

# Popularity of Brand Posts on Brand Fan Pages: An Investigation of the Effects of Social Media Marketing

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## Abstract

Social media outlets constitute excellent vehicles for fostering relationships with customers. One specific way to do this is to create brand fan pages on social networking sites. Companies can place brand posts (containing videos, messages, quizzes, information, and other material) on these brand fan pages. Customers can become fans of these brand fan pages, and subsequently indicate that they like the brand post or comment on it. This liking and commenting on brand posts reflects brand post popularity. In this article, we determine possible drivers for brand post popularity. We analyze 355 brand posts from 11 international brands spread across six product categories.

Results show that positioning the brand post on top of the brand fan page enhances brand post popularity. But the findings also indicate that different drivers influence the number of likes and the number of comments. Namely, vivid and interactive brand post characteristics enhance the number of likes. Moreover, the share of positive comments on a brand post is positively related to the number of likes. The number of comments can be enhanced by the interactive brand post characteristic, a question. The shares of both positive and negative comments are positively related to the number of comments. Managers of brands that operate brand fan pages can be guided by our research with regards to deciding which characteristics or content to place at brand posts.

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## Introduction

In 2011, more than 50% of social media users follow brands on social media (Van Bellegem, Eenhuizen, and Veris 2011) and companies are increasingly investing in social media, indicated by worldwide marketing spending on social networking sites of about \$4.3 billion (Williamson 2011). Managers invest in social media to foster relationships and interact with customers (SAS HBR 2010). One way to realize this aim is to create brand communities in the form of brand fan pages on social networking sites where customers can interact with a company by liking or commenting on brand posts (McAlexander, Schouten, and Koenig 2002; Muñiz and O'Guinn 2001). Consumers who become fans of these brand fan pages tend to be loyal and committed to the company, and are more open to receiving information about the brand (Bagozzi and Dholakia 2006). Moreover,

brand fans tend to visit the store more, generate more positive word-of-mouth, and are more emotionally attached to the brand than non-brand fans (Dholakia and Durham 2010).

While preliminary research has been conducted on the success of marketing activities on social media, little is known about factors that influence brand post popularity, that is, the number of likes and comments on brand posts at brand fan pages (Ryan and Zabin 2010; Shankar and Batra 2009). Management-oriented studies about brand post popularity are mainly descriptive; they provide no theoretical foundation and do not formally test which activities actually improve brand post popularity. For example, these studies suggest that companies should experiment with different brand post characteristics, such as videos, images, text, or questions (Brookes 2010; Keath et al. 2011). Current insights are thus limited, which has increased the call for research in the area of social media, as indicated by the subject of this special

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issue and the 2010–2012 Marketing Science Institute research priorities ([www.msi.org](http://www.msi.org)).

The aim of this research is to empirically investigate what factors drive brand post popularity. We develop a conceptual model that is based upon findings from the banner and advertising literature, as well as the word-of-mouth communication literature. We consider brand post characteristics (e.g., vividness, interactivity), content of the brand post (e.g., information, entertainment), position of the brand post, and the valence of comments on the brand post written by brand fans.

We gathered data from different brand fan pages on a social networking site to test our hypotheses. The findings indicate that enhancing either the number of likes or the number of comments requires different instruments. With this research we provide insights to the social media literature, which are interesting for academics as well as for practitioners. To the best of our knowledge, we are the first to empirically investigate which factors influence the popularity of brand posts at a social networking site. Our research provides valuable and directly applicable implications for companies’ social media marketing activities.

The flow of this paper is as follows: first, we describe brand fan pages and brand post popularity, and then develop the conceptual framework and hypotheses. That initial section is followed by a description of the study design. The empirical results are then described and discussed. We conclude with implications for managers, and propose some limitations that provide opportunities for further research.

### Brand Fan Pages and Brand Post Popularity

In just a few years, social networking sites have become extremely popular: Facebook, for example, claims to have attracted over 800 million active members (as of fall 2011) since starting in 2004 ([www.facebook.com](http://www.facebook.com)). Social networking sites can be described as networks of friends for social or professional interactions (Trusov, Bucklin, and Pauwels 2009). Members of social networking sites can become friends with other members, but they can also become fans of brands on dedicated brand fan pages. Brand fans can share their enthusiasm about the brand on these dedicated pages and be united by their common interest in the brand (Kozinets 1999). Brand fan pages reflect part of the customers’ relationship with the brand (McAlexander, Schouten, and Koenig 2002), broaden the brand–customer relationship (Muñiz and O’Guinn 2001), and provide a source of information and social benefits to the members (Bagozzi and Dholakia 2002; Dholakia, Bagozzi, and Pearo 2004). On these brand fan pages, companies can create brand posts containing anecdotes, photos, videos, or other material; brand fans can then interact with these brand posts by liking or commenting on them.

