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Word of mouth (WOM) affects diffusion and sales, but why are certain products talked about more than others, both right after consumers first experience them and in the months that follow? This article examines psychological drivers of immediate and ongoing WOM. The authors analyze a unique data set of everyday conversations for more than 300 products and conduct both a large field experiment across various cities and a controlled laboratory experiment with real conversations. The results indicate that more interesting products get more immediate WOM but, contrary to intuition, do not receive more ongoing WOM over multiple months or overall. In contrast, products that are cued more by the environment or are more publicly visible receive more WOM both right away and over time. Additional analyses demonstrate which promotional giveaways in WOM marketing campaigns are associated with increased WOM. Overall, the findings shed light on psychological drivers of WOM and provide insight into designing more effective WOM campaigns.

Keywords: word of mouth, buzz marketing, diffusion, product characteristics, social contagion, field experiment

What Drives Immediate and Ongoing Word of Mouth?

Word of mouth (WOM) is frequent and important. Consumers talk about new running shoes, complain about bad hotel stays, and share information about the best way to get out tough stains. Social talk generates more than 3.3 billion brand impressions each day (Keller and Libai 2009), and affects everything from the products consumers buy to the drugs physicians prescribe (Godes and Mayzlin 2009; Iyengar, Van den Bulte, and Valente 2009; Leskovec, Adamic, and Huberman 2007; Moe and Trusov 2011).

But why are certain things talked about more than others, both right after consumers first experience them and in the months that follow? Some products get a good deal of buzz, while others go unmentioned. Some movies are the talk of the town, while others are never discussed. Indeed, 10% of consumer packaged goods account for 85% of the buzz (Niederhoffer et al. 2007). What makes certain products more "talkable," and how does this vary over different time horizons?

This study examines how product characteristics shape immediate and ongoing WOM. Practitioners often argue that products need to be interesting (e.g., novel, surprising) to be talked about (Dye 2000; Hughes 2005; Sernovitz 2006). However, we suggest that rather than being driven by motivation (i.e., wanting to seem interesting), WOM, particularly ongoing WOM, is driven by accessibility. Everyday conversations often consist of idle chatter about whatever happens to come to mind, regardless of how mundane it may be. Consequently, products that are publicly visible or cued more by the environment should be talked about more because they are top of mind.

Our perspective sheds light on psychological drivers of WOM and how companies can design more effective WOM marketing campaigns. Although previous research has examined consequences of WOM, or how it is shaped by social network structure or important people (e.g., opinion leaders), there has been less attention to its causes, or how

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things about the product itself shape what is discussed. By observing a range of products, we provide insight into why some products are talked about more than others. Furthermore, some products may benefit more from early WOM, while others require ongoing discussion; however, research has ignored how WOM may vary over different time horizons. We distinguish between immediate and ongoing WOM and examine WOM over time to investigate not only *whether* certain types of products (i.e., more interesting ones) are talked about more but also *when* different product characteristics are more important in driving discussion. Finally, WOM marketing companies often give consumers free products, coupons, or gifts with the hope that they will spread more WOM, but are such giveaways actually effective? Although this is not our main focus, our data enable us to provide additional managerial insight by examining what type of giveaways, if any, are associated with increased WOM.

In summary, we examine how cues, public visibility, and interest shape both immediate and ongoing WOM. First, we analyze a unique data set of WOM marketing campaigns. It includes (1) face-to-face conversations (2) over time (3) regarding hundreds of products (4) from a broad range of categories (e.g., cars, clothes, cleaning products). We analyze the data with a multilevel hierarchical model of WOM, which simultaneously reflects underlying differences across people and across products, enabling key behavioral hypotheses to be tested beyond a flexible model. Second, we conduct a field experiment across various U.S. cities and a controlled laboratory experiment. By directly manipulating the key product characteristics identified in the model, we test their causal impact on WOM.

RECENT RESEARCH ON WOM

Previous WOM research has focused on identifying its consequences: WOM affects the items consumers buy (Leskovec, Adamic, and Huberman 2007), restaurants they patronize (Godes and Mayzlin 2009), and products they adopt (Trusov, Bucklin, and Pauwels 2009). Similarly, product ratings and reviews have been shown to increase sales in several contexts (Chevalier and Mayzlin 2006; Liu 2006; Moe and Trusov 2011).

However, while research has examined *effects* of WOM, there has been less attention to its *drivers*, or what consumers talk about and why. Consequently, while it is clear that WOM affects product adoption and sales, less is known about the behavioral processes that drive these outcomes (Goldenberg, Libai, and Muller 2001). Indeed, researchers have noted that an "enhanced understanding of social influence … may simply be obtained by examining which products or services consumers are more likely to 'talk about'" (Brown and Reingen 1987, p. 361), yet little empirical work has answered this call.

PSYCHOLOGICAL DRIVERS OF WOM

Existing theoretical perspectives suggest that WOM is driven by motivation (e.g., self-presentation; Dichter 1966; Gatignon and Robertson 1986). Consistent with this notion, conventional wisdom suggests that products need to be interesting to spur discussion. We first review this more motivated viewpoint before turning to our accessibility-based perspective.

Interest

Word-of-mouth practitioners often argue that products need to be interesting to be talked about. For example, Sernovitz (2006, p. 6) suggests that the most important rule of WOM marketing is to "be interesting" and that "nobody talks about boring companies, boring products, or boring ads." Webster's dictionary defines interesting things as those that arouse interest or hold attention, and products can be interesting because they are novel, exciting, or violate expectations in some way. Along these lines, Hughes (2005) argues that unusual, outrageous, or remarkable things generate conversation, and Rosen (2009) suggests that people love to talk about things that are different and surprising (Knox 2010; Nulman 2009). Most people find Hollywood blockbusters more interesting than Cheerios and iPhones more interesting than dish soap. Consequently, this perspective suggests that movies and iPhones should be talked about more and that boring products such as Cheerios will have a hard time getting WOM.

These suggestions are based, in part, on the notion that consumers talk about things that provide social currency (Hughes 2005). When sharing WOM, consumers communicate not only information but also something about themselves (Wojnicki and Godes 2008). Most people want others to think highly of them, and talking about interesting (vs. boring) things should facilitate this goal. Stated another way, people may talk about interesting products (more than less interesting ones) because it makes them seem interesting.

