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How Interest Shapes Word-of-Mouth over Different Channels

Jonah Berger and Raghuram Iyengar

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Report Summary

Word-of-mouth is frequent and important. Consumers talk about restaurants they like, post reviews of movies they hate, and share information about the best child safety seats. Further, such social transmission has a significant impact on what people buy and how they behave. Consequently, marketers have come to see that generating word-of-mouth is an important part of marketing strategy.

But while the consequences of word-of-mouth are clearly important, much less is known about what leads people to talk about certain products or brands rather than others. Further, little research has examined the role of conversation channel in generating word-of-mouth. Do different channels—face-to-face conversations, blog posts, texts, or online reviews—shape what types of products and brands people talk about. If so, how?

In this report, Jonah Berger and Raghuram Iyengar examine the relationship between how interesting a brand is to talk about and how much word-of-mouth it receives in different communication channels.

To begin, they distinguish between *continuity* and *discontinuity* in communication channels. Offline communications (e.g., face-to-face, telephone) tend to be continuous (i.e., no long breaks between conversational turns), while online communications (e.g., online posts, texts, blogs) tend to be discontinuous (i.e., breaks are expected).

Berger and Iyengar hypothesize there is a higher threshold for discussion in discontinuous conversations. Because there is no requirement to respond and pauses between turns are expected, there is less pressure to fill conversational space. Thus, people are most likely to post or share something if they think it will be interesting to others.

Conversely, in continuous conversations, the threshold for discussion is much lower. Conversations are expected to occur relatively continuously, so saying almost anything is better than saying nothing. Thus, more interesting products and brands may not receive any more ongoing word-of-mouth than less interesting ones.

To test their hypotheses, they analyze two datasets of thousands of everyday conversations across different channels. Their data cover more than 35,000 brands and product mentions from a nationally representative sample of about 6,000 people. The results confirmed their predictions. That is, product/brand interest had a larger impact on what people talk about in discontinuous conversation than continuous conversation. More interesting products were not mentioned any more frequently in face-to-face interactions than less interesting ones. A lab experiment provided evidence that this observed relationship between conversational continuity and product interest and word-of-mouth was truly causal.

These findings underscore the important role of channel selection when designing word-of-mouth marketing campaigns. Consider a consumer packaged goods company that has introduced a new type of toothpaste. Given that toothpaste probably does not generate a lot of interest or

excitement, it may be easier for the company to generate offline (rather than online) conversation.

The findings also shed light on which product dimensions marketers should emphasize depending on the word-of-mouth channel. If the goal is to generate more discussion online, framing the product in a surprising or interesting way should be effective. To generate offline word-of-mouth, evoking interest will be less effective, and making the product more accessible or publicly visible may be more effective.

Jonah Berger is the James G. Campbell Jr. Assistant Professor of Marketing and Raghuram Iyengar is an Assistant Professor of Marketing at the Wharton School, University of Pennsylvania.

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Word-of-mouth is frequent and important. Consumers talk about restaurants they like, post reviews of movies they hate, and share information about the best child safety seats. Further, such social transmission has a significant impact on what people buy and how they behave (Godes et al. 2005; Godes and Mayzlin 2004; 2009; Iyengar, Van den Bulte, and Valente 2011; Leskovec, Adamic, and Huberman 2007). Consequently, marketers have come to see that generating word-of-mouth is an important part of marketing strategy.

But while its consequences are clearly valuable, much less is known about word-of-mouth's causes, or what leads people to talk about certain products or brands rather than others. Further, the little work in this area has mostly ignored how the conversation channel may shape what people talk about. Word-of-mouth can be shared in different ways. People have face-to-face conversations, post on blogs, send texts, or write online reviews. Do these different channels shape what types of products and brands people talk about, and if so, how?

We distinguish between different types of conversation channels (i.e., continuous and discontinuous) and use this notion to shed light on how the channel itself impacts the type of things that get discussed. In particular, we examine the relationship between how interesting a brand is to talk about and how much word-of-mouth it receives in different communication channels (e.g., face-to-face and online posts). We do this in two ways. First, we analyze two unique datasets of thousands of everyday conversations across different channels to provide evidence for our theoretical perspective in the field. Second, building on these results, we conduct a controlled laboratory experiment where we manipulate the hypothesized factor driving the field results (i.e., conversation continuity) to underscore its causal impact on word-of-mouth. Taken together, the results deepen understanding about what drives word-of-mouth and provide insight into how to design more effective word-of-mouth marketing campaigns.

Theoretical Background

Most research on word-of-mouth has focused on how it affects diffusion and sales. Consumers were more likely to buy a DVD, for example, if more of their friends recommended it (Leskovec et al. 2007), and doctors were more likely prescribe a new prescription drug if other doctors they know prescribed it previously (Iyengar et al. 2011). Similarly, word-of-mouth and online reviews have been shown to boost new customer acquisitions (Schmitt, Skiera, and Van den Bulte 2011; Trusov, Bucklin, and Pauwels 2009) and increase sales in various product categories (Godes and Mayzlin 2009; Chevalier and Mayzlin 2006).

But while research has focused on the consequences of word-of-mouth, there has been much less attention to its causes, or what drives people to talk or share (though see Cheema and Kaikati 2010; Goldenberg, Libai, and Muller 2001). In particular, little is known about what shapes word-of-mouth in different communication channels.