In this article, we focus on the determinants of brand post popularity, i.e., the number of likes and comments. In order to find these determinants affecting brand post popularity, we use research on the effectiveness of banner advertising because similarities exist between banners and brand posts. A banner is a small advertisement on web pages that advertisers want people to click on (Drèze and Hussherr 2003). Similarly, brand posts occupy only a small part of the brand fan page, with

companies wanting brand fans to like or comment on it. Thus, the challenges for both banners and brand posts are firstly to attract people’s attention and secondly to induce people to click on and view the content. However, people voluntarily decide to visit a brand fan page, whereas they are involuntarily confronted with banners and usually pay low attention to them (Goodrich 2011; Yoo 2009). Despite these differences between banners and brand posts, factors that compel people to click on a banner may also be applicable to how people interact with brand posts. For example, banners and brand posts need special characteristics or features that make them salient from the background and capture customers’ attention (Fennis and Stroebe 2010, p. 51).

Brand posts differ from banners on another aspect as well: the likes and comments on the brand post reflect active statements of brand fans and are visible to others. By liking or commenting on a brand post, brand fans state their opinion publicly. Liking and commenting on a brand post is thus similar to WoM communication. We therefore also use literature on WoM communication when discussing the factors that influence brand post popularity.

### Conceptual Framework and Hypotheses

The conceptual framework for the determinants of brand post popularity is presented in Figure 1. We argue that vividness, interactivity, the content of the brand post (information, entertainment), the top position of a brand post, and the valence of comments on a brand post are related to brand post popularity (i.e., the number of likes and the number of comments). Additionally, we do control for the day of the week the brand post is placed, message length of the brand post, and the product category (see Figure 1).

#### Vividness

One way of enhancing the salience of brand posts is to include vivid brand post characteristics. Vividness reflects the richness of a brand post’s formal features; in other words, it is the extent to which a brand post stimulates the different senses (Steuer 1992). Vividness can be achieved by the inclusion of dynamic animations, (contrasting) colors, or pictures (Cho 1999; Drèze and Hussherr 2003; Fortin and Dholakia 2005; Goldfarb and Tucker

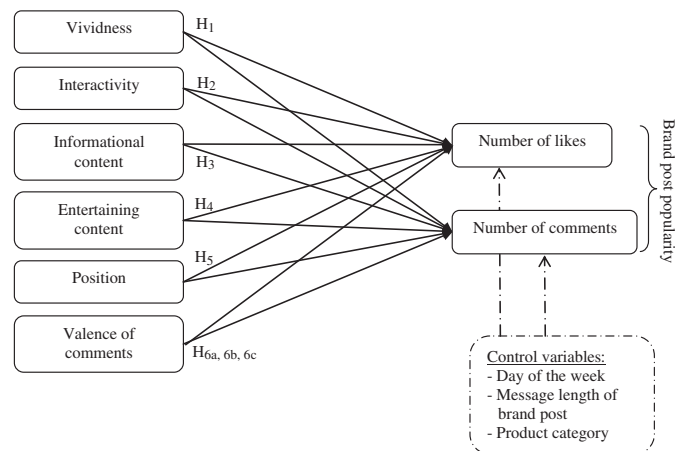


Figure 1. Conceptual Framework.

2011; Goodrich 2011). The degree of vividness can differ in the way that it stimulates multiple senses (Coyle and Thorson 2001). For example, a video is more vivid than a picture because the former stimulates not only sight, but also hearing.

Research shows that highly vivid banners are more effective with respect to intention to click (Cho 1999) and click-through rates (Lohtia, Donthu, and Hershberger 2003). Moreover, higher degrees of vividness appear to be most effective at enhancing attitudes toward a website (Coyle and Thorson 2001; Fortin and Dholakia 2005). We propose that more vivid brand posts lead to a more positive attitude toward the brand post. This positive attitude should then compel brand fans to like or comment on a brand post. Therefore, we formulate:

**H1.** The higher the level of vividness of a brand post, the more popular the brand post.

### *Interactivity*

Another way of enhancing the salience of a brand post is interactivity. Interactivity is defined as “the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized” (Liu and Shrum 2002, p. 54). Interactivity is characterized by two-way communication between companies and customers, as well as between customers themselves; put differently, it characterizes many-to-many communication (Goldfarb and Tucker 2011; Hoffman and Novak 1996). Brand post characteristics differ in the degree of interactivity. For example, a brand post with only text is not at all interactive, while a link to a website is more interactive (Fortin and Dholakia 2005) since brand fans can click on that link. Moreover, a question acts as a highly interactive brand post characteristic because it begs an answer from brand fans. Research shows inconclusive findings (no effect versus positive effect) regarding interactivity on outcome measures, such as attitude toward an ad, which might be explained by the considered degrees of interactivity (Liu and Shrum 2002). Some research suggests that there might exist an optimal level of interactivity (Fortin and Dholakia 2005), but other research proposes a linear effect of interactivity (Coyle and Thorson 2001). Since the objective of brand posts is to motivate brand fans to react (i.e., liking and/or commenting), we expect that higher degrees of interactivity will generate more likes and comments. We propose the following hypothesis:

**H2.** The higher the level of interactivity of a brand post, the more popular the brand post.

### *Content of Brand Posts: Information and Entertainment*

Information-seeking is an important reason for people to use social networking sites (Lin and Lu 2011), participate in a virtual community (Dholakia, Bagozzi, and Pearo 2004), and contribute to Facebook groups (Park, Kee, and Valenzuela 2009). Furthermore, the pursuit of information explains why people consume brand-related content (Muntinga, Moorman, and Smit 2011). Hence, if a brand post contains information about the brand or product, then the brand fans’ motivations to

participate or consume the content are met. Additionally, research shows that people tend to have positive attitudes toward informative ads on social networks (Taylor, Lewin, and Strutton 2011). Therefore, brand fans might have more positive attitudes toward informative brand posts compared to non-informative brand posts, thus leading to higher popularity. We propose:

**H3.** Informative brand posts are more popular than non-informative brand posts.

The entertainment value of a social networking site is also an important factor for using it (Cheung, Chiu, and Lee 2011; Dholakia, Bagozzi, and Pearo 2004; Lin and Lu 2011; Park, Kee, and Valenzuela 2009). Entertainment leads people to consume, create or contribute to brand-related content online (Muntinga, Moorman, and Smit 2011). Entertaining ads – ads that are perceived to be fun, exciting, cool, and flashy – do have a positive effect on attitude toward the ad (Taylor, Lewin, and Strutton 2011), attitude toward the brand, and the desire to return to the website (Raney et al. 2003). Hence, if a brand post is entertaining, brand fans’ motivations to participate or consume the content are met. Therefore, brand fans might have more positive attitudes toward entertaining brand posts compared to non-entertaining brand posts, thus generating higher popularity. This leads to the following hypothesis:

**H4.** Entertaining brand posts are more popular than non-entertaining brand posts.

### *Position of Brand Posts*

Advertising research shows that the position of a banner ad on a website has a positive effect on attention paid to the ad (Drèze and Hushherr 2003; Goodrich 2011). Moreover, recent research on search advertising shows that position plays an important role for click-through rates; namely, ads on top of the page generate more clicks (Rutz and Trusov 2011). Furthermore, prior exposure to banners has a positive effect on the clicking probability because an additional exposure to a banner increases the probability the banner will be noticed (Chatterjee, Hoffman, and Novak 2003). Whereas banners are mainly located on the periphery of websites (i.e., left or right and bottom or top), brand posts are located in the middle of the brand fan page. The most recently placed brand posts appear on top of the brand fan page, shifting older brand posts farther down on the brand fan page. If companies often create new brand posts, less recent ones shift down quickly, which means these are less noticeable and can receive less attention than brand posts that are located on top of the brand fan page. We therefore propose that the number of days the brand post is located on top of the brand fan page is beneficial for the brand post’s popularity:

**H5.** Position of a brand post on top of the brand fan page is positively related to brand post popularity.

### *Valence of Comments*

Brand fans can comment either positively, neutral, or negatively on brand posts. Research shows that consumers’ online discussions about positive product or brand experiences can generate

empathy and positive feelings among readers (Bickart and Schindler 2001). This exchange of information and experiences between consumers has a positive effect on the perceptions of the value of a product, the likelihood to recommend the product (Gruen, Osmonbekov, and Czaplewski 2006), and sales (e.g., Chevalier and Mayzlin 2006; Chintagunta, Gopinath, and Venkataraman 2010). The positive comments on a brand post might have complementary value to the company's brand post (Bronner and de Hoog 2010) and thus increase the attractiveness of the brand post. Also, the positive comments of brand fans can enhance the value of the brand post and create empathy among brand fans. All in all, we expect that the share of positive comments on a brand post, compared to the share of neutral comments, leads to higher popularity of this brand post. We propose:

**H6a.** The share of positive comments on a brand post is positively related to brand post popularity.

However, brand fans can also comment negatively on a brand post. Therefore, we also investigate the effects of negative comments on brand post popularity. Much negative information appears to produce a negative effect on attitude toward the ad and the brand (Eisend 2006). Negative consumer reviews have a negative effect on purchase intentions or sales (e.g., Chevalier and Mayzlin 2006; Dellarocas, Zhang, and Awad 2007). Moreover, Smith and Vogt (1995) show that negative WoM communication, presented directly before or after respondents have seen an ad, reduces brand attitudes, cognitive evaluations about the brand, and purchase intentions. At the brand fan page, the brand post and the comments are presented closely together (i.e., the comments are placed below the brand post). All in all, it might be very likely that negative comments to a brand post also decrease the attractiveness of the brand post. Consequently, brand fans will have a lower attitude toward this brand post and hence like it less. Also, brand fans might follow the mass and do not want to press the like button if their peer brand fans comment negatively, i.e., dislike the brand post. This results in the following hypothesis:

**H6b.** The share of negative comments on a brand post is negatively related to the number of likes on that brand post.

Moreover, research shows that when opinions on a website are very negative, consumers will adapt their opinion downwards

(Schlosser 2005). For brand posts this effect may also occur; when brand fans comment on a brand post they might negatively adapt their comment if they read negative comments because they want to conform to others' opinions. This effect may thus lead to a higher number of negative comments. Next to that, brand fans who disagree with these negative comments might rebut these by providing positive comments (e.g., Moe and Trusov 2011). People tend to differentiate their opinions and hence post multiple perspectives (e.g., Schlosser 2005). Moreover, the variance in posted comments seems to generate subsequent comments, which is an indication that negative comments are not necessarily bad (Moe and Trusov 2011). So, negative comments might not only lead to more negative comments (conformation), but also to more positive comments (differentiation). Therefore, we propose:

**H6c.** The share of negative comments on a brand post is positively related to the number of comments on that brand post.

### Control Variables

Research on search advertising shows that people perform less Internet searching during the weekends than on weekdays, although click-through rates do not differ between weekdays and weekends (Rutz and Bucklin 2011). It might be that brand fans visit brand fan pages more during the weekends than on weekdays, which can result in higher popularity for brand posts placed during weekends. Hence, we take into account whether the brand post is placed during weekdays or weekends.

Advertising research further suggests that message length may affect outcome measures such as click-through rates either positively or negatively (Baltas 2003; Robinson, Wysocka, and Hand 2007). We therefore include message length as a control variable.

Unobserved characteristics of product categories might lead to differences in brand post popularity across brands from different product categories. Therefore we control for the product category.

### Study Design

#### Operationalization of Variables

In this study, we explain brand post popularity, as indicated by the number of likes and the number of comments on a brand post.

Table 1  
Operationalizations of Vivid and Interactive Brand Post Characteristics.

Level	Vividness	Interactivity
Low	Pictorial (photo or image)	Link to a website (mainly to news sites or blogs, but never to the company website) Voting (brand fans are able to vote for alternatives (e.g., which taste or design they think is best))
Medium	Event (application at the brand page and announces an upcoming (offline) event of the brand)	Call to act (urges brand fans to do something (e.g., go to certain website, liking, or commenting)) Contest (brand fans are requested to do something (e.g., Tweet or like a website) for which they can win prizes)
High	Video (mainly videos from YouTube)	Question  Quiz (similar to question, but now brand fans can win prizes)

For both vividness and interactivity we have identified four different levels (no, low, medium, and high), which correspond to previous research (e.g., Coyle and Thorson 2001; Fortin and Dholakia 2005). The specific brand post characteristics that reflect low, medium, and high vividness as well as interactivity of the brand post are reported in Table 1. No vividness and no interactivity are used as base categories in the analyses.

