to the motive to protect others. Indeed, negative information helps people preserve social bonds (Dunbar 1996) by warning others about potential cons of products and services, thus protecting them from negative experiences (Hennig-Thurau et al. 2004). In fact, 23% of consumers claim to engage in negative WOM by sharing their unpleasant consumption experiences as a way to prevent others from encountering similar hurdles (Sundaram, Mitra, and Webster 1998). Similarly, Wetzer, Zeelenberg, and Pieters (2007) argue that feelings of regret can lead people to share negative information to strengthen social bonds by preventing others from making the same mistakes they made.

In contrast, a motive to self-enhance should lead consumers to share more positive information because doing so is instrumental to the motive to enhance the self. Consistent with this perspective, prior evidence has suggested that talking about positive experiences typically reflects favorably on the communicator because it may help improve recipients' mood (Berger and Milkman 2012) and enable the communicator to avoid being perceived as a "Debbie Downer" (Berger 2014). Indeed, people prefer to be viewed as sharers of positive rather than negative news (Berger and Milkman 2012) because interacting with others who are bearers of good news is generally preferred over interacting with others who are bearers of bad news (Bell 1978; Nisbett and Wilson 1977). In addition, posting negative content can lead people to be liked less (Forest and Wood 2012).

Overall, we predict that high IC should lead consumers to share more negative information, relative to low IC. Conversely, low IC should lead consumers to share more positive information, relative to high IC. Furthermore, we propose that this effect stems from WOM sender's motives to protect others versus enhance the self, and these motives vary as a function of IC.

OVERVIEW

Four experiments test the effect of IC on WOM valence and examine the underlying process and boundary conditions. Experiment 1 demonstrates the basic effect that communicating with a distant (close) other increases the positivity (negativity) of information shared. To account for this effect, Experiment 2 examines the underlying role of the motives to self-enhance and protect others in inducing consumers to share more positive versus negative information. Building on these findings, Experiment 3 explores an ecologically relevant moderator that modulates the intensity of consumers' motives to self-enhance and protect others. Specifically, talking about a well-established (novel) product should decrease (increase) motivations to self-enhance and protect others and, thus, moderate the effect. Finally, Experiment 4 tests an important consequence of the effect across multiple transmissions: messages might become increasingly positive (negative) across chains of people with low (high) IC and thus lead to systematic distortions in WOM messages.

EXPERIMENT 1: IC AND WOM VALENCE IN SOCIAL MEDIA

Experiment 1 tests the hypothesis that IC affects the valence of WOM shared, such that high (low) IC increases the negativity (positivity) of WOM shared. We manipulated IC by asking participants to share a message on LinkedIn with either someone they felt close to or someone they felt distant from. We chose LinkedIn for two reasons. First, the population for this experiment (Master of Business Administration [MBA] students) was very familiar with this platform. Second, preliminary conversations with MBA students revealed that their LinkedIn network typically consists of a wide range of connections, varying in IC from close friends (high IC) to mere acquaintances (low IC).

Procedure

We randomly assigned 50 MBA students (M_{age} = 30.62 years, SD = 3.48; 30 women) to two conditions (IC: high vs. low). As part of an in-class exercise, participants were asked to share a message on LinkedIn with another person. Specifically, participants read a short article on the pros and cons associated with the use of social media and digital tools in marketing and wrote a short message about it. The article contained an identical number of pros (ability to reach new segments, lower costs, increase customer loyalty, gain competitive advantage, and establish relationships with consumers) and cons (weaker control, unforeseen social media crises, difficulty to estimate return on investment, difficulty to choose partners, and more time pressure; see Web Appendix A), presented in a counterbalanced order. The arguments were pretested on a separate sample from the same population (N = 42, M_{age} = 29.54 years, SD = 2.88; 16 men) who assessed either the pros or the cons. Respondents rated on a seven-point

scale (1 = "not at all," and 7 = "extremely") how positive, important, abstract and useful they perceived each argument to be. Positive arguments were judged more positively (M = 4.90, SD = 1.78) than negative arguments (M = 2.75, SD = 1.03; F(1, 41) = 22.89, p < .01). However, positive arguments were judged equally important (M = 3.63, SD = 1.41), abstract (M = 4.06, SD = 1.41), and useful (M = 4.07, SD = 1.51) as negative arguments (respectively, M = 3.56, SD = 1.24; M = 3.86, SD = 1.21; M = 3.80; SD = 1.28; all ps > .52) (see Table 1).

We manipulated IC by instructing students to share a message with either someone they felt close to or someone they felt distant from. In the high (low) IC condition, participants read:

> Please write down the name of a fellow MBA student you feel close to (distant from) you'd like to write to. You might feel close to this person because you feel a sense of connection to him or her (You might feel distant from this person because you feel a sense of separation from him or her).

After participants read the article, they logged into their LinkedIn account and wrote a message to the fellow student they named earlier. Participants were then asked to share a copy of the message with the instructor. Subsequently, participants completed two manipulation check items, presented in a counterbalanced order, assessing the extent to which they felt close to their recipient ("How close do you feel to the message recipient?" [1 = "not at all close," and 7 = "very close"] and "How connected do you feel to the message recipient?" [1 = "not at all," and 7 = "very connected"]; α = .87; aggregated into an IC index). Participants also indicated the extent to which they thought the message recipient had expertise about the topic ("To what extent is the message recipient knowledgeable about social media?" [1 = "not knowledgeable at all," and 7 = "very knowledgeable"]). This measure aimed to rule out the possibility that senders could have tailored message content as a function of the recipient's expertise. Indeed, sharing information with someone who is perceived to be an expert may prompt people to share more negative than positive information to appear competent and knowledgeable (Amabile 1983). Finally, we collected participants' gender, age, and professional experience.

Results and Discussion

Manipulation check. A one-way analysis of variance (ANOVA) on the IC index revealed a significant effect of IC condition (F(1, 48) = 11.15, p < .01), such that participants in the high IC condition reported feeling closer to the message recipient (M = 4.02, SD = 1.80) than those in the low IC condition (M = 2.52, SD = 1.34). In addition, there was no difference in how much knowledge senders thought recipients had about the topic (F < 1).

Positive and negative thoughts. Two independent coders blind to the hypotheses counted the total number of thoughts as well as the number of positive and negative thoughts participants mentioned in their messages. Initial agreements between coders were, respectively, 97.5%, 97.9%, and 98.6%, with disagreements resolved through discussions. Next, we compared the number of thoughts across conditions. First, there was no effect of IC on the

Table 1

MEAN RATINGS OF ATTRIBUTES' VALENCE, IMPORTANCE, ABSTRACTION, AND USEFULNESS (EXPERIMENT 1)

	Valence	Importance	Abstraction	Usefulness
Positive Attributes				
Ability to reach new segments	4.90 (1.94)	3.66 (1.65)	3.90 (1.61)	3.71 (1.64)
Lower costs	4.76 (1.84)	3.52 (1.57)	4.33 (1.93)	4.33 (1.87)
Increase customer loyalty	4.95 (1.93)	3.90 (1.72)	4.19 (1.75)	4.00 (1.67)
Gain competitive advantage	4.90 (1.84)	3.62 (1.50)	3.85 (1.55)	3.95 (1.68)
Establish relationships	5.00 (2.09)	3.43 (1.69)	4.04 (1.77)	4.38 (1.80)
Negative Attributes				
Weaker control	2.85 (1.21)	3.52 (1.63)	3.95 (1.62)	4.09 (1.58)
Unforeseen social media crises	2.76 (1.26)	3.38 (1.71)	3.90 (1.54)	3.95 (1.53)
Difficulty to estimate return on investment	2.76 (1.22)	3.47 (1.57)	3.76 (1.41)	3.85 (1.49)
Difficulty to choose partners	2.66 (1.01)	3.67 (1.65)	4.04 (1.93)	4.57 (1.53)
Time pressure	2.71 (1.14)	3.76 (1.81)	3.66 (1.46)	4.52 (1.50)

Notes: Standard deviations appear in parentheses.

total amount of thoughts ($F < 1$). Second, participants shared significantly more negative information in the high IC condition ($M = 2.64$, $SD = 1.44$) than in the low IC condition ($M = 1.48$, $SD = 1.41$; $F(1, 48) = 8.24$, $p = .006$). Third, participants shared significantly more positive information in the low IC condition ($M = 2.60$, $SD = 1.47$) than in the high IC condition ($M = 1.64$, $SD = 1.38$; $F(1, 48) = 5.65$, $p = .021$).

Overall, consistent with our prediction, participants shared more negative information under high IC than low IC, but more positive information under low IC than high IC. In addition, perceived knowledge did not vary across IC conditions, suggesting that the differences in WOM cannot be tied to differences in perceived knowledge about the topic.

EXPERIMENT 2: WHAT MOTIVES UNDERLIE THE EFFECT OF IC ON WOM VALENCE?