Existing work on word-of-mouth has mostly ignored the different channels through which the communication flows (e.g., face-to-face vs. online vs. phone). Most papers rely on a single dataset covering only one channel, such as online reviews (Chevalier and Mayzlin 2006), newsgroups (Godes and Mayzlin 2004), email forwards (Berger and Milkman 2012), email referrals (Leskovec et al. 2007; Trusov et al. 2009) or mostly face-to-face communication (Berger and Schwartz 2011; Godes and Mayzlin 2009; Iyengar et al. 2011). But when only one channel is examined, it is obviously difficult to say much about how the channel itself impacts behavior. Indeed, researchers have noted that there may be fundamental differences between online and offline social interactions (Godes et al. 2005), yet little research has addressed this point.

This issue is particularly important given that managers who want to increase word-of-mouth must decide which channel(s) they want to target. They choose whether to try and create a viral video, encourage online referrals, stage a flash mob, or generate some other event, promotion, or campaign to increase mentions of the brand. But these approaches occur over, and are designed to encourage word-of-mouth through, different channels. Consequently, to understand how to make them effective, managers need to understand the nature of the channels themselves and whether they have different impacts on what gets discussed and shared.

The Current Research

We distinguish between continuous and discontinuous conversations and use this notion to help understand what shapes word-of-mouth over different channels.

People communicate information when they talk, but as with many types of consumption behaviors (Levy 1959), they also communicate things about themselves (Tannen 2005; Wojnicki and Godes 2010). One place this occurs is the topics people choose to discuss. Someone may talk about great works of literature to signal that they are well read, or good restaurants to show they are a foodie. Along these lines, Wojnicki and Godes (2010) show that consumer propensities to talk about satisfying and dissatisfying experiences depend in part on their desire to communicate domain expertise.

But people not only communicate through *what* they talk about, they also communicate through *how* they talk. Tannen (2005) notes that stylistic elements of conversation, such as rate of speech, speed of turn taking, and avoidance of pauses between conversational turns, all communicate things about the speaker. Failures to live up to expectations on these different

dimensions can lead others to make negative attributions about a person (Loewenstein, Morris, Chakravarti, Thompson, and Kopelman 2005). Transitions from one party speaking to the other, for example, usually occur with no long gap or silence in between and thus long pauses can be seen as a signal that someone is not a good conversation partner (Sacks, Schegloff, and Jefferson 1974).

Expectations about conversation style, however, vary based on the conversation channel (e.g., face-to-face vs. email). Different types of conversations come with different norms (Grice 1975; Levinson 1983). Think about the last time you had lunch with a friend or shared a cab with an acquaintance. Most of these, and similar face-to-face settings, involve continuous conversation (Sacks et al. 1974). There is an expectation that ongoing conversation will occur, and it is awkward to sit in silence. The same thing can be said of most phone conversations. Thus both parties try to keep the conversation flowing, filling the conversational space, and discussion is relatively continuous with few breaks in between. Long pauses are somewhat uncomfortable and people who take a while to respond are often seen negatively (Clark 1996; Tannen 2000).

Contrast that, however, with the types of conversations that often occur in online discussion forums, or on Facebook or Twitter, which are mostly discontinuous in nature. One person writes a post or comment, but there is no expectation that someone else will respond right away. In fact, even if a person does decide to respond, it may occur hours or even days later. This is not only true of broadcast conversations (i.e., one-to-many like a blog post) but even in narrowcast or dyadic online conversations where only two people are involved. When someone posts on someone else's Facebook wall, or sends them an email or text, they do not usually expect an immediate response, and even an "immediate" response is seen as one that occurs

minutes later, rather than right away. Further, because the expectation is that conversation is asynchronous, people have time to compose and think through what they say. Overall, online conversations tend to be more discontinuous, where there is no expectation of immediate response, and pauses in the conversation are not seen to signal anything about the conversation partner.

We suggest that these differences in conversation continuity will impact the types of things that get discussed.¹ In particular, we suggest that whether or not a product, topic, or brand is interesting to discuss will have a greater impact on whether it gets talked about online than offline, and that this is driven by differences in conversation continuity of these two channels.

We focus on product interest for two reasons. First, it is one of the most, if not the most, frequently discussed potential drivers of word-of-mouth. Practitioners often argue that products need to be interesting (i.e., novel or surprising in some way) to be talked about (Dye 2000; Hughes 2005; Knox 2010; Rosen 2008). In his popular book on word-of-mouth marketing, for example, Sernovitz (2006) argues that the most important way to generate word-of-mouth is to “be interesting” and that “nobody talks about boring companies, boring products, or boring ads,” (p. 6). Thus we test whether this common wisdom holds, and whether it holds equally, in different word-of-mouth channels (e.g., online and offline).

Second, prior work has found conflicting relationships between interest and WOM. While theory suggests that more interesting products should be talked about more than less interesting ones (Dichter 1966), and some empirical work supports this notion (Berger and Milkman 2012), other work shows that more interesting products do not get more word-of-mouth (Berger and Schwartz 2011).

¹ Researchers have also described this difference in terms of synchronous vs. asynchronous communication (Poole, Shannon, and DeSanctis 1992), but we prefer to talk about conversation continuity (see Sacks, et al. 1974) because it more concretely reflects the pauses that do, or do not, happen between conversational turns.

We suggest that this seeming discrepancy in prior findings is due, in part, to differences in the expected conversation continuity of the different word-of-mouth channels examined. When conversations are expected to be discontinuous, as in most online settings, there is some threshold for discussion. People do not have to respond to strangers' posts at all, and if they are emailing or texting with friends they can choose to respond when they have something particularly worthwhile to say. For the most part, they are making an active choice when they share something. Consequently, in discontinuous channels people do not share every single thing they come across and should be more likely to post or share something if they think it will be interesting for others. Indeed, prior work shows that more interesting *New York Times* articles are shared more frequently online, and are more likely to make the *Times* most emailed list (Berger and Milkman 2012).