Accessibility

In contrast, we suggest that WOM, particularly ongoing WOM, is driven more by accessibility, or whether products are top of mind. While self-presentational concerns may shape what people talk about in some situations (e.g., bringing up interesting topics to look good on a job interview), many day-to-day conversations seem more like small talk about whatever everyday things happen to come to mind. For example, consider how often people talk about the weather or where they are going for lunch. Similarly, although technology and media are probably more interesting, food and dining (i.e., consumer packaged goods) are discussed more frequently (Keller and Libai 2009). This suggests that rather than being driven by interest, what people talk about may be driven by whatever is accessible, regardless of whether it is interesting.

Products vary in their accessibility (Higgins and King 1981; Wyer and Srull 1981) and stimuli in the environment can act as cues, activating associated concepts in memory and making them more accessible (Higgins, Rholes, and Jones 1977; Lynch and Srull 1982; Nedungadi 1990). One such cue is usage situations, and products that are used more frequently should be more top of mind. A product that can be eaten every day for breakfast, for example, should tend to be more accessible than one that is usually only eaten on a person's birthday. More broadly, memory research has shown that conceptually related cues, or triggers, can also make products accessible (Anderson 1983; Berger and Heath 2005; Collins and Loftus 1975). For example, right before Halloween, when there were more cues related to the color orange in the surrounding environment, Reese's Pieces and orange soda were more top of mind (Berger and

Fitzsimons 2008). Similarly, seeing ducks may cue people to think of Aflac because a duck is frequently used in its commercials. Consequently, if what people talk about is driven by accessibility, products that are cued more often by the surrounding environment should be talked about more.

Along these lines, public visibility should also shape WOM. Some products are public (e.g., cars), while others are more private (e.g., antivirus software). More publicly visible products are easier to see, which should increase product accessibility and boost the chance they are brought up in conversation. For example, a person who sees someone eating a new type of snack can ask him or her if it is any good, but this is less likely to happen for more private products (e.g., toothbrushes). Visibility may also increase WOM by making the product more accessible at times when conversations are possible. Likewise, using toothpaste or drinking beer should each make that product accessible, but because beer tends to be consumed more in public, consumers are more likely to have others around to tell about the product.

WOM OVER DIFFERENT TIME HORIZONS

Importantly, we examine not only *whether* interest, cues, and visibility are linked to WOM but also *when* these different product characteristics may be more important. Word of mouth can occur over different time horizons. Immediate WOM happens soon after people first learn about or experience a product. For example, a woman might tell her friend about a movie she saw recently or a shirt she just bought. Ongoing WOM, in contrast, is the product mentions that occur in the weeks and months that follow. For example, a man might mention a movie he saw last month or a shirt he bought last year. Although immediate WOM is certainly important (e.g., building product awareness soon after a new release), most brand managers also care about the volume of WOM a product receives in the long run. Consequently, encouraging ongoing WOM should be particularly important for product success. Furthermore, knowing *when* certain aspects of products lead to more WOM can help inform marketing plans over the course of a campaign.

We suggest that there are some important differences in what drives WOM over these different time horizons. More interesting products may generate immediate WOM because they are novel, but because interest fades over time (Moldovan, Goldenberg, and Chattopadhyay 2006; Wu and Huberman 2007), they may not receive more ongoing WOM. In a sense, interesting products may become less interesting as people learn more about them. Cues and visibility, in contrast, should have more persistent effects. Products that are cued more right away should also tend to be cued more frequently over time. Similarly, products that are more publicly visible when they are first experienced should tend to be more visible even weeks or months later. Consequently, whereas more interesting products may only get more immediate WOM, products that are more visible, or cued more often, should get both more immediate and more ongoing WOM (and thus more WOM overall).

THE CURRENT RESEARCH

In summary, we investigate whether products that are more interesting, publicly visible, or cued by the environment receive more WOM, both immediately and over time. First, we analyze hundreds of WOM marketing campaigns to examine the link between product characteristics, as well as promotional giveaways, and WOM. Second, we designed both field and laboratory experiments to test the causal impact of cues, visibility, and interest on what is discussed.

FIELD ANALYSIS OF WOM

Our first study uses a unique data set detailing face-to-face WOM on more than 300 products (e.g., cars, clothes, cleaning products; see Table 1). It includes information about each product, the WOM marking campaign surrounding it, and how much each person in each campaign talked about the product.

In addition to testing how cues, visibility, and interest are related to WOM over different time horizons, we also examine how aspects of WOM campaigns themselves are linked to WOM (Ryu and Feick 2007). Most WOM campaigns involve sending consumers promotional giveaways to encourage them to talk about the product. Consumers may also receive free samples (e.g., participants in a Tabasco campaign were sent a bottle of hot sauce to try), coupons, product rebates, or extras such as brochures, postcards, or stickers. The prevalence of such giveaways suggests that firms believe they boost WOM. A full 96% of campaigns conducted by a major WOM marketing firm included at least some type of promotional giveaway, and 72% included multiple types.

However, the question remains: Are these giveaways actually effective? Although sending consumers promotional items is common, no work has examined which types of giveaways, if any, are linked to more WOM. Giveaways might generate reciprocity (Cialdini 2001) or positive affect, and those that provide product experience may boost information and reduce uncertainty (Hoch and Ha 1986), making it easier for people to learn about the product and have an opinion to share. We examine the relationship between giveaways and WOM and then discuss how these potential explanations fit with the results.

Data

BzzAgent, a marketing company that conducts marketing campaigns to help clients get more WOM for their products, provided the data for our study. BzzAgent uses its client's geographic and demographic specifications (e.g., "women in Chicago") to invite volunteers ("agents") to participate in

Table 1
PRODUCT CATEGORIES

Category	*Proportion*
Packaged food	20%
Books	18%
Household products	13%
Personal care	10%
Entertainment/games	7%
Software/technology	6%
Pharma/medical	4%
Retail	4%
Beers/wines/spirits	4%
Travel and tourism	3%
Financial services	2%
Restaurant	2%
Auto care	1%
Clothing/fashion	1%
Other	4%

each campaign. Agents who agree are all sent the same information about the product as well as promotional giveaways. Agents are not required say positive things; they are simply asked to report when they share WOM about the product. The number of reports filed by a given agent in a given campaign serves as our outcome measure (Cheema and Kaikati 2010; Godes and Mayzlin 2009). Each campaign runs for several weeks.[1]

Our data include information about all agents who participated in at least one campaign between August 2002 and January 2009. Participation means that an agent completed a precampaign survey and logged into the BzzAgent website at least once during the campaign. Importantly, participation does not require talking about the product. One report is considered equivalent to one conversation.