Experiment 2 aimed to investigate the process underlying our initial results. Our account proposes that differences in IC trigger distinct consumers' motives (i.e., self-enhance vs. protect others) and, as a result, influence the amount of positive and negative information shared. To test this account, we measured the motives to self-enhance and protect others and observed whether differences in senders' motives drove differences in WOM valence.

Procedure

We randomly assigned 240 participants ($M_{age} = 23.14$ years, $SD = 2.54$; 162 women) to a 2 (IC: low vs. high) × 2 (role: sender vs. recipient) between-subjects design.

IC manipulation. To trigger different degrees of IC, we used a relationship closeness induction task successfully used in prior research on relationships (Sedikides et al. 1999; Vohs, Baumeister, and Ciarocco 2005). After arriving at the lab, the experimenter formed dyads of participants, accompanied each dyad to a separate room, and seated the two participants across from each other. Participants were told that they would engage in a communication exchange, and they received a list of questions that served as a basis to engage in conversation by taking turns asking and answering the questions (Web Appendix B).

After participants completed this task, the experimenter informed them that they would take part in another communication task. Importantly, the experimenter either kept the same dyads from the first communication task (initial pair preserved; high IC) or formed new dyads by pairing participants who did not perform the first communication task together (new pair formed; low IC). In line with previous work (Sedikides et al. 1999), we expected IC to be higher when senders and recipients had previously been paired than when they had not.

Message generation. Next, participants were randomly assigned to the role of sender or recipient. The communication task consisted in senders sharing their last experience at a restaurant with their assigned recipient in writing.

Motives. We assessed participants' motives to self-enhance and protect others using six items adapted from Hennig-Thurau et al. (2004), measured on seven-point scales, with higher numbers indicating greater motivation. To assess participants' motive to protect others, we used three items (e.g., "I shared information about the restaurant because I wanted to help the message recipient," "I shared information about the restaurant primarily to protect the message recipient"; $\alpha = .89$). To assess participants' motive to self-enhance, we used three items (e.g., "I shared information about the restaurant so that the message recipient would like me," "I shared information about the restaurant to create a good impression about myself"; $\alpha = .91$; see Web Appendix C). We then aggregated the items into two indices reflecting the two motives.

Finally, participants completed manipulation checks assessing the extent to which they felt close to their assigned partner ("How close do you feel to the participant you wrote the message to?" [1 = "not at all," and 7 = "very close"]; "How connected do you feel to the participant you wrote the message to?" [1 = "not at all," and 7 = "very connected"]; $\alpha = .90$; aggregated in an IC index).

Results and Discussion

Manipulation checks. A one-way ANOVA on the IC index revealed a significant effect of IC ($F(1, 238) = 15.49$, $p < .001$), such that participants who kept the same partner (high IC condition) felt closer to him or her ($M = 3.70$, $SD = 1.54$) than

those who were assigned to a new partner (low IC condition; M = 2.95; SD = 1.40).

Positive and negative thoughts. Similar to Experiment 1, two coders blind to the hypotheses coded for the total number of thoughts, as well as the number of positive and negative thoughts in the messages. Initial agreements between coders were, respectively, 95.8%, 98.2%, and 96.3%, with disagreements resolved through discussions. Next, we compared the number of thoughts across conditions. First, IC did not affect the overall amount of thoughts (F < 1). Second, participants shared significantly more negative information in the high IC (M = 1.57, SD = 1.28) than in the low IC (M = 1.14, SD = 1.31; F(1, 238) = 6.52, p = .011) condition. Third, participants shared significantly more positive information in the low IC (M = 1.87, SD = 1.46) than in the high IC (M = 1.27, SD = 1.32; F(1, 238) = 11.01, p = .044) condition.

Motive to protect others. There was a main effect of IC (F(1, 238) = 5.85, p = .024), such that participants in the high IC condition reported a stronger motive to protect others (M = 3.94, SD = 1.88) than those in the low IC condition (M = 3.38, SD = 1.66).
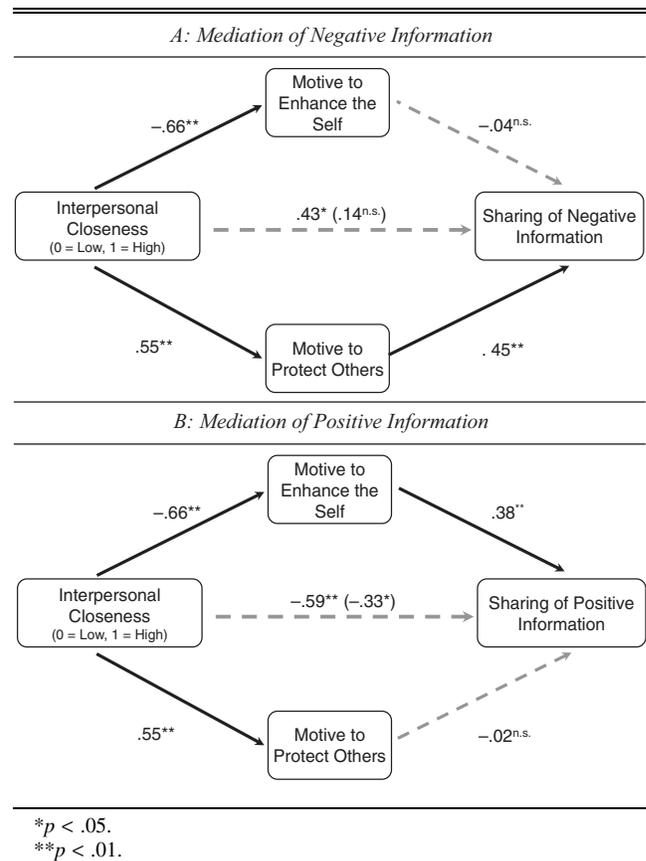
Motive to self-enhance. There was a main effect of IC (F(1, 238) = 8.91, p = . 003), such that participants in the low IC condition reported a stronger motive to self-enhance (M = 3.89, SD = 1.80) than those in the high IC condition (M = 3.23, SD = 1.62).

Mediation analyses. To test whether differences in positive versus negative information as a function of IC were jointly or differentially mediated by consumers' motives to self-enhance and protect others, we conducted two analyses using the amount of positive information and the amount of negative information, respectively, as our dependent variable (Hayes 2013).

We first tested whether the motives to self-enhance and protect others mediated the effect of IC on the sharing of negative information. Two simple regressions revealed that IC predicted both the motive to self-enhance (B = −.66, t(238) = 2.98, p = .003) and the motive to protect others (B = .55, t(238) = 2.42, p = .016). Next, a regression that included IC and the two motives revealed that the motive to protect others significantly predicted the amount of negative information shared (B = .45, t(236) = 12.06, p = .002), whereas the motive to self-enhance did not (B = −.04, t(236) = 1.14, p = .25). In addition, IC no longer predicted the sharing of negative information (B = .14, t(236) = 1.09, p = .27). Furthermore, the indirect effect through the motive to protect others was significant (95% confidence interval [CI] = [.048, .478]), indicating successful mediation, whereas the indirect effect through the motive to self-enhance was not significant (95% CI = [−.017, .103]; Figure 1).

Second, we examined whether the differences in the sharing of positive information as a function of IC could be accounted for by each of the proposed mediators. A regression that included IC and the two motives revealed that whereas the motive to self-enhance was a significant predictor of the amount of positive information shared (B = .38, t(236) = 8.24, p < .001), the motive to protect others was not (B = −.02, t(236) = −.44, p = .66). In addition, the effect of IC on the sharing of positive information was reduced (B = −.33, t(236) = 2.02, p = .04). Furthermore, the

Figure 1
EXPERIMENT 2: MEDIATION OF POSITIVE AND NEGATIVE INFORMATION THROUGH MOTIVES TO SELF-ENHANCE AND PROTECT OTHERS AS A FUNCTION OF IC

A: Mediation of Negative Information

B: Mediation of Positive Information

*p < .05.
**p < .01.

indirect effect of the motive to self-enhance was significant (95% CI = [−.471, −.089]), indicating successful mediation, whereas the indirect effect involving the motive to protect others was not significant (95% CI = [−.082, .036]) (see Figure 1). Overall, Experiment 2 both replicated Experiment 1's results and supported the proposed process by providing evidence that high IC can foster a motive to protect others, which leads to greater sharing of negative information, whereas low IC can foster a motive to self-enhance, which leads to greater sharing of positive information.

EXPERIMENT 3: MODERATION THROUGH PRODUCT NOVELTY

Experiment 3 had two main goals. First, building on Experiment 2's findings, we aimed to provide further process evidence by investigating a marketing-related moderator of our effect. In particular, we tested the hypothesis that framing a product as novel would accentuate the effect of IC on WOM valence, whereas framing a product as well-established would reduce this effect, compared with a baseline condition in which the product is not explicitly framed as either novel or well-established.