When conversations are expected to be continuous, however, as in most face-to-face interactions, the threshold for discussion is much lower. As noted previously, it is awkward to have dinner with a friend in silence, or ride in a cab with a colleague without conversing, so rather than waiting to think of the most interesting thing to say, people will tend to talk about whatever is top-of-mind to keep the conversation flowing. Few things will be deemed too boring to talk about. In a sense, the outside option is to not talk at all, and talking about almost anything is better than that. Indeed, prior work on face-to-face word-of-mouth shows that compared to less interesting brands, more interesting brands do not get any more ongoing word-of-mouth overall (Berger and Schwartz 2011).

Overall then, we suggest that in online conversations, which tend to be discontinuous in nature, more interesting products or brands (e.g., iPads or Hollywood movies) should get more word-of-mouth than their less interesting counterparts (e.g., Walmart and toasters). In face-to-

face conversations, however, or in other conversational settings that are more continuous, interest should not have as big an impact on word-of-mouth. In channels where conversation tends to be continuous, interesting products or brands should not be talked about any more frequently than less interesting ones.

Carefully studying these issues is hampered, however, by data availability. One could imagine comparing the relationship between the amount of interest a brand evokes and the amount of word-of-mouth it receives over different channels, but aggregate data introduces selection issues. Any differences in the results could be attributed to different people that tend to talk online versus offline, for example, rather than the channel itself.

We address this problem in three ways. First, in preliminary analyses we use aggregate word-of-mouth data from people who have conversations both online and offline (Pilot Study). Second, we use a unique, individual-level dataset covering word-of-mouth over various channels (Study 1). It contains over 35,000 brand and product mentions from a nationally representative sample of approximately 6,000 people who recorded all of the word-of-mouth they engaged in, as well as the channel they used (e.g., face-to-face, online posts, or text) over a one day period. By controlling for variation at the individual and product levels, we attempt to examine the impact of different conversation channels on word-of-mouth.

Third, we directly test the causal impact of conversation continuity through an experiment (Study 2). We manipulate the hypothesized conceptual difference between different word-of-mouth channels (i.e., whether people have a continuous or discontinuous conversation) and examine how it affects the relationship between how interesting a topic is and whether it is discussed.

Pilot Study: Interest and Word-of-Mouth Across Different Channels

In a preliminary analysis, we examined aggregate data on word-of-mouth for various brands, both from online posts and from face-to-face conversations.

Data were provided by the Keller Fay Group, a marketing research firm that specializes in word-of-mouth marketing. Throughout the year, the company surveys a nationally representative sample of thousands of Americans about their daily conversations. Using a diary study methodology, they have people record what products and brands they talk about during a given day. Importantly, in addition to reporting what they talk about, respondents also report the channel where that conversation occurred, such as whether it was face-to-face or in an online post (i.e., over a blog, on twitter, or a social networking site, all lumped into one category that the company does not break out).

In our first study, we examined aggregate data on how often approximately 1,200 products and brands were talked about. The list includes everything from large brands like Coca-Cola, Verizon, and Walmart, to smaller brands like Jack's Links, Monopoly, and Toll House, and included every product or brand that averaged at least four mentions per week. This data was collected from 5,960 people in 2009 who had at least one online post and one face-to-face conversation. By focusing on people who have conversations of both types, we reduce the possibility that any relationships observed between channel type and interest are driven by different types of people having conversations on one channel or the other. We more fully cast doubt on that concern in the next study by using individual-level data.

Two coders rated each product or brand based on how interesting it would be to talk about (1 = not at all, 7 = a great deal; adapted from Berger and Schwartz 2011; Heath, Bell, and

Sternberg 2001). Their ratings were reasonably highly correlated ($r = .68$) and averaged to form an interest score for each brand. We then examined the correlation between how interesting a product or brand is to talk about and how much word-of-mouth that product or brand received face-to-face as well as online.

Results

Consistent with prior work (Keller and Libai 2009), face-to-face word-of-mouth was more frequent than online word-of-mouth (Figure 1). More importantly, as predicted, the relationship between interest and word-of-mouth differed by channel. There was a positive and significant relationship between interest and online posts ($r = .08, p < .01$): more interesting products were mentioned more frequently online. In contrast, there was no relationship between interest and face-to-face word-of-mouth ($r < .01, p > .70$). Further, these correlations are significantly different from one another ($t = 8.54, p < .001$). (Figures follow References.)

It is worth noting that these results are not somehow driven by lots of small brands never being mentioned online. The difference between online posts and face-to-face word-of-mouth actually becomes even sharper when dropping brands that are mentioned infrequently. Looking only at the 500 most frequently discussed brands, for example, shows a stronger relationship between interest and online posts ($r = .10, p < .05$) and an even weaker relationship between interest and face-to-face word-of-mouth ($r = .003, p = .95$). Results are also robust to only looking at the smallest brands as well.

Study 1: Individual-Level Data

Our second test differs from the first in two main ways. First, we use individual-level data. This allows us to cast doubt on the possibility that any effects attributed to channel are really driven by the types of people that may talk more on one channel versus the other. One could argue, for example, that somehow people who tend to talk more online also tend to mention more interesting brands. Using individual-level data, we can determine whether the positive impact of interest in the online channel persists even after controlling for any differences across individuals.