We took a stratified sample by taking a uniform sample of 2000 agents and using all the campaigns in which those agents participated.[2] This yields nearly 11,000 observations, where each observation is how many conversations that agent had in that campaign (i.e., the agent-in-campaign level).[3] The histogram of number of conversations (Appendix A) shows that the counts are skewed toward zero (i.e., 43% of the time, no conversations were reported by a given agent in a given campaign). The median number of conversations is one, but 10% of all observations are five or more conversations. This follows a common pattern of overdispersed count data, so we use a Poisson log-normal model with multiple levels of parameter heterogeneity (for more details regarding the statistical model and results, see Appendix A).

Key Independent Measures

A set of independent coders (N = 109, mean age = 42 years) quantified each product characteristic. By using coders who are in the target market for such products and have similar demographic backgrounds to agents, we strengthen the validity of the measures and resulting conclusions. To avoid fatigue, we gave each coder 50 products (e.g., Kellogg's Smorz Cereal) and a brief description of each, and we asked them to code each product on a five-point scale (1 = "not at all," and 5 = "very"). Those who coded *interesting* were asked, "How interesting is this product?" Those who coded *cues* were asked, "How frequently might the surrounding environment cue or remind people to think about the product?" Those who rated *public visibility* were asked, "How publicly visible is this product?" Coding was done at the product-campaign level, and participants coded each product individually (e.g., "How publicly visible is Kellogg's Smorz Cereal?"). Coders rated each product from the perspective of a potential customer. We averaged scores across coders for each dimension (for more details, see Table 2).[4]

In addition, we recorded which promotional giveaways agents received in each campaign (i.e., the product or coupons/rebates; Table 3). The various independent measures are reasonably uncorrelated (Table 4). We also included several controls. Specifically, we controlled for price, product category, agent experience, campaign length, and calendar time.[5] Not all products can be sent in the mail (e.g., Taco Bell meal, Dodge truck), so we included a dummy variable in the analysis to control for whether products could realistically be given away (for relationship between price and giveaways, see Appendix B).

[1]In the sample, 80% of campaigns lasted 10–13 weeks, and we control for length in the model. Campaign length is set before campaigns start, was not extended as campaigns progressed, and did not relate to our focal variables. In general, campaigns are sequential, and most agents are involved in only one campaign at a time.

[2]The results are substantively the same when we use other samples.

[3]We sampled this way because there is substantial variability in campaign size and the number of campaigns in which each agent participated. The middle 50% of all campaigns involved between approximately 1000 and 5000 agents. However, approximately 10% of campaigns had more than 10,000 agents, and approximately 15% included fewer than 1000 agents. Although the median of agent experience is three campaigns, approximately 25% of agents participated in only one campaign and 10% participated in more than 13 campaigns.

[4]It is difficult to calculate interrater reliability, given that each person rated a different set of products, but when separate sets of research assistants coded the full set, interrater reliability was high (all αs > .79). This suggests there is a great degree of agreement in how interesting, visible, or cued people perceived the products.

[5]Price varied greatly, so we used the square root to capture potential diminishing marginal effects (results are robust to a log transformation). We included product category fixed effects according to those provided by BzzAgent (Table 1). We captured agent experience at the time of the campaign using both linear and quadratic terms to capture possibly changing marginal effects of participating in many campaigns. Campaign length was the number weeks the BzzAgent campaign lasted. We operationalized calendar time using fixed effects of all years in the data set and all 12 months of the possible campaign start dates. The results are robust to controlling for campaign size either by including the number of agents invited to participate (available for a subset of campaigns) or the number of agents who participated in a campaign.

Table 2
PRODUCT CHARACTERISTICS

Product Characteristic	*M*	*SD*	*Quantiles*				
			Min	*25%*	*Mdn*	*75%*	*Max*
Cues	2.19	.87	1.0	1.5	2.0	2.8	5.0
Public visibility	2.66	.64	1.2	2.2	2.7	3.0	4.5
Interesting	2.79	.80	1.0	2.3	2.3	3.3	5.0

Table 3
PROMOTIONAL GIVEAWAYS

Promotional Giveaway	*Proportion*
Free products	57%
Samples	16%
Extras	47%
Coupons or rebates	53%

Table 4
CORRELATION MATRIX FOR PRODUCT CHARACTERISTICS AND PROMOTIONAL GIVEAWAYS

	C	*P*	*I*	*FP*	*S*	*E*	*C/R*
Cues (C)	—	.03	.13	.23	.18	–.01	.19
Public (P)		—	.02	–.01	.07	.16	.11
Interesting (I)			—	.15	–.02	–.07	.27
Free product (FP)				—	.07	–.11	–.17
Samples (S)					—	–.07	–.01
Extras (E)						—	.05
Coupons/rebates (C/R)							—

Notes: The variables presented in the correlation matrix are on campaign-level measures. None of the relationships had a correlation with absolute value larger than .30.

Model Development

We model WOM at the individual level, examining the number of conversations each agent had during a particular time period of a particular campaign. It is important that our model weights the data from both individuals and campaigns according to how many observations we have for each. We capture these two levels and differing amount of information using a hierarchical model (Gelman and Hill 2007).[6] In addition, we capture time dynamics of WOM by an agent within a campaign by splitting the campaign into two periods and examining how product characteristics have different effects on immediate and ongoing WOM (i.e., across those two periods). We use a Poisson log-normal model, a type of generalized linear mixed-effects models.