The rationale for our prediction rests on the idea that framing a product as novel versus well-established affects how instrumental different types of product-related

information are to the motives to self-enhance and to protect others. On the one hand, we reasoned that framing a product as novel should increase the instrumentality of positive product-related information to self-enhance and negative product-related information to protect others. As a result, we hypothesized that discussing a product that is explicitly framed as novel should increase the effect of IC on WOM valence compared with a baseline condition in which the product is not explicitly framed as either novel or well-established. Our reasoning is based on prior evidence that suggests that talking about new products offers consumers particularly rich grounds to self-enhance (Herzenstein, Posavac, and Brakus 2007; Rosen 2009) because it makes them look more interesting, smart, and "in the know" (Berger 2014; Berger and Schwartz 2011). In addition, talking about new products also offers consumers particularly rich reasons to protect others (Arndt 1967; Sundaram, Mitra, and Webster 1998), because new products are associated with greater risk of underperformance (Herzenstein, Posavac, and Brakus 2007) as well as other potential drawbacks (Ram and Sheth 1989; Rogers 1995).

On the other hand, we reasoned that framing a product as well-established should decrease the instrumentality of positive product-related information to self-enhance and negative product-related information to protect others. As a result, we hypothesized that talking about a product that is framed as well-established should decrease the effect of IC on WOM valence compared with a baseline condition in which the product is not explicitly framed as either novel or well-established. Our reasoning is based on prior evidence that suggests that products framed as well-established offer limited grounds to self-enhance because they are likely to make the communicator seem boring and uninteresting (Berger and Schwartz 2011). This might occur because information about well-established products might already be known and, therefore, less exciting, resulting in weaker social currency for WOM senders. In addition, talking about well-established products also offers consumers fewer reasons to protect others, because such products are associated with fewer risks and reduced potential drawbacks (Herzenstein, Posavac, and Brakus 2007).[1]

A second goal of Experiment 3 was to test the robustness of our effect by varying the IC manipulation through the use of distinct social media platforms: Facebook and LinkedIn. Among young adults (our target population), Facebook is typically used to foster and maintain personal connections, whereas LinkedIn is typically used to foster and maintain professional connections (Shih 2010). Thus, we reasoned that asking participants to write a message on Facebook versus LinkedIn should prompt them to think about sharing

information with close versus distant others, respectively, and activate different levels of IC.[2]

Procedure

We randomly assigned 119 participants (M_{age} = 22.76 years, SD = 3.74, 67 women) to a 2 (IC: low vs. high) × 3 (product framing: novel vs. well-established vs. baseline) between-subjects design. Participants first read a product review for a camera that included eight product features: four positive (touchscreen, 10fps continuous shooting, integrated Wi-Fi, and low light sensitivity) and four negative (occasional accidental mode changes, no orientation sensor, no physical mode dial, and slow shutter speed) features, pretested on a separate sample of 62 participants from the same population (M_{age} = 20.11 years, SD = 2.07, 25 men) who assessed either the positive or the negative features. As part of the pretest, respondents rated on seven-point scales (1 = "not at all," and 7 = "extremely") how positive, important, abstract, and useful they perceived each product feature to be. Positive features were judged more positively (M = 4.36, SD = 1.21) than negative features (M = 2.92, SD = .96; F(1, 60) = 26.90, p < .001, η_p^2 = .31). However, positive features were judged as equally important (M = 3.51, SD = .94), abstract (M = 3.64, SD = 1.04), and useful (M = 3.65, SD = 1.02) as negative features (respectively, M = 3.35, SD = .92; M = 3.77, SD = 1.15; M = 3.92, SD = 1.42; all ps > .34) (see Table 2). Then, respondents shared this information with a person of their choice on a social media site.

Novelty manipulation. To manipulate novelty, we varied the framing of the product (Herzenstein, Posavac, and Brakus 2007). In the well-established-product condition, participants read:

> You are browsing through the web and find a review about Pentax K-5 Digital SLR Camera: a truly *well-established* camera, market leader for the *last 5 years*!

In contrast, in the new-product condition, participants read:

> You are browsing through the web and find a review about Pentax K-5 Digital SLR Camera: a truly *novel* camera, just launched over the *last 3 months*!

In the baseline condition, participants did not receive any additional information.

IC manipulation. Participants shared a message about the camera on one of two platforms. Facebook served as the "high IC platform" and LinkedIn as the "low IC platform" in our experiment. Participants were instructed to log in to either Facebook (high IC condition) or LinkedIn (low IC condition) and write a message to a recipient of their choice. Importantly, we collected a copy of their message.

Finally, participants completed manipulation check items presented in a counterbalanced order ("How close do you

---

[1]To support this perspective further, we asked a convenience sample of participants from the target population (N = 21) to indicate on six items (measured on a seven-point scale anchored at "agree" and "disagree") the extent to which they believed that "talking about new products [vs. well-established products vs. products in general] offers ground to self-enhance [vs. to protect others]." Compared with products in general, participants' agreement rate for both motives was significantly higher for new products and significantly lower for well-established products (p ≤ .05). In addition, participants' agreement rate that products in general can help people self-enhance and protect others was significantly greater than the midpoint scale (ps ≤ .05).

[2]To confirm our intuition, we asked a convenience sample of participants from the target population (N = 20) to rate different social networking sites (Facebook, LinkedIn, Twitter, Pinterest, Google+, Tumblr, Instagram, Flicker, Vine, and Meetup) on a seven-point scale anchored at "I typically use this platform to share information with distant others (i.e., people I do not to feel close to)" and "I typically use this platform to share information with close others (i.e., people I feel close to)." Facebook received the highest score (M = 5.05, SD = 2.11), significantly higher than LinkedIn, which received the lowest score (M = 2.65, SD = 1.34; t(19) = 3.78, p < .002).

Table 2

MEAN RATINGS OF ATTRIBUTES' VALENCE, IMPORTANCE, ABSTRACTION, AND USEFULNESS (EXPERIMENT 3)

	Valence	Importance	Abstraction	Usefulness
Positive Attributes				
Touchscreen	4.45 (1.82)	3.71 (1.24)	3.25 (1.67)	3.38 (1.47)
10fps continuous shooting	4.19 (1.86)	3.54 (1.45)	3.67 (1.49)	3.71 (1.49)
Integrated Wi-Fi	4.58 (1.66)	3.58 (1.43)	3.77 (1.56)	3.93 (1.77)
Low light sensitivity	4.22 (1.91)	3.22 (1.41)	3.87 (1.65)	3.54 (1.61)
Negative Attributes				
Accidental mode changes	2.74 (1.23)	3.32 (1.27)	3.77 (1.45)	4.13 (1.54)
No orientation sensor	3.06 (1.38)	3.38 (1.60)	3.51 (1.46)	3.64 (1.66)
No physical mode dial	2.77 (1.23)	3.25 (1.43)	3.80 (1.62)	4.00 (1.75)
Slow shutter speed	3.09 (1.46)	3.45 (1.36)	4.00 (1.61)	3.90 (1.85)

Notes: Standard deviations appear in parentheses.

feel to the individual you wrote the message to?" [1 = "not at all close," and 7 = "very close"] and "How connected do you feel to the individual you wrote the message to?" [1 = "not at all," and 7 = "very connected"]; α = .91; aggregated into an IC index).

Results and Discussion

Manipulation checks. A two-way ANOVA on the IC index revealed a significant effect of IC: participants who shared information through Facebook (high IC condition) reported feeling closer to their recipient (M = 3.76, SD = 1.74) than participants who shared information through LinkedIn (low IC condition; M = 2.81, SD = 1.37; F(1, 113) = 10.62, p = .001). There was no effect of novelty, and the novelty × IC interaction was not significant (F < 1).

Positive and negative thoughts. Two independent coders blind to the hypotheses coded the messages for the total number of thoughts as well as the number of positive and negative thoughts about the camera. Agreement rate was 97.8%, 96.5%, and 98.9%, respectively, and disagreements were resolved through discussions.

First, a two-way ANOVA on the total number of thoughts did not reveal any difference in the overall number of thoughts generated. The effect of novelty (F(2, 113) = 2.15, p = .12), the effect of IC (F < 1), and the interaction between the two (F < 1) were all nonsignificant.

Second, a two-way ANOVA on the number of positive thoughts revealed that participants in the low IC condition conveyed significantly more positive thoughts (M = 2.45, SD = 1.54) than those in the high IC condition (M = 1.69, SD = 1.23; F(1, 113) = 9.08, p = .003). There was no effect of novelty (F(2, 113) = 1.87, p = .16). Centrally, there was a significant novelty × IC interaction (F(2, 113) = 3.22, p = .04): in the baseline condition, participants included a significantly greater number of positive thoughts in the low IC condition (M = 2.60, SD = 1.63) than in the high IC condition (M = 1.70, SD = 1.34; F(1, 113) = 4.35, p = .039). In the established condition, the effect of IC was reduced and there was no difference between the number of positive thoughts between the low IC (M = 1.70, SD = 1.17) and high IC (M = 1.79, SD = 1.13) conditions (F < 1). In the novel condition, the effect of IC was amplified (low IC: M = 3.05, SD = 1.53; high IC: M = 1.60, SD = 1.27; F(1, 113) = 11.31, p = .001).