Second, we provide a broader test of our underlying theoretical proposition by examining a broader set of conversation channels. We suggested that the relationship between interest and word-of-mouth differs for online posts and face-to-face conversations due to the nature of conversations in these two types of channels; face-to-face conversations tend to be continuous, while online conversations tend to be more discontinuous. But these are not the only channels over which word-of-mouth can travel. People also talk over text, for example, or the phone. Both of these channels are technically offline (people are on their phones, not on the internet), but our conceptualization suggests they should have a different impact on the types of things discussed. While phone is a more continuous mode of communication, text is more discontinuous (Loewenstein et al. 2005; Poole et al. 1992). Consequently, if our theoretical proposition is correct, the relationship between interest and word-of-mouth over these channels should differ. Email is also more discontinuous, so should show patterns similar to text and online posts. We start by looking at face-to-face conversations and online posts and then move to a broader analysis of word-of-mouth over continuous and discontinuous channels.

Data

Study 1 uses a different dataset, cataloging individual-level data from Keller Fay collected at different points throughout 2010. Rather than being aggregated, this data includes information on all products or brands that a given person talked about during the day they were surveyed (each person only talked about a given product or brand once, and mentioned 11.78 brands on average). Further, it includes many more small brands that were only mentioned once overall (the data covers around 6,500 products and brands). Finally, in addition to containing face-to-face and online word-of-mouth, the data also comprise other channels of communication such as telephone (which is continuous) and text and email (which are discontinuous).

Thus the data includes information about what product each person talked about as well as through which channel the conversation occurred. The dataset is not restricted to people who talked both face-to-face and online, so while some people had both types of conversations, others had conversations of only one type or of other types entirely. Coders again rated each product based on how interesting it would be to talk about.²

Results

Aggregate Analysis. First, we perform the same aggregate level analysis as in the pilot study. We examine how interesting a product or brand is to talk about and how much word-of-mouth that product or brand received face-to-face as well as online.

² Given the huge number of brands in this study, not every coder rated every brand, but for brands rated by multiple coders the reliability was quite high ($r = .74$).

Results are similar to those found in the pilot study. There is a positive and significant relationship between interest and online word-of-mouth ($r = .04$, $p < .005$); compared to less interesting products, more interesting products were again mentioned more frequently online. In a face-to-face context, however, more interesting products were not mentioned more frequently than less interesting ones ($r = .002$, $p > .87$). As in the pilot study, these correlations are significantly different from one another ($t = 6.82$, $p < .001$).³ These results show that the findings of the pilot study are not somehow limited to people who have conversations both face-to-face and online.

Individual-Level Analysis – Conversation-by-Conversation. Next, we incorporate the individual-level data. This allows us to cast doubt on the possibility that the above results are merely driven by people who tend to talk about more or less interesting brands also tending to talk over certain channels.

To address this issue, we perform a regression of the interest level of each conversation on a channel (Online or face-to-face) after controlling for an individual-level fixed effect. Let IR_{ijk} be the interest rating for a conversation j that individual i has in channel k ($k = 0$ for face-to-face and $k=1$ for Online). We specify the following model:

$$IR_{ijk} = \alpha_i + \beta(k),$$

where the parameter α_i is an individual-specific fixed effect and β captures the effect of online channel as compared to face-to-face on the interest level of conversations.

Results indicate that even controlling for individuals, online conversations include more interesting brands than face-to-face conversations ($\beta_{\text{Online}} = 0.35$, $p < .001$).

³ Face-to-face word-of-mouth was again more frequent than online word-of-mouth.

Results are similar when we look at other types of continuous and discontinuous conversations. As noted earlier, while phone conversations are like face-to-face in that they are continuous (no long breaks in between partners' responses), text and email conversations are like online conversations in that they are often more discontinuous (time elapses between one person talking and the other). We create two groups of channels, continuous (f2f and phone) and discontinuous (online, text, and email) and perform the same fixed effect analysis above. The regression shows that discontinuous conversations include more interesting brands than continuous conversations ($\beta_{\text{Discontinuous}} = 0.22, p < .001$).⁴

Finally, to ensure that the results of our continuous/discontinuous analysis are not driven solely by online and face-to-face conversations, we also replicate the fixed effect analysis but only consider text, email (grouped together as discontinuous) and phone conversations. The results remain the same: discontinuous conversations include more interesting brands than continuous conversations ($\beta_{\text{Discontinuous}} = 0.29, p < .001$).

Individual-Level Analysis – Number of Conversations. We also conduct a second individual-level analysis that focuses on the number of conversations had at different levels of interest. This analysis more closely mirrors the aggregate analyses done previously and allows us to examine how the relationship between interest and word-of-mouth changes for different channels. It also allows us to cast doubt on the possibility that any effects attributed to channel are really driven by certain types of people both having more conversations and tending to talk more over certain channels.

⁴ Results of this, and the rest of the analyses, are similar when interest ratings from a broader set of coders are used. Having the same coders rate most of the product and brand creates continuity, but one could argue that their particular viewpoints might be biased in some way. Consequently, we also used mechanical Turk to collect ratings of how interesting each product or brand would be to talk about from a much larger sample of coders from across the United States (N = 400, mean age = 34). To reduce fatigue, each coder was only asked to rate a random sample of 240 products and brands, so each product was rated by approximately 9 coders. While it was not possible to train these coders as carefully as our main ones, it is worth noting that even using these alternate ratings, the results of the various analyses remained the same. This consistency further supports the validity of the findings.