Brand posts are regarded as informative when the brand post contains information about the company/brand and/or its products. On the other hand, entertaining brand posts contain content that is unrelated to the brand, such as funny movies or anecdotes. Some brand posts are neutral; they are neither entertaining nor informative and are used as base categories in the analyses. An example of a non-informative, non-entertaining brand post is asking a neutral question, such as: ‘What color/taste do you like most?’. Regarding the valence of the comments, we count the number of positive, neutral, and negative comments on a brand post. Subsequently, we compute the shares of positive, neutral, and negative comments to the total number of comments per brand post. The share of neutral comments is used as a base category in the analyses.

Data

We empirically investigated data of 11 international brands that were actively posting content at their brand fan pages on a social networking site from May 24, 2010 to February 18, 2011. The brands are from six different product categories: cosmetics, alcoholic beverages, mobile phones, leisure wear, accessories, and food. We gathered the number of likes and comments on a brand post, as well as the valence of the comments and other brand post characteristics, through a total of 355 brand posts.<sup>1</sup>

The average number (*M*) of brand fans was 337,500 per brand (*SD*=168,103); the number of brand posts taken into account in this research was, on average, 32.27 per brand (*SD*=7.10); the average number of likes per brand post was 189.26 (*SD*=193.10), and the average number of comments per brand post was 42.26 (*SD*=57.96). The data shows quite a degree of variation across and within product categories for brand post popularity (i.e., likes and comments), which is shown in Table 2.

Companies use different tools to stimulate brand fans to like or comment (see Table 3). On average, about 50% of the brand posts contain vivid characteristics and about 75% of the brand posts contain interactive characteristics. More specifically, the most popular are the vivid brand post characteristic ‘pictorial’, and the interactive brand post characteristics ‘link to a website’ and ‘question.’ The medium vivid and high interactive brand post characteristics ‘event’ and ‘quiz’ occur infrequently at the posts. Because these characteristics do not show much variation, we decided to exclude them from further analyses. Brands provided their brand fans with information regarding the company and its product(s) in 38.6% of the brand posts. Furthermore, 34.4% of the brand posts were entertaining. The relative shares of neutral,

Table 2  
Average Number of Likes and Comments per Product Category.

Product category	Likes		Comments	
	M	SD	M	SD
Food	145.91	82.22	53.91	41.47
Accessories	143.49	52.33	14.86	28.80
Leisure wear	184.02	73.55	15.61	10.51
Alcoholic beverages	253.48	298.53	46.53	65.09
Cosmetics	200.54	233.56	53.44	91.85
Mobile phones	177.10	155.07	56.90	37.15

positive, and negative comments are 0.3, 0.48, and 0.11 respectively. Brands placed a new post, on average, every two days, and the day that the most brand posts are placed is Thursday. The average text length at a brand post is 28 words.

Methodology

The two dependent variables for brand post popularity are  $y_1$  = number of likes and  $y_2$  = number of comments, which are count data with a Poisson distribution (Cameron and Trivedi 2005; Hill, Griffiths, and Judge 2001). The model to explain the number of likes and the number of comments can be expressed as:

$$y_{ij} = \alpha \left( \sum_{f=1}^2 \beta_f \text{vivid}_{fj} + \sum_{g=1}^5 \beta_g \text{ia}_{gj} + \beta_i \text{info}_j + \beta_e \text{entertain}_j + \beta_d \text{position}_j + \beta_p \text{pos}_j + \beta_n \text{neg}_j + \beta_c \text{weekd}_j + \beta_r \text{text}_j + \sum_{b=1}^5 \beta_b \text{pc}_b \right) + \varepsilon_{ij} \tag{1}$$

where

- $y_{ij}$   $y_{1j}$  or  $y_{2j}$ ; the number of likes per brand post  $j$  or the number of comments per brand post  $j$ , respectively,
- $\text{vivid}_{fj}$  dummy variables indicating whether the vivid characteristic  $f$  at brand post  $j$  is present or not (baseline category is no vividness),
- $\text{ia}_{gj}$  dummy variables indicating whether the interactive characteristic  $g$  at brand post  $j$  is present or not (baseline category is no interactivity),
- $\text{info}_j$  dummy variable indicating whether brand post  $j$  is informative (baseline category is no information),
- $\text{entertain}_j$  dummy variable indicating whether brand post  $j$  is entertaining (baseline category is no entertainment),
- $\text{position}_j$  indicating the position of the brand post by the number of days the brand post  $j$  is on top of the brand fan page,
- $\text{pos}_j$  indicating the share of positive comments on brand post  $j$ ,
- $\text{neg}_j$  indicating the share of negative comments on brand post  $j$  (baseline category for both positive and negative comments is the share of neutral comments),
- $\text{weekd}_j$  dummy variable if the brand post  $j$  is placed during weekdays,
- $\text{text}_j$  indicating the number of words at the brand post  $j$ ,
- $\text{pc}_b$  dummy variables for product category  $b$  (baseline category is ‘food’),
- $\varepsilon_{ij}$   $\varepsilon_{1j}$  or  $\varepsilon_{2j}$ ; normally distributed error terms for dependent variable  $y_{1j}$  and  $y_{2j}$  respectively.