Formally, each observation, y_{ijt}, represents the number of conversations agent i had during time t of a campaign j for a particular product. Each of those observations has an unobserved Poisson rate of conversations, λ_{ijt}. This rate parameter, or the expected number of conversations, is a log-linear combination of the global mean μ, each individual agent's talking propensity α_i, each product campaign's propensity to be talked about δ_{jt}, and each observation-specific unobserved error ε_{ijt}. That is,

$$y_{ijt} \sim \text{Poisson}\ (\lambda_{ijt}) \tag{1}$$

$$\log\ (\lambda_{ijt}) = \mu + \alpha_i + \delta_{jt} + \varepsilon_{ijt}, \tag{2}$$

where the product-campaign's propensity δ_{jt} has both unobserved components γ_j and observed components $X_j\beta_t$, denoted by product campaign covariate vector $\mathbf{X}_j$ and the coefficient vector β_t, which is common across agents but time specific:

$$\delta_{jt} = \gamma_j + X_j\beta_t. \tag{3}$$

The components of β_t reflect the relationships between the predictors and WOM for each time period. The parameters ε_{ijt}, α_i, and γ_j are unobserved random effects and vary across observations, agents, and campaigns, respectively. They are independently normally distributed:

$$\varepsilon_{ijt} \sim N(0, \sigma_\varepsilon),\ \alpha_i \sim N\ (0, \sigma_\alpha), \text{ and } \gamma_j \sim N\ (0, \sigma_\gamma), \tag{4}$$

where the parameter σ_α reflects the degree of unobserved heterogeneity across individual agents and σ_γ reflects the degree of unobserved heterogeneity across campaigns (not accounted for by the impact of observed covariates $X_j\beta_t$). The parameter σ_ε reflects the degree of overdispersion in the counts, conditional on the other parameters. This observation error, ε_{ijt}, can be interpreted as the unobserved interaction effect of a particular person's propensity to talk about a particular product-campaign in a particular time period. As in random effects models, we assume the observed predictors are uncorrelated with the random effects.

To investigate our key questions, we examine the coefficients representing the associations of each product characteristic and campaign giveaway with WOM. We study the temporal course of WOM by splitting each campaign into two nonoverlapping, consecutive periods (immediate and ongoing WOM). In particular, we examine the associations of each product characteristic with WOM over time. Our focal analyses treat the immediate time period as the first three weeks of the campaign and ongoing as the remaining part (typically about seven weeks). We use a discrete approach because it is simpler to interpret and the data are quite sparse for the continuous approach. That said, our results are robust to other ways of dividing the two time periods (e.g., defining the immediate part as the two weeks, four weeks, first half, first third, or first fourth a campaign). Overall WOM refers to the WOM over the whole length of the campaign.

In summary, we model the counts of conversations at the level of an agent in a campaign during a given period. Using a multilevel modeling approach, we test how cues, visibility, and interest are linked to immediate, ongoing, and overall WOM.

Results and Discussion

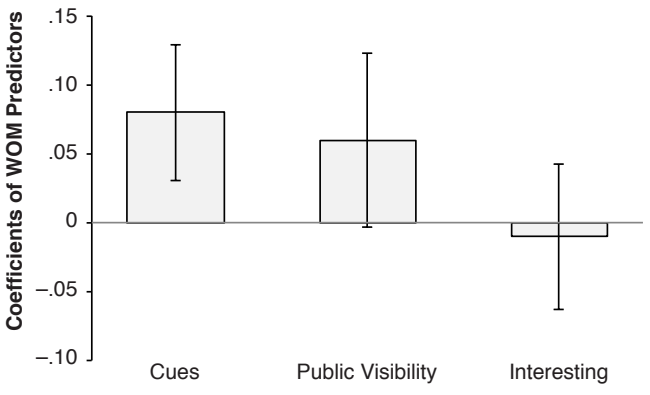
Product characteristics. What types of products are talked about more? Our results indicate that being cued, publicly visible, and interesting all shape WOM but that these relationships vary over different time horizons.

First, we examined overall WOM. Products that are cued more by the environment ($\beta = .08$, $t = 3.17$) or are more publicly visible ($\beta = .06$, $t = 1.86$) receive more overall WOM (Figure 1). The size of the coefficients suggest that compared with a product one standard deviation below the mean in cues, a product one standard deviation above the mean gets an average of 15% more WOM overall. Similarly, a product that is one standard deviation above the mean in public visibility gets an average of 8% more WOM overall. More interesting products, however, did not receive more overall WOM ($\beta = -.01$, $t = -.37$). The results are similar using other ways to measure interest (e.g., novelty, originality, surprise), casting doubt on the possibility that our findings are driven by the specific measure used.

Next, we examined immediate and ongoing WOM. As predicted, both cues and public visibility are associated with

Figure 1

CUED AND PUBLICLY VISIBLE PRODUCTS GET MORE OVERALL WOM, BUT MORE INTERESTING PRODUCTS DO NOT (CROSS-CAMPAIGN ANALYSIS)



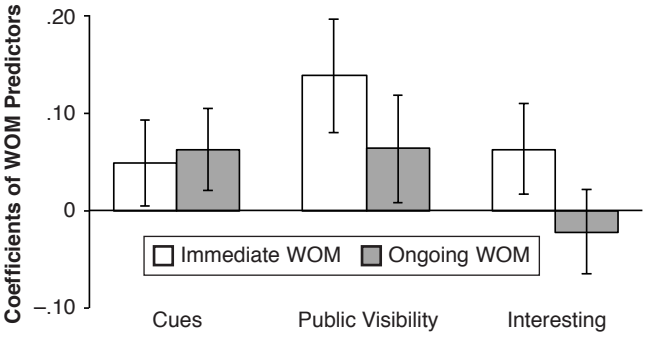
Notes: This is the visualization of the table presenting the results from the "whether" model of overall WOM. The bars show the estimated coefficient value. The error bars show the 95% confidence interval for the coefficients.

[6]This approach stems from the classic item response theory model (Gulliksen 1950; Lord 1980).

whether people talk about products right after they experience them and whether they continue to talk about them over time (Figure 2). Products that are cued more by the environment receive more immediate WOM (β = .05, t = 2.13) and more ongoing WOM (β = .06, t = 2.92). Products that are more publicly visible also receive more immediate WOM (β = .14, t = 4.65) and more ongoing WOM (β = .06, t = 2.23). Furthermore, consistent with our theorizing, the relationship between interest and WOM varied over time. Although more interesting products received more immediate WOM (β = .06, t = 2.67), they did not receive any more ongoing WOM (β = –.02, t = –1.01). This suggests that although more interesting products are talked about more right after people first get them, they do not continue to receive more discussion in the months that follow.

Promotional giveaways. We also examined the relationship between different giveaways and overall WOM (Table 5). Giving away the product itself or sending nonproduct extras (e.g., stickers, hats) were both associated with strong and significant increases in WOM. Sending consumers a full product to try, for example, is associated with a 20% increase in WOM, on average. Sending extras is associated with 15% more WOM. Neither samples nor coupons and rebates, however, were linked to increased WOM. This suggests that promotional giveaways may help boost WOM but that certain types of giveaways seem significantly more effective than others.