Third, a two-way ANOVA on the number of negative thoughts revealed that participants in the high IC condition conveyed significantly more negative thoughts (M = 2.37, SD = 1.55) than those in the low IC condition (M = 1.48, SD = 1.23; F(1, 113) = 12.52, p = .001). There was no effect of novelty (F(2, 113) = 2.13, p = .12). Centrally, there was a significant novelty × IC interaction (F(2, 113) = 4.32, p = .01); participants in the baseline condition included a significantly greater number of negative thoughts in the high IC condition (M = 2.55, SD = 1.53) than in the low IC condition (M = 1.55, SD = 1.27; F(1, 113) = 5.49, p = .02). In the well-established condition, the effect of IC disappeared, and there was no difference between the number of positive thoughts between the high IC (M = 1.52, SD = 1.26) and low IC (M = 1.60, SD = 1.27) conditions (F < 1). In the novel condition, the effect of IC was amplified (high IC: M = 3.00, SD = 1.52; low IC: M = 1.30, SD = 1.17; F(1, 113) = 15.88, p < .001; see Figure 2).

Overall, the experiment provided further evidence for the effect of IC on WOM valence and documented the moderating role of product novelty. Specifically, highlighting a product's novelty amplified the effect of IC on WOM valence by prompting people to share more positive information with distant others but more negative information with close others, compared with the baseline condition. In contrast, emphasizing the well-established nature of a product reduced the effect of IC on WOM valence, presumably because of a weaker instrumentality of product-related positive and negative information to the motives to self-enhance and protect others.

EXPERIMENT 4: DISTORTION OF MESSAGE VALENCE ACROSS TRANSMISSION CHAINS

Experiment 4 aimed to document an important consequence of our effect: systematic valence mutations when information is transmitted repeatedly throughout a chain of people characterized by different degrees of IC. By "chains," we refer to linear arrangements of people who successively pass information about a topic from one person to another and in which each person (except the first and the last) is connected to two other people, the one in front and the one behind (Christakis and Fowler 2009). A long research tradition has established that people often distort information when sharing it with others over multiple rounds of transmission (e.g., Allport and Postman

Figure 2
EXPERIMENT 3: NUMBER OF POSITIVE AND NEGATIVE THOUGHTS BY IC AND FRAMING CONDITIONS
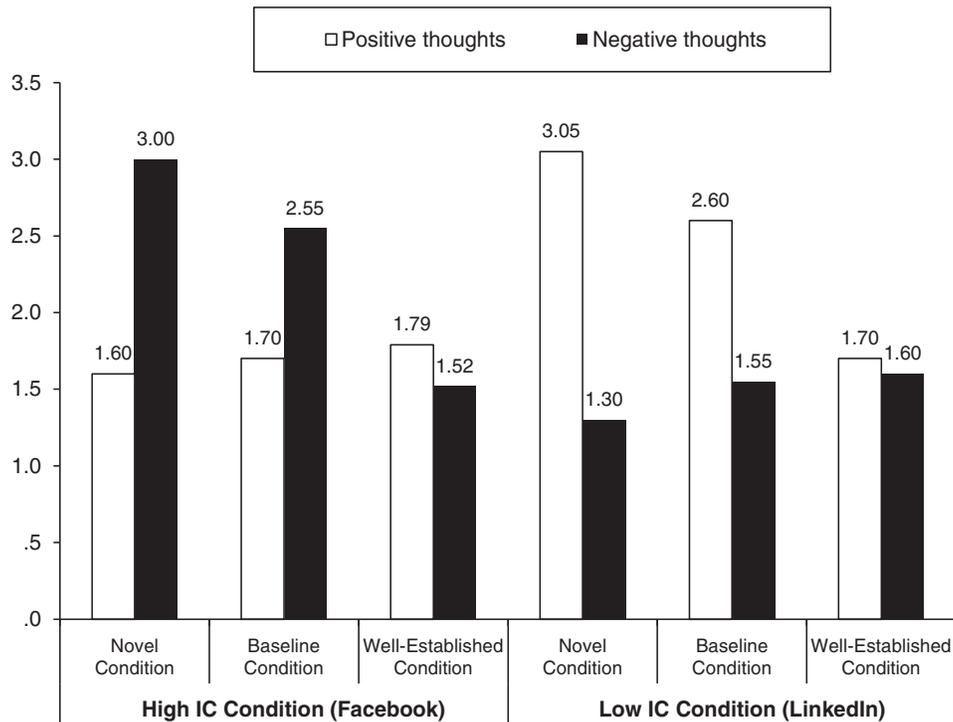
1947). Importantly, distortions over successive transmissions can cause attitudes and behaviors to strengthen or weaken (Dubois, Rucker, and Tormala 2011). Thus, if IC systematically affects WOM valence, one might expect messages to become increasingly positive within weakly tied chains (low IC) but increasingly negative within strongly tied chains (high IC). In turn, consumers' attitudes toward a topic might decrease over successive transmissions among chains of people with high IC but increase over successive transmissions among chains of people with low IC. If true, these predictions might have implications for the "strength" of weak ties (Granovetter 1973), by suggesting that weak ties might be particularly conducive to the spread of positive information while strong ties might be particularly conducive to the spread of negative information (e.g., rumors; Kamins, Folkes, and Perner 1997). To test these predictions, we measured two outputs across successive transmissions: (1) the amount of valenced information shared and (2) consumers' attitudes about the topic.

To trigger different feelings of IC, participants imagined either receiving a message from one of their best friends and writing to another best friend (high IC) or receiving a message from an acquaintance and writing to another acquaintance (low IC; Dibble, Levine, and Park 2012).

Procedure

We randomly assigned 120 undergraduate students (M_{age} = 19.50 years, SD = 1.14; 51 men) to a 2 (IC: high vs. low) × 3 (position in WOM chain: first vs. second vs. third) mixed design. Participants were recruited from university dining and residence halls and placed in a WOM chain. Each chain consisted of three participants, with each participant occupying one of three positions in the chain (i.e., first, second, or third). Participants in the first position were given a review of a hotel and asked to write a message to participants in the second position without further instructions. This led to the creation of an initial set of natural WOM messages about the hotel. Participants in the second and third positions were randomly given a message written by a participant in the previous position and assigned to one of two conditions. In the high IC condition, participants imagined that the message came from one of their best friends, and they were instructed to write a message to another best friend. In contrast, in the low IC condition, participants imagined that the message came from an acquaintance, and they were instructed to write a message to another acquaintance (Web Appendix D). Thus, two types of WOM chains were formed: a set of chains characterized by high IC and a set of chains characterized by low IC. Participants were unaware that they were placed in a chain of multiple consumers, similar to how consumers sharing information with one another might not know how many people passed along the information before them or how many will pass it on after them.

Participants in the first position. Participants occupying the first position were approached by the experimenter and given a typed copy of a hotel review. The review listed six features of the hotel, the order of which was counterbalanced: three positive (150+ TV channels, complimentary wireless Internet, and indoor pool) and three negative (far from the airport, expensive massage service, and

variability in room size). The features were pretested on a separate sample of 84 students (M_{age} = 19.46 years, SD = 1.59; 36 men), who assessed either the positive or the negative features on four dimensions: valence, importance, abstraction, and usefulness (1 = "not important/abstract/useful" and 7 = "very important/abstract/useful"). A series of ANOVAs on participants' average score for each feature type (i.e., positive vs. negative) revealed that positive features (M = 4.52, SD = 1.46) were judged more favorably than negative features (M = 2.81, SD = 1.05; $F(1, 82)$ = 37.93, $p < .001$). Positive features, however, were judged equally important (M = 3.50, SD = 1.19), abstract (M = 3.76, SD = 1.21), and useful (M = 3.46, SD = 1.18) as negative features (respectively, M = 3.54, SD = 1.09; M = 3.48, SD = .91; M = 3.17, SD = 1.13; all $ps > .24$) (see Table 3). Participants received the typed review and were instructed to read it carefully. They then wrote a message about the hotel, with the goal to transmit the information to another person as accurately as possible. This procedure yielded an initial set of "natural" WOM messages about a hotel and was used to increase the realism of the study.

Participants in subsequent positions. Participants in the second position received a randomly selected message written by one of the participants from position 1 and wrote their own message, which was given to one of the participants in position 3. Finally, participants in position 3 received the message written by participants in position 2 and wrote their own message for another participant. In reality, the chain stopped there and no other participant received these final messages. Crucially, the difference in IC (best friend vs. acquaintance) was carried over across positions 2 and 3. As a result, participants in subsequent positions were in the low or high IC condition by virtue of their relationship with the first set of participants (best friend vs. acquaintance). Although this design does not perfectly mirror the dynamics of information transmission in the real world, in which information-sharing settings can be complex, it isolates information spread from person to person (Dubois et al. 2011).

We collected two key dependent variables. First, two independent coders blind to conditions analyzed the messages written by participants. Specifically, for each message, coders counted the total number of thoughts as well as the number of positive and negative thoughts. Initial agreement between coders was 94.8%, 96.6%, and 98.8%, respectively, with disagreements resolved through discussion. Second, after participants sent the message, we assessed their attitudes toward the hotel (on seven-point scales anchored at "unfavorable/favorable," "negative/positive," and "good/bad"; averaged to form a composite attitude index; α = .94).