<sup>1</sup> We only use posts of the brands, so we do not take into account posts of the brand fans.

Table 3  
Descriptive Statistics Explanatory Variables.

Variable	Brand Post Characteristics and Content				
	Level	Operationalization	Relative frequency (%)	Min (%)	Max (%)
Vividness*	No		48.7%	20.9%	93.3%
	Low	Pictorial	34.4%	6.7%	65.1%
	Medium	Event	0.6%	0.0%	3.3%
Interactivity*	High	Video	16.9%	0.0%	40.0%
	No		23.1%	2.3%	100.0%
	Low	Link website	51.5%	0.0%	86.0%
		Voting	2.3%	0.0%	10.2%
	Medium	Call to act	6.8%	0.0%	20.4%
Information		Contest	9.3%	0.0%	33.3%
	High	Question	35.5%	6.7%	80.0%
		Quiz	1.4%	0.0%	6.7%
Entertainment		No information	61.4%	6.7%	96.0%
		Information	38.6%	4.0%	93.3%
Entertainment		No entertainment	65.6%	31.0%	92.9%
		Entertainment	34.4%	7.1%	69.0%
Variable	Operationalization	M	SD		
Valence of comments**	Share of neutral comments	0.303	0.275		
	Share of positive comments	0.482	0.278		
	Share of negative comments	0.114	0.193		
Top position	Number of days	2.30	4.086		
Message length	Number of words	28.44	18.445		

\* Please note that the summations of the columns vividness and interactivity are more than 100%; some brand posts contain more than one interactive or vivid characteristic.

\*\* Please note that the shares of neutral, positive, and negative comments do not sum to one; some of the comments are coded as unknown because of language issues (following Godes and Mayzlin, 2004).

We transformed zeros in the dependent (i.e., the number of comments) and independent count variables (i.e., ‘position’ and ‘text’) into 0.00001. We conducted OLS regressions by taking the natural logarithm of the dependent variables, as well as of the independent count variables.

## Results

The estimation results are presented in Table 4, while Table 5 summarizes the findings. The effects of the potential explanatory variables on the components of brand post popularity, the number of likes and comments, are clearly different.

### Number of Likes

The model for the number of likes is significant as a whole ( $F$ -value=3.074,  $p$ -value<0.01) and explains the variance of the dependent variable reasonably well ( $R^2$ =15.0%, adj.  $R^2$ =10.1%).

The low level of vividness (i.e., ‘pictorial’) is not significantly related to the number of likes. But, the high degree of vividness (i.e., ‘video’) is significant and positively related to the number of likes ( $\beta_{\text{video}}=0.304$ ,  $p$ -value<0.05), in support of

Table 4  
Estimation Results for Brand Post Popularity\*.

			Log Likes	Log Comments	
Vividness	No	(baseline)	—	—	
	Low	Pictorial	0.080	-0.319	
	High	Video	<b>0.304</b>	-0.495	
Interactivity	No	(baseline)	—	—	
	Low	Link website	-0.002	-0.640	
		Voting	0.221	0.493	
	Medium	Call to act	0.216	-0.674	
	High	Contest	<b>0.393</b>	0.217	
Information		Question	<b>-0.193</b>	<b>0.968</b>	
		No information (baseline)	—	—	
		Information	0.018	-0.095	
Entertainment		No entertainment (baseline)	—	—	
		Entertainment	-0.188	-0.355	
Position		Number of days	<b>0.022</b>	<b>0.063</b>	
Valence of comments		Share of neutral (baseline)	—	—	
		Share of positive	<b>0.708</b>	<b>2.671<sup>a</sup></b>	
		Share of negative	-0.062	<b>3.082<sup>a</sup></b>	
	Control variables		Weekdays	-0.106	-0.410
			Message length	-0.027	0.061
Product categories		Food (baseline)	—	—	
		Accessories	0.066	<b>-1.673</b>	
		Leisure wear	0.137	-0.453	
		Alcoholic beverages	0.149	-0.496	
		Cosmetics	-0.041	-0.719	
		Mobile phones	0.123	0.315	
	Constant		<b>4.760</b>	<b>2.407</b>	
	$N$	355	355		
	$F$ -value	<b>3.074</b>	<b>7.473</b>		
	$R^2$	0.150	0.300		
	Adj. $R^2$	0.101	0.260		

Bold figures:  $p$ -value<0.05, Italic figures:  $p$ -value<0.10.