As each individual mentions a brand only once, we cannot estimate an individual-level model with the number of mentions of a specific brand as the dependent variable. Thus, we investigate how many conversations people have at different interest levels and how that varies by conversation channel.⁵ To do so, we use a Poisson model and accommodate the count nature of the data. Let Online be an indicator variable that takes a value of 1 for conversations that are online and 0 otherwise. Let Y_{ijk} be the number of conversations that individual i has with interest level j ($j=1, \dots, 6$) in channel k ($k = 0$ for face-to-face and $k=1$ for Online). Then, we specify the following model:

$$P(Y_{ijk} = y) = \frac{(\lambda_{ijk})^y e^{-\lambda_{ijk}}}{y!},$$

$$\log(\lambda_{ijk}) = \alpha_i + \beta_1 j + \beta_2 (k) + \beta_3 (j \times k).$$

Here, the parameter α_i is an individual-specific fixed effect, which captures any variation across people in the total number of conversations.⁶ The parameters β_1 , β_2 and β_3 capture the impact of interest, channel and its interaction on the expected number of conversations. The face-to-face channel ($k = 0$) serves as the baseline channel for conversations.

As predicted, results indicate a positive and significant interaction (Online * Interest = 0.15, $p < .01$) indicating that interest has a larger impact on online conversations as compared to face-to-face conversations.

Results are similar when we look at all types of continuous and discontinuous conversations. Using the groupings of continuous (face-to-face and phone) and discontinuous (text, email and online) channels, we replicate the above fixed effect analysis. The baseline

⁵ We specified a conversation to have an interest level of 1, 2... 6 if the coders gave it an average rating between 1 and 2, 2 and 3... 6 and 7, respectively.

⁶ Note that a Poisson model, unlike other count models, does not suffer from the incidental parameters problem (Lancaster 2000).

channel for these results is continuous communication. As predicted, there is a positive and significant interaction (Discontinuous * Interest = 0.09, $p < .01$), indicating that interest has a larger impact on discontinuous conversations than on continuous conversations.

Results also remain the same when we drop online and face-to-face conversations from this analysis and only consider text (discontinuous), email (discontinuous) and phone (continuous) conversations. There is a positive and significant interaction (Discontinuous * Interest = 0.08, $p < .01$) indicating that interest has a larger impact on discontinuous conversations than on continuous conversations.

Discussion

Taken together, the results of the first two studies support our underlying conceptualization. The channel over which communication occurred moderated whether more interesting products received more word-of-mouth than less interesting ones. Interest has a much larger impact on online than offline. Further, these effects persisted even while using individual-level data, casting doubt on the possibility that they are due to the type of people who tend to talk more online or offline.

The results also bolster the notion that the continuity of the conversation is driving these effects. Rather than being driven by whether the conversation took place online or offline per se, analysis of other types of continuous (i.e., phone) and discontinuous (i.e., email and text) conversation channels suggest that the results are driven by conversation continuity. Interest has a larger impact on what people talk about in discontinuous conversation than continuous conversation.

Our results also cast doubt on a number of alternate explanations. First, while one could argue that the conversation data may be biased in some way, it is hard for such biases (were they to exist) to explain our pattern of results. Despite the use of a diary used by respondents to keep track of their conversations, one could imagine that consumers underreport the number of conversations they actually have on a daily basis, for example, or even underreport online conversations in particular for some reason (e.g., due to a bias in memory or failure to make accurate use of the diary). But while such issues would result in a smaller than accurate number of daily conversations, or even an overestimation in the relative frequency of offline conversations, such issues cannot explain why the relationship *between* product interest and word-of-mouth would differ for different channels. Similarly, while one could argue that consumers underreport the number of times they talk about small brands, or boring brands (i.e., because they fail to stick out in memory), these main effect-type explanations again cannot explain our interactive pattern of results (i.e., interest matters more in one channel than another).

Second, while one could argue that our measure of how interesting a product is to talk about is somehow noisy or biased, it has repeatedly been shown to be valid in prior work (Berger and Schwartz 2011; Berger and Milkman 2012). In addition, it is hard for this issue to explain our pattern of results. Even if the measure was noisy, or biased, that alone cannot explain why it predicts the amount of word-of-mouth over one channel but not the other. The noise or bias would have to somehow be correlated with mentions online, but not offline, which seems unlikely. Further, our results remain the same when interest ratings from a different set of coders is used (see Footnote 5), showing that the findings are not restricted to the set of raters used. Finally, the pilot study shows that our results persist (and in fact, get stronger) using a smaller set

of 500 brands that are mentioned both online and off, casting doubt on the possibility that our results are somehow driven by different products or brands being talked about online and offline.

Third, the data also cast doubt on the possibility that the results are driven solely by audience differences. Status or self-enhancement concerns shape word-of-mouth (Wojnicki and Godes 2010) and appearing boring or interesting may be more likely to affect one's status among strangers or weak ties (because they do not know someone as well). Consequently, one could argue that another reason people are more likely to talk about interesting things online is that online word-of-mouth is more likely to be in a public forum or with strangers, so people care more about saying interesting things to impress others. But while this explanation may certainly help explain product reviews or posting on blogs, it has trouble explaining our full pattern of results. Most texting occurs with close friends, for example, not strangers, yet we found that more interesting brands are still talked about more frequently over text (a pattern that mimics other discontinuous channels more broadly). Thus, while audience differences may certainly explain some of the variation between, for example, blog posting and face-to-face word-of-mouth, it cannot fully explain our results.

Finally, though our analyses rule out self-selection of people into channels, this data alone cannot fully rule out channel selection within individuals based on the interest level of a topic. In most cases, it seems like the channel comes before the topic. People are using a particular mode of communication (e.g., talking on the phone or writing on their Facebook page) and then determine what they want to talk about. Consequently, the current analysis assumes that channel comes first and then topic of conversation. But in some cases the opposite may also occur, whereby people have a topic or brand in mind and then decide on the mode of communication. Thus one could argue that rather than reflecting an impact of channel on

conversation topic, our results merely indicate that when people have more interesting products or brands to discuss, they decide to talk about them over more discontinuous conversation channels. Though this result would itself be of interest, and it might occur in some cases, it seems unlikely that this happens most of the time.