Figure 2
RELATIONSHIP BETWEEN PRODUCT CHARACTERISTICS AND WOM OVER DIFFERENT TIME HORIZONS (CROSS-CAMPAIGN ANALYSIS)



Notes: This is the visualization of the table presenting the results from the "when" model of immediate and ongoing WOM. The bars show the estimated coefficient value. The error bars show the 95% confidence interval for the coefficients.

Table 5
RELATIONSHIP BETWEEN PROMOTIONAL GIVEAWAYS AND WOM (CROSS-CAMPAIGN ANALYSIS)

	Overall WOM	
	β	*t*
Product	.18	3.06
Sample	.05	1.07
Extras	.14	3.49
Coupon/rebate	–.01	–.11

Notes: The table displays results dealing with promotional giveaways from the "whether" model (as described in Table 3).

Although it is difficult to draw definitive conclusions from these relationships alone, they provide at least some suggestion about why giveaways may boost WOM. A reciprocity or mood-based explanation suggests that any giveaway should increase WOM, but this was not the case. Rather, the results appear more consistent with a product-experience explanation. Giving away the product itself provides the most experience, and this was the giveaway most strongly linked to increased WOM, on average. Moreover, although extras do not provide product experience, they may boost WOM because they act as a cue, increasing product accessibility and making it more likely to be mentioned.[7]

Potential Limitations

Alternative explanations have trouble explaining the overall pattern of results. For example, it could be argued that agents exaggerate WOM to seem hardworking or underreport because of laziness. If such biases exist, however, they should occur across campaigns and cannot explain the observed WOM variation across campaigns.

Furthermore, selection-oriented explanations (at the level of agents, campaigns, clients, or BzzAgent) cannot explain the results. It could be argued that BzzAgent only offers campaigns to agents who are most likely to talk about those products or that agents self-select into campaigns in which they will talk a great deal. Discussions with BzzAgent, however, cast doubt on these possibilities. Rather than the quickest or most engaged agents gaining access, the company allocates agents to campaigns according to the client's geographic and demographic constraints (e.g., having kids). Often, this fills the campaign quota. If there is still room, BzzAgent prioritizes people who have not done a campaign recently, making it less likely that people with high WOM propensities self-select into any campaign they want. In addition, if the best agents were getting into campaigns first, average WOM per agent should be lower in larger campaigns, because less effective agents would be included to fill the quota. This is not the case. There is no correlation between the number of agents in a campaign and average WOM per agent (r = –.01, p = .90). Finally, even if these biases did exist, they would boost talking across campaigns but not bias our focal coefficients, which depend on differences between campaigns.

Alternatively, it could be argued that clients only hire BzzAgent if they think a campaign will boost WOM; therefore, the data only include "easy to talk about" products. However, the reverse is also possible: Firms might only hire BzzAgent if their product is not getting enough WOM naturally; therefore, the data set may contain many products that are difficult to talk about. Either way, this selection would shift the average WOM across products but does not explain how WOM varies with product and campaign characteristics.

Finally, it could be argued that clients give away products only when they anticipate that trial will increase WOM. That is, the design of a campaign is endogenous to campaign success. Discussions with BzzAgent, however, indicate that variation in giveaways was driven by clients wanting to save money or not having products available to share. Furthermore, if this was the case, giving away samples or

[7]Consistent with this, ancillary analyses reveal a negative extras × cues interaction, suggesting that extras may work through a similar mechanism as cues.

coupons should also be linked to increased WOM, but they are not.

To be a true concern, selection would have to be correlated with our suggested drivers of WOM. Although selection seems plausible for some product characteristics, it makes less sense for the ones we find to be significantly associated with WOM. It is possible that agents pick campaigns they think will be interesting, but it is less likely that they would consider how often a product is cued by the environment.

FIELD EXPERIMENT

The breadth of products and categories used in the cross-campaign analysis speaks to the generality of the findings, but one may still wonder whether the observed relationships are truly causal. Consequently, we conducted a field experiment to test whether boosting the cues for a product increases WOM.

Product accessibility can be increased by creating links to stimuli with which the product was not already associated. Linking a reminder to eat fruits and vegetables to an object in dining halls, for example, increased fruit and vegetable consumption by encouraging people to think about the reminder more (Berger and Fitzsimons 2008). Along these lines, we manipulated cues by manipulating the messaging different participants received during a BzzAgent campaign for the restaurant chain Boston Market. Half the agents received a message linking the product to a particular cue (dinner), while the other half received a control message.

To illustrate the causal role of cuing, we also measured participants' prior associations between the cue and the brand to test whether it moderates the effects. Dinner should already bring the brand to mind for people who more strongly associate the product with that cue (strong associates), and thus, the dinner manipulation should have little impact on either product accessibility or their WOM. But for people who do not already associate Boston Market with dinner (weak associates), creating a link between the product and that cue should boost product accessibility and thus the frequency with which they talk about the brand.[8]

Method

The experiment was run on 1687 BzzAgents who participated in a campaign for Boston Market. Before the campaign started, we measured how much participants associated the product with dinner: "Boston Market is a dinner place" (1 = "strongly disagree," and 7 = "strongly agree").

The only difference between conditions was the focus of three e-mail messages agents received during the campaign. Half the agents received control messages, while the other half received messages that linked Boston Market to dinner. For example, for participants in the control [cue] condition, the subject line read "Thinking About a Place to Eat [Thinking About Dinner]? Think About Boston Market!" (for full text, see the Web Appendix at http://www.marketingpower.com/jmroct11). We analyzed the data using a Poisson model.

Results

Consistent with our theorizing, broadening the potential set of cues for the product increased WOM (Figure 3). Analyses revealed a significant message × preexisting product association interaction ($\beta = -.08$, $z = -1.82$). As predicted, decomposition of the interaction one standard deviation above and below the mean product association shows that while the message had no effect on participants who already associated Boston Market with dinner ($\beta = -.07$, $z = -.73$), it boosted WOM by 20% among participants who did not already associate the chain with that usage situation ($\beta = .17$, $z = 1.84$).

Stated another way, while the control condition shows that participants with stronger preexisting dinner associations naturally tended to talk about the brand more ($\beta = .06$, $z = 1.79$), the dinner message reduced this discrepancy. In the dinner condition, participants with low preexisting dinner associations talked about the brand as often as participants with high preexisting dinner association ($\beta = -.02$, $z = -.51$).