Finally, after sending the message, participants were asked to report how close they felt to the person from whom they received the message and to whom they sent their message on two seven-point scales. Because the two measures were highly correlated, we aggregated them into a single index (α = .89). This index measured the extent to which our participants felt integrated into a chain with high versus low IC.

Results and Discussion

Manipulation checks. There was a main effect of IC ($F(1, 114)$ = 23.97, $p < .001$): participants felt closer to the person situated immediately before and after in the chain in the high IC condition (M = 4.21, SD = 1.89) than in the low IC condition (M = 2.76, SD = 1.22). There was no main effect of position or position × IC interaction (F < 1).

Positive and negative thoughts. We submitted the coded messages to a series of 2 (IC: low vs. high) × 3 (position in the chain: first vs. second vs. third) ANOVAs. First, there was no main effect of IC or interaction on the total number of thoughts (F < 1).

Second, we examined negative thoughts. There was a main effect of position ($F(2, 114)$ = 6.17, $p = .003$), such that the number of negative thoughts decreased from the first position (M = 2.25, SD = 1.10) to the second (M = 1.85, SD = 1.18) and from the second to the third (M = 1.38, SD = 1.29). There was also a main effect of IC ($F(1, 114)$ = 14.81, $p < .001$), such that the number of negative thoughts was greater among chains with high IC (M = 2.22, SD = 1.13) than among chains with low IC (M = 1.43, SD = 1.22). Importantly, there was a significant position × IC interaction ($F(2, 114)$ = 3.18, $p = .045$). Specifically, the difference between the number of negative thoughts increased across transmissions from the first position (M_{diff} = .20; F < 1) to the second (M_{diff} = .70; $F(1, 114)$ = 3.94, $p = .05$) and from the second to the third (M_{diff} = 1.55; $F(1, 114)$ = 16.92, $p < .001$).

Third, we examined positive thoughts. There was a main effect of position ($F(2, 114)$ = 4.14, $p = .018$), such that the number of positive thoughts decreased from the first position (M = 2.20, SD = 1.18) to the second (M = 1.75, SD = 1.23) and from the second to the third (M = 1.48, SD = 1.26). There was also a main effect of IC ($F(1, 114)$ = 16.78, $p < .001$),

Table 3

MEAN RATINGS OF ATTRIBUTES' VALENCE, IMPORTANCE, ABSTRACTION AND USEFULNESS (EXPERIMENT 4)

	Valence	Importance	Abstraction	Usefulness
Positive Attributes				
150+ TV channels	4.54 (1.53)	3.35 (1.72)	3.88 (1.55)	3.52 (1.53)
Complimentary wireless Internet	4.45 (1.65)	3.33 (1.67)	3.57 (1.50)	3.07 (1.71)
Indoor pool	4.50 (1.70)	3.81 (1.86)	3.83 (1.46)	2.92 (1.67)
Negative Attributes				
Far from the airport	2.83 (1.28)	3.26 (1.70)	3.95 (1.62)	3.76 (1.63)
Expensive massage service	2.90 (1.20)	3.74 (1.63)	3.19 (1.36)	2.97 (2.06)
Variability in room size	2.69 (1.34)	3.61 (1.51)	3.30 (1.61)	3.64 (1.35)

Notes: Standard deviations appear in parentheses.

such that the number of positive thoughts was greater among chains with low IC (M = 2.23, SD = 1.18) than among chains with high IC (M = 1.38, SD = 1.18). Centrally, there was a marginally significant position × IC interaction (F(2, 114) = 2.69, p = .072): the difference between the number of positive thoughts increased across transmissions from the first position (M_{diff} = .20; F < 1) to the second (M_{diff} = 1.00; F(1, 114) = 7.74, p = .006) and from the second to the third (M_{diff} = 1.35; F(1, 114) = 14.11, p < .001).

Put differently, throughout chains with high IC, the number of negative thoughts was constant (M_1 = 2.35, M_2 = 2.20, M_3 = 2.10; F < 1), whereas the number of positive thoughts significantly decreased (M_1 = 2.1, M_2 = 1.25, M_3 = .80; F(2, 57) = 7.67, p = .001). In contrast, throughout chains with low IC, the number of positive thoughts was constant (M_1 = 2.30, M_2 = 2.25, M_3 = 2.15; F < 1), whereas the number of negative thoughts significantly decreased (M_1 = 2.15, M_2 = 1.50, M_3 = .65; F(2, 57) = 9.76, p < .001). These results are consistent with the proposition that negative information is more prone to be shared among chains of people who feel close to one another. In contrast, positive information is more prone to be shared among chains of people who feel distant from one another (Figure 3).

Attitudes. There was a main effect of IC (F(1, 114) = 10.89, p = .001), such that participants placed within chains with low IC reported more favorable attitudes (M = 4.21, SD = 1.34) than participants placed within chains with high IC (M = 3.46, SD = 1.22). There was no main effect of position (F < 1). Importantly, there was a significant position × IC interaction (F(2, 114) = 4.24, p = .01, η_p^2 = .07), such that participants' attitudes significantly decreased across transmissions among chains with high IC (F(2, 57) = 3.95, p = .02). In contrast, participants' attitudes increased, though not significantly, among chains with low IC (F(2, 57) = 1.11, p = .33). In summary, the difference in attitudes between chains with low and high IC increased across transmissions from the first position (M_{diff} = −.05; F < 1) to the second (M_{diff} = .74; F(1, 114) = 3.42, p = .06) and from the second to the third (M_{diff} = 1.58; F(1, 114) = 15.93, p < .001) (Figure 4).

Overall, Experiment 4 found that IC affects WOM valence across multiple transmissions of information. Specifically, the results suggest that chains of consumers characterized by high versus low IC might be differentially conducive to positive and negative information. Importantly, these differences influence the formation of consumers' attitudes that become increasingly more positive or negative along transmissions.

GENERAL DISCUSSION

In four experiments, we examined how IC affects WOM valence in both online (Experiments 1 and 3) and offline (Experiments 2 and 4) settings. The results revealed that high IC tends to foster more negative WOM compared with low IC, whereas low IC tends to foster more positive WOM compared with high IC. Furthermore, the results suggest that this effect is driven by changes in consumers' motives to self-enhance and protect others. Across experiments, we used different manipulations of IC and assessed both the valence of senders' thoughts in WOM messages (Experiments

Figure 3
EXPERIMENT 4: NUMBER OF POSITIVE AND NEGATIVE THOUGHTS WITHIN CHAINS OF HIGH IC VERSUS CHAINS OF LOW IC
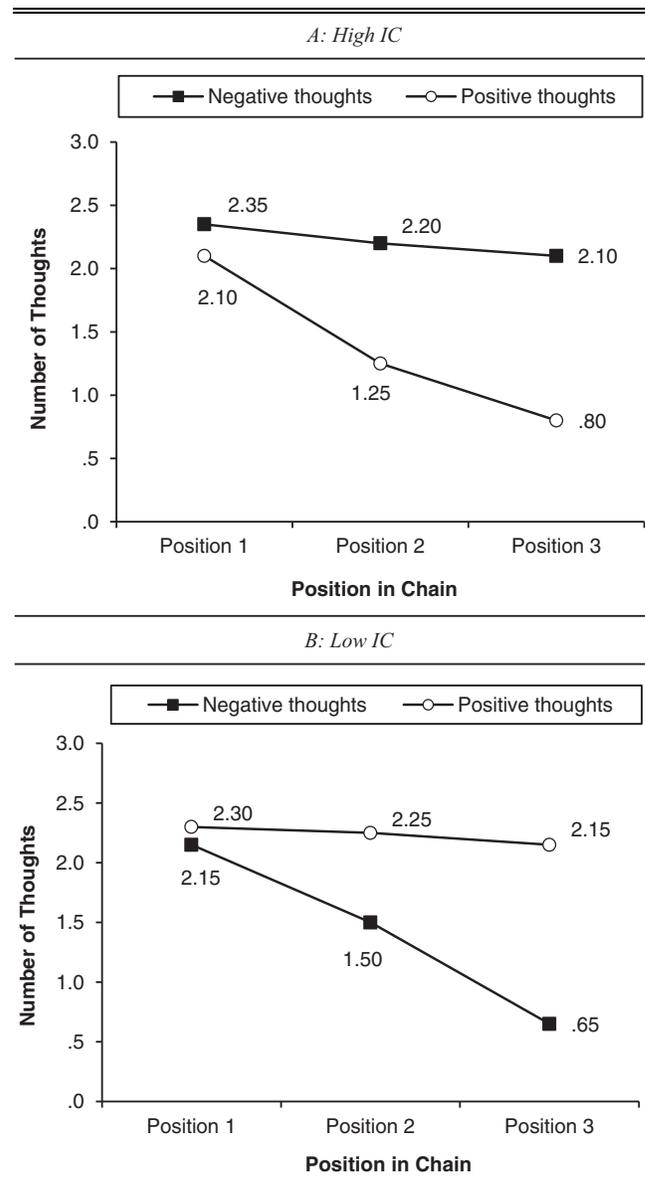
1–4) and the recipients' attitudes resulting from exposure to WOM messages (Experiment 4). To probe the effect's robustness and provide convergence on the IC construct, we manipulated IC in several different ways: In Experiments 1 and 4, we directly asked WOM senders to share a message with someone they felt close to versus distant from. In Experiment 2, we induced different degrees of IC through a relationship closeness induction task (Sedikides et al. 1999; Vohs, Baumeister, and Ciarocco 2005). In Experiment 3, we induced different degrees of IC by varying the type of communication channel participants used to share a WOM message. Thus, our manipulations were not based on the frequency of observable interactions