That said, to more directly show that our results hold even when holding channel selection constant, we conducted Study 2. In addition to keeping the audience identical across conditions, we manipulate conversation continuity to directly test its causal impact on the relationship between interest and whether something gets discussed.

Study 2: Experimental Evidence

The results of the first two studies provide evidence for our theory in the field, but one may still wonder whether the observed relationships are truly causal. Thus, in Study 2 we experimentally manipulate the hypothesized mechanism behind the differences in word-of-mouth over different channels (i.e., conversation continuity) and examine how it affects what people talk about.

Specifically, we manipulated whether participants had continuous or discontinuous conversations, and measure how that impacted the relationship between interest and whether a given topic was discussed. Consistent with the prior two studies, we predict that more interesting topics will be more likely to be discussed in discontinuous conversations, but that interest will have less of an effect (or none at all) on what gets mentioned when the conversation is continuous.

Importantly, we also collect data on the consideration set of topics for each individual. This allows us to disentangle preferential transmission from mere base rates when examining

whether topics of different interest levels were discussed (see Godes et al. 2005 for a related discussion regarding word-of-mouth positivity). If we only knew what people mentioned, but not what they could have talked about, then it would be unclear whether any count-type results at the individual level are the result of what people prefer to share or just the distribution of available options. In Study 1, for example, there were many low interest brands but few high interest ones. Thus, a given individual might talk about boring brands more frequently than interesting ones just based on the base-rate of what they could choose from (i.e., there are more boring brands). Individual-level consideration set data was not available for that study, but by collecting such data in this study we can more fully examine whether more interesting brands are talked about more frequently than less interesting ones both in continuous and discontinuous conversation.

Method

One hundred and ninety five undergraduates engaged in a conversation task. They were paired with another participant and asked to have a five minute conversation about classes at their university.

The only difference between conditions was the conversation style participants were asked to adopt. In the continuous condition, participants were told that research on conversation styles has shown that some people tend to pause less during conversations than others, and they were asked to adopt this conversation style. They were told that they should speak at a regular pace when talking, but that they should start speaking right away at the beginning of the conversation and try not to pause before responding to what the other person said.

The instructions in the discontinuous condition were similar except that both participants were asked to have a more discontinuous conversation (differences are highlighted in italics). They were told that research on conversation styles has shown that some people tend to pause *more* during conversations than others, and were asked to adopt this style of conversation. They were told that they should speak at a regular pace when talking but that they should *wait 20 seconds* at the beginning of the conversation and try *to wait at least 5 seconds* before responding to what the other person said.

After finishing the conversation, participants were asked to write down all the classes they had taken this year as well as any additional classes they had talked about during the conversation. They were also asked whether or not they had talked about each of the classes they listed during the experiment (these responses were confirmed by a research assistant who listened to a recording of the conversations).

We then took the full set of courses listed, randomized their order, and gave them to a set of outside raters (undergraduates from the same university as the students in the experiment) who coded how interesting they thought most students would find them to talk about (1 = not at all, 7 = a great deal).

Results

Preliminary Analysis. As should be expected based on random assignment, there was little difference in the consideration set of the courses listed by participants in the two conditions. There was no difference in either the number of courses listed ($M_{\text{Continuous}} = 7.72$ vs. $M_{\text{Discontinuous}}$

= 7.35, $p > .35$) or interest level as rated by the coders ($M_{\text{Continuous}} = 2.83$ vs. $M_{\text{Discontinuous}} = 2.96$, $p > .25$).

Main Analysis. We use a logistic regression to model the likelihood that a class is mentioned. We use the respondent condition, the interest level of a class, and the interaction between the condition and the interest level for a class as independent variables. To address unobserved heterogeneity among respondents, we perform an individual-level fixed effect analysis.

As predicted, the analysis reveals a significant condition x interest interaction (estimate = 0.30, $p < .05$), such that the effect of interest on mentioning a topic depends on whether the conversation was continuous or discontinuous (Table 1). For discontinuous conversations, the interest level of the course impacted whether it was mentioned (estimate = 0.43, $p < .001$). More interesting courses were more likely to be discussed. For continuous conversations, however, the interest level of the course did not affect whether it was mentioned (estimate = 0.12, $p = .11$), indicating that more interesting courses were just as likely to be mentioned as less interesting ones. (Table follows References.)

Figure 2 plots the probability of mentioning a class as a function of its interest level (we use the average of the estimated individual-level intercept across respondents in the two conditions). It shows that how interesting a class would be to talk about has a much higher impact on the probability of it being mentioned in the discontinuous condition as compared to the continuous condition.

Ancillary Analysis. Further analysis also cast doubt on an alternative explanation based on conversation time. While our results are supportive, one could argue that they are driven by the nature of the discontinuous condition. Because they had to pause briefly before talking and

responding, people in the discontinuous condition may have had less time to talk and thus talked about fewer courses. Consequently, if interest determined the order in which people talked about courses (talking about the most interesting course first, the second most interesting second, and so on), then people in the discontinuous condition may not have mentioned less interesting courses simply because they did not have the time to talk about them (while people in the continuous condition did).

But this is not the case. While people in the continuous condition did discuss slightly more courses ($p < .05$), interest did not determine the order in which courses were discussed. In the continuous condition, for example, people talked about two courses on average, but the average interest rank of these courses (among all the courses they could have talked about) was 4.24. This indicates that rather than starting by talking about the first most interesting course, and then moving to their second most interesting one (which would have resulted in an average rank of around 1.5), interest was not the main factor in determining which courses were discussed, and there were many interesting courses that could have been mentioned but were not. Similarly, the average interest rank of mentioned courses in the discontinuous condition was 3.66. Thus, people in the continuous condition did not merely talk about more boring courses because they mentioned more courses and had no interesting courses left to talk about.