Discussion

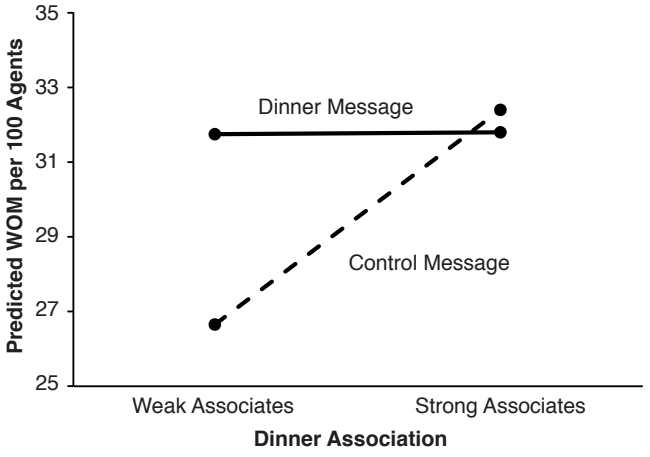
The field study provides causal support for results of the cross-campaign analysis; increasing the cues for a product—in this case, linking it to a usage situation that some participants did not already associate it with—increased WOM. Among participants who did not already associate Boston Market with dinner, linking the product to that cue led to a 20% boost in WOM. This moderation demonstrates that these effects are driven by cuing rather than a particular message just happening to be more effective overall. Ancillary analyses also show that the manipulation did not make Boston Market seem more interesting or novel, even among people who do not already associate the chain with dinner, ruling out these alternative explanations for the results.

LAB EXPERIMENT

Our final study provides a further test of how accessibility and interest shape WOM through a controlled laboratory experiment. In this study, we use ordinary participants to test whether the effects generalize beyond people who participate in WOM marketing campaigns. We recorded people

Figure 3

EFFECT OF DINNER MESSAGE ON WOM IS STRONGEST AMONG PEOPLE WHO DO NOT ALREADY ASSOCIATE THE BRAND WITH THAT CUE (FIELD EXPERIMENT)



Notes: The four points are predicted number of WOM conversations per 100 agents for each condition at one standard deviation below and above the average dinner association.

[8]Weak dinner associates are familiar with the brand but associate it with other situations (e.g., lunch).

having real, everyday conversations and manipulated the public visibility of certain products, as well as the cues for certain topics, to observe how this affected what was discussed. We also varied the interest level of the different products to examine whether more interesting products were more likely to be mentioned. We used existing products that were already familiar, so the effects should be similar to the ongoing WOM observed in the cross-campaign data. Publicly visible or cued products or topics should be more likely to be discussed because they are top of mind, but more interesting things should not be talked about more.

Method

Participants (N = 120) completed the experiment as part of a larger set of studies. Pairs of participants were brought into a small room, ostensibly for a study on choice. They were seated at a small table, and after completing demographic information, they were given a cover story to disguise the true purpose of the study. After rustling through a stack of papers, the experimenter said that she had "run out of experimental materials" and asked the participants to talk among themselves while she went to make copies. While the experimenter was gone, a laptop in the corner of the room unobtrusively recorded what, if anything, the participants discussed. The experimenter returned approximately ten minutes later, apologized for the delay, and debriefed participants.

To test our underlying hypotheses, we manipulated what was in the room. One pair of products was visible for half the participants (music CDs and recruiting books), while a different pair was visible for the other half (semester abroad books and accounting textbooks). These items were placed on a different table but were in full view of the participants. We picked pairs of products according to their level of interest. Pretest data indicated that one item in each pair (CDs and semester abroad books) was more interesting than the other (recruiting books and accounting textbooks).

Our key dependent measure was whether participants talked about any of the focal products or topics that the products should have cued. Two research assistants, blind to condition and hypotheses, listened to the recording of each conversation and coded whether participants discussed a variety of products and topics (disagreement was resolved through discussion). To test whether visibility influenced what was talked about, they coded whether participants discussed any of the four focal products (the CDs, semester abroad books, recruiting books, and accounting textbooks). To test whether cues influenced what was talked about, the research assistants coded whether participants discussed a set of predetermined topics that the focal products could have cued: The CDs might cue people to think about the big upcoming concert on campus, the semester abroad books might trigger discussions of travel during the school break the following week, recruiting books might trigger discussions of résumés, and accounting textbooks might trigger discussions of accounting classes. Finally, to test whether interest influenced WOM, for each pair of products, we examined (1) whether the more interesting product of the pair was discussed more often and (2) whether the more interesting cued topic of the pair (concerts and vacation destinations, respectively) was discussed more often.

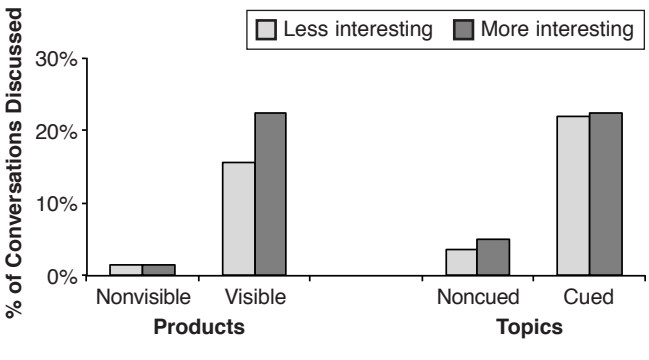
Results

First, we examined public visibility. The results indicate that products were more likely to be discussed when they were publicly visible (19% vs. 2%, Figure 4). While recruiting books were discussed in only 3% of control conversations, they were discussed in 18% of conversations when recruiting books were in the room ($\chi^2(59) = 3.45$, $p < .06$). The other products displayed the same pattern. The CDs (32% vs. 3%; $\chi^2(59) = 8.74$, $p < .003$), accounting books (13% vs. 0%; $\chi^2(59) = 3.88$, $p < .05$), and semester abroad books (13% vs. 0%; $\chi^2(59) = 3.88$, $p < .05$) were all more likely to be talked about when they were publicly visible than when they were not.