Figure 4
ATTITUDES WITHIN CHAINS OF HIGH VERSUS LOW IC (EXPERIMENT 4)
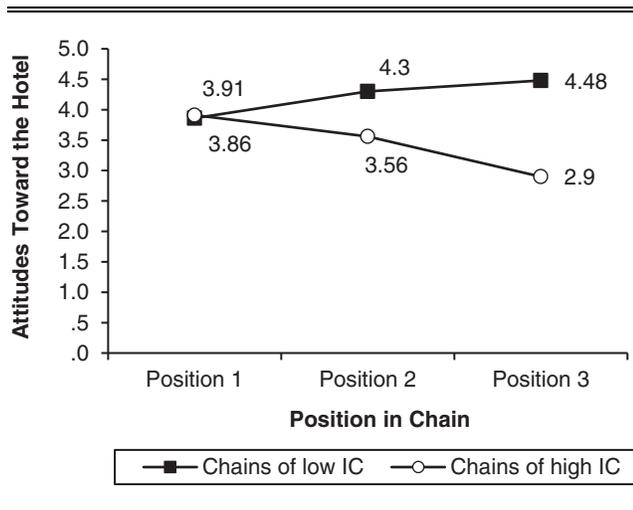
between WOM senders and recipients but, rather, directly tapped into people's feelings of psychological proximity. We systematically checked the effectiveness of our IC manipulations across experiments by using similar manipulation checks (i.e., Experiments 1–3: "How close/connected do you feel to the message recipient?"; Experiment 4: "How close do you feel to the person from whom you received the message/to whom you sent the message?"). Secondary analyses revealed that IC, as measured by the manipulation checks, systematically mediated the effect of the manipulations on the valence of information shared (Web Appendix E).

Theoretical Contributions

This article contributes to the research on WOM and social transmission in three significant ways. First, we uncover a previously unexplored factor influencing WOM valence: senders' feelings of IC relative to recipients. Our findings suggest that high (low) IC fosters the sharing of negative (positive) WOM compared with low (high) IC. Importantly, these tendencies are tied to consumers' motives to self-enhance and protect others. Overall, this research contributes to the literature on how situational and personal factors influence WOM valence (e.g., Barasch and Berger 2014; De Angelis et al. 2012).

Second, our work provides novel insights into the concept of value of information. According to Frenzen and Nakamoto (1993), the value that a piece of information has in the eyes of a recipient influences with whom that piece of information is shared. Specifically, when information is highly valuable (e.g., high-quality merchandise being on exceptional sale at a store for the next few days), consumers prefer to share it with close rather than distant others, but as information value declines (e.g., a new brand of shampoo will be introduced in the market shortly), this preference progressively disappears (Frenzen and Nakamoto 1993). Although in certain situations WOM may be influenced by the value that a piece of information has for the recipient,

our work suggests that WOM may also be influenced by the value that a certain piece of information has for the self (i.e., by how instrumental different pieces of information are in fulfilling personal motives). Specifically, when aiming to self-enhance, positive information might become more valuable to the self than negative information. In contrast, when aiming to protect others, negative information might become more valuable to the self than positive information. Thus, when examining information value as a driver of WOM, it is important to consider value both for the recipient (i.e., usefulness of information for the recipient) and for the sender (i.e., instrumentality of information for the sender).

Third, our work contributes to our understanding of how valenced information spreads throughout social networks and might help shed new light on prior work on tie strength. Notably, the bulk of past efforts focused on factors that affect the quantity of information shared and thus trigger greater or weaker diffusion or adoption of a product or service (Bansal and Voyer 2000; De Bruyn and Lilien 2008). In contrast, our work focuses on how IC qualitatively affects WOM and suggests that the nature of a social network can systematically shape the sharing of valenced WOM across multiple transmissions. That is, strongly tied networks might be more conducive to sharing negative WOM, but weakly tied networks might be more conducive to sharing positive WOM. Our findings might thus shed new light onto when and why successful WOM campaigns (i.e., positive information) spread across social networks. In particular, Godes and Mayzlin (2004) studied the effect of online WOM on future success of TV shows in the form of higher ratings and found that more dispersed online communication (i.e., distributed across weakly tied groups) yielded higher future TV show ratings, relative to more concentrated online communication. In other words, shows for which online WOM communications took place *across* communities got higher ratings than those for which online WOM communications took place *within* a few communities, where ties linking members are likely to be stronger. This finding could be explained by a more successful transmission of positive information across weakly tied communities of TV watchers associated with low levels of IC among community members, compared with strongly tied communities of TV watchers who have high levels of IC with one another.

Managerial Implications

This article has several implications for marketers in charge of designing their brands' social media or WOM campaigns. First, our research suggests that companies can systematically encourage the sharing of positive or negative WOM through simple interventions. For instance, companies could easily adjust features of the context (e.g., display a photo of potential recipient) to trigger different levels of IC and influence the valence of reviews and recommendations of their products and services. Second, our research suggests that marketers could measure variations in IC between and within social media platforms to anticipate WOM diffusion within their target market. For example, Experiments 1 and 3 illustrate how the same platform (LinkedIn) can be used to connect mostly with weak ties within one population (young adults, aged

20–25 years) but to connect with weak and strong ties within another population (MBA students). Third, this research has implications for the type of communities companies should target their messages to when aiming to spread positive WOM about their products. Given that consumers tend to feel closer to one another in small-sized (vs. large-sized) communities (Roberts et al. 2009), companies aiming to spread positive WOM might focus on large-sized over small-sized communities because the former might be more likely to spread positive WOM than the latter. Finally, our research has implications for marketing researchers interested in predicting the diffusion of valenced WOM. If weakly tied people are more conducive to positive WOM, but strongly tied people are more conducive to negative WOM, one might be able to predict the valence of future diffusion on the basis of connectedness metrics between individuals. These metrics are often more easily accessible (e.g., on social media sites) than more time-consuming content analyses to estimate WOM valence (Gilbert and Karahalios 2009).

Limitations and Further Research

First, our research focused on investigating how IC causes distortions in the valence of information shared, conditional on sharing. In doing so, this work leaves out the question of whether and how IC might affect the likelihood to share information as a function of its valence. That is, with the exception of Experiment 2, in which participants freely shared a personal experience at a restaurant, other experiments induced participants to share content (e.g., the pros and cons of a camera). Yet in the real world, the decision of what information to include in a message (i.e., its content) is always preceded by the decision of whether to share the information in the first place. Given that the total effect of WOM on consumer behavior depends both on the likelihood that consumers will share information (Guadagno et al. 2013) and on the content of the information shared, we encourage future studies to investigate how IC might affect the likelihood to share valenced information.

Second, one might wonder whether positive and negative information are always instrumental to consumers' motives to self-enhance versus protect others, respectively. Indeed, one could argue that consumers might sometimes share negative information to self-enhance or positive information to protect others. For example, a person might communicate negative information to distant others to convey expertise (Amabile 1983; Packard and Wooten 2013), or a father might convey positive information to his daughter to protect her (e.g., when telling her it is important to buckle her seatbelt when driving). A particularly promising path for further research is thus to explore whether and how associations between motives and valence systematically vary. That is, implicit group norms might systematically encourage associations to emerge: for example, academic settings might encourage the sharing of critical and negative information even with distant others (Amabile 1983). In nonacademic settings, however, consumers might be likely to use positive information to build relationships (i.e., under low IC) because warmth is typically more valued than expertise in these settings as a tool to foster perceptions of likeability (Cuddy, Fiske, and Glick 2008). Yet information sharing within established relationships, in which building likeability is often secondary, might leave more room for the sharing of negative information.

Another worthwhile avenue for further research relates to the potentially damaging effect of sharing negative information on the audience. Indeed, previous work has suggested that sharing negative information can, at times, damage social relationships (e.g., Bell 1978; Berger 2014; Berger and Milkman 2012). This might be the case when the information shared negatively reflects on the WOM sender (e.g., a bad experience that would undermine the sender's social currency). Thus, a promising moderator of the use of negative information to self-enhance might lie in whether the information shared is about oneself (e.g., products the WOM sender personally chose, tried, or bought; i.e., high self-connection) or about products or services divorced from the sender's direct experience (i.e., low self-connection). One might expect that sharing negative information about products one has chosen and tried hurts rather than strengthens relationships with others, thus favoring censoring mechanisms, at least among close others.