\* We report unstandardized coefficients.

<sup>a</sup> Parameter estimates with same superscripts are not significantly different from each other.

**hypothesis 1.** The low-level interactive brand post characteristics (i.e., ‘link website’ and ‘voting’) are not significantly related to the number of likes, which is not in support with **hypothesis 2**. The medium-level interactive brand post characteristic (i.e., ‘call to act’) is not significantly related to the number of likes. On the other hand, the other medium-level interactive brand post characteristic (i.e., ‘contest’) is significant and positively related to the number of likes ( $\beta_{\text{contest}}=0.393$ ,  $p$ -value<0.01), in support of **hypothesis 2**. However, the high level of interactivity (i.e., ‘question’) is significant and negatively related to the number of likes ( $\beta_{\text{question}}=-0.193$ ,  $p$ -value<0.05). All in all, we find partial support for **hypothesis 2**.

Providing information at a brand post is not significantly related to the number of likes, so we cannot support **hypothesis 3**. Entertainment is marginally significant and negatively related to the number of likes ( $\beta_e=-0.188$ ,  $p$ -value<0.10), contrary to **hypothesis 4**. The top position of a brand post is significant and positively related to the number of likes ( $\beta_d=0.022$ ,  $p$ -value<0.05), in support of **hypothesis 5**. Compared to neutral comments, the share of positive comments is significant and

Table 5  
Summary of Results.

Hypotheses	Expected	Number of Likes	Number of Comments
H <sub>1</sub> : vividness	+	Supported	Not supported
H <sub>2</sub> : interactivity	+	Partially supported	Partially supported
H <sub>3</sub> : information	+	Not supported	Not supported
H <sub>4</sub> : entertainment	+	Not supported	Not supported
H <sub>5</sub> : position	+	Supported	Supported
H <sub>6a</sub> : share of positive comments	+	Supported	Supported
H <sub>6b</sub> : share of negative comments	–	Not supported	n.a.
H <sub>6c</sub> : share of negative comments	+	n.a.	Supported

Note: n.a. = not applicable because no hypothesis was formulated.

positively related to the number of likes ( $\beta_p=0.708$ ,  $p$ -value<0.01), in support of [hypothesis 6a](#). The share of negative comments is not significantly related to the number of likes and we cannot confirm [hypothesis 6b](#).

#### Number of Comments

The model for the number of comments is significant as a whole ( $F$ -value=7.473,  $p$ -value<0.01) and explains the variance of the dependent variable reasonably well ( $R^2=30.0\%$ , adj.  $R^2=26.0\%$ ).

The vivid brand post characteristics are not significantly related to the number of comments, so we cannot support [hypothesis 1](#) with regard to the number of comments. The low interactive brand post characteristic (i.e., ‘link website’) is marginally significant and negatively related to the number of comments ( $\beta_{\text{link}}=-0.640$ ,  $p$ -value<0.10), contrary to [hypothesis 2](#). The other low and medium levels of interactive brand post characteristics are not significantly related to the number of comments. But the high level of interactive brand post characteristic (i.e., ‘question’) is significant and positively related to the number of comments ( $\beta_{\text{question}}=0.968$ ,  $p$ -value<0.01), in support of [hypothesis 2](#).

Whether a brand post is informative or entertaining has no influence on the number of comments. Hence, we cannot support hypotheses 3 and 4 with regard to the number of comments. The top position of a brand post is significant and positively related to the number of comments ( $\beta_d=0.063$ ,  $p$ -value<0.05), in support of [hypothesis 5](#). Compared to neutral comments, both shares of positive and negative comments are positively related to the number of comments ( $\beta_p=2.671$ ;  $\beta_n=3.082$ ,  $p$ -values<0.01), in support of [hypothesis 6a](#) and [hypothesis 6c](#), respectively.

#### Managerial Implications

Managers of brands that operate brand fan pages can be guided by our research with regards to deciding which characteristics or content to place at brand posts. Our research shows that not all determinants which are beneficial for enhancing the number of likes do also have an effect on enhancing the number of comments, and vice versa.