Discussion

By experimentally manipulating conversation continuity, and measuring what people talked about, Study 2 provides direct causal evidence for our theoretical perspective. Conversation continuity moderated whether interesting things were talked about more frequently

than less interesting ones. While people were more likely to talk about interesting classes (than less interesting ones) when having a discontinuous conversation, this difference disappeared among people who had a more continuous conversation. In continuous conversations, interesting classes were no more likely to be discussed than their less interesting counterparts.

This study also allows us to cast doubt on the possibility that our results are somehow driven by different base rates of interesting versus boring topics available online versus offline. In this case, people had similar sets of things they could talk about, but what they ended up talking about depended on conversation continuity. Further, as noted earlier, having the consideration set of options allows us to better disentangle preferential transmission from mere base rates. The results show that even taking into account the full set of options people *could* talk about, more interesting things were only more likely to be talked about than less interesting ones when the conversation was discontinuous.

The results also bolster our perspective by showing that even when the audience was identical (generally strangers), the relationship between interest and word-of-mouth disappears when conversations are more continuous in nature. This shows that while audience differences may also contribute to any differences between face-to-face word-of-mouth and online reviews or blog posts, this mechanism would occur in addition to differences in conversation continuity, not instead of it.

General Discussion

Given its ability to boost diffusion and sales, word-of-mouth has become an integral part of marketing strategy. But while it has clear beneficial consequences, much less is known about its causes, or why people talk about certain things rather than others. Further, by focusing on

only one channel at a time, existing research has mostly ignored how word-of-mouth may differ depending on the channel over which conversation takes place.

Three studies address this issue, showing that the conversation channel impacts what gets discussed. While more interesting products or brands get talked about more frequently online, they do not get any more face-to-face word-of-mouth (Pilot Study and Study 1). Similarly, while more interesting products or brands get talked about more frequently over text or email, they do not get any more word-of-mouth over the phone (Study 1).

Our results show that this is driven, in part, by the nature of those types of conversations. While face-to-face conversations are usually more continuous in nature, online conversations are more discontinuous, with pauses expected between responses. This relatively simple difference has an important impact on word-of-mouth (Study 2). When conversation is more discontinuous, more interesting topics and brands are more likely to be discussed than less interesting ones. When conversation is more continuous, however, this difference disappears and more interesting things are no more likely to be discussed than less interesting ones.

By showing these results in large datasets of thousands of consumers, as well as a tightly controlled laboratory experiment, we both illustrate the causal mechanism behind these effects while demonstrating their generalizability to actual word-of-mouth in the field. Taken together, the studies deepen understanding about what drives word-of-mouth and provide insight into how to design more effective word-of-mouth marketing campaigns.

Implications and Directions for Future Research

These results have a number of important marketing implications. First, they underscore the important role of channel selection when designing word-of-mouth marketing campaigns. Word-of-mouth marketing companies like BzzAgent help accelerate word-of-mouth for their clients to drive sales, but they can do it through various channels. Originally they focused on sending consumers product-related materials (e.g., coupons or rebates) to encourage them to have face-to-face conversations with their friends, but more recently they have also started online initiatives, encouraging bloggers and others to post company-relevant content on the web.

Given a company or organization with a particular product, which word-of-mouth channels should they pursue? Take a consumer packaged goods company that just introduced a new type of toothpaste. This company could try to generate online word-of-mouth, offline word-of-mouth, or both. How should they decide? While part of the decision certainly depends on how effective those different types of word-of-mouth are for generating sales (e.g., online word-of-mouth may be more useful in driving people to a website as opposed to an offline store because all they have to do is click), it also depends on how easily the company can get people talking over those different types of channels. Because toothpaste is probably not the most interesting or exciting product to discuss, our results suggest that it may be easier for the company to generate offline (as opposed to online) discussion.

Second, the findings shed light on which product dimensions marketers should emphasize depending on the type of word-of-mouth channel they are trying to use. Practitioners often believe that products need to be interesting to be talked about, but our results suggest they are only right for certain word-of-mouth channels. If the goal is to get more discussion online, our

results suggest that framing the product in an interesting or surprising way should help. Ads or online content that surprises people, violates expectations, or evokes interest in some other manner should be more likely to be shared. Blendtec's "Will It Blend" infomercials, for example, have generated over 150 million views on YouTube. But while the product itself (a blender) is certainly not the most exciting, by framing it in a novel way (i.e., showing how it can be used to chop up everything from golf balls to an iPhone), the campaign has been highly shared.

If the goal is to get more offline word-of-mouth, however, then evoking interest may be less effective. In a face-to-face context, making the product accessible in consumer minds, or publicly visible, may be more important (Berger and Schwartz 2011). Indeed, while it is probably not the most exciting topic, data on mostly face-to-face word of mouth finds that food and dining is the most frequently discussed product category, even more than media and entertainment or technology (Keller and Libai 2009). Thus for offline word-of-mouth, considering how to trigger people to think about the product or brand may be a helpful approach to generating discussion.

The findings also suggest several directions for further research. We found that interest matters more in discontinuous conversations, but there may even be some types of continuous conversations where interest plays a role. In cases where people are motivated to look smart, clever, or funny, for example, interest may play a greater role in shaping what people discuss. Thus when people are on a date, or talking with a prospective employer, interesting things may get brought up more than boring ones, even if the conversation is face-to-face.