Fourth, we did not examine whether and how communicators might share different types of information depending on whether the sharing of information is public or private. In particular, Schlosser (2005) found that "posters" (i.e., people likely to post content online) tended to become more negative (i.e., adjust their public attitude downward) when exposed to another person's negative opinion. This finding invites the possibility that sharing information publicly (as opposed to sharing in a one-to-one setting) might moderate the effect of IC on WOM valence. That is, exposure to negative reviews might induce "posters" to adapt their attitudes, especially when adjusting to such reviews is viewed as an effective way to self-enhance.

Finally, our work suggests that consumers can change the content of their WOM messages to gain social currency or protect others, yet unexplored is whether these efforts actually yield benefits in the form of greater social capital. Social capital refers to the social resources a person accrues through interactions within social networks (Bourdieu and Wacquant 1992, p. 119). Social capital is linked to people's investment in their social relations (e.g., type of information shared) and typically manifests itself through greater reputation and trust and leads others to feel morally obligated to the person who "owns" this resource (Coleman 1988). To the extent that the motives to self-enhance and protect others fulfill larger goals of building one's reputation and trust, respectively, our research suggests two strategies people might use to build their social capital: (1) sharing positive information with people they feel psychologically distant from to gain social currency and recognition from them and (2) sharing negative information with those they feel psychologically close to so as to enhance feelings of trust from them. A worthwhile question for further research is thus whether sharing more positive or more negative messages might result in increased reputation or trust in senders' eyes. At present, it is unknown how using different strategies might actually affect senders' social capital.

REFERENCES

Aaker, Jennifer L. and Angela Y. Lee (2001), "'I' Seek Pleasures and 'We' Avoid Pains: The Role of Self-Regulatory Goals in Information Processing and Persuasion," *Journal of Consumer Research*, 28 (6), 33–49.

Allport, Gordon W. and Leo Postman (1947), *The Psychology of Rumor*. New York: Henry Holt.

Altman, Irwin and Dalmas A. Taylor (1973), *Social Penetration: The Development of Interpersonal Relationships*. New York: Holt, Rinehart and Winston.

Amabile, Teresa M. (1983), "Brilliant but Cruel: Perceptions of Negative Evaluators," *Journal of Experimental Social Psychology*, 19 (2), 146–56.

Aral, Sinan (2011), "Identifying Social Influence: A Comment on Opinion Leadership and Social Contagion in New Product Diffusion," *Marketing Science*, 30 (2), 217–23.

Argo, Jennifer J., Katherine White, and Darren W. Dahl (2006), "Social Comparison Theory and Deception in the Interpersonal Exchange of Consumption Information," *Journal of Consumer Research*, 33 (1), 99–108.

Arndt, Johan (1967), "Role of Product-Related Conversations in the Diffusion of a New Product," *Journal of Marketing Research*, 4 (August), 291–95.

Aron, Arthur, Elaine N. Aron, Michael Tudor, and Greg Nelson (1991), "Close Relationships as Including Other in the Self," *Journal of Personality and Social Psychology*, 60 (2), 241–53.

Bakshy, Eytan, Itamar Rosenn, Cameron Marlow, and Lada Adamic (2012), "The Role of Social Networks in Information Diffusion," in *Proceedings of the 21st International Conference on World Wide Web*. New York: Association for Computing Machinery, 519–28.

Bansal, Harvir S. and Peter A. Voyer (2000), "Word-of-Mouth Processes Within a Services Purchase Decision Context," *Journal of Service Research*, 3 (2), 166–77.

Barasch, Alixandra and Jonah Berger (2014), "Broadcasting and Narrowcasting: How Audience Size Affects What People Share," *Journal of Marketing Research*, 51 (June), 286–99.

Batson, Daniel C., Johee Chang, Ryan Orr, and Jennifer Rowland (2002), "Empathy, Attitudes, and Action: Can Feeling for a Member of a Stigmatised Group Motivate One to Help the Group?" *Personality and Social Psychology Bulletin*, 28 (12), 1656–66.

Belk, Russell W. (1988), "Possessions and the Extended Self," *Journal of Consumer Research*, 15 (2), 139–68.

Bell, Paul A. (1978), "Affective State, Attraction, and Activation: Misery Loves Happy Company, Too," *Personality and Social Psychology Bulletin*, 4 (4), 616–19.

Berger, Jonah (2013), *Contagious: Why Things Catch On*. New York: Simon & Schuster.

——— (2014), "Word-of-Mouth and Interpersonal Communication: An Organizing Framework and Directions for Future Research," *Journal of Consumer Psychology*, 24 (4), 586–607.

——— and Katherine L. Milkman (2012), "What Makes Online Content Viral?" *Journal of Marketing Research*, 49 (August), 192–205.

——— and Eric Schwartz (2011), "What Drives Immediate and Ongoing Word of Mouth?" *Journal of Marketing Research*, 48 (October), 869–80.

Blaine, Bruce and Jennifer Crocker (1993), "Self-Esteem and Self-Serving Biases in Reactions to Positive and Negative Events: An Integrative Review," in *Self-Esteem: The Puzzle of Low Self-Regard*, R.E. Baumeister, ed. New York: Plenum Press, 55–85.

Bond, Robert M., Christopher J. Fariss, Jason J. Jones, Adam D.I. Kramer, Cameron Marlow, Jaime E. Settle, et al. (2012), "A 61-Million-Person Experiment in Social Influence and Political Mobilization," *Nature*, 489 (7415), 295–98.

Bourdieu, Pierre and Loic J.D. Wacquant (1992), *An Invitation to Reflexive Sociology*. Chicago: University of Chicago Press.

Brown, Roger and Albert Gilman (1960), "The Pronouns of Power and Solidarity," in *Style in Language*. Cambridge, MA: MIT Press, 253.

Brown, Jacqueline J. and Peter H. Reingen (1987), "Social Ties and Word-of-Mouth Referral Behavior," *Journal of Consumer Research*, 14 (12), 350–62.

Brown, Jonathon D., Rebecca L. Collins, and Greg W. Schmidt (1988), "Self-Esteem and Direct Versus Indirect Forms of Self-Enhancement," *Journal of Personality and Social Psychology*, 55 (3), 445–53.

Burt, Ronald S. (1992), *Structural Holes*. Cambridge, MA: Harvard University Press.

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.

Christakis, Nicholas A. and James H. Fowler (2009), *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. New York: Little Brown and Company.

Clark, Margaret S., Julie Fitness, and Ian Brissette (2001), "Understanding People's Perceptions Relationships Is Crucial to Understanding Their Emotional Lives," in *Blackwell Handbook of Social Psychology: Interpersonal Processes*, Vol. 3, G. Fletcher and M.S. Clark, eds. Malden, MA: Blackwell, 253–78.

——— and Judson Mills (1993), "The Difference Between Communal and Exchange Relationships: What It Is and Is Not," *Personality and Social Psychology Bulletin*, 19 (6), 684–91.

Coleman, James T. (1988), "Social Capital in the Creation of Human Capital," *American Journal of Sociology*, 94 (Supplement), S95–S120.

Cross, Susan E., Pamela L. Bacon, and Michael L. Morris (2000), "The Relational– Interdependent Self-Construal and Relationships," *Journal of Personality and Social Psychology*, 78 (4), 791–808.

——— and Laura Madson (1997), "Models of the Self: Self-Construals and Gender," *Psychological Bulletin*, 122 (1), 5–37.

Cuddy, Amy J.C., Susan T. Fiske, and Peter Glick (2008), "Warmth and Competence as Universal Dimensions of Social Perception: The Stereotype Content Model and the BIAS Map," in *Advances in Experimental Social Psychology*, Vol. 40, Mark P. Zanna, ed. Amsterdam: Elsevier, 61–149.

De Angelis, Matteo, Andrea Bonezzi, Alessandro 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 (August), 551–63.

De Bruyn, Arnaud and Gary L. Lilien (2008), "A Multi-Stage Model of Word-of-Mouth Influence Through Viral Marketing," *International Journal of Research in Marketing*, 25 (9), 151–63.

Dibble, Jayson L., Timothy R. Levine, and Hee S. Park (2012), "The Unidimensional Relationship Closeness Scale (URCS): Reliability and Validity Evidence for a New Measure of Relationship Closeness," *Psychological Assessment*, 24 (9), 565–72.

Donavan, D. Todd, John C. Mowen, and Goutam Chakraborty (1999), "Urban Legends: The Word-of-Mouth Communication of Morality Through Negative Story Content," *Marketing Letters*, 10 (1), 23–34.

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 (December), 1020–32.

Dunbar, Robin I.M. (1996), *Grooming, Gossip, and the Evolution of Language*. Cambridge, MA: Harvard University Press.

East, Robert, Kathy Hammond, and Malcolm Wright (2007), "The Relative Incidence of Positive and Negative Word of Mouth: A Multi-Category Study," *International Journal of Research in Marketing*, 24 (6), 175–84.