Next, we examined cued topics. The results indicate that things were more likely to be discussed when they were cued by the surrounding environment (22% vs. 4%; Figure 4). While résumés were discussed in only 3% of control conversations, they were discussed in 25% of conversations when recruiting books were in the room ($\chi^2(59) = 5.92$, $p < .01$). Other topics displayed the same pattern. The upcoming concert was more likely to be discussed when CDs were in the room (18% vs. 3%; $\chi^2(59) = 3.45$, $p = .06$), accounting classes were more likely to be discussed when accounting textbooks were in the room (19% vs. 4%; $\chi^2(59) = 3.51$, $p = .06$), and school break travel was more likely to be discussed when semester abroad books were in the room (29% vs. 7%; $\chi^2(59) = 4.65$, $p < .05$).

Finally, we examined interest. The results provide little evidence that more interesting products were discussed more often. Although CDs were rated as more interesting than recruiting books, they were equally likely to be discussed (17% vs. 10%; $\chi^2(59) = 1.16$, $p > .25$). Similarly, although semester abroad books were rated as more interesting than accounting textbooks, they were equally likely to be discussed (7% vs. 7%). The same held true for triggered topics. Although the concert was rated as more interesting than résumés, for example, they were equally likely to be discussed (14% vs. 10%; $\chi^2 < .4$, $p > .55$). Similarly, while school break travel was rated as more interesting than accounting classes, they were equally likely to be discussed (19% vs. 12%; $\chi^2 = 1.05$, $p > .30$). Overall, the less interesting products and topics were talked about as often as the more interesting products and topics (11% vs. 13%; Figure 4).

Figure 4
HOW PUBLIC VISIBILITY, CUES, AND INTEREST AFFECT WHAT PEOPLE TALK ABOUT (LAB EXPERIMENT)



Discussion

These results further underscore our suggestion that accessibility shapes WOM. Manipulating publicly visibility and cues influenced what people talked about. Products were more likely to be discussed when they were publicly visible, and topics were more likely to be discussed when related cues were in the surrounding environment. There was little evidence that more interesting things were discussed more.

Because we found similar results to the cross-campaign analysis while using ordinary people who did not participate in WOM marketing campaigns, the generalizability of our effects is bolstered. Although it could be argued that agents talk more than members of the general population, these results illustrate that the psychological drivers of WOM we identified are not restricted to that population.

GENERAL DISCUSSION

Word of mouth is frequent and important. It affects diffusion and sales, and as a result, WOM campaigns have become a standard part of many companies' marketing plans. However, although it is clear that consumer conversations affect product success, less is known about the *causes* of WOM or why certain products are talked about more than others, both immediately and over time. Moreover, companies often send consumers promotional items to encourage them to talk, but no empirical work has examined whether these giveaways are actually linked to more WOM. In summary, although research has shown that WOM has important consequences, less is known about why consumers talk or how marketing campaigns can generate more WOM.

This research sheds light on psychological drivers of WOM and provides insight into how to design more effective WOM campaigns. Our analyses of WOM marketing campaigns for hundreds of products, as well as field and laboratory experiments, provide insight into how product characteristics shape both immediate and ongoing WOM. Products that are more publicly visible, or cued more frequently by the environment, receive more immediate, ongoing, and overall WOM. However, although more interesting products receive more WOM right after consumers learn about or experience the product, they do not receive more ongoing WOM over a multimonth period (or overall). Taken together, the results suggest whether products continue to be discussed depends less on how interesting they are and more on whether they stay relatively accessible in consumer minds.

Although people may think they talk about interesting things more than boring ones, this may be due to self-presentation and memory biases. Most people prefer not to seem boring, so if asked to rate what they would talk about, they would report being more likely to talk about interesting things, even if that is not what would actually occur. Similarly, people may think they talk about interesting things because those things stick in memory, but people do not remember all the boring things they talk about because those things are not that noteworthy.

Our findings also suggest that promotional giveaways may boost WOM but that certain types of giveaways are more effective than others. Giving away the product itself or nonproduct extras (e.g., logo hats, recipes) are positively linked to more overall WOM. Although neither samples nor coupons and rebates were linked to increased WOM, they may be useful for increasing other outcomes (e.g., sales, quality of conversations).

More broadly, by combining empirical analysis of hundreds of products across dozens of categories with field and laboratory experiments, we bolster the generalizability of the results while underscoring the causal role that public visibility and cues play in increasing WOM. By mapping consumer behavior theory and findings from statistical analysis of observational data onto the controlled field and laboratory experiments, we further enhance the contributions to theory and marketing practice.

Managerial Implications

Our results shed light on how to design more successful WOM marketing campaigns, as well as how to design products and advertising to increase WOM. Although managers often think that only outrageous or surprising products are WOM worthy (Dye 2000), our research shows that even mundane products can get a great deal of WOM if they are publicly visible or cued frequently by the environment. Consequently, managers should think about how to make products more visible and consider the structure of the surrounding environment when designing products or marketing messages. The "Weekends Are Made for Michelob" campaign, for example, created a link between the beer and the weekend, increasing the chance that consumers think (and talk) about the beer when the weekend arrives. Our field experiment further demonstrates how this notion can be applied. Marketing actions (e.g., messaging) can create or strengthen links between a product and cues in environment, increasing product accessibility and WOM. By considering not only whether something will be surprising or novel but also whether it will be triggered by the surrounding environment, managers can increase WOM (as well as consumer choice; Berger and Fitzsimons 2008; Nedungadi 1990).

By recognizing how different factors shape WOM over different time horizons, managers can also increase the effectiveness of marketing message. For example, while messages emphasizing novelty may help boost immediate WOM, they are less likely to generate ongoing discussion. Messages that generate or strengthen links to environmental cues, however, should induce WOM that is more ongoing.

The findings also suggest how to use promotional giveaways more effectively. If generating more WOM is the goal, sending consumers the full product to try, or related extras, seems to be the best approach. However, whether giveaways are cost-effective depends on their cost and the value of WOM. As we noted previously, giving away a product is associated with approximately a 20% boost in overall WOM. However, the return on investment (ROI) depends on how many purchases eventually occur as a result of those conversations that would not occur otherwise (including repeat purchases) and the product mailing cost. Table 6 illustrates how the expected ROI of giving away a product varies under different circumstances using the following equation:

$$E(ROI) = \text{Unit Profit} \times \text{Purchases per Conversation} \times \text{Avg.\%Change in WOM} - \text{Mailing Cost}. \quad (5)$$

In other words, expected ROI will be the unit profit (e.g., $10) times the purchases per conversation and the average WOM boost from giving away the product (20%), all minus the product mailing cost. For example, if the product mailing cost is $1, giving away the product is cost effective as

Table 6
EXPECTED ROI OF PRODUCT GIVEAWAYS

	Purchases per Conversation		
Product Mailing Cost	*.5*	*1.0*	*2.0*
$1.00	$.00	$1.00	$3.00
$2.00	–$1.00	$.00	$2.00
$3.00	–$2.00	–$1.00	$1.00

Notes: The table shows that expected ROI of a product giveaway is sensitive to mailing cost and the number of purchases that stem from each WOM conversation.

long as more than one purchase stems from each initial WOM conversation. In contrast, if the mailing cost is $2, the giveaway will only net positive ROI if two purchases stem from each conversation.[9] Although precise ROI of each WOM marketing campaign element is beyond the scope of our data, the framework we use here should be considered the first step for researchers and managers to run such a cost–benefit analysis.