It would also be interesting to consider how other drivers of word-of-mouth might vary across different conversation channels. Our results suggest that interest may matter less in

continuous conversations because people have less time to formulate a reply (See also Loewenstein et al. 2005). In online conversations, or even over text messaging, people have time to think of a clever response or think about the most interesting thing that they can write before responding. But this is not the case in more continuous conversations. Long pauses are awkward in face-to-face conversations, so rather than searching for the most interesting thing to say, people may just mention whatever happens to come to mind. This suggests that any factor which requires deliberation should have more of an effect in discontinuous, compared to continuous conversation. More practically useful things, for example, might be mentioned more online, but not more in face-to-face conversation. Similarly, emotion may have a larger impact on continuous conversations because there is no break for them to dissipate.

As noted earlier, self-enhancement might also play more of a role in certain conversation channels due to the audience people tend to be talking to. People are more likely to be communicating with strangers or weak ties when they blog, for example, as opposed to when they send a text. Consequently, they may be more likely to talk about things that make them look good (and avoid talking about things that make them look bad).

More broadly, more attention should be paid to how conversation channels shape both communication and influence. Most recent research on word-of-mouth has used online data, presumably because it is more available and easier to collect. But given that over 75% of WOM actually occurs face-to-face (Keller and Libai 2009) more attention to offline word-of-mouth seems warranted. Further, there may also be important differences even within the various online channels. Though they were all grouped together in our data, Facebook is not the same as Twitter which is not the same as blogs. The way conversation channels are designed has

important implications for the conversations that evolve over them and—our results imply— the brands and products that get discussed.

Finally, future work might empirically examine the temporal order of topic and channel selection. As noted above, in most conversations it seems like the channel comes first. People are sitting next to a friend at lunch or chatting with a colleague online and then decide what to talk about. But in some cases the opposite may occur. In a negotiation, for example, one party might purposefully decide to have the conversation online so that they have more time to carefully craft their response. Similarly, a salesperson might prefer a face-to-face interaction because it is harder for the customer to say no. In these cases of purposeful interaction, the topic may come first and then the channel. More research into the relative frequency of these types of interactions, and how they shape word-of-mouth, seems warranted.

In conclusion, while a great deal of work has focused on the impact of word-of-mouth on consumer behavior, there is much more to learn about what drives conversation in the first place. By examining how the relationship between product characteristics and word-of-mouth varies across different channels, greater insight into the behavioral process behind word-of-mouth can be obtained.

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FIGURES

Figure 1: How Frequently Different Brands are Mentioned in Different Channels

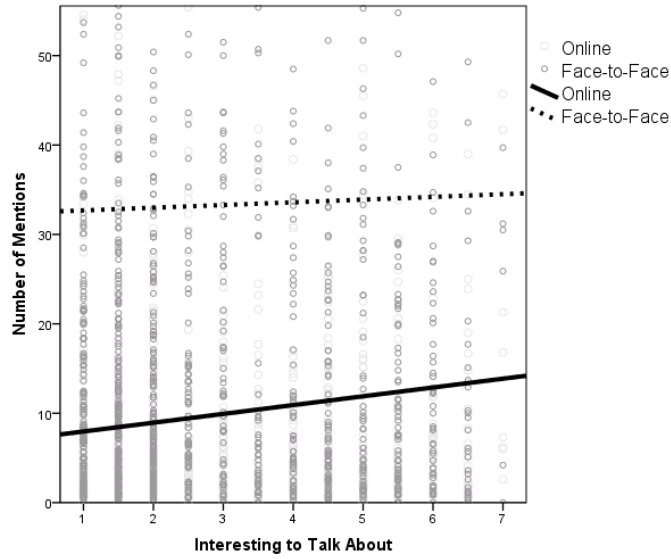
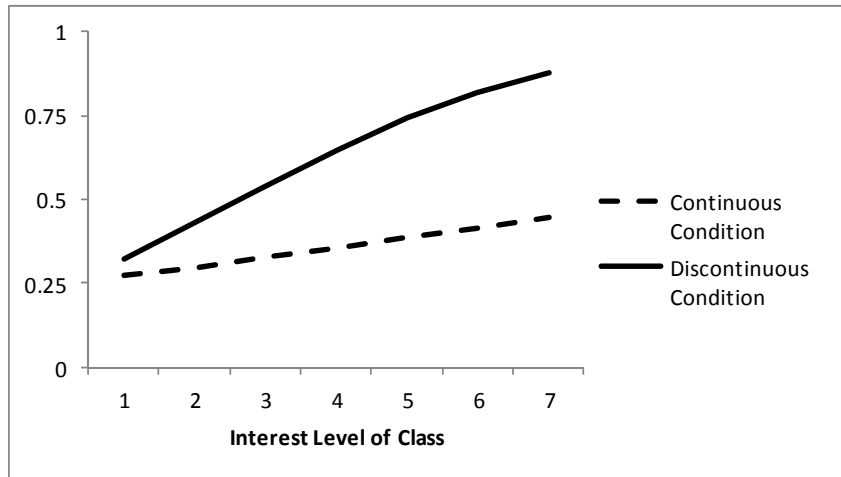


Figure 2: Probability of Mentioning a Class



TABLES

Table 1: Likelihood of mentioning of a class (Continuous Condition)

Parameter	Estimate
Interest level	.12 (.07)
Discontinuous * Interest level	.30* (.14)

* $p < .05$ There is no simple effect of discontinuous condition as using fixed effects accounts for all effects that are invariant for all observations from a participant (e.g., condition, age, gender, number of classes that a participant has taken).