Elder, Glen H., Jacquelyne S. Eccles, Monika Ardelt, and Sarah Lord (1995), "Inner-City Parents Under Economic Pressure: Perspectives on the Strategies of Parenting," *Journal of Marriage and the Family*, 57 (3), 771–84.

Folkes, Valerie S. and David O. Sears (1977), "Does Everybody Like a Liker?" *Journal of Experimental Social Psychology*, 13 (6), 505–19.

Forest, Amanda L. and Joanne V. Wood (2012), "When Social Networking Is Not Working: Individuals with Low Self-Esteem Recognize but Do Not Reap the Benefits of Self-Disclosure on Facebook," *Psychological Science*, 23 (3), 295–302.

Frenzen, Jonathan and Kent Nakamoto (1993), "Structure, Cooperation, and the Flow of Market Information," *Journal of Consumer Research*, 20 (3), 360–75.

Friedkin, Noah (1980), "A Test of Structural Features of Granovetter's Strength of Weak Ties Theory," *Social Networks*, 2 (4), 411–22.

Gilbert, Eric and Karrie Karahalios (2009), "Predicting Tie Strength with Social Media," in *Proceedings of the SIGHCI Conference on Human Factors in Computing Systems*. New York: Association for Computing Machinery, 211–20.

Gino, Francesca and Adam D. Galinsky (2012), "Vicarious Dishonesty: When Psychological Closeness Creates Distance from One's Moral Compass," *Organizational Behavior and Human Decision Processes*, 119 (9), 15–26.

Godes, David and Dina Mayzlin (2004), "Using Online Conversations to Study Word-of-Mouth Communication," *Marketing Science*, 23 (4), 545–60.

——— and ——— (2009), "Firm-Created Word-of-Mouth Communication: Evidence from a Field Test," *Marketing Science*, 28 (7), 721–39.

Granovetter, Mark S. (1973), "The Strength of Weak Ties," *American Journal of Sociology*, 78 (6), 1360–80.

Guadagno, R., D. Rempala, S. Murphy, and B. Okdie (2013), "What Makes a Video Go Viral? An Analysis of Emotional Contagion and Internet Memes," *Computers in Human Behavior*, 29 (6), 2312–19.

Hamilton, Ryan, Kathleen Vohs, and Ann L. McGill (2014), "We'll Be Honest, This Won't Be the Best Article You'll Ever Read: The Use of Dispreferred Markers in Word of Mouth Communication," *Journal of Consumer Research*, 40 (1), 197–212.

Heine, Steven J., Darrin R. Lehman, Hazel R. Markus, and Shinobu Kitayama (1999), "Is There a Universal Need for Positive Self-Regard?" *Psychological Review*, 106 (4), 766–94.

Hennig-Thurau, Thorsten, Kevin P. Gwinner, Gianfranco Walsh, and Dwayne D. Gremler (2004), "Electronic Word-of-Mouth via Consumer-Opinion Platform: What Motivates Consumers to Articulate Themselves on the Internet?" *Journal of Interactive Marketing*, 18 (1), 38–52.

Herr, Paul M., Frank R. Kardes, and John Kim (1991), "Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: An Accessibility-Diagnosticity Perspective," *Journal of Consumer Research*, 17 (3), 454–62.

Herzenstein, Michal, Steven S. Posavac, and J. Joško Brakus (2007), "Adoption of New and Really New Products: The Effects of Self-Regulation Systems and Risk Salience," *Journal of Marketing Research*, 44 (May), 251–60.

Jiang, Lan, Joandrea Hoegg, Darren W. Dahl, and Amitava Chattopadhyay (2010), "The Persuasive Role of Incidental Similarity on Attitudes and Purchase Intentions in a Sales Context," *Journal of Consumer Research*, 36 (2), 778–91.

Kamins, Michael A., Valerie S. Folkes, and Lars Perner (1997), "Consumer Responses to Rumors: Good News, Bad News," *Journal of Consumer Psychology*, 6 (2), 165–87.

Kelley, Harold, Ellen Berscheid, Andrew Christensen, John H. Harvey, Ted L. Huston, Georges Levinger, et al. (1983), "Analyzing Close Relationships," in *Close Relationships*. San Francisco: Freeman, 20–67.

Kreilkamp, Thomas (1984), "Psychological Closeness," *American Behavioral Scientist*, 27 (7), 771–84.

Lee, Angela Y., Jennifer L. Aaker, and Wendi L. Gardner (2000), "The Pleasures and Pains of Distinct Self-Construals: The Role of Interdependence in Regulatory Focus," *Journal of Personality and Social Psychology*, 78 (6), 1122–34.

Lin, Nan, Walter M. Ensel, and John C. Vaughn (1981), "Social Resources and Strength of Ties: Structural Factors in Occupational Status Attainment," *American Sociological Review*, 46 (4), 393–405.

Luo, Xueming (2009), "Quantifying the Long-Term Impact of Negative Word of Mouth on Cash Flows and Stock Prices," *Marketing Science*, 28 (1), 148–65.

Markus, Hazel R. and Shinobu Kitayama (1991), "Culture and the Self: Implications for Cognition, Emotion, and Motivation," *Psychological Review*, 98 (4), 224–53.

Marsden, Peter V. and Karen E. Campbell (1984), "Measuring Tie Strength," *Social Forces*, 63 (2), 482–501.

———, Alain Samson, and Neville Upton (2005), "Advocacy Drives Growth: Customer Advocacy Drives UK Business Growth," LSE Research Report, (September 5), (accessed April 26, 2016), [available at http://www.lse.ac.uk/intranet/LSEServices/communications/pressAndInformationOffice/PDF/AdvocacyDrivesGrowth_5-9-05.pdf].

Nisbett, Richard and Timothy Wilson (1977), "Telling More Than We Can Know: Verbal Reports on Mental Processes," *Psychological Review*, 84 (3), 231–59.

Packard, Grant and David B. Wooten (2013), "Compensatory Knowledge Signaling in Consumer Word-of-Mouth," *Journal of Consumer Psychology*, 23 (4), 434–50.

Hayes, Andrew F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York: The Guilford Press.

Ram, Sundaresan and Jagdish N. Sheth (1989), "Consumer Resistance to Innovations: The Marketing Problem and Its Solutions," *Journal of Consumer Marketing*, 6 (2), 5–14.

Roberts, Sam G.B., Robin I.M. Dunbar, Thomas V. Pollet, and Toon Kuppens (2009), "Exploring Variation in Active Network Size: Constraints and Ego Characteristics," *Social Networks*, 31 (2), 138–46.

Rogers, Everett (1995), *Diffusion of Innovations*. New York: The Free Press.

Rosen, Emanuel (2009), *The Anatomy of Buzz Revisited: Real-Life Lessons in Word-of-Mouth Marketing*. New York: Crown Business.

Schlosser, Ann E. (2005), "Posting Versus Lurking: Communicating in a Multiple Audience Context," *Journal of Consumer Research*, 32 (2), 260–65.

Sedikides, Constantine (1993), "Assessment, Enhancement, and Verification Determinants of the Self-Evaluation Process," *Journal of Personality and Social Psychology*, 65 (2), 317–33.

———, Keith Campbell, Glenn D. Reeder, and Andrew J. Elliot (1999), "The Relationship Closeness Induction Task," *Representative Research in Social Psychology*, 23, 1–4.

Shih, Clara (2010), *The Facebook Era: Tapping Online Social Networks to Market, Sell, and Innovate*. New York: Addison Wesley.

Sundaram, D.S., Kaushik Mitra, and Cynthia Webster (1998), "Word-of-Mouth Communications: A Motivational Analysis," in *Advances in Consumer Research. Association for Consumer Research*, Vol. 25, Joseph W. Alba and J. Wesley Hutchinson, eds. Provo, UT: Association for Consumer Research, 527–31.

Vohs, Kathleen D., Roy F. Baumeister, and Natalie Ciarocco (2005), "Self-Regulation and Self-Presentation: Regulatory Resource Depletion Impairs Impression Management and Effortful Self-Presentation Depletes Regulatory Resources," *Journal of Personality and Social Psychology*, 8 (4), 632–57.

Weenig, Mieneke W. and Cees J. Midden (1991), "Communication Network Influences on Information Diffusion and Persuasion," *Journal of Personality and Social Psychology*, 61 (11), 734–42.

Weimann, G. (1983), "The Strength of Weak Conversational Ties in the Flow of Information and Influence," *Social Networks*, 5 (3), 245–67.

Wetzer, Inge M., Marcel Zeelenberg, and Rik Pieters (2007), "Consequences of Socially Sharing Emotions: Testing the Emotion-Response Congruency Hypothesis," *European Journal of Social Psychology*, 37 (6), 1310–24.

Wilcox, Keith and Andrew T. Stephen (2013), "Are Close Friends the Enemy? Online Social Networks, Self-Esteem, and Self-Control," *Journal of Consumer Research*, 40 (1), 90–103.