Directions for Further Research

We have examined how cues, visibility, and interest affect WOM, but other product characteristics matter as well. People may talk more about products that they like, for example, or those that signal their identity (Berger and Heath 2007; Wojnicki and Godes 2008).[10] It might also be useful to examine how interest, cues, and visibility affect other outcomes (e.g., WOM valence, quality, conversation length, conversation size, sales). For example, more interesting products may generate longer conversations or more positive WOM.

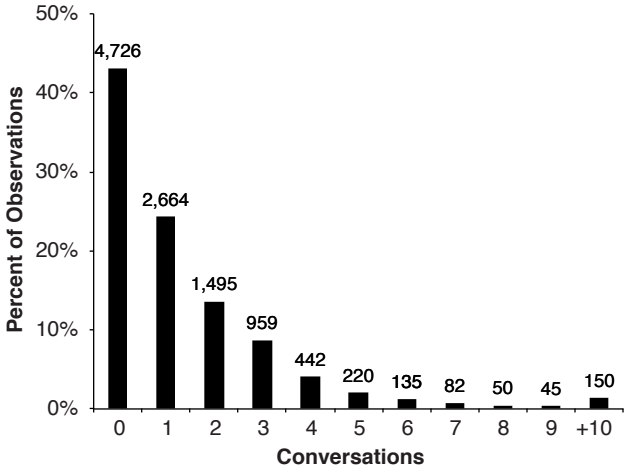
Researchers might also examine the differential impact of immediate and ongoing WOM on diffusion. Although the overall amount of WOM a product receives depends heavily on it continuing to be discussed (ongoing WOM), immediate WOM should be particularly important for products that have short life cycles (e.g., movies), for which early sales affect later distribution (e.g., books) or an early installed base is important because of positive network effects (e.g., mobile phone network).

A particularly rich area for further investigation is differences in drivers of online and offline (i.e., face-to-face) WOM. Prior work has mostly used online conversations, reviews, or content transmission to study WOM (Berger and Milkman 2011; Godes and Mayzlin 2004; Moe and Trusov 2011), but more than 75% of WOM actually occurs face-to-face (Keller and Libai 2009). An important difference is that face-to-face interactions may have a lower threshold for discussion. It is awkward to have dinner with a friend in silence or ride in a cab with a colleague without conversing; therefore, few things will be deemed too boring to talk about. Consistent with this, most WOM reported to BzzAgent is face-to-face, and we find that more interesting products do not get more WOM overall. With online WOM, however, the threshold for discussion is often higher. Most decisions to post a review or share a news article are not driven by the need to fill conversational space but by the belief that there is useful or interesting information to be passed along. More practically useful or surprising *New York Times* articles, for example, are more likely to make the most e-mailed list (Berger and Milkman 2011). Consequently, factors such as interest or practical utility may have a greater impact on online transmission (Berger and Iyengar 2012).

Another potential difference is whether WOM is affected by the temporal distance between an experience and talking about it. People often forward online content (e.g., articles, videos) soon after they find it, but face-to-face interactions often involve discussions about more distal experiences. Consequently, how top of mind various experiences are (i.e., accessibility in memory) may play a larger role in face-to-face versus online WOM. Online and offline WOM also differ in whether the decision is about what to share or with whom to share it. In online WOM, the content comes first (e.g., reading a given article), and people then decide whether and with whom to share it. In offline WOM, however, the discussion partner(s) usually comes first (e.g., talking to a certain people or group of people), and people then decide what to share. These different decisions could have a significant impact on WOM.

In conclusion, WOM provides a fertile domain to integrate consumer psychology and marketing science. The emergence of social media and online WOM has provided a wealth of data on what consumers say, share, and do. While analyzing this data correctly requires an appropriate toolkit, it provides the opportunity to address a rich set of behaviorally and managerially relevant questions.

Appendix A
HISTOGRAM OF DATA AND ADDITIONAL MODEL RESULTS (CROSS-CAMPAIGN ANALYSIS)



Notes: The histogram contains all observations from 2000 agents across 335 campaigns. Visualizing this informs the modeling approach. The two main models for the cross-campaign analysis ("whether" and "when" models) involved multiple levels of unobserved heterogeneity. The most unobserved variability is captured by the observation level random effects (σ_ε = .77 for "whether" and .51 for "when"), followed by the unobserved heterogeneity across agents (σ_α = .69 for "whether" and .46 for "when"). The remaining unobserved heterogeneity across campaigns not accounted for by the observed campaign-level factors was smallest (σ_γ= .27 for "whether" and .24 for "when"). These hierarchical models were not estimated using fully Bayesian inference, rather by quasi-likelihood estimation technique involving a Laplace approximation (Bates 2010).

[9]These calculations consider the product's unit cost of production to be a sunk cost.

[10]We found no relationship between WOM and product price, for example, but there was a significant relationship with hedonicity, such that hedonic products received more WOM than more utilitarian ones.

Appendix B

PROMOTIONAL GIVEAWAYS AND PRODUCT PRICE—PROPORTION OF CAMPAIGNS WITH EACH GIVEAWAY BY PRICE TIER

Price Tier	*Number of Campaigns*	*Product*	*Sample*	*Extras*	*Coupon/Rebate*	*Potential Product*
$0	35	29%	3%	63%	46%	40%
$.01 to $3.99	52	58%	21%	48%	75%	71%
$4.00 to $9.99	82	62%	22%	39%	77%	79%
$10.00 to $19.99	86	67%	8%	45%	22%	86%
More than $20	80	53%	21%	51%	51%	60%
Overall	335	57%	16%	47%	53%	71%

Notes: Price tiers are approximately the quartiles of price, with free products separated out from the rest of the bottom quartile.

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