#### Enhancing the Number of Likes

When managers aim to enhance the number of likes, they can place a highly vivid or a medium interactive brand post characteristics such as a video or a contest. Posting a question (highly interactive) has a negative effect on the number of likes. A question demands an answer, which cannot be given by liking the brand post. Also entertainment has a negative effect on the number of likes. This might be explained by the fact that entertaining brand posts contain content that is unrelated to the brand, while brand fans are interested in the brand. Furthermore, the longer a brand post remains at the top of the brand fan page increases the probability that brand fans are exposed to it, which indeed has a positive effect on the number of likes. Additionally, compared to neutral comments, the share of positive comments from brand fans are positively related to the number of likes for the brand post in question. Our results further indicate that brand fans are influenced by each other: the share of positive comments to a brand post enhances the attractiveness of the brand post. It seems to raise general interest in a brand post which may in turn lead to an increasing number of likes.

#### Enhancing the Number of Comments

Managers who specifically want to enhance the number of comments should post a highly interactive brand post characteristic at the brand post, such as a question. This result is intuitive because answering a question is only possible by placing a comment. The other vivid and interactive brand post characteristics, as well as the content of the brand post do not have an effect on the number of comments. Placing the low level interactive brand post characteristic, a website link, even has a negative effect on the number of comments. An explanation might be that brand fans who click on the link do not comment on the brand post anymore because they navigate away from the brand fan page. It is beneficial for the number of comments to keep the brand post longer at the top of the brand fan page. Finally, compared to neutral comments, both shares of positive and negative comments are positively related to the number of comments. Probably positive and negative comments enhance a general interest in the brand post, which leads to more commenting. Namely, previous research shows that people differentiate their opinions and the variance in posted comments seems to generate subsequent comments (e.g., [Moe and Trusov 2011](#); [Schlosser 2005](#)). For managers this is an important finding because it indicates that negative comments are not necessarily bad. Brand fans may feel to be part of the community because they engage in a vivid discussion with both positive and negative arguments.

#### Limitations and Further Research

This research is subject to some limitations which may provide fruitful avenues for future research. We have chosen to use eleven brands from six product categories. Moreover, we have included a limited number of brand posts per brand. The amount of data is sufficient to empirically investigate the factors that drive brand post popularity. However, brands did not

often post a quiz or event at a brand post and therefore we excluded these two explanatory variables from the analyses. Future studies may want to use a more comprehensive dataset. Additionally, we have gathered data from the brand fan pages of one social networking site. It would be interesting to replicate this research for other social networking sites, to see whether the results still hold. Specifically, investigating social networking sites from other countries sheds light on possible cultural differences that influence which activities on brand fan pages are and are not successful.

We have investigated the determinants of brand post popularity. An interesting topic for further research is to examine the determinants of brand popularity. Brand popularity reflects the number of brand fans, which gives an indication of the brand's recognition on social media. Industry market research shows that consumers become brand fans because they have had a positive experience with the product (Van Belleghem, Eenhuizen, and Veris 2011). It would be interesting to know how companies can influence consumers to become brand fans.

Social contagion (i.e., brand fans influencing each other) might play a role when brand fans choose to like or comment on a brand post. We show that the shares of positive and negative comments, compared to neutral comments, are positively related to brand post popularity. Other research has shown that WoM communication of social networking sites' users significantly influences new sign-ups (Trusov, Bucklin, and Pauwels 2009). Similarly, social contagion might play a role in brand fans' decisions to 'adopt' (i.e., like or comment on) a brand post. For example, Aral and Walker (2011) show that the automated notifications in a social network influence the adoption of an application. The notifications that appear when a brand fan likes or comments on a brand post might influence the brand fan's friends to become a brand fan or like and/or comment on a brand post. An investigation into how the popularity of brands and brand posts is affected by social contagion could prove interesting and valuable.

We did not include dynamic aspects in our study. The timing of the likes and comments to the brand post might be investigated. For example, when do people react: mostly in the few hours after the brand post is created or also after a few days? This kind of information can be used to compute how many days between two brand posts effectively increases brand post popularity. Moreover, the 'adoption' curve of likes and comments can be modeled if one knows how long it takes before a certain number of people like or comment on a brand post.

In conclusion, this research responds to the call for research into social media, and more specifically, how social media can be used to manage customer relationships, marketing communications, and branding. Future research may enrich our initial findings about the factors that determine the popularity of brand posts as discussed in this paper.

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